# TABLE OF CONTENTS

1. BACKGROUND ............................................................................................................ 1

2. SITE DESCRIPTION ..................................................................................................... 3  
   2.1 Site Setting ............................................................................................................ 3  
   2.2 CCR Units ............................................................................................................. 3  
   2.3 Summary of Site Geology and Hydrogeology ...................................................... 4  
   2.4 Aquifer System Description .................................................................................. 4  
      2.4.1 Identification of Uppermost Aquifer ........................................................ 4  
      2.4.2 Groundwater Flow Direction .................................................................... 5  
      2.4.3 Groundwater Flow Rates .......................................................................... 5  

3. GROUNDWATER MONITORING SYSTEM ............................................................. 6  
   3.1 Status of the Groundwater Monitoring and Corrective Action Program .............. 6  
   3.2 Identification of Monitoring Wells Installed, Abandoned, or Decommissioned -  
      257.90 (E)(2) .................................................................................................................. 6  

4. SUMMARY OF 2015-2017 CCR RULE ACTIVITIES COMPLETED ....................... 7  
   4.1 Requirements Completed ...................................................................................... 7  
   4.2 Completion of Required Reports ........................................................................... 7  
   4.3 Problems Encountered and Resolution.................................................................. 8  

5. GROUNDWATER MONITORING DATA - 257.90(E)(3) .......................................... 9  
   5.1 Baseline Sampling ................................................................................................. 9  
   5.2 Detection Monitoring ............................................................................................ 9  
      5.2.1 Alternative Monitoring Frequency – 257.94(d)(3) ................................... 9  
      5.2.2 Identification of Appendix III Constituents Detected at SSI Over  
          Background – 257.94(e) ....................................................................................... 9  
      5.2.3 Alternative Source Demonstration – 257.94(e)(2) .................................... 9  
      5.2.4 Transition from Detection to Assessment Monitoring – 257.90(e)(4) .... 9  
   5.3 Assessment Monitoring ......................................................................................... 9  

6. DATA USABILITY EVALUATION .............................................................................. 10  

7. DETECTION MONITORING STATISTICAL ANALYSIS ....................................... 11
8. ASSESSMENT MONITORING STATISTICAL ANALYSIS ................................. 12
9. ACTIVITIES PLANNED FOR 2018 .......................................................... 13
10. CORRECTIVE MEASURES ................................................................. 14
11. REMEDY SELECTION ................................................................. 15
12. CORRECTIVE ACTION ................................................................. 16
13. REFERENCES ............................................................................. 17

LIST OF TABLES
Table 1. CCR Monitoring Well Construction Details
Table 2. Summary of Detection and Assessment Monitoring Constituents Under the CCR Rule
Table 3. Summary of Baseline Groundwater Monitoring Analytical Results

LIST OF FIGURES
Figure 1. Economizer Ash and Pyrite Pond System Location Map
Figure 2. CCR Monitoring Well Locations

LIST OF APPENDICES
Appendix A Laboratory Analytical Data Reports
Appendix B Geosyntec Data Validation Reports
ACRONYMS

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>BBS</td>
<td>Big Bend Power Station</td>
</tr>
<tr>
<td>CCR</td>
<td>Coal Combustion Residuals</td>
</tr>
<tr>
<td>CCR Rule</td>
<td>Coal Combustion Residuals Rule</td>
</tr>
<tr>
<td>CFR</td>
<td>Code of Federal Regulations</td>
</tr>
<tr>
<td>EAPPS</td>
<td>Economizer Ash and Pyrite Pond System</td>
</tr>
<tr>
<td>GWPS</td>
<td>Groundwater Protection Standard</td>
</tr>
<tr>
<td>PE</td>
<td>Professional Engineer</td>
</tr>
<tr>
<td>RCRA</td>
<td>Resource Conservation and Recovery Act</td>
</tr>
<tr>
<td>SP</td>
<td>Statistical Analysis Plan</td>
</tr>
<tr>
<td>SSI</td>
<td>Statistically Significant Increase</td>
</tr>
<tr>
<td>TEC</td>
<td>Tampa Electric Company</td>
</tr>
<tr>
<td>USEPA</td>
<td>United States Environmental Protection Agency</td>
</tr>
</tbody>
</table>
1. BACKGROUND

On April 17, 2015, the United States Environmental Protection Agency (USEPA) published 40 Code of Federal Regulations (CFR) Parts 257 and 261: Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals from Electric Utilities; Final Rule (USEPA, 2015). This regulation addresses the safe disposal of coal combustion residuals (CCR) as solid waste under Subtitle D of the Resource Conservation and Recovery Act (RCRA) and is referred to herein as the CCR Rule. The CCR Rule became effective on October 14, 2015. The rule provides national minimum criteria for “the safe disposal of CCR in new and existing CCR landfills, surface impoundments, and lateral expansions, design and operating criteria, groundwater monitoring and corrective action, closure requirements and post closure care, and recordkeeping, notification, and internet posting requirements.” The groundwater monitoring requirements of the CCR Rule apply to the economizer ash and pyrite pond system (EAPPS) at Tampa Electric Company’s (TEC) Big Bend Power Station (BBS) in southeast Hillsborough County in Gibsonton, Florida (Figure 1).

This document has been prepared to meet the requirements found in 40 CFR 257.90(e) concerning the Annual Groundwater Monitoring and Corrective Action reporting required by the CCR Rule for the EAPPS and BBS. At a minimum, the annual groundwater monitoring and corrective action report must contain the information described below and the information required by 257.90(e)(1) through (5), to the extent available:

“For existing CCR landfills and existing CCR surface impoundments, no later than January 31, 2018, and annually thereafter, the owner or operator must prepare an annual groundwater monitoring and corrective action report. For new CCR landfills, new CCR surface impoundments, and all lateral expansions of CCR units, the owner or operator must prepare the initial annual groundwater monitoring and corrective action report no later than January 31 of the year following the calendar year a groundwater monitoring system has been established for such CCR unit as required by this subpart, and annually thereafter. For the preceding calendar year, the annual report must document the status of the groundwater monitoring and corrective action program for the CCR unit, summarize key actions completed, describe any problems encountered, discuss actions to resolve the problems, and project key activities for the upcoming year. For purposes of this section, the owner or operator has prepared the annual report when the report is placed in the facility’s operating record as required by § 257.105(h)(1)”

This annual report covers the period January 1, 2017 through December 31, 2017. Since this is the first CCR Annual Report, activities conducted in 2016 are also included. Sections of this report that are required by the CCR Rule, but are not applicable during the reporting period, contain the text “Not applicable for this annual reporting period”.
Site features/geology/lithology, design of the CCR monitoring well network, the Sampling and Analysis Plan including requirements, procedures, documentation, laboratory analytical procedures and quality control, and the Quality Assurance Plan are provided in the *CCR Rule Groundwater Monitoring Program Plan (GWMP), Big Bend Power Station*, (October 2016).
2. SITE DESCRIPTION

2.1 Site Setting

The BBS is located on the eastern shore of Tampa Bay in Sections 9, 10, 15, and 16, Township 31, Range 19 East of the Gibsonton Quadrangle, with the center of the facility at approximately 27°47’36” north latitude and 82°24’16” west longitude and encompasses approximately 1,492 acres. Topography at the Site ranges from approximately sea level (along the western portion of the BBS) to approximately 10 feet mean sea level (MSL) near the eastern portions of the property along U.S. Highway 41. The location of the BBS and the components of the EAPPS, namely the north and south economizer ash ponds and the suction pond, are shown on Figure 1 and Figure 2.

Construction of BBS began in the late 1960s on two dredge/fill peninsulas. Four coal-fired power generating units are present at the BBS and were placed into service in 1970, 1973, 1976, and 1985. Units 1, 2, and 3 are wet-bottom slag-tap type units that originally used saltwater slag-handling systems and electrostatic precipitators for stack gas emissions control. However, these units are now operating as freshwater systems, subsequently allowing more internal water recycling. Unit 4 is a dry-bottom unit with a closed-loop freshwater bottom ash-slurce system. All units are equipped with electrostatic precipitators and stack gasses are treated with limestone flue gas desulfurization (FGD) and selective catalytic reduction (SCR) systems.

2.2 CCR Units

The EAPPS was built in the early 1980s to support the operation of Big Bend Unit 4 and consists of three lined ponds. The EAPPS is considered one CCR unit by 40 CFR 257.53 and is located approximately 1,000 feet southeast of the active power generating units (Figure 1). The north economizer ash pond and economizer ash suction pond are still in operation. The south economizer ash pond has been converted to dry storage of material excavated from the south recycle pond when it was reconstructed and lined in 2010.

The pond bottom and dike crest elevations for each pond are reportedly 5.5 ft NGVD and 31 ft, NGVD respectively. The South Economizer Ash Pond contains an estimated 337,400 cubic yards (cy) of CCR material over a surface area of 7.2 acres. The north pond contains an estimated 90,000 cy of CCR material (Geosyntec, 2016) over a surface area of 5.4 acres. The suction pond has a surface area of 1.6 acres, receives decant water from the north and south economizer ash ponds, and contains only minor amounts of settleable CCR fines material.
2.3 Summary of Site Geology and Hydrogeology

The units that form the hydrogeologic framework in the region include the surficial aquifer system (SAS), the Intermediate Confining Unit (ICU), and the upper Floridan aquifer system (UFAS). Based on Site-specific data as well as hydrogeologic studies of west-central Florida, the intermediate aquifer system has not been identified as being present at this location (Tihanksy and Knochenmus, 2001).

The SAS sediments consist of Pleistocene shell deposits and terrace sands; due to the irregular surface of the underlying limestone, the SAS varies in thicknesses but typically ranges between 20 and 30 feet (ft) thick in the area of the Site (SWFWMD, 2010). The water table across the Site resides in the SAS. The groundwater flow direction in the SAS is generally towards Tampa Bay as the discharge point; however, flow direction is influenced by various surface water features including ponds, drainage ditches, canals, and small creeks locally. Upward vertical flow gradients from the UFAS to the SAS are common based on historical data trends, and in certain cases can lead to artesian conditions (ECT, 2003; 2007).

The ICU resides within the undifferentiated Hawthorn Group. Due to the absence of the intermediate aquifer system, the permeable strata are absent and consequently the less permeable, fine grained clastic clay units are generally more prevalent. These clay units with varying silt, sand content, and marls comprise the semi-confining unit that separates the SAS and the UFAS.

The UFAS consists of a continuous series of carbonate units and is composed of the limestone sequences that occur in the Tampa Member of the Arcadia Formation of the Hawthorn Group as well as the underlying Suwannee Limestone and other carbonate strata. The Tampa Member encompasses sandy limestone containing varying amounts of clays and marls. The thickness of the UFAS may exceed 1,200 ft beneath the facility. Groundwater in the UFAS generally flows regionally from northeast to southwest towards Tampa Bay.

The GWMP may be consulted for additional details regarding the regional and Site-specific geology and hydrogeology.

2.4 Aquifer System Description

2.4.1 Identification of Uppermost Aquifer

The uppermost aquifer is defined by 40 CFR 257.53 as the geologic formation nearest the natural ground surface that is an aquifer, as well as lower aquifers that are hydraulically interconnected with this aquifer within the facility’s property boundary. The uppermost aquifer at the Site is the SAS.
2.4.2  Groundwater Flow Direction

A surface water feature, Jackson Branch, to the north/northeast of the EAPPS appears to influence local groundwater flow toward the stream in contrast to the general groundwater flow direction at the BBS, which is east to west. The groundwater flow direction near the EAPPS is generally north/northeast.

2.4.3  Groundwater Flow Rates

As described in the *GWMP*, the average linear velocity of groundwater in the SAS ranges from 0.2 to 0.6 ft/day. This flow velocity corresponds to a potential range of flow velocities from approximately 7 to 22 feet per year.
3. **GROUNDWATER MONITORING SYSTEM**

The groundwater monitoring system (GMS) installed at the EAPPS was designed to monitor the water quality in the SAS downgradient of the EAPPS. The documentation for the design, installation, and development of these wells is found in *Groundwater Monitoring Well Design, Installation, Development, and Decommissioning Report, October 2017*. The GMS consists of two background monitoring wells (identified as BBS-CCR-BW1 and BBS-CCR-BW2) located hydraulically upgradient of EAPPS. The background monitoring wells will be used to derive background concentrations for Appendix III constituents. Three monitoring wells (identified as BBS-CCR1, BBS-CCR-2, and BBS-CCR-3) are located at the waste boundary and at the “hydraulically downgradient perimeter (i.e., the edge) of the CCR unit or at the closest practical distance from this location” [80 FR 21400]. The screen intervals are at or below the actual depth of CCR material in the upper portion of the SAS and therefore meet the performance standards specified in 257.91(a) through (d). The locations of the monitoring wells comprising the GMS are shown on Figure 2.

### 3.1 Status of the Groundwater Monitoring and Corrective Action Program

Groundwater monitoring was initiated at the EAPPS in June 2016 as part of the groundwater monitoring and corrective action program in accordance with the requirements of 40 CFR 257.90(b). Ten sampling events were conducted as part of baseline monitoring between June 2016 and August 2017. The first detection monitoring event was conducted in October 2017.

### 3.2 Identification of Monitoring Wells Installed, Abandoned, or Decommissioned - 257.90 (E)(2)

The monitoring wells comprising the GMS for compliance with the CCR Rule were installed in May 2016 to meet the groundwater monitoring system requirements in 257.91. A monitoring well construction summary is provided in Table 1.
4. **SUMMARY OF 2015-2017 CCR RULE ACTIVITIES COMPLETED**

4.1 **Requirements Completed**

The key actions completed during this reporting period are summarized below.

- The required groundwater monitoring system wells were installed in compliance with §257.91. The well locations are depicted in Figure 2.

- The groundwater sampling and analysis program was developed and conducted in accordance with §257.93. The statistical procedures to be used for evaluating groundwater monitoring data were also selected as required by §257.93.

- The detection (baseline) monitoring program complying with §257.94(b) was initiated and exceeded the minimum requirement of eight independent samples for each background and downgradient well.

- The design, installation, development, and decommissioning of any monitoring wells, piezometers and other measurement, sampling, and analytical devices was placed in the operating record as required by §§257.91(e)(1) and 257.105(h)(2), respectively.

- A certification from a qualified professional engineer stating that the groundwater monitoring system was designed and constructed to meet the requirements of the CCR rule was obtained, placed in the operating record, and posted on the publicly accessible Internet site pursuant to the requirements of §§257.91(f), 257.105(h)(3), and 257.107(h)(2), respectively.

- A certification from a qualified professional engineer stating that the selected statistical method is appropriate for evaluating the groundwater monitoring data for the CCR management area to meet the requirements of the CCR rule including a narrative description of the statistical method selected was obtained, placed in the operating record, and posted on the publicly accessible Internet site pursuant to the requirements of §§257.93(f)(6), 257.105(h)(4), and 257.107(h)(3), respectively.

- As required by §257.94, the evaluation of the groundwater monitoring data for statistically significant increases over background levels for the constituents listed in Appendix III was initiated no later than October 17, 2017.

4.2 **Completion of Required Reports**

The following reports were completed during the reporting period:


• **Statistical Analysis Plan**, October 2017, as required by §257.93.


### 4.3 Problems Encountered and Resolution

No problems were encountered during the reporting period.
5. **GROUNDWATER MONITORING DATA - 257.90(E)(3)**

5.1 **Baseline Sampling**

TEC conducted ten baseline groundwater sampling events from the GMS between June 2016 and October 2017 and analyzed the samples for Appendix III and Appendix IV constituents as required in 40 CFR 257.93. Background monitoring results were used to establish background constituent concentrations for use in detection and (if necessary) assessment monitoring [40 CFR 257.91(a)(1)]. The analytical results from the 10 sampling events are provided in Table 3. The laboratory analytical reports for each event are compiled in Appendix A.

5.2 **Detection Monitoring**

During detection monitoring, indicator (Appendix III) parameters (Table 2) were monitored to assess potential releases from the CCR unit into groundwater. Detection monitoring samples must be collected semi-annually from each background and compliance well and analyzed for Appendix III constituents.

The first semi-annual, detection monitoring event was conducted in October 2017. The analytical results are included in Table 3, and the laboratory analytical reports are included in Appendix A.

5.2.1 **Alternative Monitoring Frequency – 257.94(d)(3)**

Not applicable for this annual reporting period.

5.2.2 **Identification of Appendix III Constituents Detected at SSI Over Background – 257.94(e)**

Not applicable for this annual reporting period.

5.2.3 **Alternative Source Demonstration – 257.94(e)(2)**

Not applicable for this annual reporting period.

5.2.4 **Transition from Detection to Assessment Monitoring – 257.90(e)(4)**

Not applicable for this annual reporting period.

5.3 **Assessment Monitoring**

None of the provisions of 40 CFR 257.95 are applicable for this annual reporting period.
6. DATA USABILITY EVALUATION

The inorganic data were reviewed based on the following: *CCR Groundwater Monitoring Program Plan*, Big Bend Power Station, Apollo Beach, Florida, September 2016; USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, August 2014 (OSWER 9355.0-131, EPA 540-R-013-001); the applicability and appropriateness of the analytical methods referenced by the data package; and professional and technical judgment by the data validation team. A Stage 2A data validation report evaluating the quality control (QC) parameters was generated for each detection monitoring event. Additional data qualifiers generated from the data validation were applied where appropriate. The groundwater data generated from each detection monitoring event was deemed usable for meeting the project objectives.

The data validation reports are provided in Appendix B.
7. DETECTION MONITORING STATISTICAL ANALYSIS

Not applicable for this annual reporting period.
8. **ASSESSMENT MONITORING STATISTICAL ANALYSIS**

Not applicable for this annual reporting period.
9. ACTIVITIES PLANNED FOR 2018

The projected key activities for the upcoming year include the following:

- Two semi-annual detection monitoring events will be conducted, and statistical analyses performed.

- The statistical evaluation of groundwater data for statistically significant increases over background for Appendix III constituents for the reporting period was completed by January 15, 2018 in accordance with 257.93.
10. CORRECTIVE MEASURES

Not applicable for this annual reporting period.
11. REMEDY SELECTION

Not applicable for this annual reporting period.
12. CORRECTIVE ACTION

Not applicable for this annual reporting period.
13. REFERENCES


Environmental Consulting & Technology. 2007. Sodium Ground Water Quality Exemption Application for the TECO Big Bend Station. Tampa, Florida.


TABLES
**Table 1: CCR Monitoring Well Construction Details**  
TEC Big Bend Station Economizer Ash and Pyrite Pond System  
Gibsonton, FL

<table>
<thead>
<tr>
<th>Well ID</th>
<th>Diameter (in)</th>
<th>Designation</th>
<th>Northing (NAD 1983)</th>
<th>Easting (NAD 1983)</th>
<th>Ground Surface Elevation (ft NAVD)</th>
<th>TOC Elevation* (ft NAVD)</th>
<th>Total Depth (ft bsls)</th>
<th>Screen Interval (ft bsls)</th>
<th>Top of Screen Elevation (ft NAVD)</th>
<th>Bottom of Screen Elevation (ft NAVD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BBS-CCR-BW1</td>
<td>2</td>
<td>Background</td>
<td>1256638.34</td>
<td>528461.95</td>
<td>29.10</td>
<td>33.40</td>
<td>40</td>
<td>30-40</td>
<td>-0.90</td>
<td>-10.90</td>
</tr>
<tr>
<td>BBS-CCR-BW2</td>
<td>2</td>
<td>Background</td>
<td>1256966.67</td>
<td>527897.28</td>
<td>7.70</td>
<td>12.54</td>
<td>19</td>
<td>9-19</td>
<td>-1.30</td>
<td>-11.30</td>
</tr>
<tr>
<td>BBS-CCR-1</td>
<td>2</td>
<td>Detection</td>
<td>1257433.85</td>
<td>528211.74</td>
<td>5.00</td>
<td>9.82</td>
<td>17.5</td>
<td>7.5-17.5</td>
<td>-2.50</td>
<td>-12.50</td>
</tr>
<tr>
<td>BBS-CCR-2</td>
<td>2</td>
<td>Detection</td>
<td>1257429.29</td>
<td>528769.31</td>
<td>5.00</td>
<td>9.34</td>
<td>17.5</td>
<td>7.5-17.5</td>
<td>-2.50</td>
<td>-12.50</td>
</tr>
<tr>
<td>BBS-CCR-3</td>
<td>2</td>
<td>Detection</td>
<td>1257154.61</td>
<td>529023.26</td>
<td>4.90</td>
<td>9.20</td>
<td>18.5</td>
<td>8.5-18.5</td>
<td>-3.60</td>
<td>-13.60</td>
</tr>
</tbody>
</table>

**Notes**
1. in = Inches  
2. ft bsls = Feet Below Land Surface  
5. *Top of casing elevations were revised in September 2016 during final aboveground well completions. The additional PVC stickup was measured in the field and added to the surveyed top of casing elevation.
### Table 2: Summary of Detection and Assessment Monitoring Constituents

**TEC Big Bend Station Economizer Ash and Pyrite Pond System**

**Gibsonton, FL**

<table>
<thead>
<tr>
<th>Constituent</th>
<th>Constituent Reference</th>
<th>Analytical Methods(s)</th>
<th>EPA Primary or Secondary MCL (ug/L)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arsenic (Total)</td>
<td>X</td>
<td>EPA 200.8 or 6020</td>
<td>10</td>
</tr>
<tr>
<td>Antimony (Total)</td>
<td>X</td>
<td>EPA 200.8 or 6020</td>
<td>6</td>
</tr>
<tr>
<td>Barium (Total)</td>
<td>X</td>
<td>EPA 6010</td>
<td>2,000</td>
</tr>
<tr>
<td>Beryllium (Total)</td>
<td>X</td>
<td>EPA 6010</td>
<td>4</td>
</tr>
<tr>
<td>Boron (Total)</td>
<td>X</td>
<td>EPA 6010</td>
<td>NA</td>
</tr>
<tr>
<td>Cadmium (Total)</td>
<td>X</td>
<td>EPA 200.8 or 6020</td>
<td>5</td>
</tr>
<tr>
<td>Calcium (Total)</td>
<td>X</td>
<td>EPA 6010</td>
<td>NA</td>
</tr>
<tr>
<td>Chloride</td>
<td>X</td>
<td>EPA 300.0</td>
<td>250,000</td>
</tr>
<tr>
<td>Chromium (Total)</td>
<td>X</td>
<td>EPA 6010</td>
<td>100</td>
</tr>
<tr>
<td>Cobalt (Total)</td>
<td>X</td>
<td>EPA 6010</td>
<td>NA</td>
</tr>
<tr>
<td>Fluoride</td>
<td>X</td>
<td>EPA 300.0</td>
<td>4,000</td>
</tr>
<tr>
<td>Lead (Total)</td>
<td>X</td>
<td>EPA 200.8</td>
<td>15</td>
</tr>
<tr>
<td>Lithium (Total)</td>
<td>X</td>
<td>EPA 6010</td>
<td>NA</td>
</tr>
<tr>
<td>Mercury (Total)</td>
<td>X</td>
<td>EPA 7470</td>
<td>2</td>
</tr>
<tr>
<td>Molybdenum (Total)</td>
<td>X</td>
<td>EPA 6010</td>
<td>NA</td>
</tr>
<tr>
<td>pH</td>
<td>X</td>
<td>Field</td>
<td>6.5-8.5 (STD Units)</td>
</tr>
<tr>
<td>Radium 226 and 228 (Total)</td>
<td>X</td>
<td>EPA 903</td>
<td>5 (pCi/L)</td>
</tr>
<tr>
<td>Sulfate</td>
<td>X</td>
<td>EPA 200.8 or 6020</td>
<td>50</td>
</tr>
<tr>
<td>TDS</td>
<td>X</td>
<td>SM2540C</td>
<td>500,000</td>
</tr>
<tr>
<td>Thallium (Total)</td>
<td>X</td>
<td>EPA 6020</td>
<td>2</td>
</tr>
</tbody>
</table>

**Notes.**

1. EPA = US Environmental Protection Agency
2. MCL = Maximum Contaminant Level
3. ug/L = Micrograms per liter
4. STD Units = Standard Units
5. pCi/L = picoCuries per liter
### Table 3: Summary of Baseline Groundwater Monitoring Analytical Results

TEC Big Bend Economizer Ash and Pyrite Pond System
Gibsonton, Florida

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Depth to Water</td>
<td>ft BTOC</td>
<td>25.57</td>
<td>26.19</td>
<td>25.78</td>
<td>29.42</td>
<td>29.84</td>
<td>30.49</td>
<td>30.71</td>
<td>29.92</td>
<td>28.89</td>
<td>28.74</td>
<td>30.41</td>
</tr>
<tr>
<td>Groundwater Elevation</td>
<td>ft NAVD 88</td>
<td>4.76</td>
<td>3.94</td>
<td>4.35</td>
<td>0.71</td>
<td>0.29</td>
<td>-0.36</td>
<td>-0.58</td>
<td>0.21</td>
<td>1.24</td>
<td>1.39</td>
<td>-0.28</td>
</tr>
<tr>
<td>Temperature</td>
<td>ºC</td>
<td>NA</td>
<td>27.84</td>
<td>28.25</td>
<td>28.11</td>
<td>27.46</td>
<td>27.50</td>
<td>26.98</td>
<td>27.20</td>
<td>27.72</td>
<td>27.89</td>
<td>28.08</td>
</tr>
<tr>
<td>Specific Conductivity (field)</td>
<td>umhos/cm</td>
<td>NA</td>
<td>56.20</td>
<td>5420</td>
<td>5140</td>
<td>4860</td>
<td>5000</td>
<td>4940</td>
<td>1580</td>
<td>5010</td>
<td>4960</td>
<td>5000</td>
</tr>
<tr>
<td>pH (field)</td>
<td>SU</td>
<td>6.5 - 8.5</td>
<td>6.51</td>
<td>6.38</td>
<td>6.41</td>
<td>6.50</td>
<td>6.52</td>
<td>6.46</td>
<td>6.49</td>
<td>6.47</td>
<td>6.49</td>
<td>6.52</td>
</tr>
<tr>
<td>Dissolved Oxygen</td>
<td>mg/L</td>
<td>NA</td>
<td>0.18</td>
<td>0.17</td>
<td>0.12</td>
<td>0.13</td>
<td>0.13</td>
<td>0.20</td>
<td>0.14</td>
<td>0.42</td>
<td>0.60</td>
<td>0.45</td>
</tr>
<tr>
<td>Redox Potential</td>
<td>mV</td>
<td>NA</td>
<td>-8.60</td>
<td>-7.3</td>
<td>-22.8</td>
<td>-76.2</td>
<td>-71.1</td>
<td>-20.2</td>
<td>-114</td>
<td>-11.4</td>
<td>-23.0</td>
<td>3.6</td>
</tr>
<tr>
<td>Turbidity (field)</td>
<td>NTU</td>
<td>NA</td>
<td>5.14</td>
<td>7.10</td>
<td>6.47</td>
<td>4.08</td>
<td>1.77</td>
<td>2.04</td>
<td>4.22</td>
<td>0.69</td>
<td>2.38</td>
<td>6.03</td>
</tr>
</tbody>
</table>

**Appendix III Parameters**

- **Boron**: mg/L
  - 1.4** 59.1 56.9 53.7 51.4 49.7 45.9 49.0 51.7 47.0 48.0 44.2
- **Calcium**: mg/L
  - 781 737 729 675 V 692 728 693 781 744 V 743 691
- **Chloride**: mg/L
  - 1140 J- 1120 1030 939 V 932 934 934 995 V 915 V 793 809
- **Fluoride**: mg/L
  - 0.199 0.110 0.180 0.194 0.261 0.315 0.256 0.298 0.255 J 0.0100 V 0.334
- **Sulfate**: mg/L
  - 250 1440 J- 1120 1100 1100 1100 1100 1100 1100 1100 1100

**Appendix IV Parameters**

- **Total Dissolved Solids**: mg/L

Notes and Abbreviations provided on Page 6.

---

Table 1-BB CCR DATA 2016-2017

Page 1 of 6

GEOSYNT EC CONSULTANTS
### Table 3: Summary of Baseline Groundwater Monitoring Analytical Results

#### TEC Big Bend Economizer Ash and Pyrite Pond System
Gibsonton, Florida

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Units</th>
<th>MCL</th>
<th>Sample Date</th>
<th>BBS-CCR-BW2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Top of Casing Elevation</td>
<td>ft NAVD 88</td>
<td>--</td>
<td>6/24/2016</td>
<td>--</td>
</tr>
<tr>
<td>Depth to Water</td>
<td>ft HTOC</td>
<td>--</td>
<td>6/24/2016</td>
<td>--</td>
</tr>
<tr>
<td>Groundwater Elevation</td>
<td>ft NAVD 88</td>
<td>--</td>
<td>6/24/2016</td>
<td>--</td>
</tr>
<tr>
<td>Temperature</td>
<td>°C</td>
<td>NA</td>
<td>6/24/2016</td>
<td>26.42</td>
</tr>
<tr>
<td>Specific Conductivity (field)</td>
<td>umhos/cm</td>
<td>NA</td>
<td>6/24/2016</td>
<td>1640</td>
</tr>
<tr>
<td>pH (field)</td>
<td>SU</td>
<td>5.5 - 8.5</td>
<td>6/24/2016</td>
<td>6.53</td>
</tr>
<tr>
<td>Dissolved Oxygen</td>
<td>mg/L</td>
<td>NA</td>
<td>6/24/2016</td>
<td>0.37</td>
</tr>
<tr>
<td>Redox Potential</td>
<td>mV</td>
<td>NA</td>
<td>6/24/2016</td>
<td>-59.4</td>
</tr>
<tr>
<td>Turbidity (field)</td>
<td>NTU</td>
<td>NA</td>
<td>6/24/2016</td>
<td>6.70</td>
</tr>
</tbody>
</table>

#### Appendix III Parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Units</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fluoride</td>
<td>mg/L</td>
<td>3.89</td>
</tr>
<tr>
<td>Sulfate</td>
<td>mg/L</td>
<td>414</td>
</tr>
<tr>
<td>Total Dissolved Solids</td>
<td>mg/L</td>
<td>1230</td>
</tr>
</tbody>
</table>

#### Appendix IV Parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Units</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antimony</td>
<td>ug/L</td>
<td>0.600</td>
</tr>
<tr>
<td>Arsenic</td>
<td>ug/L</td>
<td>2.65</td>
</tr>
<tr>
<td>Barium</td>
<td>ug/L</td>
<td>51.3</td>
</tr>
<tr>
<td>Beryllium</td>
<td>ug/L</td>
<td>4.000</td>
</tr>
<tr>
<td>Cadmium</td>
<td>ug/L</td>
<td>0.100</td>
</tr>
<tr>
<td>Chromium</td>
<td>ug/L</td>
<td>1.600</td>
</tr>
<tr>
<td>Cobalt</td>
<td>ug/L</td>
<td>3.010</td>
</tr>
<tr>
<td>Lead</td>
<td>ug/L</td>
<td>15.000</td>
</tr>
<tr>
<td>Lithium</td>
<td>ug/L</td>
<td>3.800</td>
</tr>
<tr>
<td>Mercury</td>
<td>ug/L</td>
<td>0.0500</td>
</tr>
<tr>
<td>Molybdenum</td>
<td>ug/L</td>
<td>3.000</td>
</tr>
<tr>
<td>Radium</td>
<td>pCi/L</td>
<td>1.000</td>
</tr>
<tr>
<td>Selenium</td>
<td>ug/L</td>
<td>0.722</td>
</tr>
<tr>
<td>Thallium</td>
<td>ug/L</td>
<td>0.100</td>
</tr>
</tbody>
</table>

Notes and Abbreviations provided on Page 6.
Table 3: Summary of Baseline Groundwater Monitoring Analytical Results
TEC Big Bend Economizer Ash and Pyrite Pond System
Gibsonston, Florida

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Top of Casing Elevation</td>
<td>ft NAVD 88</td>
<td>--</td>
<td>7.79</td>
<td>7.79</td>
<td>7.79</td>
<td>7.79</td>
<td>7.79</td>
<td>7.79</td>
<td>7.79</td>
<td>7.79</td>
<td>7.79</td>
</tr>
<tr>
<td>Depth to Water</td>
<td>ft BTOC</td>
<td>--</td>
<td>3.51</td>
<td>5.00</td>
<td>5.06</td>
<td>6.78</td>
<td>7.38</td>
<td>7.46</td>
<td>7.64</td>
<td>7.41</td>
<td>5.86</td>
</tr>
<tr>
<td>Groundwater Elevation</td>
<td>ft NAVD 88</td>
<td>--</td>
<td>4.28</td>
<td>2.79</td>
<td>2.73</td>
<td>1.01</td>
<td>0.41</td>
<td>0.33</td>
<td>0.15</td>
<td>0.38</td>
<td>1.93</td>
</tr>
<tr>
<td>Temperature</td>
<td>°C</td>
<td>NA</td>
<td>25.48</td>
<td>26.41</td>
<td>27.05</td>
<td>25.78</td>
<td>25.70</td>
<td>24.03</td>
<td>23.70</td>
<td>25.54</td>
<td>25.81</td>
</tr>
<tr>
<td>Specific Conductivity</td>
<td>umhos/cm</td>
<td>NA</td>
<td>3940</td>
<td>4180</td>
<td>4000</td>
<td>4060</td>
<td>4290</td>
<td>4120</td>
<td>4170</td>
<td>4063</td>
<td>3960</td>
</tr>
<tr>
<td>pH (field)</td>
<td>SU</td>
<td>6.5 - 8.5</td>
<td>6.80</td>
<td>6.67</td>
<td>6.71</td>
<td>6.83</td>
<td>6.82</td>
<td>6.79</td>
<td>6.84</td>
<td>6.78</td>
<td>6.81</td>
</tr>
<tr>
<td>Dissolved Oxygen</td>
<td>mg/L</td>
<td>NA</td>
<td>0.10</td>
<td>0.22</td>
<td>0.14</td>
<td>0.10 U</td>
<td>0.10 U</td>
<td>0.10 U</td>
<td>0.27</td>
<td>0.10</td>
<td>0.28</td>
</tr>
<tr>
<td>Redox Potential</td>
<td>mV</td>
<td>NA</td>
<td>-49.1</td>
<td>-74.1</td>
<td>-34.8</td>
<td>-107.0</td>
<td>-136</td>
<td>-110</td>
<td>-80.4</td>
<td>-80.6</td>
<td>-122.0</td>
</tr>
<tr>
<td>Turbidity (field)</td>
<td>NTU</td>
<td>NA</td>
<td>8.01</td>
<td>3.88</td>
<td>2.08</td>
<td>3.22</td>
<td>0.890</td>
<td>1.99</td>
<td>4.12</td>
<td>3.63</td>
<td>1.58</td>
</tr>
</tbody>
</table>

**Notes and Abbreviations provided on Page 6.**
Table 3: Summary of Baseline Groundwater Monitoring Analytical Results
TEC Big Bend Economizer Ash and Pyrite Pond System
Gibsonton, Florida

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Units</th>
<th>MCL</th>
<th>Result Q</th>
<th>Result Q</th>
<th>Result Q</th>
<th>Result Q</th>
<th>Result Q</th>
<th>Result Q</th>
<th>Result Q</th>
<th>Result Q</th>
<th>Result Q</th>
<th>Result Q</th>
<th>Result Q</th>
</tr>
</thead>
<tbody>
<tr>
<td>Depth to Water</td>
<td>ft BTOC</td>
<td>--</td>
<td>2.45</td>
<td>5.30</td>
<td>5.35</td>
<td>6.78</td>
<td>6.88</td>
<td>6.97</td>
<td>7.15</td>
<td>6.07</td>
<td>5.06</td>
<td>6.33</td>
<td>6.88</td>
</tr>
<tr>
<td>Groundwater Elevation</td>
<td>ft NAVD 88</td>
<td>--</td>
<td>4.69</td>
<td>2.84</td>
<td>2.79</td>
<td>1.36</td>
<td>1.26</td>
<td>1.21</td>
<td>0.99</td>
<td>1.17</td>
<td>3.08</td>
<td>1.61</td>
<td>1.26</td>
</tr>
<tr>
<td>Specific Conductivity (field)</td>
<td>umhos/cm</td>
<td>NA</td>
<td>1580</td>
<td>1700</td>
<td>1570</td>
<td>1500</td>
<td>1540</td>
<td>1560</td>
<td>1540</td>
<td>1485</td>
<td>1630</td>
<td>1560</td>
<td>1350</td>
</tr>
<tr>
<td>pH (field)</td>
<td>SU</td>
<td>6.5 - 8.5</td>
<td>6.80</td>
<td>6.68</td>
<td>6.74</td>
<td>6.87</td>
<td>6.89</td>
<td>6.89</td>
<td>6.93</td>
<td>6.87</td>
<td>6.97</td>
<td>6.92</td>
<td>6.87</td>
</tr>
<tr>
<td>Dissolved Oxygen</td>
<td>mg/L</td>
<td>NA</td>
<td>0.10</td>
<td>0.13</td>
<td>0.100 U</td>
<td>0.13</td>
<td>0.10 U</td>
<td>0.10 U</td>
<td>0.24</td>
<td>0.10 U</td>
<td>0.25</td>
<td>0.20</td>
<td>NA</td>
</tr>
<tr>
<td>Redox Potential</td>
<td>mV</td>
<td>NA</td>
<td>-71.0</td>
<td>-67.4</td>
<td>-27.3</td>
<td>-183</td>
<td>-186</td>
<td>-128</td>
<td>-131</td>
<td>-154</td>
<td>-233</td>
<td>-188</td>
<td>NA</td>
</tr>
<tr>
<td>Turbidity (field)</td>
<td>NTU</td>
<td>NA</td>
<td>4.90</td>
<td>7.16</td>
<td>3.31</td>
<td>3.73</td>
<td>7.10</td>
<td>4.93</td>
<td>4.33</td>
<td>4.71</td>
<td>4.56</td>
<td>3.22</td>
<td>3.03</td>
</tr>
</tbody>
</table>

**Appendix III Parameters**

- **Boron**: mg/L 1.4**
- **Calcium**: mg/L NA
- **Chloride**: mg/L 118 140 124 112 V 111 V 115 J- 119 105 114 V 113 70.9
- **Fluoride**: mg/L 0.148 0.183 0.150 0.171 0.168 0.248 J+ 0.237 0.214 0.166 J 0.155 0.182
- **Sulfate**: mg/L 471 542 484 468 468 490 J- 485 J- 415 J- 481 459 432
- **Total Dissolved Solids**: mg/L 1170 J- 1170 1170 1130 1110 1140 1150 1080 1140 1080 1080 1030

**Appendix IV Parameters**

- **Antimony**: ug/L 6 0.600 U 0.830 I 0.600 U 0.600 U 0.600 U 0.600 U 0.600 U 0.600 U 1.20 U 0.600 U
- **Arsenic**: ug/L 10 1.83 I 0.990 I 1.25 1.16 I 1.37 I 1.09 I 2.64 1.01 I 0.974 I 1.02 J 1.14 J
- **Barium**: ug/L/ 2000 65.0 64.8 61.4 60.6 62.4 54.6 55.8 54.6 54.6 56.8 53.3
- **Beryllium**: ug/L 4 0.200 U 0.200 U 0.200 U 0.200 U 0.200 U 0.200 U 0.200 U 0.200 U 0.200 U 0.200 U 0.200 U 0.200 U
- **Cadmium**: ug/L 5 0.100 U 0.100 U 0.100 U 0.100 U 0.100 U 0.100 U 0.100 U 0.100 U 0.100 U 0.100 U 0.100 U 0.200 U
- **Chromium**: ug/L 100 1.60 U 1.60 U 1.60 U 1.60 U 1.60 U 1.60 U 1.60 U 1.60 U 1.60 U 1.60 U 1.60 U
- **Cobalt**: ug/L 140** 1.09 U 0.0900 I 0.0776 I 0.107 I 0.105 I 0.0902 I 2.0 U 0.0875 I 0.0857 I 0.150 J 0.115 J
- **Lead**: ug/L 15 0.0800 U 0.110 I 0.0800 U 0.129 I 0.0955 I 0.0800 I 0.176 I 0.144 I 0.127 I 0.244 J 0.15 J
- **Lithium**: ug/L 140** 10 I 17 I 11 I 14 I 11 I 13 I 13 I 14 I 16 I 0.050 U 0.050 U
- **Mercury**: ug/L 2 0.0500 U 0.0500 U 0.0500 U 0.0500 U 0.0500 U 0.0500 U 0.0500 U 0.0500 U 0.0500 U 0.0500 U
- **Molybdenum**: ug/L 35** 1.75 I 1.00 U 7.78 1.00 U 1.43 I 2.52 I 9.82 I 9.59 U 9.88 I 3.02 J 1.99 J
- **Radium 226/228**: pCi/L 1 15.0 13.2 32 14.9 14.8 13.9 14.2 14.7 14.4 12.1 13.5
- **Selenium**: ug/L 50 0.376 I 0.280 I 0.200 U 0.333 I 0.259 I 0.200 U 0.200 U 0.200 U 0.247 I 0.662 J 0.474 J
- **Thallium**: ug/L 2 0.100 U 0.100 U 0.100 U 0.100 U 0.100 U 0.100 U 0.100 U 0.100 U 0.100 U 0.200 U 0.100 U

Notes and Abbreviations provided on Page 6.
### Table 3: Summary of Baseline Groundwater Monitoring Analytical Results

**TEC Big Bend Economizer Ash and Pyrite Pond System**

**Gibsonton, Florida**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Units</th>
<th>MCL</th>
<th>Well ID</th>
<th>Sample Date</th>
<th>Result</th>
<th>Q</th>
</tr>
</thead>
<tbody>
<tr>
<td>Top of Casing Elevation</td>
<td>ft NAVD 88</td>
<td>--</td>
<td>BBS-CCR-3</td>
<td>06/26/2016</td>
<td>6.78</td>
<td>6.78</td>
</tr>
<tr>
<td>Depth to Water</td>
<td>ft BTOC</td>
<td>--</td>
<td>BBS-CCR-3</td>
<td>06/26/2016</td>
<td>6.78</td>
<td>6.78</td>
</tr>
<tr>
<td>Groundwater Elevation</td>
<td>ft NAVD 88</td>
<td>--</td>
<td>BBS-CCR-3</td>
<td>06/26/2016</td>
<td>6.78</td>
<td>6.78</td>
</tr>
<tr>
<td>Temperature</td>
<td>°F</td>
<td>NA</td>
<td>BBS-CCR-3</td>
<td>06/26/2016</td>
<td>26.62</td>
<td>27.28</td>
</tr>
<tr>
<td>Specific Conductivity (field)</td>
<td>umhos/cm</td>
<td>NA</td>
<td>BBS-CCR-3</td>
<td>06/26/2016</td>
<td>1580</td>
<td>1740</td>
</tr>
<tr>
<td>pH (field)</td>
<td>SU</td>
<td>6.5 - 8.5</td>
<td>BBS-CCR-3</td>
<td>06/26/2016</td>
<td>6.42</td>
<td>6.19</td>
</tr>
<tr>
<td>Dissolved Oxygen</td>
<td>mg/L</td>
<td>NA</td>
<td>BBS-CCR-3</td>
<td>06/26/2016</td>
<td>0.54</td>
<td>0.100</td>
</tr>
<tr>
<td>Redox Potential</td>
<td>mV</td>
<td>NA</td>
<td>BBS-CCR-3</td>
<td>06/26/2016</td>
<td>-145</td>
<td>115</td>
</tr>
<tr>
<td>Turbidity (field)</td>
<td>NTU</td>
<td>NA</td>
<td>BBS-CCR-3</td>
<td>06/26/2016</td>
<td>11.5</td>
<td>8.04</td>
</tr>
</tbody>
</table>

### Appendix III Parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Units</th>
<th>MCL</th>
<th>Well ID</th>
<th>Sample Date</th>
<th>Result</th>
<th>Q</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boron</td>
<td>mg/L</td>
<td>0.14**</td>
<td>BBS-CCR-3</td>
<td>06/26/2016</td>
<td>0.662</td>
<td>13.2</td>
</tr>
<tr>
<td>Calcium</td>
<td>mg/L</td>
<td>NA</td>
<td>BBS-CCR-3</td>
<td>06/26/2016</td>
<td>187</td>
<td>196</td>
</tr>
<tr>
<td>Chloride</td>
<td>mg/L</td>
<td>250</td>
<td>BBS-CCR-3</td>
<td>06/26/2016</td>
<td>88.9</td>
<td>140</td>
</tr>
<tr>
<td>Fluoride</td>
<td>mg/L</td>
<td>4***</td>
<td>BBS-CCR-3</td>
<td>06/26/2016</td>
<td>0.313</td>
<td>0.262</td>
</tr>
<tr>
<td>Sulfate</td>
<td>mg/L</td>
<td>250</td>
<td>BBS-CCR-3</td>
<td>06/26/2016</td>
<td>474</td>
<td>516</td>
</tr>
<tr>
<td>Total Dissolved Solids</td>
<td>mg/L</td>
<td>350</td>
<td>BBS-CCR-3</td>
<td>06/26/2016</td>
<td>1200</td>
<td>1220</td>
</tr>
</tbody>
</table>

### Appendix IV Parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Units</th>
<th>MCL</th>
<th>Well ID</th>
<th>Sample Date</th>
<th>Result</th>
<th>Q</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antimony</td>
<td>ug/L</td>
<td>0.600</td>
<td>BBS-CCR-3</td>
<td>06/26/2016</td>
<td>0.600</td>
<td>0.770</td>
</tr>
<tr>
<td>Arsenic</td>
<td>ug/L</td>
<td>10</td>
<td>BBS-CCR-3</td>
<td>06/26/2016</td>
<td>1.23</td>
<td>0.540</td>
</tr>
<tr>
<td>Barium</td>
<td>ug/L</td>
<td>2000</td>
<td>BBS-CCR-3</td>
<td>06/26/2016</td>
<td>65.3</td>
<td>67.6</td>
</tr>
<tr>
<td>Beryllium</td>
<td>ug/L</td>
<td>4</td>
<td>BBS-CCR-3</td>
<td>06/26/2016</td>
<td>0.200</td>
<td>0.200</td>
</tr>
<tr>
<td>Cadmium</td>
<td>ug/L</td>
<td>5</td>
<td>BBS-CCR-3</td>
<td>06/26/2016</td>
<td>0.100</td>
<td>0.100</td>
</tr>
<tr>
<td>Chromium</td>
<td>ug/L</td>
<td>100</td>
<td>BBS-CCR-3</td>
<td>06/26/2016</td>
<td>1.60</td>
<td>1.60</td>
</tr>
<tr>
<td>Cobalt</td>
<td>ug/L</td>
<td>140**</td>
<td>BBS-CCR-3</td>
<td>06/26/2016</td>
<td>1.00</td>
<td>0.0989</td>
</tr>
<tr>
<td>Lead</td>
<td>ug/L</td>
<td>15</td>
<td>BBS-CCR-3</td>
<td>06/26/2016</td>
<td>0.125</td>
<td>0.0800</td>
</tr>
<tr>
<td>Lithium</td>
<td>ug/L</td>
<td>140**</td>
<td>BBS-CCR-3</td>
<td>06/26/2016</td>
<td>3.7</td>
<td>11</td>
</tr>
<tr>
<td>Mercury</td>
<td>ug/L</td>
<td>2</td>
<td>BBS-CCR-3</td>
<td>06/26/2016</td>
<td>0.0580</td>
<td>0.0550</td>
</tr>
<tr>
<td>Molybdenum</td>
<td>ug/L</td>
<td>35**</td>
<td>BBS-CCR-3</td>
<td>06/26/2016</td>
<td>4.09</td>
<td>2.23</td>
</tr>
<tr>
<td>Radium 226/228</td>
<td>pCi/L</td>
<td>1</td>
<td>BBS-CCR-3</td>
<td>06/26/2016</td>
<td>10.3</td>
<td>12.3</td>
</tr>
<tr>
<td>Selenium</td>
<td>ug/L</td>
<td>50</td>
<td>BBS-CCR-3</td>
<td>06/26/2016</td>
<td>0.262</td>
<td>0.270</td>
</tr>
<tr>
<td>Thallium</td>
<td>ug/L</td>
<td>2</td>
<td>BBS-CCR-3</td>
<td>06/26/2016</td>
<td>0.100</td>
<td>0.100</td>
</tr>
</tbody>
</table>

Notes and Abbreviations provided on Page 6.
### Notes:

1. **U**: Laboratory qualifier - Indicates that the compound was not detected above the reporting limit.

2. **I**: Laboratory qualifier - The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit; estimated value.

3. **J**: Laboratory qualifier - The reported value is an estimated value.

4. **J**: Data validation qualifier - The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

5. **U**: Data validation qualifier - The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

6. **J**: Data validation qualifier - The analyte was positively identified; however, the associated numerical value is likely to be lower than the concentration of the analyte in the sample due to negative bias of associated QC or calibration data or attributable to matrix interference.

7. **J**: Data validation qualifier - The analyte was positively identified; however, the associated numerical value is likely to be higher than the concentration of the analyte in the sample due to positive bias of associated QC or calibration data or attributable to matrix interference.

8. **V**: Analyte detected in the method blank.

9. **J**: Laboratory qualifier - Re-analysis of sample beyond the accepted holding time.

10. **J**: Laboratory qualifier - Estimated value; value may not be accurate. Spike recovery or RPD outside of criteria.

11. **MCLs**: EPA Maximum Contaminant Levels; primary enforceable standards shown unless otherwise noted. Secondary (non-enforceable) standards shown in italics.

12. **Detections shown in bold text.**

13. **Florida GCTLs** per FDEP Chapter 62-777 of the Florida Administrative Code.

14. **Secondary MCL** for fluoride is 2 mg/L but not enforceable.

15. **Background / Upgradient Well shaded green.**

### Abbreviations:

- **Q**: Data qualifier
- **C**: Celsius
- **ft BTC**: feet below top of well casing
- **mg/L**: milligrams per liter
- **SU**: Standard units
- **ft NAVD 88**: feet elevation in North American Vertical Datum 1988
- **ug/L**: micrograms per liter
- **umhos/cm**: micromhos per centimeter
- **mV**: millivolts

---

Table 1 - B8 CCR DATA 2016-2017

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Analyte 1</td>
<td>5.5 mg/L</td>
</tr>
<tr>
<td>Analyte 2</td>
<td>2.3 mg/L</td>
</tr>
<tr>
<td>Analyte 3</td>
<td>0.8 mg/L</td>
</tr>
</tbody>
</table>

---

**GEOSYNTEC CONSULTANTS**
FIGURES
Long Term Bottom Ash Area

Long Term Fly Ash Pond/Reclaimed Water Pond (lined)

Limestone and FGD Area

South Economizer Ash Pond (lined)

South Bottom Ash Pond (lined)

North Economizer Ash Pond (lined)

South Recycle Pond (lined)

Economizer Ash Suction Pond (lined)

Bottom Ash Suction Pond (lined)

Settling Pond (lined)

Settling Basins (concrete)

South Recycle Pond (lined)

North Bottom Ash Pond (lined)

South Economizer Ash Pond (lined)

South Recycle Pond (lined)

Economizer Ash and Pyrite Pond System (EAPPS)

Legend

Jackson Branch

Economizer Ash and Pyrite Pond System (EAPPS)

Note:
Source of 2014 Aerials: Florida Department of Transportation, Surveying and Mapping Office.

Economizer Ash and Pyrite Pond System Location Map

TEC Big Bend Station
Gibsonton, FL

Geosyntec consultants

Tampa, FL

January 2018
Economizer Suction Pond (Lined)
North Economizer Ash Pond (Lined)
South Economizer Ash Pond (Lined)
Long Term Fly Ash Pond (Lined)

Legend
- Background Well Location
- CCR Monitoring Well Location

Note:
2014 Aerial Imagery source, Florida Department of Transportation Surveying and Mapping Office APLUS website.
APPENDIX A

Laboratory Analytical Reports
JUNE 2016
REPORT REVISED TO ADD: Co, Ca and Rad-226/228.

8 sample(s) were received on 06/24/16 14:25.

There were no issues noted with the sample(s) associated with this workorder unless noted below.

**SM 2540C**

A constant weight could not be achieved after three consecutive weighing and drying cycles for samples PZ-1, PZ-2, PZ-5 and PZ-6. The sample(s) are flagged with a J qualifier.

**EPA 300.0**

The recovery of the matrix spike and spike duplicate for Chloride and Sulfate were below the control limits due to matrix interference. The parent sample is flagged with a J qualifier.

**EPA 200.8**

The recovery of the matrix spike and spike duplicate for Cadmium was below the control limits due to matrix interference. The parent sample is flagged with a J qualifier.
## Laboratory Results

### Sample Qualifier:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier Code</th>
<th>Dil</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>General Chemistry Parameters</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chloride</td>
<td>619</td>
<td>mg/L</td>
<td>0.200</td>
<td>5.00</td>
<td>10</td>
<td>EPA 300.0</td>
<td>RFL</td>
<td>6/28/16 16:42</td>
<td></td>
</tr>
<tr>
<td>Specific Conductance</td>
<td>3940</td>
<td>umhos/cm</td>
<td>100</td>
<td>100</td>
<td>1</td>
<td>FDEP SOP FT 1200</td>
<td>RAB</td>
<td>6/24/16 13:32</td>
<td></td>
</tr>
<tr>
<td>Dissolved Oxygen</td>
<td>0.100</td>
<td>mg/L</td>
<td>0.100</td>
<td>0.100</td>
<td>1</td>
<td>FDEP SOP FT 1500</td>
<td>RAB</td>
<td>6/24/16 13:32</td>
<td></td>
</tr>
<tr>
<td>Fluoride</td>
<td>0.211</td>
<td>mg/L</td>
<td>0.0100</td>
<td>0.0500</td>
<td>1</td>
<td>EPA 300.0</td>
<td>RFL</td>
<td>6/28/16 16:26</td>
<td></td>
</tr>
<tr>
<td>pH</td>
<td>6.80</td>
<td>pH Units</td>
<td>1.00</td>
<td>1.00</td>
<td>1</td>
<td>FDEP SOP FT 1100</td>
<td>RAB</td>
<td>6/24/16 13:32</td>
<td></td>
</tr>
<tr>
<td>REDOX Potential</td>
<td>-49.1</td>
<td>mV</td>
<td>-999</td>
<td>-999</td>
<td>1</td>
<td>SM 2580B</td>
<td>RAB</td>
<td>6/24/16 13:32</td>
<td></td>
</tr>
<tr>
<td>Total Dissolved Solids</td>
<td>3060</td>
<td>mg/L</td>
<td>24.0</td>
<td>40.0</td>
<td>J-</td>
<td>SM 2540C</td>
<td>TMH</td>
<td>6/28/16 15:09</td>
<td></td>
</tr>
<tr>
<td>Sulfate</td>
<td>1240</td>
<td>mg/L</td>
<td>10.0</td>
<td>40.0</td>
<td>20</td>
<td>EPA 300.0</td>
<td>RFL</td>
<td>6/29/16 11:53</td>
<td></td>
</tr>
<tr>
<td>Turbidity</td>
<td>8.01</td>
<td>NTU</td>
<td>0.100</td>
<td>0.100</td>
<td>1</td>
<td>FDEP SOP FT 1600</td>
<td>RAB</td>
<td>6/24/16 13:32</td>
<td></td>
</tr>
</tbody>
</table>

#### Total Mercury by SW846 Method 7470/7471

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier Code</th>
<th>Dil</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mercury</td>
<td>0.0500</td>
<td>ug/L</td>
<td>0.0500</td>
<td>0.200</td>
<td>U</td>
<td>1</td>
<td>EPA 7470A</td>
<td>MCR</td>
<td>7/7/16 10:01</td>
</tr>
</tbody>
</table>

#### Total Recoverable Metals by 200 Series

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier Code</th>
<th>Dil</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antimony</td>
<td>0.600</td>
<td>ug/L</td>
<td>0.600</td>
<td>2.00</td>
<td>U</td>
<td>1</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>7/5/16 10:28</td>
</tr>
<tr>
<td>Arsenic</td>
<td>8.74</td>
<td>ug/L</td>
<td>0.320</td>
<td>2.00</td>
<td>U</td>
<td>1</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>7/5/16 10:28</td>
</tr>
<tr>
<td>Cadmium</td>
<td>0.100</td>
<td>ug/L</td>
<td>0.100</td>
<td>0.500</td>
<td>J-</td>
<td>1</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>7/5/16 10:28</td>
</tr>
<tr>
<td>Cobalt</td>
<td>1.00</td>
<td>ug/L</td>
<td>1.00</td>
<td>20.0</td>
<td>U</td>
<td>1</td>
<td>EPA 200.7</td>
<td>MCR</td>
<td>7/5/16 13:14</td>
</tr>
<tr>
<td>Lead</td>
<td>0.0800</td>
<td>ug/L</td>
<td>0.0800</td>
<td>2.00</td>
<td>U</td>
<td>1</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>7/5/16 10:28</td>
</tr>
<tr>
<td>Selenium</td>
<td>0.696</td>
<td>ug/L</td>
<td>0.200</td>
<td>2.00</td>
<td>I</td>
<td>1</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>7/5/16 10:28</td>
</tr>
<tr>
<td>Thallium</td>
<td>0.100</td>
<td>ug/L</td>
<td>0.100</td>
<td>0.500</td>
<td>U</td>
<td>1</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>7/5/16 10:28</td>
</tr>
</tbody>
</table>

#### Total Recoverable Metals by SW846 Method 6010B

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier Code</th>
<th>Dil</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barium</td>
<td>122</td>
<td>ug/L</td>
<td>0.500</td>
<td>20.0</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>7/5/16 13:14</td>
<td></td>
</tr>
<tr>
<td>Beryllium</td>
<td>0.200</td>
<td>ug/L</td>
<td>0.200</td>
<td>2.00</td>
<td>U</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>7/5/16 13:14</td>
</tr>
</tbody>
</table>

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
## Sample Information

Client: Big Bend Power Station  
Lab Sample ID: L16F174-01  
Sample Description: PZ1  
Sample Collection Method: Grab  
Sampled By: Robert Barthelette  
Date and Time Collected: 6/24/16 13:32  
Date of Sample Receipt: 6/24/16 14:25

## Laboratory Results

### Sample Qualifier:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier Code</th>
<th>Dil</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boron</td>
<td>14400</td>
<td>ug/L</td>
<td>10.0</td>
<td>50.0</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>7/5/16 13:14</td>
<td></td>
</tr>
<tr>
<td>Calcium</td>
<td>541000</td>
<td>ug/L</td>
<td>30.0</td>
<td>1000</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>7/5/16 13:14</td>
<td></td>
</tr>
<tr>
<td>Chromium</td>
<td>1.60</td>
<td>ug/L</td>
<td>1.60</td>
<td>12.0</td>
<td>U</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>7/5/16 13:14</td>
<td></td>
</tr>
<tr>
<td>Molybdenum</td>
<td>106</td>
<td>ug/L</td>
<td>1.00</td>
<td>20.0</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>7/5/16 13:14</td>
<td></td>
</tr>
<tr>
<td>Radium - 226</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rad - 226</td>
<td>37</td>
<td>pCi/L</td>
<td>0.4</td>
<td>0.4</td>
<td>1</td>
<td>EPA 903.0</td>
<td>KL1</td>
<td>7/1/16 13:23</td>
<td></td>
</tr>
<tr>
<td>Rad - 226 Counting Error +/-</td>
<td>2.6</td>
<td>pCi/L</td>
<td>1.0</td>
<td>1.0</td>
<td>1</td>
<td>EPA Ra-05</td>
<td>KL1</td>
<td>7/5/16 11:17</td>
<td></td>
</tr>
<tr>
<td>Radium - 228</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rad - 228</td>
<td>1.6</td>
<td>pCi/L</td>
<td>1.0</td>
<td>1.0</td>
<td>1</td>
<td>EPA Ra-05</td>
<td>KL1</td>
<td>7/5/16 11:17</td>
<td></td>
</tr>
<tr>
<td>Rad - 228 Counting Error +/-</td>
<td>0.7</td>
<td>pCi/L</td>
<td>1.0</td>
<td>1.0</td>
<td>1</td>
<td>EPA Ra-05</td>
<td>KL1</td>
<td>7/5/16 11:17</td>
<td></td>
</tr>
<tr>
<td>Radium-226/228</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rad-226/228</td>
<td>39</td>
<td>pCi/L</td>
<td>1.0</td>
<td>1.0</td>
<td>1</td>
<td>Calc</td>
<td>KL1</td>
<td>7/5/16 11:17</td>
<td></td>
</tr>
<tr>
<td>Rad-226/228 Counting Error +/-</td>
<td>2.6</td>
<td>pCi/L</td>
<td>1.0</td>
<td>1.0</td>
<td>1</td>
<td>Calc</td>
<td>KL1</td>
<td>7/5/16 11:17</td>
<td></td>
</tr>
<tr>
<td>Metals (ICP)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lithium</td>
<td>0.0083</td>
<td>mg/L</td>
<td>0.0010</td>
<td>0.050</td>
<td>I</td>
<td>200.7 Rev 4.4 Z01</td>
<td>GESP</td>
<td>7/1/16 14:31</td>
<td></td>
</tr>
</tbody>
</table>

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
### Sample Information

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier Code</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chloride</td>
<td>118</td>
<td>mg/L</td>
<td>0.200</td>
<td>5.00</td>
<td>10</td>
<td>EPA 300.0</td>
<td>RFL</td>
<td>6/28/16 17:14</td>
</tr>
<tr>
<td>Specific Conductance</td>
<td>1580</td>
<td>umhos/cm</td>
<td>100</td>
<td>100</td>
<td>1</td>
<td>FDEP SOP FT 1200</td>
<td>RAB</td>
<td>6/24/16 13:08</td>
</tr>
<tr>
<td>Dissolved Oxygen</td>
<td>0.100</td>
<td>mg/L</td>
<td>0.100</td>
<td>0.100</td>
<td>1</td>
<td>FDEP SOP FT 1500</td>
<td>RAB</td>
<td>6/24/16 13:08</td>
</tr>
<tr>
<td>Fluoride</td>
<td>0.148</td>
<td>mg/L</td>
<td>0.0100</td>
<td>0.0500</td>
<td>1</td>
<td>EPA 300.0</td>
<td>RFL</td>
<td>6/28/16 16:58</td>
</tr>
<tr>
<td>pH</td>
<td>6.80</td>
<td>pH Units</td>
<td>1.00</td>
<td>1.00</td>
<td>1</td>
<td>FDEP SOP FT 1100</td>
<td>RAB</td>
<td>6/24/16 13:08</td>
</tr>
<tr>
<td>REDOX Potential</td>
<td>-71.0</td>
<td>mV</td>
<td>-999</td>
<td>-999</td>
<td>1</td>
<td>SM 2580B</td>
<td>RAB</td>
<td>6/24/16 13:08</td>
</tr>
<tr>
<td>Total Dissolved Solids</td>
<td>1170</td>
<td>mg/L</td>
<td>12.0</td>
<td>20.0</td>
<td>J</td>
<td>SM 2540C</td>
<td>TMH</td>
<td>6/28/16 15:09</td>
</tr>
<tr>
<td>Sulfate</td>
<td>471</td>
<td>mg/L</td>
<td>5.00</td>
<td>20.0</td>
<td>10</td>
<td>EPA 300.0</td>
<td>RFL</td>
<td>6/29/16 12:09</td>
</tr>
<tr>
<td>Turbidity</td>
<td>4.90</td>
<td>NTU</td>
<td>0.100</td>
<td>0.100</td>
<td>1</td>
<td>FDEP SOP FT 1600</td>
<td>RAB</td>
<td>6/24/16 13:08</td>
</tr>
</tbody>
</table>

### Total Mercury by SW846 Method 7470/7471

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier Code</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mercury</td>
<td>0.0500</td>
<td>ug/L</td>
<td>0.0500</td>
<td>0.200</td>
<td>U</td>
<td>EPA 7470A</td>
<td>MCR</td>
<td>7/7/16 10:05</td>
</tr>
</tbody>
</table>

### Total Recoverable Metals by 200 Series

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier Code</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antimony</td>
<td>0.600</td>
<td>ug/L</td>
<td>0.600</td>
<td>2.00</td>
<td>U</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>7/5/16 10:32</td>
</tr>
<tr>
<td>Arsenic</td>
<td>1.83</td>
<td>ug/L</td>
<td>0.320</td>
<td>2.00</td>
<td>I</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>7/5/16 10:32</td>
</tr>
<tr>
<td>Cadmium</td>
<td>0.100</td>
<td>ug/L</td>
<td>0.100</td>
<td>0.500</td>
<td>U</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>7/5/16 10:32</td>
</tr>
<tr>
<td>Cobalt</td>
<td>1.00</td>
<td>ug/L</td>
<td>1.00</td>
<td>20.0</td>
<td>U</td>
<td>EPA 200.7</td>
<td>MCR</td>
<td>7/5/16 13:17</td>
</tr>
<tr>
<td>Lead</td>
<td>0.0800</td>
<td>ug/L</td>
<td>0.0800</td>
<td>2.00</td>
<td>U</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>7/5/16 10:32</td>
</tr>
<tr>
<td>Selenium</td>
<td>0.376</td>
<td>ug/L</td>
<td>0.200</td>
<td>2.00</td>
<td>I</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>7/5/16 10:32</td>
</tr>
<tr>
<td>Thallium</td>
<td>0.100</td>
<td>ug/L</td>
<td>0.100</td>
<td>0.500</td>
<td>U</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>7/5/16 10:32</td>
</tr>
</tbody>
</table>

### Total Recoverable Metals by SW846 Method 6010B

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier Code</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barium</td>
<td>65.0</td>
<td>ug/L</td>
<td>0.500</td>
<td>20.0</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>7/5/16 13:17</td>
</tr>
<tr>
<td>Beryllium</td>
<td>0.200</td>
<td>ug/L</td>
<td>0.200</td>
<td>2.00</td>
<td>U</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>7/5/16 13:17</td>
</tr>
</tbody>
</table>

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
Sample Information

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier Code</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boron</td>
<td>1550</td>
<td>ug/L</td>
<td>10.0</td>
<td>50.0</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>7/5/16 13:17</td>
</tr>
<tr>
<td>Calcium</td>
<td>198000</td>
<td>ug/L</td>
<td>30.0</td>
<td>1000</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>7/8/16 11:00</td>
</tr>
<tr>
<td>Chromium</td>
<td>1.60</td>
<td>ug/L</td>
<td>1.60</td>
<td>12.0</td>
<td>U</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>7/5/16 13:17</td>
</tr>
<tr>
<td>Molybdenum</td>
<td>1.73</td>
<td>ug/L</td>
<td>1.00</td>
<td>20.0</td>
<td>I</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>7/5/16 13:17</td>
</tr>
</tbody>
</table>

Laboratory Results

**Sample Qualifier:**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>Qualifier</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Radium - 226</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rad - 226</td>
<td>13.4</td>
<td>pCi/L</td>
<td>0.7</td>
<td>1</td>
<td>EPA 903.0</td>
<td>KL1 7/1/16 13:23</td>
</tr>
<tr>
<td>Rad - 226 Counting Error +/-</td>
<td>1.7</td>
<td>pCi/L</td>
<td>0.7</td>
<td>1</td>
<td>EPA 903.0</td>
<td>KL1 7/1/16 13:23</td>
</tr>
<tr>
<td>Radium - 228</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rad - 228</td>
<td>1.6</td>
<td>pCi/L</td>
<td>1.0</td>
<td>1</td>
<td>EPA Ra-05</td>
<td>KL1 7/5/16 11:17</td>
</tr>
<tr>
<td>Rad - 228 Counting Error +/-</td>
<td>0.7</td>
<td>pCi/L</td>
<td>1.0</td>
<td>1</td>
<td>EPA Ra-05</td>
<td>KL1 7/5/16 11:17</td>
</tr>
<tr>
<td>Radium-226/228</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rad-226/228</td>
<td>15.0</td>
<td>pCi/L</td>
<td>1.0</td>
<td>1</td>
<td>Calc</td>
<td>KL1 7/5/16 11:17</td>
</tr>
<tr>
<td>Rad-226/228 Counting Error +/-</td>
<td>1.7</td>
<td>pCi/L</td>
<td>1.0</td>
<td>1</td>
<td>Calc</td>
<td>KL1 7/5/16 11:17</td>
</tr>
</tbody>
</table>

**Metals (ICP)**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>Qualifier</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithium</td>
<td>0.010</td>
<td>mg/L</td>
<td>0.0010</td>
<td>1</td>
<td>200.7 Rev 4.4 Z01</td>
<td>GESP 7/1/16 14:35</td>
</tr>
</tbody>
</table>

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
Laboratory Results

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Code</th>
<th>Dil</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>General Chemistry Parameters</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chloride</td>
<td>88.9</td>
<td>mg/L</td>
<td>0.0200</td>
<td>0.500</td>
<td>1</td>
<td>EPA 300.0</td>
<td>RFL</td>
<td>6/28/16 17:30</td>
<td></td>
</tr>
<tr>
<td>Specific Conductance</td>
<td>1580</td>
<td>umhos/cm</td>
<td>100</td>
<td>100</td>
<td>1</td>
<td>FDEP SOP FT 1200</td>
<td>RAB</td>
<td>6/24/16 12:31</td>
<td></td>
</tr>
<tr>
<td>Dissolved Oxygen</td>
<td>0.540</td>
<td>mg/L</td>
<td>0.100</td>
<td>0.100</td>
<td>1</td>
<td>FDEP SOP FT 1500</td>
<td>RAB</td>
<td>6/24/16 12:31</td>
<td></td>
</tr>
<tr>
<td>Fluoride</td>
<td>0.313</td>
<td>mg/L</td>
<td>0.0100</td>
<td>0.0500</td>
<td>1</td>
<td>EPA 300.0</td>
<td>RFL</td>
<td>6/28/16 17:30</td>
<td></td>
</tr>
<tr>
<td>pH</td>
<td>6.42</td>
<td>pH Units</td>
<td>1.00</td>
<td>1.00</td>
<td>1</td>
<td>FDEP SOP FT 1100</td>
<td>RAB</td>
<td>6/24/16 12:31</td>
<td></td>
</tr>
<tr>
<td>REDOX Potential</td>
<td>-145</td>
<td>mV</td>
<td>-999</td>
<td>-999</td>
<td>1</td>
<td>SM 2580B</td>
<td>RAB</td>
<td>6/24/16 12:31</td>
<td></td>
</tr>
<tr>
<td>Total Dissolved Solids</td>
<td>1200</td>
<td>mg/L</td>
<td>12.0</td>
<td>20.0</td>
<td>10</td>
<td>EPA 300.0</td>
<td>RFL</td>
<td>6/29/16 12:25</td>
<td></td>
</tr>
<tr>
<td>Sulfate</td>
<td>474</td>
<td>mg/L</td>
<td>5.00</td>
<td>20.0</td>
<td>1</td>
<td>SM 2540C</td>
<td>TMH</td>
<td>6/28/16 15:09</td>
<td></td>
</tr>
<tr>
<td>Turbidity</td>
<td>11.5</td>
<td>NTU</td>
<td>0.100</td>
<td>0.100</td>
<td>1</td>
<td>FDEP SOP FT 1600</td>
<td>RAB</td>
<td>6/24/16 12:31</td>
<td></td>
</tr>
<tr>
<td><strong>Total Mercury by SW846 Method 7470/7471</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mercury</td>
<td>0.0580</td>
<td>ug/L</td>
<td>0.0500</td>
<td>0.200</td>
<td>I</td>
<td>1</td>
<td>EPA 7470A</td>
<td>MCR</td>
<td>7/7/16 10:08</td>
</tr>
<tr>
<td><strong>Total Recoverable Metals by 200 Series</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Antimony</td>
<td>0.600</td>
<td>ug/L</td>
<td>0.600</td>
<td>2.00</td>
<td>U</td>
<td>1</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>7/5/16 10:36</td>
</tr>
<tr>
<td>Arsenic</td>
<td>1.23</td>
<td>ug/L</td>
<td>0.320</td>
<td>2.00</td>
<td>U</td>
<td>1</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>7/5/16 10:36</td>
</tr>
<tr>
<td>Cadmium</td>
<td>0.100</td>
<td>ug/L</td>
<td>0.100</td>
<td>0.500</td>
<td>U</td>
<td>1</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>7/5/16 10:36</td>
</tr>
<tr>
<td>Cobalt</td>
<td>1.00</td>
<td>ug/L</td>
<td>1.00</td>
<td>20.0</td>
<td>U</td>
<td>1</td>
<td>EPA 200.7</td>
<td>MCR</td>
<td>7/5/16 13:20</td>
</tr>
<tr>
<td>Lead</td>
<td>0.125</td>
<td>ug/L</td>
<td>0.0800</td>
<td>2.00</td>
<td>I</td>
<td>1</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>7/5/16 10:36</td>
</tr>
<tr>
<td>Selenium</td>
<td>0.262</td>
<td>ug/L</td>
<td>0.200</td>
<td>2.00</td>
<td>I</td>
<td>1</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>7/5/16 10:36</td>
</tr>
<tr>
<td>Thallium</td>
<td>0.100</td>
<td>ug/L</td>
<td>0.100</td>
<td>0.500</td>
<td>U</td>
<td>1</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>7/5/16 10:36</td>
</tr>
<tr>
<td><strong>Total Recoverable Metals by SW846 Method 6010B</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Barium</td>
<td>65.3</td>
<td>ug/L</td>
<td>0.500</td>
<td>20.0</td>
<td>1</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>7/5/16 13:20</td>
</tr>
<tr>
<td>Beryllium</td>
<td>0.200</td>
<td>ug/L</td>
<td>0.200</td>
<td>2.00</td>
<td>U</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>7/5/16 13:20</td>
</tr>
</tbody>
</table>

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
Sample Information

Client: Big Bend Power Station
Lab Sample ID: L16F174-03
Sample Description: PZ3
Sample Collection Method: Grab
Sampled By: Robert Barthelette
Date and Time Collected: 6/24/16 12:31
Date of Sample Receipt: 6/24/16 14:25

Laboratory Results

Sample Qualifier:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier Code</th>
<th>Dil</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boron</td>
<td>662</td>
<td>ug/L</td>
<td>10.0</td>
<td>50.0</td>
<td>1</td>
<td></td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>7/5/16 13:20</td>
</tr>
<tr>
<td>Calcium</td>
<td>187000</td>
<td>ug/L</td>
<td>30.0</td>
<td>1000</td>
<td>1</td>
<td></td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>7/8/16 11:03</td>
</tr>
<tr>
<td>Chromium</td>
<td>1.60</td>
<td>ug/L</td>
<td>1.60</td>
<td>12.0</td>
<td>U</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>7/5/16 13:20</td>
</tr>
<tr>
<td>Molybdenum</td>
<td>4.09</td>
<td>ug/L</td>
<td>1.00</td>
<td>20.0</td>
<td>I</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>7/5/16 13:20</td>
</tr>
</tbody>
</table>

**Radium - 226**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier Code</th>
<th>Dil</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rad - 226</td>
<td>9.6</td>
<td>pCi/L</td>
<td>0.5</td>
<td>0.5</td>
<td>1</td>
<td></td>
<td>EPA 903.0</td>
<td>KL1</td>
<td>7/1/16 13:23</td>
</tr>
<tr>
<td>Rad - 226 Counting Error +/-</td>
<td>1.4</td>
<td>pCi/L</td>
<td>1.0</td>
<td>1.0</td>
<td>U</td>
<td>1</td>
<td>EPA Ra-05</td>
<td>KL1</td>
<td>7/5/16 11:17</td>
</tr>
</tbody>
</table>

**Radium - 228**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier Code</th>
<th>Dil</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rad - 228</td>
<td>1.0</td>
<td>pCi/L</td>
<td>1.0</td>
<td>1.0</td>
<td>U</td>
<td>1</td>
<td>EPA Ra-05</td>
<td>KL1</td>
<td>7/5/16 11:17</td>
</tr>
<tr>
<td>Rad - 228 Counting Error +/-</td>
<td>0.6</td>
<td>pCi/L</td>
<td>1.0</td>
<td>1.0</td>
<td>U</td>
<td>1</td>
<td>EPA Ra-05</td>
<td>KL1</td>
<td>7/5/16 11:17</td>
</tr>
</tbody>
</table>

**Radium-226/228**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier Code</th>
<th>Dil</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rad-226/228</td>
<td>10.3</td>
<td>pCi/L</td>
<td>1.0</td>
<td>1.0</td>
<td>1</td>
<td></td>
<td>Calc</td>
<td>KL1</td>
<td>7/5/16 11:17</td>
</tr>
<tr>
<td>Rad-226/228 Counting Error +/-</td>
<td>1.4</td>
<td>pCi/L</td>
<td>1.0</td>
<td>1.0</td>
<td>1</td>
<td></td>
<td>Calc</td>
<td>KL1</td>
<td>7/5/16 11:17</td>
</tr>
</tbody>
</table>

**Metals (ICP)**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier Code</th>
<th>Dil</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithium</td>
<td>0.0037</td>
<td>mg/L</td>
<td>0.0010</td>
<td>0.050</td>
<td>1</td>
<td></td>
<td>200.7 Rev 4.4 Z01</td>
<td>GESP</td>
<td>7/1/16 14:38</td>
</tr>
</tbody>
</table>

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
## Sample Information

<table>
<thead>
<tr>
<th>Client:</th>
<th>Big Bend Power Station</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lab Sample ID:</td>
<td>L16F174-04</td>
</tr>
<tr>
<td>Sample Description:</td>
<td>PZ4</td>
</tr>
<tr>
<td>Sample Collection Method:</td>
<td>Grab</td>
</tr>
<tr>
<td>Sampled By:</td>
<td>Robert Barthelette</td>
</tr>
<tr>
<td>Date and Time Collected:</td>
<td>6/24/16 12:00</td>
</tr>
<tr>
<td>Date of Sample Receipt:</td>
<td>6/24/16 14:25</td>
</tr>
</tbody>
</table>

## Laboratory Results

### Sample Qualifier:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier Code</th>
<th>Dil</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chloride</td>
<td>28.7</td>
<td>mg/L</td>
<td>0.0200</td>
<td>0.500</td>
<td>1</td>
<td>EPA 300.0</td>
<td>RFL</td>
<td>6/28/16 18:02</td>
<td></td>
</tr>
<tr>
<td>Specific Conductance</td>
<td>1370</td>
<td>umhos/cm</td>
<td>100</td>
<td>100</td>
<td>1</td>
<td>FDEP SOP FT 1200</td>
<td>RAB</td>
<td>6/24/16 12:00</td>
<td></td>
</tr>
<tr>
<td>Dissolved Oxygen</td>
<td>0.150</td>
<td>mg/L</td>
<td>0.100</td>
<td>0.100</td>
<td>1</td>
<td>FDEP SOP FT 1500</td>
<td>RAB</td>
<td>6/24/16 12:00</td>
<td></td>
</tr>
<tr>
<td>Fluoride</td>
<td>0.151</td>
<td>mg/L</td>
<td>0.0100</td>
<td>0.0500</td>
<td>1</td>
<td>EPA 300.0</td>
<td>RFL</td>
<td>6/28/16 18:02</td>
<td></td>
</tr>
<tr>
<td>pH</td>
<td>6.70</td>
<td>pH Units</td>
<td>1.00</td>
<td>1.00</td>
<td>1</td>
<td>FDEP SOP FT 1100</td>
<td>RAB</td>
<td>6/24/16 12:00</td>
<td></td>
</tr>
<tr>
<td>REDOX Potential</td>
<td>-74.9</td>
<td>mV</td>
<td>-999</td>
<td>-999</td>
<td>1</td>
<td>SM 2580B</td>
<td>RAB</td>
<td>6/24/16 12:00</td>
<td></td>
</tr>
<tr>
<td>Total Dissolved Solids</td>
<td>1090</td>
<td>mg/L</td>
<td>12.0</td>
<td>20.0</td>
<td>10</td>
<td>EPA 300.0</td>
<td>RFL</td>
<td>6/29/16 12:41</td>
<td></td>
</tr>
<tr>
<td>Sulfate</td>
<td>442</td>
<td>mg/L</td>
<td>5.00</td>
<td>20.0</td>
<td>1</td>
<td>EPA 300.0</td>
<td>RFL</td>
<td>6/29/16 12:41</td>
<td></td>
</tr>
<tr>
<td>Turbidity</td>
<td>5.66</td>
<td>NTU</td>
<td>0.100</td>
<td>0.100</td>
<td>1</td>
<td>FDEP SOP FT 1600</td>
<td>RAB</td>
<td>6/24/16 12:00</td>
<td></td>
</tr>
</tbody>
</table>

### Total Mercury by SW846 Method 7470/7471

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier Code</th>
<th>Dil</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mercury</td>
<td>0.0500</td>
<td>ug/L</td>
<td>0.0500</td>
<td>0.200</td>
<td>U</td>
<td>1</td>
<td>EPA 7470A</td>
<td>MCR</td>
<td>7/7/16 10:12</td>
</tr>
</tbody>
</table>

### Total Recoverable Metals by 200 Series

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier Code</th>
<th>Dil</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antimony</td>
<td>0.600</td>
<td>ug/L</td>
<td>0.600</td>
<td>2.00</td>
<td>U</td>
<td>1</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>7/5/16 10:40</td>
</tr>
<tr>
<td>Arsenic</td>
<td>48.6</td>
<td>ug/L</td>
<td>0.320</td>
<td>2.00</td>
<td>U</td>
<td>1</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>7/5/16 10:40</td>
</tr>
<tr>
<td>Cadmium</td>
<td>0.100</td>
<td>ug/L</td>
<td>0.100</td>
<td>0.500</td>
<td>U</td>
<td>1</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>7/5/16 10:40</td>
</tr>
<tr>
<td>Cobalt</td>
<td>1.00</td>
<td>ug/L</td>
<td>1.00</td>
<td>20.0</td>
<td>U</td>
<td>1</td>
<td>EPA 200.7</td>
<td>MCR</td>
<td>7/5/16 13:23</td>
</tr>
<tr>
<td>Lead</td>
<td>0.0800</td>
<td>ug/L</td>
<td>0.0800</td>
<td>2.00</td>
<td>U</td>
<td>1</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>7/5/16 10:40</td>
</tr>
<tr>
<td>Selenium</td>
<td>0.205</td>
<td>ug/L</td>
<td>0.200</td>
<td>2.00</td>
<td>I</td>
<td>1</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>7/5/16 10:40</td>
</tr>
<tr>
<td>Thallium</td>
<td>0.100</td>
<td>ug/L</td>
<td>0.100</td>
<td>0.500</td>
<td>U</td>
<td>1</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>7/5/16 10:40</td>
</tr>
</tbody>
</table>

### Total Recoverable Metals by SW846 Method 6010B

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier Code</th>
<th>Dil</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barium</td>
<td>57.2</td>
<td>ug/L</td>
<td>0.500</td>
<td>20.0</td>
<td>I</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>7/5/16 13:23</td>
</tr>
<tr>
<td>Beryllium</td>
<td>0.200</td>
<td>ug/L</td>
<td>0.200</td>
<td>2.00</td>
<td>U</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>7/5/16 13:23</td>
</tr>
</tbody>
</table>

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
## Laboratory Results

### Sample Qualifier:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier Code</th>
<th>Dil</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boron</td>
<td>495</td>
<td>µg/L</td>
<td>10.0</td>
<td>50.0</td>
<td>1</td>
<td></td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>7/5/16 13:23</td>
</tr>
<tr>
<td>Calcium</td>
<td>231000</td>
<td>µg/L</td>
<td>30.0</td>
<td>1000</td>
<td>1</td>
<td></td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>7/8/16 11:05</td>
</tr>
<tr>
<td>Chromium</td>
<td>1.60</td>
<td>µg/L</td>
<td>1.60</td>
<td>12.0</td>
<td>U</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>7/5/16 13:23</td>
</tr>
<tr>
<td>Molybdenum</td>
<td>1.66</td>
<td>µg/L</td>
<td>1.00</td>
<td>20.0</td>
<td>I</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>7/5/16 13:23</td>
</tr>
</tbody>
</table>

**KNL Laboratory**

#### Radium - 226

| Rad - 226          | 9.6    | pCi/L | 0.6 | 0.6 | 1              |     | EPA 903.0   | KL1     | 7/1/16 13:23         |
| Rad - 226 Counting Error +/- | 1.5 | pCi/L | 1.0 | 1.0 | 1              |     | EPA Ra-05   | KL1     | 7/5/16 11:17         |

#### Radium - 228

| Rad - 228          | 1.8    | pCi/L | 1.0 | 1.0 | 1              |     | EPA Ra-05   | KL1     | 7/5/16 11:17         |
| Rad - 228 Counting Error +/- | 0.8 | pCi/L | 1.0 | 1.0 | 1              |     | EPA Ra-05   | KL1     | 7/5/16 11:17         |

#### Radium-226/228

| Rad-226/228        | 11.4   | pCi/L | 1.0 | 1.0 | 1              |     | Calc        | KL1     | 7/5/16 11:17         |
| Rad-226/228 Counting Error +/- | 1.5 | pCi/L | 1.0 | 1.0 | 1              |     | Calc        | KL1     | 7/5/16 11:17         |

**TestAmerica Pensacola**

#### Metals (ICP)

| Lithium            | 0.0028 | mg/L  | 0.0010 | 0.050 | I              | 1   | 200.7 Rev 4.4 Z01 | GESP    | 7/1/16 14:42         |

Laboratory Services-certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
## Sample Information

Client: Big Bend Power Station  
Lab Sample ID: L16F174-05  
Sample Description: PZ5  
Sample Collection Method: Grab  
Sampled By: Robert Barthelette  
Date and Time Collected: 6/24/16 11:23  
Date of Sample Receipt: 6/24/16 14:25

## Laboratory Results

### Sample Qualifier:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier Code</th>
<th>Dil</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chloride</td>
<td>1140 mg/L</td>
<td>0.400</td>
<td>10.0</td>
<td>J-</td>
<td>20</td>
<td>EPA 300.0</td>
<td>RFL</td>
<td>6/29/16 12:56</td>
<td></td>
</tr>
<tr>
<td>Specific Conductance</td>
<td>5620 umhos/cm</td>
<td>100</td>
<td>100</td>
<td>1</td>
<td>FDEP SOP FT 1200</td>
<td>RAB</td>
<td>6/24/16 11:23</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dissolved Oxygen</td>
<td>0.180 mg/L</td>
<td>0.100</td>
<td>0.100</td>
<td>1</td>
<td>FDEP SOP FT 1500</td>
<td>RAB</td>
<td>6/24/16 11:23</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fluoride</td>
<td>0.199 mg/L</td>
<td>0.0100</td>
<td>0.0500</td>
<td>1</td>
<td>EPA 300.0</td>
<td>RFL</td>
<td>6/28/16 19:06</td>
<td></td>
<td></td>
</tr>
<tr>
<td>pH</td>
<td>6.51 pH Units</td>
<td>1.00</td>
<td>1.00</td>
<td>1</td>
<td>FDEP SOP FT 1100</td>
<td>RAB</td>
<td>6/24/16 11:23</td>
<td></td>
<td></td>
</tr>
<tr>
<td>REDOX Potential</td>
<td>-8.60 mV</td>
<td>-999</td>
<td>-999</td>
<td>1</td>
<td>SM 2580B</td>
<td>RAB</td>
<td>6/24/16 11:23</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Dissolved Solids</td>
<td>5050 mg/L</td>
<td>48.0</td>
<td>80.0</td>
<td>J-</td>
<td>4</td>
<td>SM 2540C</td>
<td>TMH</td>
<td>6/28/16 15:09</td>
<td></td>
</tr>
<tr>
<td>Sulfate</td>
<td>1440 mg/L</td>
<td>10.0</td>
<td>40.0</td>
<td>J-</td>
<td>20</td>
<td>EPA 300.0</td>
<td>RFL</td>
<td>6/29/16 12:56</td>
<td></td>
</tr>
<tr>
<td>Turbidity</td>
<td>5.14 NTU</td>
<td>0.100</td>
<td>0.100</td>
<td>1</td>
<td>FDEP SOP FT 1600</td>
<td>RAB</td>
<td>6/24/16 11:23</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Total Mercury by SW846 Method 7470/7471

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier Code</th>
<th>Dil</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mercury</td>
<td>0.0500 ug/L</td>
<td>0.0500</td>
<td>0.200</td>
<td>U</td>
<td>1</td>
<td>EPA 7470A</td>
<td>MCR</td>
<td>7/7/16 10:22</td>
<td></td>
</tr>
</tbody>
</table>

### Total Recoverable Metals by 200 Series

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier Code</th>
<th>Dil</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antimony</td>
<td>0.600 ug/L</td>
<td>0.600</td>
<td>2.00</td>
<td>U</td>
<td>1</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>7/5/16 10:44</td>
<td></td>
</tr>
<tr>
<td>Arsenic</td>
<td>10.2 ug/L</td>
<td>0.320</td>
<td>2.00</td>
<td>U</td>
<td>1</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>7/5/16 10:44</td>
<td></td>
</tr>
<tr>
<td>Cadmium</td>
<td>0.100 ug/L</td>
<td>0.100</td>
<td>0.500</td>
<td>U</td>
<td>1</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>7/5/16 10:44</td>
<td></td>
</tr>
<tr>
<td>Cobalt</td>
<td>1.40 ug/L</td>
<td>1.00</td>
<td>20.0</td>
<td>I</td>
<td>1</td>
<td>EPA 200.7</td>
<td>MCR</td>
<td>7/5/16 13:26</td>
<td></td>
</tr>
<tr>
<td>Lead</td>
<td>0.0800 ug/L</td>
<td>0.0800</td>
<td>2.00</td>
<td>U</td>
<td>1</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>7/5/16 10:44</td>
<td></td>
</tr>
<tr>
<td>Selenium</td>
<td>2.09 ug/L</td>
<td>0.200</td>
<td>2.00</td>
<td>U</td>
<td>1</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>7/5/16 10:44</td>
<td></td>
</tr>
<tr>
<td>Thallium</td>
<td>0.118 ug/L</td>
<td>0.100</td>
<td>0.500</td>
<td>I</td>
<td>1</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>7/5/16 10:44</td>
<td></td>
</tr>
</tbody>
</table>

### Total Recoverable Metals by SW846 Method 6010B

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier Code</th>
<th>Dil</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barium</td>
<td>72.9 ug/L</td>
<td>0.500</td>
<td>20.0</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>7/5/16 13:26</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beryllium</td>
<td>0.200 ug/L</td>
<td>0.200</td>
<td>2.00</td>
<td>U</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>7/5/16 13:26</td>
<td></td>
</tr>
</tbody>
</table>

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
### Sample Information

- **Client:** Big Bend Power Station
- **Lab Sample ID:** L16F174-05
- **Sample Description:** PZ5
- **Sample Collection Method:** Grab
- **Sampled By:** Robert Barthelette
- **Date and Time Collected:** 6/24/16 11:23
- **Date of Sample Receipt:** 6/24/16 14:25

### Laboratory Results

#### Sample Qualifier:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier Code</th>
<th>Dil</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boron</td>
<td>59100</td>
<td>ug/L</td>
<td>10.0</td>
<td>50.0</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>7/5/16  13:26</td>
<td></td>
</tr>
<tr>
<td>Calcium</td>
<td>781000</td>
<td>ug/L</td>
<td>30.0</td>
<td>1000</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>7/8/16  11:08</td>
<td></td>
</tr>
<tr>
<td>Chromium</td>
<td>1.60</td>
<td>ug/L</td>
<td>1.60</td>
<td>12.0</td>
<td>U</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>7/5/16  13:26</td>
</tr>
<tr>
<td>Molybdenum</td>
<td>4.46</td>
<td>ug/L</td>
<td>1.00</td>
<td>20.0</td>
<td>I</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>7/5/16  13:26</td>
</tr>
</tbody>
</table>

**KNL Laboratory**

- **Radium - 226**
  - Rad - 226: 34 pCi/L, 0.4 0.4 1 EPA 903.0 KLI 7/1/16 13:23
  - Rad - 226 Counting Error +/- 2.3 pCi/L, 1 EPA 903.0 KLI 7/1/16 13:23

- **Radium - 228**
  - Rad - 228: 4.2 pCi/L, 1.0 1.0 1 EPA Ra-05 KLI 7/5/16 11:17
  - Rad - 228 Counting Error +/- 0.9 pCi/L, 1 EPA Ra-05 KLI 7/5/16 11:17

- **Radium-226/228**
  - Rad-226/228: 38 pCi/L, 1.0 1.0 1 Calc KLI 7/5/16 11:17
  - Rad-226/228 Counting Error +/- 2.3 pCi/L, 1 Calc KLI 7/5/16 11:17

**TestAmerica Pensacola**

- **Metals (ICP)**
  - Lithium: 0.0089 mg/L, 0.0010 0.050 I 1 200.7 Rev 4.4 Z01 GESP 7/1/16 14:45

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
**Sample Information**

Client: Big Bend Power Station  
Lab Sample ID: L16F174-06  
Sample Description: PZ6  
Sample Collection Method: Grab  
Sampled By: Robert Barthelette  
Date and Time Collected: 6/24/16 10:50  
Date of Sample Receipt: 6/24/16 14:25

**Laboratory Results**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier Code</th>
<th>Dil</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>General Chemistry Parameters</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chloride</td>
<td>123</td>
<td>mg/L</td>
<td>0.200</td>
<td>5.00</td>
<td>10</td>
<td>EPA 300.0</td>
<td>RFL</td>
<td>6/28/16</td>
<td>19:53</td>
</tr>
<tr>
<td>Specific Conductance</td>
<td>1640</td>
<td>umhos/cm</td>
<td>100</td>
<td>100</td>
<td>1</td>
<td>FDEP SOP FT 1200</td>
<td>RAB</td>
<td>6/24/16</td>
<td>10:50</td>
</tr>
<tr>
<td>Dissolved Oxygen</td>
<td>0.370</td>
<td>mg/L</td>
<td>0.100</td>
<td>0.100</td>
<td>1</td>
<td>FDEP SOP FT 1500</td>
<td>RAB</td>
<td>6/24/16</td>
<td>10:50</td>
</tr>
<tr>
<td>Fluoride</td>
<td>0.409</td>
<td>mg/L</td>
<td>0.0100</td>
<td>0.0500</td>
<td>1</td>
<td>EPA 300.0</td>
<td>RFL</td>
<td>6/28/16</td>
<td>19:37</td>
</tr>
<tr>
<td>pH</td>
<td>6.53</td>
<td>pH Units</td>
<td>1.00</td>
<td>1.00</td>
<td>1</td>
<td>FDEP SOP FT 1100</td>
<td>RAB</td>
<td>6/24/16</td>
<td>10:50</td>
</tr>
<tr>
<td>REDOX Potential</td>
<td>-59.4</td>
<td>mV</td>
<td>-999</td>
<td>-999</td>
<td>1</td>
<td>SM 2580B</td>
<td>RAB</td>
<td>6/24/16</td>
<td>10:50</td>
</tr>
<tr>
<td>Total Dissolved Solids</td>
<td>1230</td>
<td>mg/L</td>
<td>12.0</td>
<td>20.0</td>
<td>J-</td>
<td>SM 2540C</td>
<td>TMH</td>
<td>6/28/16</td>
<td>15:09</td>
</tr>
<tr>
<td>Sulfate</td>
<td>414</td>
<td>mg/L</td>
<td>5.00</td>
<td>20.0</td>
<td>10</td>
<td>EPA 300.0</td>
<td>RFL</td>
<td>6/29/16</td>
<td>13:44</td>
</tr>
<tr>
<td>Turbidity</td>
<td>6.70</td>
<td>NTU</td>
<td>0.100</td>
<td>0.100</td>
<td>1</td>
<td>FDEP SOP FT 1600</td>
<td>RAB</td>
<td>6/24/16</td>
<td>10:50</td>
</tr>
<tr>
<td><strong>Total Mercury by SW846 Method 7470/7471</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mercury</td>
<td>0.0500</td>
<td>ug/L</td>
<td>0.0500</td>
<td>0.200</td>
<td>U</td>
<td>EPA 7470A</td>
<td>MCR</td>
<td>7/7/16</td>
<td>10:26</td>
</tr>
<tr>
<td><strong>Total Recoverable Metals by 200 Series</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Antimony</td>
<td>0.600</td>
<td>ug/L</td>
<td>0.600</td>
<td>2.00</td>
<td>U</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>7/5/16</td>
<td>10:47</td>
</tr>
<tr>
<td>Arsenic</td>
<td>2.65</td>
<td>ug/L</td>
<td>0.320</td>
<td>2.00</td>
<td>U</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>7/5/16</td>
<td>10:47</td>
</tr>
<tr>
<td>Cadmium</td>
<td>0.100</td>
<td>ug/L</td>
<td>0.100</td>
<td>0.500</td>
<td>U</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>7/5/16</td>
<td>10:47</td>
</tr>
<tr>
<td>Cobalt</td>
<td>1.00</td>
<td>ug/L</td>
<td>1.00</td>
<td>20.0</td>
<td>U</td>
<td>EPA 200.7</td>
<td>MCR</td>
<td>7/5/16</td>
<td>13:35</td>
</tr>
<tr>
<td>Lead</td>
<td>0.0800</td>
<td>ug/L</td>
<td>0.0800</td>
<td>2.00</td>
<td>U</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>7/5/16</td>
<td>10:47</td>
</tr>
<tr>
<td>Selenium</td>
<td>0.722</td>
<td>ug/L</td>
<td>0.200</td>
<td>2.00</td>
<td>I</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>7/5/16</td>
<td>10:47</td>
</tr>
<tr>
<td>Thallium</td>
<td>0.100</td>
<td>ug/L</td>
<td>0.100</td>
<td>0.500</td>
<td>U</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>7/5/16</td>
<td>10:47</td>
</tr>
<tr>
<td><strong>Total Recoverable Metals by SW846 Method 6010B</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Barium</td>
<td>51.3</td>
<td>ug/L</td>
<td>0.500</td>
<td>20.0</td>
<td>U</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>7/5/16</td>
<td>13:35</td>
</tr>
<tr>
<td>Beryllium</td>
<td>0.200</td>
<td>ug/L</td>
<td>0.200</td>
<td>2.00</td>
<td>U</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>7/5/16</td>
<td>13:35</td>
</tr>
</tbody>
</table>

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
### Sample Information

- **Client:** Big Bend Power Station
- **Lab Sample ID:** L16F174-06
- **Sample Description:** PZ6
- **Sample Collection Method:** Grab
- **Sampled By:** Robert Barthelette
- **Date and Time Collected:** 6/24/16 10:50
- **Date of Sample Receipt:** 6/24/16 14:25

### Laboratory Results

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier Code</th>
<th>Dil</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boron</td>
<td>3890</td>
<td>ug/L</td>
<td>10.0</td>
<td>50.0</td>
<td>1</td>
<td></td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>7/7/16 14:51</td>
</tr>
<tr>
<td>Calcium</td>
<td>313000</td>
<td>ug/L</td>
<td>30.0</td>
<td>1000</td>
<td>1</td>
<td></td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>7/8/16 11:10</td>
</tr>
<tr>
<td>Chromium</td>
<td>1.60</td>
<td>ug/L</td>
<td>1.60</td>
<td>12.0</td>
<td>U</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>7/5/16 13:35</td>
</tr>
<tr>
<td>Molybdenum</td>
<td>2.40</td>
<td>ug/L</td>
<td>1.00</td>
<td>20.0</td>
<td>I</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>7/5/16 13:35</td>
</tr>
<tr>
<td><strong>Radium - 226</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rad - 226</td>
<td>4.2</td>
<td>pCi/L</td>
<td>0.5</td>
<td>0.5</td>
<td>1</td>
<td></td>
<td>EPA 903.0</td>
<td>KL1</td>
<td>7/1/16 13:23</td>
</tr>
<tr>
<td>Rad - 226 Counting Error +/-</td>
<td>0.9</td>
<td>pCi/L</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td>EPA 903.0</td>
<td>KL1</td>
<td>7/1/16 13:23</td>
</tr>
<tr>
<td><strong>Radium - 228</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rad - 228</td>
<td>1.0</td>
<td>pCi/L</td>
<td>1.0</td>
<td>1.0</td>
<td>U</td>
<td>1</td>
<td>EPA Ra-05</td>
<td>KL1</td>
<td>7/5/16 11:17</td>
</tr>
<tr>
<td>Rad - 228 Counting Error +/-</td>
<td>0.7</td>
<td>pCi/L</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td>EPA Ra-05</td>
<td>KL1</td>
<td>7/5/16 11:17</td>
</tr>
<tr>
<td><strong>Radium-226/228</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rad-226/228</td>
<td>4.8</td>
<td>pCi/L</td>
<td>1.0</td>
<td>1.0</td>
<td>1</td>
<td></td>
<td>Calc</td>
<td>KL1</td>
<td>7/5/16 11:17</td>
</tr>
<tr>
<td>Rad-226/228 Counting Error +/-</td>
<td>0.9</td>
<td>pCi/L</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td>Calc</td>
<td>KL1</td>
<td>7/5/16 11:17</td>
</tr>
</tbody>
</table>

### Test America Pensacola

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier Code</th>
<th>Dil</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithium</td>
<td>0.0038</td>
<td>mg/L</td>
<td>0.0010</td>
<td>0.050</td>
<td>I</td>
<td>1</td>
<td>200.7 Rev 4.4 Z01</td>
<td>GESP</td>
<td>7/1/16 14:49</td>
</tr>
</tbody>
</table>

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
Laboratory Results

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier Code</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chloride</td>
<td>15.1</td>
<td>mg/L</td>
<td>0.0200</td>
<td>0.500</td>
<td>1</td>
<td>EPA 300.0</td>
<td>RFL</td>
<td>6/28/16 20:09</td>
</tr>
<tr>
<td>Specific Conductance</td>
<td>1520</td>
<td>umhos/cm</td>
<td>100</td>
<td>100</td>
<td>1</td>
<td>FDEP SOP FT 1200</td>
<td>RAB</td>
<td>6/24/16 10:19</td>
</tr>
<tr>
<td>Dissolved Oxygen</td>
<td>0.360</td>
<td>mg/L</td>
<td>0.100</td>
<td>0.100</td>
<td>1</td>
<td>FDEP SOP FT 1500</td>
<td>RAB</td>
<td>6/24/16 10:19</td>
</tr>
<tr>
<td>Fluoride</td>
<td>0.996</td>
<td>mg/L</td>
<td>0.0100</td>
<td>0.0500</td>
<td>1</td>
<td>EPA 300.0</td>
<td>RFL</td>
<td>6/28/16 20:09</td>
</tr>
<tr>
<td>pH</td>
<td>6.80</td>
<td>pH Units</td>
<td>1.00</td>
<td>1.00</td>
<td>1</td>
<td>FDEP SOP FT 1100</td>
<td>RAB</td>
<td>6/24/16 10:19</td>
</tr>
<tr>
<td>REDOX Potential</td>
<td>-57.0</td>
<td>mV</td>
<td>-999</td>
<td>-999</td>
<td>1</td>
<td>SM 2580B</td>
<td>RAB</td>
<td>6/24/16 10:19</td>
</tr>
<tr>
<td>Total Dissolved Solids</td>
<td>1160</td>
<td>mg/L</td>
<td>12.0</td>
<td>20.0</td>
<td>10</td>
<td>EPA 300.0</td>
<td>RFL</td>
<td>6/29/16 14:32</td>
</tr>
<tr>
<td>Sulfate</td>
<td>420</td>
<td>mg/L</td>
<td>5.00</td>
<td>20.0</td>
<td>1</td>
<td>EPA 300.0</td>
<td>RFL</td>
<td>6/29/16 14:32</td>
</tr>
<tr>
<td>Turbidity</td>
<td>1.22</td>
<td>NTU</td>
<td>0.100</td>
<td>0.100</td>
<td>1</td>
<td>FDEP SOP FT 1600</td>
<td>RAB</td>
<td>6/24/16 10:19</td>
</tr>
<tr>
<td><strong>Total Mercury by SW846 Method 7470/7471</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mercury</td>
<td>0.0500</td>
<td>ug/L</td>
<td>0.0500</td>
<td>0.200</td>
<td>U</td>
<td>EPA 7470A</td>
<td>MCR</td>
<td>7/7/16 10:13</td>
</tr>
<tr>
<td><strong>Total Recoverable Metals by 200 Series</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Antimony</td>
<td>0.600</td>
<td>ug/L</td>
<td>0.600</td>
<td>2.00</td>
<td>U</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>7/5/16 11:45</td>
</tr>
<tr>
<td>Arsenic</td>
<td>4.30</td>
<td>ug/L</td>
<td>0.320</td>
<td>2.00</td>
<td>U</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>7/5/16 11:45</td>
</tr>
<tr>
<td>Cadmium</td>
<td>0.100</td>
<td>ug/L</td>
<td>0.100</td>
<td>0.500</td>
<td>U</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>7/5/16 11:45</td>
</tr>
<tr>
<td>Cobalt</td>
<td>1.00</td>
<td>ug/L</td>
<td>1.00</td>
<td>20.0</td>
<td>U</td>
<td>EPA 200.7</td>
<td>MCR</td>
<td>7/5/16 13:38</td>
</tr>
<tr>
<td>Lead</td>
<td>0.0800</td>
<td>ug/L</td>
<td>0.0800</td>
<td>2.00</td>
<td>U</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>7/5/16 11:45</td>
</tr>
<tr>
<td>Selenium</td>
<td>0.533</td>
<td>ug/L</td>
<td>0.200</td>
<td>2.00</td>
<td>I</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>7/5/16 11:45</td>
</tr>
<tr>
<td>Thallium</td>
<td>0.100</td>
<td>ug/L</td>
<td>0.100</td>
<td>0.500</td>
<td>U</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>7/5/16 11:45</td>
</tr>
<tr>
<td><strong>Total Recoverable Metals by SW846 Method 6010B</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Barium</td>
<td>46.0</td>
<td>ug/L</td>
<td>0.500</td>
<td>20.0</td>
<td>U</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>7/5/16 13:38</td>
</tr>
<tr>
<td>Beryllium</td>
<td>0.200</td>
<td>ug/L</td>
<td>0.200</td>
<td>2.00</td>
<td>U</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>7/5/16 13:38</td>
</tr>
</tbody>
</table>

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
### Sample Information

<table>
<thead>
<tr>
<th>Client:</th>
<th>Big Bend Power Station</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lab Sample ID:</td>
<td>L16F174-07</td>
</tr>
<tr>
<td>Sample Description:</td>
<td>MWB-35</td>
</tr>
<tr>
<td>Sample Collector:</td>
<td>Robert Barthelette</td>
</tr>
<tr>
<td>Date and Time Collected:</td>
<td>6/24/16 10:19</td>
</tr>
</tbody>
</table>

### Laboratory Results

#### Sample Qualifier:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier Code</th>
<th>Dil</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boron</td>
<td>1690</td>
<td>ug/L</td>
<td>10.0</td>
<td>50.0</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>7/7/16 14:54</td>
<td></td>
</tr>
<tr>
<td>Calcium</td>
<td>313000</td>
<td>ug/L</td>
<td>30.0</td>
<td>1000</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>7/8/16 11:21</td>
<td></td>
</tr>
<tr>
<td>Chromium</td>
<td>1.60</td>
<td>ug/L</td>
<td>1.60</td>
<td>12.0</td>
<td>U</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>7/5/16 13:38</td>
<td></td>
</tr>
<tr>
<td>Molybdenum</td>
<td>41.0</td>
<td>ug/L</td>
<td>1.00</td>
<td>20.0</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>7/5/16 13:38</td>
<td></td>
</tr>
</tbody>
</table>

**Radium - 226**

| Rad - 226 | 1.7   | pCi/L | 0.4 | 0.4 | 1              | EPA 903.0 | KL1         | 7/1/16 13:23        |
| Rad - 226 Counting Error +/- | 0.6   | pCi/L |     |     | 1              | EPA 903.0 | KL1         | 7/1/16 13:23        |

**Radium - 228**

| Rad - 228 | 1.0   | pCi/L | 1.0 | 1.0 | U              | EPA Ra-05 | KL1         | 7/5/16 11:17        |
| Rad - 228 Counting Error +/- | 0.7   | pCi/L |     |     | 1              | EPA Ra-05 | KL1         | 7/5/16 11:17        |

**Radium-226/228**

| Rad-226/228 | 2.2   | pCi/L | 1.0 | 1.0 | 1              | Calc      | KL1         | 7/5/16 11:17        |
| Rad-226/228 Counting Error +/- | 0.7   | pCi/L |     |     | 1              | Calc      | KL1         | 7/5/16 11:17        |

**TestAmerica Pensacola**

| Metals (ICP) | | | | | | | |
|---------------|-----------------|-----|-----|-----|----------------|-----|-------------|---------|----------------------|
| Lithium       | 0.0056          | mg/L| 0.0010| 0.050| I              | 200.7 Rev 4.4 Z01 | GESP | 7/1/16 15:02        |

---

Laboratory Services certifies that the test results in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
# Laboratory Results

## Sample Information

**Client:** Big Bend Power Station  
**Lab Sample ID:** L16F174-08  
**Sample Description:** MWB-36  
**Sample Collection Method:** Grab  
**Sampled By:** Robert Barthelette  
**Date and Time Collected:** 6/24/16 9:50  
**Date of Sample Receipt:** 6/24/16 14:25

## Laboratory Results

### General Chemistry Parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier Code</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chloride</td>
<td>154</td>
<td>mg/L</td>
<td>0.200</td>
<td>5.00</td>
<td>10</td>
<td>EPA 300.0</td>
<td>RFL</td>
<td>6/28/16 22:01</td>
</tr>
<tr>
<td>Specific Conductance</td>
<td>2640</td>
<td>umhos/cm</td>
<td>100</td>
<td>100</td>
<td>1</td>
<td>FDEP SOP FT 1200</td>
<td>RAB</td>
<td>6/24/16 9:50</td>
</tr>
<tr>
<td>Dissolved Oxygen</td>
<td>0.710</td>
<td>mg/L</td>
<td>0.100</td>
<td>0.100</td>
<td>1</td>
<td>FDEP SOP FT 1500</td>
<td>RAB</td>
<td>6/24/16 9:50</td>
</tr>
<tr>
<td>Fluoride</td>
<td>1.07</td>
<td>mg/L</td>
<td>0.0100</td>
<td>0.0500</td>
<td>1</td>
<td>EPA 300.0</td>
<td>RFL</td>
<td>6/28/16 21:13</td>
</tr>
<tr>
<td>pH</td>
<td>6.91</td>
<td>pH Units</td>
<td>1.00</td>
<td>1.00</td>
<td>1</td>
<td>FDEP SOP FT 1100</td>
<td>RAB</td>
<td>6/24/16 9:50</td>
</tr>
<tr>
<td>REDOX Potential</td>
<td>-244</td>
<td>mV</td>
<td>-999</td>
<td>-999</td>
<td>1</td>
<td>SM 2580B</td>
<td>RAB</td>
<td>6/24/16 9:50</td>
</tr>
<tr>
<td>Total Dissolved Solids</td>
<td>2330</td>
<td>mg/L</td>
<td>24.0</td>
<td>40.0</td>
<td>2</td>
<td>SM 2540C</td>
<td>TMH</td>
<td>6/28/16 15:09</td>
</tr>
<tr>
<td>Sulfate</td>
<td>1170</td>
<td>mg/L</td>
<td>10.0</td>
<td>40.0</td>
<td>20</td>
<td>EPA 300.0</td>
<td>RFL</td>
<td>6/29/16 16:56</td>
</tr>
<tr>
<td>Turbidity</td>
<td>1.70</td>
<td>NTU</td>
<td>0.100</td>
<td>0.100</td>
<td>1</td>
<td>FDEP SOP FT 1600</td>
<td>RAB</td>
<td>6/24/16 9:50</td>
</tr>
</tbody>
</table>

### Total Mercury by SW846 Method 7470/7471

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier Code</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mercury</td>
<td>0.0500</td>
<td>ug/L</td>
<td>0.0500</td>
<td>0.200</td>
<td>U</td>
<td>1</td>
<td>EPA 7470A</td>
<td>MCR</td>
</tr>
</tbody>
</table>

### Total Recoverable Metals by 200 Series

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier Code</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antimony</td>
<td>0.600</td>
<td>ug/L</td>
<td>0.600</td>
<td>2.00</td>
<td>U</td>
<td>1</td>
<td>EPA 200.8</td>
<td>MCR</td>
</tr>
<tr>
<td>Arsenic</td>
<td>27.5</td>
<td>ug/L</td>
<td>0.320</td>
<td>2.00</td>
<td>U</td>
<td>1</td>
<td>EPA 200.8</td>
<td>MCR</td>
</tr>
<tr>
<td>Cadmium</td>
<td>0.100</td>
<td>ug/L</td>
<td>0.100</td>
<td>0.500</td>
<td>U</td>
<td>1</td>
<td>EPA 200.8</td>
<td>MCR</td>
</tr>
<tr>
<td>Cobalt</td>
<td>1.00</td>
<td>ug/L</td>
<td>1.00</td>
<td>20.0</td>
<td>U</td>
<td>1</td>
<td>EPA 200.7</td>
<td>MCR</td>
</tr>
<tr>
<td>Lead</td>
<td>0.0800</td>
<td>ug/L</td>
<td>0.0800</td>
<td>2.00</td>
<td>U</td>
<td>1</td>
<td>EPA 200.8</td>
<td>MCR</td>
</tr>
<tr>
<td>Selenium</td>
<td>0.414</td>
<td>ug/L</td>
<td>0.200</td>
<td>2.00</td>
<td>I</td>
<td>1</td>
<td>EPA 200.8</td>
<td>MCR</td>
</tr>
<tr>
<td>Thallium</td>
<td>0.100</td>
<td>ug/L</td>
<td>0.100</td>
<td>0.500</td>
<td>U</td>
<td>1</td>
<td>EPA 200.8</td>
<td>MCR</td>
</tr>
</tbody>
</table>

### Total Recoverable Metals by SW846 Method 6010B

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier Code</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barium</td>
<td>87.4</td>
<td>ug/L</td>
<td>0.500</td>
<td>20.0</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>7/5/16 13:41</td>
</tr>
<tr>
<td>Beryllium</td>
<td>0.200</td>
<td>ug/L</td>
<td>0.200</td>
<td>2.00</td>
<td>U</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
</tr>
</tbody>
</table>

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
# Laboratory Results

## Sample Qualifier:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier Code</th>
<th>Dil</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boron</td>
<td>4380</td>
<td>ug/L</td>
<td>10.0</td>
<td>50.0</td>
<td>1</td>
<td></td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>7/7/16 14:56</td>
</tr>
<tr>
<td>Calcium</td>
<td>554000</td>
<td>ug/L</td>
<td>30.0</td>
<td>1000</td>
<td>1</td>
<td></td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>7/8/16 11:23</td>
</tr>
<tr>
<td>Chromium</td>
<td>1.60</td>
<td>ug/L</td>
<td>1.60</td>
<td>12.0</td>
<td>U</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>7/5/16 13:41</td>
</tr>
<tr>
<td>Molybdenum</td>
<td>12.8</td>
<td>ug/L</td>
<td>1.00</td>
<td>20.0</td>
<td>I</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>7/5/16 13:41</td>
</tr>
</tbody>
</table>

### KNL Laboratory

#### Radium - 226

| Rad - 226       | 3.0    | pCi/L | 0.5  | 0.5  | 1               |     | EPA 903.0   | KL1     | 7/1/16 13:23          |
| Rad - 226 Counting Error +/- | 0.7    | pCi/L  |      |      | 1               |     | EPA 903.0   | KL1     | 7/1/16 13:23          |

#### Radium - 228

| Rad - 228       | 1.0    | pCi/L | 1.0  | 1.0  | U              | 1   | EPA Ra-05   | KL1     | 7/5/16 11:17          |
| Rad - 228 Counting Error +/- | 0.7    | pCi/L  |      |      | 1               |     | EPA Ra-05   | KL1     | 7/5/16 11:17          |

#### Radium-226/228

| Rad-226/228     | 3.0    | pCi/L | 1.0  | 1.0  | 1               |     | Calc        | KL1     | 7/5/16 11:17          |
| Rad-226/228 Counting Error +/- | 0.7    | pCi/L  |      |      | 1               |     | Calc        | KL1     | 7/5/16 11:17          |

### TestAmerica Pensacola

#### Metals (ICP)

| Lithium         | 0.0043 | mg/L  | 0.0010 | 0.050 | I  | 1 | 200.7 Rev 4.4 Z01 | GESP     | 7/1/16 15:05          |

## Comments

U: Indicates that the compound was analyzed for but not detected.

J: The reported value is an estimated value, see the case narrative for specifics.

I: Estimated value

I: The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.

### Subcontract Laboratories:

- KNL Laboratory: E84025
- TestAmerica Pensacola: E81010

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Tampa Electric Company, Laboratory Services

Peggy Penner, Manager, Laboratory Services

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
### Big Bend

#### LIMS #
- **L16F174-01**: CCR-PZ-2, 6.8, 25.5, 3645, 0.0, 8.0, 49.1, 0.0, 30.0, 30.0, LEV,
- **L16F074-02**: CCR-PZ-2, 6.8, 25.5, 1676, 0.1, 4.9, 71.0, 0.1, 30.0, 30.0, LEV,

#### Preservation
- **Sampling**: 10807310, 02162010, 03073010, 03150010, 03200010, 03250010, 03300010, 03350010, 03400010, 03450010, Time: 14:25

#### Conductivity Meter Calibration
- **Standard Value**: 1000, 1000, 8.15

#### Turbidity Meter Calibration
- **Standard Value**: 1000, 1000, 8.15

#### Sulfate Test: (EPA 307.1)
- **pH**: 4.0, 4.5, 4.5

### Purging Information

#### Well Capacity (gallons/hr):
- **CCR-PZ-1**: 20.29, 51.54, 15.15, 0.16, 2.42, 0.0026, 21.3, 0.06, 0.12

#### Purge Time:
- **1A**: 13:23, 700, 1.29, 2.39, 5.16, 25.50, 39.06, 0.12, 9.33, STABLE,
- **1B**: 13:37, 700, 0.37, 1.54, 6.87, 25.87, 39.06, 0.10, 5.72, STABLE with excludes 20%

#### Purge Complete
- **1A**: 13:54, 20.54, 5.40, 15.24, 0.16, 2.44, 0.0026, 21.64, 0.06, 0.12

#### Comments:
- **Time**: Total Time, Total Miles

---

**Table Notes**
- The pH and Turbidity values are within the acceptable range for drinking water.
- The Purge Time values indicate the duration of the purge process.
- The Status column indicates whether the purge was successful or not.

**Legend**
- **CCR-PZ-1**: 10, 15.29, 20.29, 51.4, 9.15, 4.5, 4.5
- **CCR-PZ-2**: 2, 10, 15.24, 20.54, 5.40, 15.24, 0.16, 2.44, 0.0026, 21.64, 0.06, 0.12

**Equipment ID**: WLM08, WLM09

---

**Sampling**
- **ESS**: 01070310, 02162010, 03073010, 03150010, 03200010, 03250010, 03300010, 03350010, 03400010, 03450010, Time: 14:25
<table>
<thead>
<tr>
<th>Site:</th>
<th>Big Bend</th>
<th>Date:</th>
<th>06/24/15</th>
<th>File Name:</th>
<th>062415 Wells_RAB</th>
<th>Weather:</th>
<th>PTLY CLOUDY &amp; HOT</th>
<th>Sampler(s)/Initiais</th>
<th>RAB /TECO</th>
<th>Initi Ials</th>
</tr>
</thead>
<tbody>
<tr>
<td>LIMS #:</td>
<td>L16F174-03</td>
<td>Location Code:</td>
<td>CCR-PZ-3</td>
<td>Time:</td>
<td>12:31</td>
<td>FET</td>
<td>mg/l</td>
<td>pH (SU)</td>
<td>Temp °C</td>
<td>Cond (μS/m)</td>
</tr>
<tr>
<td></td>
<td>L16F174-04</td>
<td>CCR-PZ-4</td>
<td>12:00</td>
<td>6.7</td>
<td>26.6</td>
<td>1372</td>
<td>0.2</td>
<td>5.7</td>
<td>-74.9</td>
<td></td>
</tr>
<tr>
<td>LIMS #:</td>
<td>L16F174-03</td>
<td>Location Code:</td>
<td>CCR-PZ-3</td>
<td>Time:</td>
<td>12:31</td>
<td>FET</td>
<td>mg/l</td>
<td>pH (SU)</td>
<td>Temp °C</td>
<td>Cond (μS/m)</td>
</tr>
<tr>
<td></td>
<td>L16F174-04</td>
<td>CCR-PZ-4</td>
<td>12:00</td>
<td>6.7</td>
<td>26.6</td>
<td>1372</td>
<td>0.2</td>
<td>5.7</td>
<td>-74.9</td>
<td></td>
</tr>
<tr>
<td>LIMS #:</td>
<td>L16F174-03</td>
<td>Location Code:</td>
<td>CCR-PZ-3</td>
<td>Time:</td>
<td>12:31</td>
<td>FET</td>
<td>mg/l</td>
<td>pH (SU)</td>
<td>Temp °C</td>
<td>Cond (μS/m)</td>
</tr>
<tr>
<td></td>
<td>L16F174-04</td>
<td>CCR-PZ-4</td>
<td>12:00</td>
<td>6.7</td>
<td>26.6</td>
<td>1372</td>
<td>0.2</td>
<td>5.7</td>
<td>-74.9</td>
<td></td>
</tr>
<tr>
<td>LIMS #:</td>
<td>L16F174-03</td>
<td>Location Code:</td>
<td>CCR-PZ-3</td>
<td>Time:</td>
<td>12:31</td>
<td>FET</td>
<td>mg/l</td>
<td>pH (SU)</td>
<td>Temp °C</td>
<td>Cond (μS/m)</td>
</tr>
<tr>
<td></td>
<td>L16F174-04</td>
<td>CCR-PZ-4</td>
<td>12:00</td>
<td>6.7</td>
<td>26.6</td>
<td>1372</td>
<td>0.2</td>
<td>5.7</td>
<td>-74.9</td>
<td></td>
</tr>
</tbody>
</table>

**Preservation**

<table>
<thead>
<tr>
<th>Pres ID</th>
<th>L16F174-03</th>
<th>01017001Y</th>
<th>L16F174-04</th>
<th>02180201Y</th>
</tr>
</thead>
</table>

**Storage**

<table>
<thead>
<tr>
<th>Pres ID</th>
<th>L16F174-03</th>
<th>L16F174-04</th>
</tr>
</thead>
</table>

**Sample Receipt**

- Samples in Cold Room
- Samples in Sample Cooler

**Conductivity**

<table>
<thead>
<tr>
<th>Meter ID</th>
<th>L16F174-03</th>
<th>L16F174-04</th>
</tr>
</thead>
</table>

**Turbidity**

<table>
<thead>
<tr>
<th>Meter ID</th>
<th>L16F174-03</th>
<th>L16F174-04</th>
</tr>
</thead>
</table>

**pH Meter Calibration**

<table>
<thead>
<tr>
<th>Buffer ID</th>
<th>L16F174-03</th>
<th>L16F174-04</th>
</tr>
</thead>
</table>

**Calculation**

<table>
<thead>
<tr>
<th>Buffer ID</th>
<th>L16F174-03</th>
<th>L16F174-04</th>
</tr>
</thead>
</table>

**Temperature**

<table>
<thead>
<tr>
<th>Temperature</th>
<th>L16F174-03</th>
<th>L16F174-04</th>
</tr>
</thead>
</table>

**Reading**

<table>
<thead>
<tr>
<th>Reading</th>
<th>L16F174-03</th>
<th>L16F174-04</th>
</tr>
</thead>
</table>

**Calculated**

<table>
<thead>
<tr>
<th>Calculated</th>
<th>L16F174-03</th>
<th>L16F174-04</th>
</tr>
</thead>
</table>

**Sampling Information**

- Water Sampled (gallons): 2.0 x 1.6 = 3.2 gallons
- Tubing Inside Diameter: 0.75 x 2.2 = 1.6

**Well Information**

<table>
<thead>
<tr>
<th>Well #</th>
<th>CCR-PZ-3</th>
<th>CCR-PZ-4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diam (in)</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Intake (ft)</td>
<td>104</td>
<td>104</td>
</tr>
<tr>
<td>Water Depth (ft)</td>
<td>15.3</td>
<td>15.3</td>
</tr>
<tr>
<td>Water Current (gallons per minute)</td>
<td>203.8</td>
<td>32.2</td>
</tr>
<tr>
<td>Water Temperature (°F)</td>
<td>8.05</td>
<td>8.05</td>
</tr>
<tr>
<td>Water Color</td>
<td>19.2</td>
<td>19.2</td>
</tr>
<tr>
<td>Water Capacity (gallons per minute)</td>
<td>2.71</td>
<td>0.0026</td>
</tr>
<tr>
<td>Water Volume (gallons)</td>
<td>21.38</td>
<td></td>
</tr>
<tr>
<td>Water Volume (gallons)</td>
<td>0.06</td>
<td></td>
</tr>
</tbody>
</table>

**Purple Value**

<table>
<thead>
<tr>
<th>Purple Value</th>
<th>0.12</th>
<th>0.18</th>
</tr>
</thead>
</table>

**Total Time**

| Total Time | 8 | 6 |

**Total Miles**

| Total Miles | 0 | 0 |
### Water Treatment Test Results

<table>
<thead>
<tr>
<th>Site:</th>
<th>Big Bend</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date: 06/24/15</td>
<td>File Name: 062415_Wells_RAB</td>
</tr>
<tr>
<td>Weather: PTLY CLOUDY &amp; HOT</td>
<td>Sample(s) / Initials: RAB /TECO</td>
</tr>
</tbody>
</table>

#### Meter ID: 010163A
- Buffer ID: 010163A
- Buffer Value: 10
- Cal: 8.05
- Time: 8.05
- ICV: 7.50
- COV: 7.50
- Time: 14:30
- Reading (mgL): 6.00
- Thio Value (mgL): 5.00

### pH Meter Calibration
- Buffer ID: 010163A
- Buffer Value: 10
- Cal: 8.05
- Time: 8.05
- ICV: 7.50
- COV: 7.50
- Time: 14:30
- Reading (mgL): 6.00
- Thio Value (mgL): 5.00

#### Turbidity Meter Calibration
- Buffer ID: 010163A
- Buffer Value: 10
- Cal: 8.05
- Time: 8.05
- ICV: 7.50
- COV: 7.50
- Time: 14:30
- Reading (mgL): 6.00
- Thio Value (mgL): 5.00

#### Conductivity Meter Calibration
- Buffer ID: 010163A
- Buffer Value: 10
- Cal: 8.05
- Time: 8.05
- ICV: 7.50
- COV: 7.50
- Time: 14:30
- Reading (mgL): 6.00
- Thio Value (mgL): 5.00

### Purge Complete At: 11:03
- Gallons to Purge: 0.81
- Stability Values = 6.51
- 28.74
- 6.01
- 5.14

### Purge Complete At: 10:33
- Gallons to Purge: 0.18
- Stability Values = 6.53
- 26.42
- 6.01
- 6.70

### Comments:

Total Time: 14:25
Total Miles: 6.00
### Purging Information

- **Well Capacity (gallons per ft):** 2.5 inches
- **Total Volume:** 105,000 gallons
- **Purge:**
  - **Start Time:** 10:06
  - **End Time:** 10:10
  - **Volume Purged:** 36,000 gallons
- **Status:** Purge Complete

### Purge Requirements

- **Well Capacity:** 2.5 gallons per ft
- **Total Volume:** 105,000 gallons
- **Volume to Purge:** 36,000 gallons

### Purge Calculations

- **Purge Volume (gallons):**
  - **Gallons to Purge:** 36,000
  - **Purge Criteria:** Stability
  - **Status:** Purge Complete
  - **Equipment ID:** Ept. Table

---

### Turbidity Meter Calibration

- **Standard:** NAHSO
- **Turbidity Value:** 1.0
- **Reading mOD:** 6.0
- **Sample:** ESS

---

### Conductivity Meter Calibration

- **Standard:** SU
- **Turbidity Value:** 1.0
- **Reading mOD:** 6.0
- **Sample:** ESS

---

### pH Meter Calibration

- **Standard:** PP
- **Turbidity Value:** 1.0
- **Reading mOD:** 6.0
- **Sample:** ESS

---

### Turbidity Meter Calibration

- **Standard:** PP
- **Turbidity Value:** 1.0
- **Reading mOD:** 6.0
- **Sample:** ESS

---

### Conductivity Meter Calibration

- **Standard:** PP
- **Turbidity Value:** 1.0
- **Reading mOD:** 6.0
- **Sample:** ESS

---

### Purge Table

<table>
<thead>
<tr>
<th>Well #</th>
<th>Diameter</th>
<th>Screen interval (ft)</th>
<th>Intake Depth (ft)</th>
<th>Well Depth (ft)</th>
<th>Water Column (ft)</th>
<th>Total Volume (gallons)</th>
<th>Purge Volume (gallons)</th>
<th>Purge Criteria</th>
<th>Status</th>
<th>Equipment ID</th>
</tr>
</thead>
<tbody>
<tr>
<td>MWB-36</td>
<td>2</td>
<td>5</td>
<td>15</td>
<td>15</td>
<td>15</td>
<td>115,650 (25 ml)</td>
<td>36,000 (25 ml)</td>
<td>Stability</td>
<td>Purge Complete</td>
<td>Ept. Table</td>
</tr>
</tbody>
</table>

---

**Comments:**

- Total Time: 21 minutes
- Total Miles: 5 miles

---

**Notes:**

- **Sample Collection:**
  - **Sample:** ESS
  - **Date:** 06/24/15
- **File Name:** 062415_Wells_RAB
- **Weather:** PTLY CLOUDY & HOT
- **Sample(s) Initials:** RAB / TECO

---

**Preservation:**

- **Preservation ID:** 0216201
- **Preservation:** ESS
- **Preservation:** 0307301
- **Preservation:** ESS
- **Preservation:** ESS

---

**Gallons to Purge:**

- **Stability Values:**
  - **Stability Value:** 6.0
  - **Stability Value:** 26.77
  - **Stability Value:** 1516
  - **Stability Value:** 0.36
  - **Stability Value:** 1.22

---

**Sample(s) Initials:**

- **Initials:** RAB / TECO
# GROUNDWATER WELL SAMPLING EQUIPMENT CALIBRATION

<table>
<thead>
<tr>
<th>Date: 09/24/15</th>
<th>Sampler(s): RAB</th>
<th>Initials</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>pH Meter Calibration</th>
<th>Buffer ID</th>
<th>Buffer/Value</th>
<th>Cal</th>
<th>Time</th>
<th>ICV</th>
<th>Time</th>
<th>Pass/Fail</th>
</tr>
</thead>
<tbody>
<tr>
<td>MPM08</td>
<td>L 01567A</td>
<td>7</td>
<td>7.02</td>
<td>8.05</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FDEP FT 1100</td>
<td>L 01570</td>
<td>10</td>
<td>10.05</td>
<td>8.05</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Units: SU</td>
<td>L 01585A</td>
<td>4</td>
<td>3.98</td>
<td>8.05</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ICV Check</td>
<td>L 01609U</td>
<td>7</td>
<td>7.08</td>
<td>810</td>
<td></td>
<td></td>
<td>Pass/Fail</td>
</tr>
<tr>
<td>Conductivity Meter Calibration</td>
<td>Standard ID</td>
<td>Std Value</td>
<td>Cal</td>
<td>Time</td>
<td>ICV</td>
<td>Time</td>
<td>Pass/Fail</td>
</tr>
<tr>
<td>MPM08</td>
<td>L 014684</td>
<td>10000</td>
<td>10023</td>
<td>8.15</td>
<td></td>
<td></td>
<td>Pass/Fail</td>
</tr>
<tr>
<td>FDEP FT 1200, Units: mHOS</td>
<td>L 01567A</td>
<td>5.40</td>
<td>4.88</td>
<td>5.94</td>
<td>5.68</td>
<td>7.40</td>
<td>Pass/Fail</td>
</tr>
<tr>
<td>Turbidity Meter Calibration</td>
<td>Standard ID</td>
<td>Std Value</td>
<td>Acceptability Range</td>
<td>ICV</td>
<td>Time</td>
<td>Pass/Fail</td>
<td>CCV</td>
</tr>
<tr>
<td>MPM08</td>
<td>L 01609U</td>
<td>53.40</td>
<td>49.03</td>
<td>58.87</td>
<td></td>
<td></td>
<td>Pass/Fail</td>
</tr>
<tr>
<td>FDEP FT 1600, Units: NTU</td>
<td>L 01567A</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self He H2O [QC Check]</td>
<td>L063877.1</td>
<td>QC Result mg/L</td>
<td>Time</td>
<td>TRT &amp; ID</td>
<td>Note: ID</td>
<td>CCV [Flow ID]</td>
<td>Sample ID</td>
</tr>
<tr>
<td>QC Std. 5mL (NaThiosulfate)/500mL (10mg/L)</td>
<td></td>
<td></td>
<td></td>
<td>L</td>
<td>L</td>
<td>L</td>
<td>L</td>
</tr>
<tr>
<td>Redox Cal</td>
<td>Time</td>
<td>Temp °C</td>
<td>Redox mv</td>
<td>Theor</td>
<td>Theor</td>
<td>Pass/Fail</td>
<td>ICV</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Meter ID: 8.00</td>
<td>27.4</td>
<td>226.1</td>
<td>226.4</td>
<td>226.4</td>
<td>Pass</td>
<td>MPM08</td>
<td>15.05</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Redox std ID</th>
<th>Sample ID</th>
<th>pH</th>
<th>Conduct %</th>
<th>DO mg/L</th>
<th>Redox mv</th>
<th>CL2</th>
<th>Calibration</th>
<th>Ferrous Iron</th>
</tr>
</thead>
<tbody>
<tr>
<td>MPM08</td>
<td>104277</td>
<td>0.2</td>
<td>5</td>
<td>0.3</td>
<td>10</td>
<td>0.2</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**GCD, DPD Check:** must be read @10% of the Calculated std. Concentration, divided by 2.4. 
**Glycol Check:** should read < 0.10 mg/L CdCl.

**Chlorine Dioxide (mg/L) | Std. Conc. (mg/L) | Std. Spike Volume (ml) | Cal Sample Volume (ml) | Calc. Std. Conc. (mg/L) | DPD Check (mg/L) | Glycol Check (mg/L) | Initial Calibration | Calibration | Verification ICV | Continuous Calibration | Verification CCV |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Meter ID: 1.0</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**COMMENTS:** CL2 Std. ID: L

- A checked box indicates reagent expiration date has been verified.

*Method 16120* 

*Equivalent to Standard Methods, 4500 CIO, D,*
**GROUNDWATER SAMPLING LOG**

**FACILITY NAME:** Big Bend  
**SITE LOCATION:** Apollo Beach, FL.  
**WELL NO.:** CCR-PZ-1  
**SAMPLE ID:** L16F174-01  
**DATE:** 6/24/15

### PURGING DATA

<table>
<thead>
<tr>
<th>WELL DIAMETER (inches)</th>
<th>TUBING DIAMETER (inches)</th>
<th>1/4</th>
<th>WELL SCREEN INTERVAL (feet)</th>
<th>DEPTH (feet)</th>
<th>10.29</th>
<th>20.29</th>
<th>DEPTH (feet)</th>
<th>5.14</th>
<th>PURGE VOLUME (in)</th>
<th>OR BAILER:</th>
<th>PP</th>
</tr>
</thead>
</table>

**WELL VOLUME PURGE:**

(only if applicable)

**EQUIPMENT VOLUME PURGE:**

(only if applicable)

**INITIAL PUMP OR TUBING DEPTH IN WELL (feet):** 15.3

**FINAL PUMP OR TUBING DEPTH IN WELL (feet):** 15.3

**PURGING INITIATED AT:** 13:16

**PURGING ENDED AT:** 13:27

**TOTAL VOLUME PURGED (gallons):** 2.03

### SAMPLING DATA

**SAMPLED BY (PRINT):** RAB  
**AFFILIATION:** TECO  
**SAMPLER'S SIGNATURE:**  
**SAMPLING INITIATED AT:** 13:27  
**SAMPLING ENDED AT:** 13:32

**PUMP OR TUBING DEPTH IN WELL (feet):** 15.3

**FIELD DECONTAMINATION:** Y No N No

**FIELD FILTERED:** No  
**FILTER SIZE:** 250 µm  
**DUPLICATE:** Y No N No

**SAMPLE CONTAINER SPECIFICATION**

<table>
<thead>
<tr>
<th>SAMPLE ID CODE</th>
<th>CONTAINERS</th>
<th>MATERIAL CODE</th>
<th>VOLUME</th>
<th>PRESERVATIVE USED</th>
<th>TOTAL VOL. ADDED IN FIELD (ml)</th>
<th>FINAL pH</th>
<th>INTENDED ANALYSIS AND/OR METHOD</th>
<th>SAMPLING EQUIPMENT CODE</th>
</tr>
</thead>
<tbody>
<tr>
<td>@ino-500</td>
<td>1</td>
<td>PE</td>
<td>500ml</td>
<td>NONE</td>
<td>NONE</td>
<td>N/A</td>
<td>Inorganics</td>
<td>PP</td>
</tr>
<tr>
<td>@Met-250</td>
<td>1</td>
<td>PE</td>
<td>250ml</td>
<td>HNO3</td>
<td>1ml</td>
<td>&lt;2</td>
<td>Metals</td>
<td>PP</td>
</tr>
<tr>
<td>@Rad-1L</td>
<td>2</td>
<td>PE</td>
<td>1L</td>
<td>HNO3</td>
<td>5ml</td>
<td>&lt;2</td>
<td>Radiologicals</td>
<td>PP</td>
</tr>
</tbody>
</table>

**REMARKS:**

(1) Sample bottles pre-preserved at laboratory prior to sample collection.

**MATERIAL CODES:**

- AG = Amber Glass
- CG = Clear Glass
- PE = Polyethylene
- PP = Polypropylene
- S = Silicon
- T = Teflon
- O = Other (Specify)

**EQUIPMENT CODES:**

- APP = After Pressure Purge
- B = Bailer
- BP = Bladder Pump
- ESP = Electric Submersible Pump
- PP = Presaturation Pump
- RPP = Reverse Pore Pressure
- RSM = Osmotic Method
- VTR = Vacuum Trap

**NOTES:**

1. The above do not constitute all of the information required by Chapter 62-163, F.A.C.
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SFF FS 2212, SECTION 3)

   - pH: ±0.2 units
   - Temperature: ±0.2°C
   - Specific Conductance: ±5% Dissolved Oxygen: ±10% saturation (see Table FS 2200-2)
   - Turbidity: ±10%

   - Optionally, ±0.2 mg/L, or ±10% (whichever is greater)

Page 32 of 32  
Revision Date: February 1, 2004
**DEP-SOP-001/01**

**FS 2200 Groundwater Sampling**

**Form FD 9000-24**

**GROUNDWATER SAMPLING LOG**

**SITE NAME:** Big Bend

**WELL NO.:** CCR-PZ-2

**SAMPLE ID:** L16F074-02

**DATE:** 6/24/15

---

### PURGING DATA

<table>
<thead>
<tr>
<th>Time</th>
<th>Volume Purged (gallons)</th>
<th>Volume Purged (gallons)</th>
<th>Purge Rate (gpm)</th>
<th>Depth to Water (feet)</th>
<th>PH (standard units)</th>
<th>Temp (°C)</th>
<th>Cond. (μmhos/cm)</th>
<th>TDS (mg/l)</th>
<th>DO (mg/l)</th>
<th>Turbidity (NTU)</th>
<th>Color (describe)</th>
<th>Odor (describe)</th>
</tr>
</thead>
<tbody>
<tr>
<td>12:58</td>
<td>0.86</td>
<td>0.86</td>
<td>0.14</td>
<td>5.55</td>
<td>6.81</td>
<td>25.62</td>
<td>1540</td>
<td>0.19</td>
<td>8.17</td>
<td>LT. YELLOW</td>
<td>NONE</td>
<td></td>
</tr>
<tr>
<td>13:00</td>
<td>0.29</td>
<td>1.15</td>
<td>0.15</td>
<td>5.54</td>
<td>6.76</td>
<td>25.67</td>
<td>1561</td>
<td>0.11</td>
<td>6.52</td>
<td>LT. YELLOW</td>
<td>NONE</td>
<td></td>
</tr>
<tr>
<td>13:02</td>
<td>0.29</td>
<td>1.44</td>
<td>0.15</td>
<td>5.53</td>
<td>6.75</td>
<td>25.62</td>
<td>1576</td>
<td>0.10</td>
<td>4.86</td>
<td>LT. YELLOW</td>
<td>NONE</td>
<td></td>
</tr>
</tbody>
</table>

**WELL CAPACITY (Gallons Per Foot):** 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 1.50" = 0.10; 2" = 0.15; 3" = 0.30; 4" = 0.60; 5" = 1.0; 6" = 1.5; 7" = 2.1; 12" = 6.88

---

### SAMPLING DATA

**PUMP OR TUBING DEPTH IN WELL (feet):** 15.6

**SAMPLED BY:** RAB

**AFFILIATION:** TECO

**SAMPLER(s) SIGNATURE:**

**SAMPLE PUMP FLOW RATE (ml per minute):** 540

**TUBING MATERIAL CODE:** PE/S

**FIELD DECONTAMINATION:** Y N

**FIELD-FILTERED:**

**FILTER SIZE:**

**DUPLICATE:** Y N

**TUBE CONDITION:**

**MATERIAL CODE:**

**SAMPLE CONTAINER SPECIFICATION:**

**SAMPLE ID CODE:**

**CONTAINERS:**

**MATERIAL CODE:**

**VOLUME:**

**PRESEVATION USED:**

**TOTAL VOL. ADDED IN FIELD (ml):**

**FINAL pH:**

**INTENDED ANALYSIS AND/OR METHOD:**

**SAMPLING EQUIPMENT CODE:**

---

### REMARKS:

1. Sample bottles pre-preserved at laboratory prior to sample collection.

---

### MATERIAL CODES:

<table>
<thead>
<tr>
<th>A = Amber Glass</th>
<th>C = Clear Glass</th>
<th>PE = Polyethylene</th>
<th>PP = Polypropylene</th>
<th>S = Silica</th>
<th>T = Teflon</th>
<th>O = Other (Specify)</th>
</tr>
</thead>
</table>

### SAMPLING/PURGING EQUIPMENT CODES:

<table>
<thead>
<tr>
<th>A = After Peristaltic Pump</th>
<th>B = Ball</th>
<th>BP = Bladder Pump</th>
<th>ESP = Electric Siphon Pump</th>
<th>PP = Peristaltic Pump</th>
</tr>
</thead>
</table>

### NOTES:

1. The above do not constitute all the information required by Chapter 62-169, F.A.C.

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 11)

   - Alt. ± 2.0 mg/l
   - Temperature ± 0.2 °C
   - Specific Conductance ± 5%
   - Dissolved Oxygen: all readings ± 2% saturation (see Table FS 2212-2)

   Optionally, ± 0.2 mg/l, or ± 10% (whichever is greater)

   Turbidity: all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

---

**Page 32 of 32**

**Revision Date:** February 1, 2004
**DEP-SOP-001/01**  
**FS 2200 Groundwater Sampling**  
**Form FD 9000-24**  
**GROUNDDWATER SAMPLING LOG**

**SITE:** Big Bend  
**NAME:** CCR-PZ-3  
**SAMPLE ID:** L16F174-03  
**LOCATION:** Apollo Beach, FL  
**DATE:** 6/24/15

### PURGING DATA

<table>
<thead>
<tr>
<th>WELL DIAMETER (inches)</th>
<th>TUBING DIAMETER (inches)</th>
<th>WELL SCREEN INTERVAL (feet)</th>
<th>DEPTH TO WATER (feet)</th>
<th>STATIC DEPTH TO WATER (feet)</th>
<th>PURGE PUMP TYPE OR BARREL</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/4</td>
<td>1/4</td>
<td>10.38</td>
<td>20.38</td>
<td>5.46</td>
<td>PP</td>
</tr>
</tbody>
</table>

**WELL VOLUME PURGE:**

- **1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) x WELL CAPACITY**

**EQUIPMENT VOLUME PURGE:**

- **1 EQUIPMENT VOLUME = PUMP VOLUME + (TUBING CAPACITY x TUBING LENGTH) + FLOW CELL VOLUME**

<table>
<thead>
<tr>
<th>TIME</th>
<th>VOLUME PURGED (GALLONS)</th>
<th>PURGE RATE (GPM)</th>
<th>DEPTH TO WATER (FEET)</th>
<th>TEMP (°C)</th>
<th>COND. (μS/cm)</th>
<th>DISOLVED OXYGEN (PPM)</th>
<th>TURBIDITY (NTU)</th>
<th>COLOR (describe)</th>
<th>ODOR (describe)</th>
</tr>
</thead>
<tbody>
<tr>
<td>12:18</td>
<td>0.78</td>
<td>0.09</td>
<td>4.92</td>
<td>6.47</td>
<td>26.62</td>
<td>1617</td>
<td>0.79</td>
<td>13.00</td>
<td>YELLOW</td>
</tr>
<tr>
<td>12:20</td>
<td>0.17</td>
<td>0.09</td>
<td>4.90</td>
<td>6.41</td>
<td>26.69</td>
<td>1596</td>
<td>0.62</td>
<td>15.10</td>
<td>YELLOW</td>
</tr>
<tr>
<td>12:22</td>
<td>0.17</td>
<td>0.09</td>
<td>4.90</td>
<td>6.42</td>
<td>26.62</td>
<td>1577</td>
<td>0.54</td>
<td>11.50</td>
<td>YELLOW</td>
</tr>
</tbody>
</table>

**WELL CAPACITY (gallons/foot):** 0.75 ± 0.02; T = 0.04; 12.5 ± 0.08; 6 ± 0.06; 5 ± 1.00; 6 ± 1.47; 12 ± 6.88

**TUBING INSIDE DIAM. CAPACITY (gal/ft):** 1/4; 3/4 ± 0.0008; 1/4 ± 0.0004; 3/8 ± 0.0004; 3/8 ± 0.0006; 1/2 ± 0.0008; 5/8 ± 0.0008

### SAMPLING DATA

<table>
<thead>
<tr>
<th>PUMP OR TUBING DEPTH IN WELL (feet):</th>
<th>15.4</th>
</tr>
</thead>
<tbody>
<tr>
<td>FLOW RATE (ml per minute): 330</td>
<td></td>
</tr>
<tr>
<td>TUBING MATERIAL CODE: PE/S</td>
<td></td>
</tr>
<tr>
<td>FIELD DECONTAMINATION: Y N O</td>
<td></td>
</tr>
<tr>
<td>FILTER SIZE:</td>
<td></td>
</tr>
<tr>
<td>SAMPLE CONTAINER SPECIFICATION</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CONTAINERS</th>
<th>MATERIAL CODE</th>
<th>VOLUME</th>
<th>PRESERVATIVE USED</th>
<th>TOTAL VOL. ADDED IN FIELD (ml)</th>
<th>FINAL pH</th>
<th>INTENDED ANALYSIS AND METHOD</th>
</tr>
</thead>
<tbody>
<tr>
<td>@Ino-500</td>
<td>1 PE</td>
<td>500ml</td>
<td>NONE</td>
<td>NONE</td>
<td>N/A</td>
<td>Inorganics</td>
</tr>
<tr>
<td>@Net-250</td>
<td>1 PE</td>
<td>250ml</td>
<td>HNO3</td>
<td>1ml</td>
<td>&lt;2</td>
<td>Metals</td>
</tr>
<tr>
<td>@Rad-1L</td>
<td>2 PE</td>
<td>1L</td>
<td>HNO3</td>
<td>5ml</td>
<td>&lt;2</td>
<td>Radiologics</td>
</tr>
</tbody>
</table>

**REMARKS:**

1. Sample bottles pre-preserved at laboratory prior to sample collection.

**MATERIAL CODES:**

- AG = Amber Glass; CC = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

**SAMPLING/PURGING EQUIPMENT CODES:**

- APP = After Purge Pump; B = Bladder; BP = Bladder Pump; ESP = Electronic Submersible Pump; PP = Peristaltic Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (using Gravity Drain); VT = Vacuum Trap; O = Other (Specify)

**NOTES:**

1. The above do not constitute all of the information required by Chapter 63-160, F.A.C.
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2010. SECTION 4.3)
   - pH: ± 0.2 units; Temperature: ± 0.2 °C; Specific Conductance: ± 5%; Dissolved Oxygen: all readings ± 20% saturation (see Table FS 2000.2); optionally ± 0.2 mg/L or ± 10% (whichever is greater); Turbidity: all readings ± 20 NTU; optionally ± 5 NTU or 10% (whichever is greater)

Page 32 of 32  
Revision Date: February 1, 2004
### DEP-SOP-09/01
### FS 2200 Groundwater Sampling
### Form FD 9000-24
### GROUNDWATER SAMPLING LOG

**SITE NAME:** Big Bend  
**WELL NO.:** CCR-PZ-4  
**SAMPLE ID:** L16F174-04  
**DATE:** 6/24/15  
**SITE LOCATION:** Apollo Beach, FL.

#### PURGING DATA

<table>
<thead>
<tr>
<th>WELL VOLUME PURGE</th>
<th>1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) x WELL CAPACITY</th>
</tr>
</thead>
</table>
| (only if applicable) |🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️🗂️URRE

#### SAMPLING DATA

<table>
<thead>
<tr>
<th>TIME</th>
<th>VOLUME PURGED (GALLONS)</th>
<th>DEPTH TO WATER (F E E T)</th>
<th>TEMP (°C)</th>
<th>COND. (µS/cm)</th>
<th>D O I N S (µg/L)</th>
<th>T U R B I T U R Y (NTU)</th>
<th>COLOR</th>
<th>ODOR</th>
</tr>
</thead>
<tbody>
<tr>
<td>11:43</td>
<td>0.99 Gallons</td>
<td>3.52</td>
<td>6.68</td>
<td>26.49</td>
<td>1412</td>
<td>0.32</td>
<td>4.64</td>
<td>CLEAR</td>
</tr>
<tr>
<td>11:45</td>
<td>1.17 Gallons</td>
<td>6.65</td>
<td>26.64</td>
<td>1387</td>
<td>0.18</td>
<td>4.87</td>
<td>CLEAR</td>
<td>MLD</td>
</tr>
<tr>
<td>11:47</td>
<td>1.35 Gallons</td>
<td>6.70</td>
<td>26.64</td>
<td>1372</td>
<td>0.15</td>
<td>5.66</td>
<td>CLEAR</td>
<td>MLD</td>
</tr>
</tbody>
</table>

**TOTAL VOLUME PURGED (gallons):** 1.35

#### REMARKS:
(1) Sample bottles pre-preserved at laboratory prior to sample collection.

**MATERIAL CODES:**
- AG = Amber Glass  
- CC = Clear Glass  
- PE = Polyethylene  
- PP = Polypropylene  
- S = Silicone  
- T = Teflon  
- O = Other (Specify)

**NOTES:**
1. The above do not constitute all of the information required by Chapter 62-163, F.A.C.
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FD 2212. SECTION 3)
   - pH: ±0.2 units
   - Temperature: ±0.2 °C
   - Specific Conductance: ±5% Dissolved Oxygen: all readings ± 20% salination (see Table FD 2200-2);
   - TURBIDITY: all readings ≤ 20 NTU; optionally ±5 NTU or 10% (whichever is greater) Turbidity: all readings ≤ 20 NTU; optionally ±5 NTU or 10% (whichever is greater)

**Page 32 of 32**  
**Revision Date: February 1, 2004**
**DEP-SOP-001/01**
**FS 2200 Groundwater Sampling**
Form FD 9000-24

**GROUNDWATER SAMPLING LOG**

**SITE:** Big Bend  
**SITE LOCATION:** Apollo Beach, FL.

**WELL NO:** CCR-PZ-5  
**SAMPLE ID:** L16F174-05  
**DATE:** 6/24/15

### PURGING DATA

<table>
<thead>
<tr>
<th>TIME</th>
<th>VOLUME PURGED (GALLONS)</th>
<th>VOLUME PURGED (GALLONS)</th>
<th>PURGE RATE (GPM)</th>
<th>DEPTH TO WATER (FEET)</th>
<th>pH (standard units)</th>
<th>TEMP. (°C)</th>
<th>COND. (μhos/cm OR μs/cm)</th>
<th>DISSOLVED OXYGEN (% saturation)</th>
<th>TURBIDITY (NTUs)</th>
<th>COLOR (describe)</th>
<th>ODOR (describe)</th>
</tr>
</thead>
<tbody>
<tr>
<td>11:16</td>
<td>7.69</td>
<td>7.69</td>
<td>0.51</td>
<td>26.88</td>
<td>6.51</td>
<td>27.85</td>
<td>5585</td>
<td>0.20</td>
<td>11.30</td>
<td>CLEAR</td>
<td>MILD</td>
</tr>
<tr>
<td>11:18</td>
<td>1.04</td>
<td>8.73</td>
<td>0.52</td>
<td>26.86</td>
<td>6.51</td>
<td>27.84</td>
<td>5598</td>
<td>0.19</td>
<td>7.72</td>
<td>CLEAR</td>
<td>MILD</td>
</tr>
<tr>
<td>11:20</td>
<td>1.05</td>
<td>9.78</td>
<td>0.53</td>
<td>26.85</td>
<td>6.51</td>
<td>27.84</td>
<td>5618</td>
<td>0.18</td>
<td>5.14</td>
<td>CLEAR</td>
<td>MILD</td>
</tr>
</tbody>
</table>

**TOTAL VOLUME PURGED (gallons):** 9.76

**SAMPLING DATA**

<table>
<thead>
<tr>
<th>SAMPLED BY (PRINT): AFFILIATION</th>
<th>SAMPLER SIGNATURE</th>
<th>SAMPLING INITIATED AT</th>
<th>SAMPLING ENDED AT</th>
</tr>
</thead>
<tbody>
<tr>
<td>RAB TECO</td>
<td>1963</td>
<td>11:20</td>
<td>11:23</td>
</tr>
</tbody>
</table>

**PUMP OR TUBING DEPTH IN WELL (feet):** 36.0

**FIELD DECONTAMINATION:** Y ☐ N ☑

**FIELD-FILTERED:** ☑ ☐

**FILTER SIZE:** µm

**DUPLICATE:** Y ☐ N ☑

**INTENDED ANALYSIS AND/OR METHOD:**

- @Ino-500: PE, 500ml, NONE, NIA, inorganics, ESP
- @Met-250: PE, 250ml, HNO3, 1ml, <2, Metals, ESP
- @Rad-1L: PE, 1L, HNO3, 5ml, <2, Radiologicals, ESP

**REMARKS:**
(1) Sample bottles pre-preserved at laboratory prior to sample collection.

**NOTES:**
1. The above do not constitute all of the information required by Chapter 62-163, F.A.C.
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

<table>
<thead>
<tr>
<th>pH: ± 0.2 units</th>
<th>ORP: ± 5%</th>
<th>Conductivity: ± 5%</th>
<th>Dissolved Oxygen: ± 5%</th>
<th>Turbidity: ± 10 NTU</th>
<th>Salinity: ± 10%</th>
</tr>
</thead>
</table>

**Page 32 of 32**  
**Revision Date:** February 1, 2004
### GROUNDWATER SAMPLING LOG

**Site:** Big Bend  
**Location:** Apollo Beach, FL  
**Well No.:** CCR-PZ-6  
**Sample ID:** L16F174-06  
**Date:** 6/24/15

#### PURGING DATA

<table>
<thead>
<tr>
<th>Time</th>
<th>Volume Purged (Gallons)</th>
<th>Volume Purged (Gallons)</th>
<th>Purge Rate (GPM)</th>
<th>Depth to Water (feet)</th>
<th>pH (standard units)</th>
<th>Temp. (°C)</th>
<th>Cond. (μhos/cm or μS/cm)</th>
<th>Dissolved Oxygen (p.p.m.)</th>
<th>Turbidity (NTU)</th>
<th>Color (describe)</th>
<th>Odor (describe)</th>
</tr>
</thead>
<tbody>
<tr>
<td>10:38</td>
<td>0.78</td>
<td>0.78</td>
<td>0.13</td>
<td>5.45</td>
<td>6.55</td>
<td>26.54</td>
<td>1639</td>
<td>0.05</td>
<td>9.78</td>
<td>CLEAR</td>
<td>MILD</td>
</tr>
<tr>
<td>10:40</td>
<td>0.26</td>
<td>1.04</td>
<td>0.13</td>
<td>5.46</td>
<td>6.52</td>
<td>26.53</td>
<td>1639</td>
<td>0.31</td>
<td>8.22</td>
<td>CLEAR</td>
<td>MILD</td>
</tr>
<tr>
<td>10:42</td>
<td>0.26</td>
<td>1.30</td>
<td>0.13</td>
<td>5.48</td>
<td>6.63</td>
<td>26.42</td>
<td>1038</td>
<td>0.57</td>
<td>6.70</td>
<td>CLEAR</td>
<td>MILD</td>
</tr>
</tbody>
</table>

#### SAMPLING DATA

<table>
<thead>
<tr>
<th>Sampled By/Print Affiliation</th>
<th>Sampler (S) Signatures</th>
<th>Sampling Initiated At</th>
<th>Sampling Ended At</th>
</tr>
</thead>
<tbody>
<tr>
<td>TECO</td>
<td>403</td>
<td>10:42</td>
<td>10:50</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Field Decontamination</th>
<th>Field-Filtered</th>
<th>Filter Size</th>
<th>µm</th>
<th>Duplicate</th>
<th>Y</th>
<th>N</th>
<th>Y</th>
<th>N</th>
<th>X</th>
</tr>
</thead>
</table>

#### Remarks:

1. Sample bottles pre-preserved at laboratory prior to sample collection.

### Notes:

1. The above do not constitute all of the information required by Florida Statute 62-169.1, F.A.C.
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE P5 2212. SECTION 3)
   - pH: ±0.2 units
   - Temperature: ±0.2 °C
   - Conductance: ± 5 %
   - Dissolved Oxygen: ± 20 % saturation
   - Turbidity: ± 2 NTU
   - Volatile: ± 10 % (whichever is greater)
3. Optionally, ± 0.2 mg/L or ± 10 % (whichever is greater)
### PURGING DATA

- **WELL NAME:** Hardee
- **SITE LOCATION:** Bowling Green, Fl.
- **WELL NO.:** MWB-35
- **SAMPLE ID:** L16F174-07
- **DATE:** 6/24/15

**WELL VOLUME PURGE:**
- 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) x WELL CAPACITY
- PURGE VOLUME = \( \frac{1}{4} \) WELL VOLUME

**EQUIPMENT VOLUME PURGE:**
- 1 EQUIPMENT VOLUME = PUMP VOLUME + (TUBING CAPACITY x TUBING LENGTH) + FLOW CELL VOLUME

**INITIAL PUMP OR TUBING DEPTH:** 16.2 feet

<table>
<thead>
<tr>
<th>TIME</th>
<th>VOLUME PURGED (GALLONS)</th>
<th>VOLUME PURGED (GALLONS)</th>
<th>PURGE RATE (GPM)</th>
<th>DEPTH TO WATER (Feet)</th>
<th>pH (standard units)</th>
<th>TEMP (°C)</th>
<th>COND. (µhos/cm OR µS/cm)</th>
<th>DISSOLVED OXYGEN (mg/l OR % saturation)</th>
<th>TURBIDITY (NTU)</th>
<th>COLOR (describe)</th>
<th>ODOR (describe)</th>
</tr>
</thead>
<tbody>
<tr>
<td>10:04</td>
<td>0.82</td>
<td>0.82</td>
<td>0.12</td>
<td>7.36</td>
<td>6.80</td>
<td>26.50</td>
<td>1584</td>
<td>0.38</td>
<td>0.94</td>
<td>LT. YELLOW</td>
<td>NONE</td>
</tr>
<tr>
<td>10:06</td>
<td>0.24</td>
<td>1.06</td>
<td>0.12</td>
<td>7.40</td>
<td>6.59</td>
<td>26.59</td>
<td>1567</td>
<td>0.36</td>
<td>1.46</td>
<td>LT. YELLOW</td>
<td>NONE</td>
</tr>
<tr>
<td>10:08</td>
<td>0.24</td>
<td>1.30</td>
<td>0.12</td>
<td>7.42</td>
<td>6.80</td>
<td>26.72</td>
<td>1544</td>
<td>0.54</td>
<td>1.59</td>
<td>LT. YELLOW</td>
<td>NONE</td>
</tr>
<tr>
<td>10:10</td>
<td>0.24</td>
<td>1.54</td>
<td>0.12</td>
<td>7.43</td>
<td>6.80</td>
<td>26.77</td>
<td>1516</td>
<td>0.36</td>
<td>1.22</td>
<td>LT. YELLOW</td>
<td>NONE</td>
</tr>
</tbody>
</table>

**WELL CAPACITY (Gallons Per Foot):** 0.750 ± 0.020

**TUBING INSIDE DIAMETER (Inches):** 0.288 ± 0.00020

**TUBULAR CONDUIT WALL THICKNESS (Inches):** 0.00005

**SAMPLE DATA**

- **SAMPLED BY:** TECO
- **AFFILIATION:** RAB
- **SIGNATURES:** SAMPLER: TECO
- **SAMPLE INITIATED AT:** 10:10
- **SAMPLE ENDED AT:** 10:19
- **TUBING MATERIAL CODE:** PE/S

**FIELD DECONTAMINATION:** Y [ ] N [x]

**FIELD FILTERED:** Y [x] N [ ]

**FILTER SIZE:** µm

**DUPLICATE (if applicable):** Y [x] N [ ]

<table>
<thead>
<tr>
<th>SAMPLE ID CODE</th>
<th># CONTAINERS</th>
<th>MATERIAL CODE</th>
<th>VOLUME</th>
<th>PRESERVATIVE USED</th>
<th>TOTAL VOL. ADDED IN FIELD (ml)</th>
<th>FINAL pH</th>
<th>INTENDED ANALYSIS AND/OR METHOD</th>
<th>SAMPLING EQUIPMENT CODE</th>
</tr>
</thead>
<tbody>
<tr>
<td>@lno-500</td>
<td>1</td>
<td>PE</td>
<td>500ml</td>
<td>NONE</td>
<td>NONE</td>
<td>NIA</td>
<td>Inorganics</td>
<td>PP</td>
</tr>
<tr>
<td>@Met-250</td>
<td>1</td>
<td>PE</td>
<td>250ml</td>
<td>HNO3</td>
<td>1ml</td>
<td>&lt;2</td>
<td>Metals</td>
<td>PP</td>
</tr>
<tr>
<td>@Rad-1L</td>
<td>2</td>
<td>PE</td>
<td>1L</td>
<td>HNO3</td>
<td>5ml</td>
<td>&lt;2</td>
<td>Radiologics</td>
<td>PP</td>
</tr>
</tbody>
</table>

**NOTES:**

1. The above do not constitute all of the information required by Chapter 62-163, F.A.C.
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS:
   - pH: ±0.2 units
   - Temperature: ±0.2 °C
   - Specific Conductance: ±5%
   - Dissolved Oxygen: ±15%
   - Turbidity: ±50 NTU
   - Other (Specify)

**Material Codes:**
- AG = Amber Glass
- CG = Clear Glass
- PE = Polyethylene
- PP = Polypropylene
- S = Silicone
- T = Teflon

**Sampling Purging Equipment Codes:**
- APP = After Perisodic Pump
- B = Baller
- BP = Bladder Pump
- ESP = Electric Submersible Pump
- PP = Perisodic Pump
- RPPP = Reverse Perisodic Pump
- SM = Straw Method (testing Gravity Drain)
- VT = Vacuum Trap
- D = Other (Specify)

**Revision Date:** February 1, 2004
## Purgung Data

<table>
<thead>
<tr>
<th>WELL NO.</th>
<th>MWB-36</th>
<th>SAMPLE ID.</th>
<th>L16F174-08</th>
<th>DATE: 6/24/15</th>
</tr>
</thead>
</table>

### Purging Data

**Well Diameter (inches):** 0.0

**Tubing Diameter (inches):** 1/4

**Well Screen Interval:** 13.73 feet to 18.73 feet

**Static Depth to Water (feet):** 7.78

**Purging Pump Type or Bailier:** PP

#### WELL VOLUME PURGE

- 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) x WELL CAPACITY

**Initial Pump or Tubing Depth in Well (feet):** 16.2

**Final Pump or Tubing Depth in Well (feet):** 16.2

**Purging Initiated At:** 9:26

**Purging Ended At:** 9:42

**Total Volume Purged (gallons):** 1.82

### Sampling Data

**Sampled by (Print)/Affiliation:** RAB

**Sampled on (Signature):** TECO

**Sampled Date:** 942

**Sampled by:** 9:42

**Sampled Ended At:** 9:50

**Pump or Tubing Depth in Well (feet):** 16.2

**Sampled Flow Rate (ml, per minute):** 430

**Tubing Material Code:** PE/S

**Field Decontamination:** Y

**Field-filtered:** N

**Filter Size:** µm

**Duplicate:** Y

**Sample Container Specification**

<table>
<thead>
<tr>
<th>Sample ID Code</th>
<th># Containers</th>
<th>Material Code</th>
<th>Volume</th>
<th>Preservative Used</th>
<th>Sample Preservation</th>
<th>Total Vol. Added to Field (ml)</th>
<th>pH</th>
<th>Intended Analysis And/or Method</th>
<th>Sampling Equipment Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>@Ino-500</td>
<td>1</td>
<td>PE</td>
<td>500ml</td>
<td>NONE</td>
<td>NONE</td>
<td>N/A</td>
<td></td>
<td>Inorganics</td>
<td>PP</td>
</tr>
<tr>
<td>@Met-250</td>
<td>1</td>
<td>PE</td>
<td>250ml</td>
<td>HNO3</td>
<td>1ml</td>
<td>&lt;2</td>
<td></td>
<td>Metals</td>
<td>PP</td>
</tr>
<tr>
<td>@Rad-1L</td>
<td>2</td>
<td>PE</td>
<td>1L</td>
<td>HNO3</td>
<td>5ml</td>
<td>&lt;2</td>
<td></td>
<td>Radiologicals</td>
<td>PP</td>
</tr>
</tbody>
</table>

**Remarks:**

(1) Sample bottles pre-preserved at laboratory prior to sample collection.

**Material Codes:**

- A = Amber Glass
- C = Clear Glass
- P = Polyethylene
- PP = Polypropylene
- S = Silicone
- T = Teflon
- O = Other (Specify)

**Sampling Purging:**

- APP = After Peristaltic Pump
- B = Bailier
- BP = Bailer Pump
- ESP = Electric Submersible Pump
- PP = Peristaltic Pump

**Equipment Codes:**

- RFP = Reverse Flow Peristaltic Pump
- SM = Straw Method (using Gravity Drainage)
- VT = Vacuum Trap
- O = Other (Specify)

**Notes:**

1. The above do not constitute all of the information required by Chapter 62-163, F.A.C.
2. Stabilization Criteria for Range of Variation of Last Three Consecutive Readings (See FS 2200-2, Section 13)
   - pH ± 0.5 unit
   - Temperature ± 2 °C
   - Conductance ± 5% Dissolved Oxygen: all readings ≥ 10% saturation (see Table FS 2200-2)
   - Optionally, ± 0.2 mg/L or ± 10% (whichever is greater)
   - Turbidity: all readings ≤ 20 NTU, optionally ± 5 NTU or ± 10% (whichever is greater)

Page 32 of 32

Revision Date: February 1, 2004
Work Order - L16G005
Project - CCR Wells Economizer Ash Pond

Case Narrative

8 sample(s) were received on 07/27/16 15:50.

There were no issues noted with the sample(s) associated with this workorder unless noted below.

**EPA 6010**

The recovery of the matrix spike and spike duplicate could not be accurately determined due to the amount of target analyte in the sample matrix.
The Parent sample is flagged with a J qualifier.

**EPA 300.0**

The recovery of the matrix spike and spike duplicate for Chloride and Sulfate is below the control limits due to matrix interference. The parent sample is flagged with a J qualifier.

**EPA 200.8**

The recovery of the matrix spike and spike duplicate for Selenium is below the control limits due to matrix interference. The parent sample is flagged with a J qualifier.

**SM 2540C**

A constant weight could not be achieved after three consecutive weighing and drying cycles for sample PZ-2. The sample(s) are flagged with a J qualifier.

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
**Sample Information**

Client: Big Bend Power Station  
Lab Sample ID: L16G005-01  
Sample Description: PZ1  
Sample Collection Method: Grab  
Sampled By: Robert Barthelette  
Date and Time Collected: 7/27/16 13:45  
Date of Sample Receipt: 7/27/16 15:50

---

**Laboratory Results**

**Sample Qualifier:**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>MDL</th>
<th>Qualifier Code</th>
<th>Dil</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>General Chemistry Parameters</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chloride</td>
<td>742 mg/L</td>
<td>2.00</td>
<td>50.0</td>
<td>J-</td>
<td>100</td>
<td>EPA 300.0</td>
<td>TMH</td>
<td>8/11/16</td>
<td>10:29</td>
<td></td>
</tr>
<tr>
<td>Specific Conductance</td>
<td>4180 umhos/cm</td>
<td>100</td>
<td>100</td>
<td>1</td>
<td>FDEP SOP FT 1200</td>
<td>RAB</td>
<td>7/27/16</td>
<td>13:45</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dissolved Oxygen</td>
<td>0.220 mg/L</td>
<td>0.100</td>
<td>0.100</td>
<td>1</td>
<td>FDEP SOP FT 1500</td>
<td>RAB</td>
<td>7/27/16</td>
<td>13:45</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fluoride</td>
<td>0.128 mg/L</td>
<td>0.0100</td>
<td>0.0500</td>
<td>1</td>
<td>EPA 300.0</td>
<td>TMH</td>
<td>8/10/16</td>
<td>18:40</td>
<td></td>
<td></td>
</tr>
<tr>
<td>pH</td>
<td>6.67 pH Units</td>
<td>1.00</td>
<td>1.00</td>
<td>1</td>
<td>FDEP SOP FT 1100</td>
<td>RAB</td>
<td>7/27/16</td>
<td>13:45</td>
<td></td>
<td></td>
</tr>
<tr>
<td>REDOX Potential</td>
<td>-74.1 mV</td>
<td>-999</td>
<td>-999</td>
<td>1</td>
<td>SM 2580B</td>
<td>RAB</td>
<td>7/27/16</td>
<td>13:45</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Dissolved Solids</td>
<td>3140 mg/L</td>
<td>24.0</td>
<td>40.0</td>
<td>2</td>
<td>SM 2540C</td>
<td>RFL</td>
<td>8/3/16</td>
<td>12:00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sulfate</td>
<td>1320 mg/L</td>
<td>50.0</td>
<td>200</td>
<td>J-</td>
<td>100</td>
<td>EPA 300.0</td>
<td>TMH</td>
<td>8/11/16</td>
<td>10:29</td>
<td></td>
</tr>
<tr>
<td>Turbidity</td>
<td>3.88 NTU</td>
<td>0.100</td>
<td>0.100</td>
<td>1</td>
<td>FDEP SOP FT 1600</td>
<td>RAB</td>
<td>7/27/16</td>
<td>13:45</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total Mercury by SW846 Method 7470/7471</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mercury</td>
<td>0.0500 ug/L</td>
<td>0.0500</td>
<td>0.200</td>
<td>U</td>
<td>1</td>
<td>EPA 7470A</td>
<td>RLC</td>
<td>8/5/16</td>
<td>9:08</td>
<td></td>
</tr>
<tr>
<td><strong>Total Recoverable Metals by 200 Series</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Antimony</td>
<td>1.03 ug/L</td>
<td>0.600</td>
<td>2.00</td>
<td>I</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RC</td>
<td>8/2/16</td>
<td>10:09</td>
<td></td>
</tr>
<tr>
<td>Arsenic</td>
<td>7.38 ug/L</td>
<td>0.320</td>
<td>2.00</td>
<td>I</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RC</td>
<td>8/2/16</td>
<td>10:09</td>
<td></td>
</tr>
<tr>
<td>Cadmium</td>
<td>0.100 ug/L</td>
<td>0.100</td>
<td>0.500</td>
<td>U</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RC</td>
<td>8/3/16</td>
<td>11:15</td>
<td></td>
</tr>
<tr>
<td>Cobalt</td>
<td>0.450 ug/L</td>
<td>0.0400</td>
<td>2.00</td>
<td>I</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RC</td>
<td>8/2/16</td>
<td>10:09</td>
<td></td>
</tr>
<tr>
<td>Lead</td>
<td>0.110 ug/L</td>
<td>0.0800</td>
<td>2.00</td>
<td>I</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RC</td>
<td>8/3/16</td>
<td>11:15</td>
<td></td>
</tr>
<tr>
<td>Selenium</td>
<td>0.960 ug/L</td>
<td>0.200</td>
<td>2.00</td>
<td>I</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RC</td>
<td>8/2/16</td>
<td>10:09</td>
<td></td>
</tr>
<tr>
<td>Thallium</td>
<td>0.100 ug/L</td>
<td>0.100</td>
<td>0.500</td>
<td>U</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RC</td>
<td>8/3/16</td>
<td>11:15</td>
<td></td>
</tr>
<tr>
<td><strong>Total Recoverable Metals by SW846 Method 6010B</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Barium</td>
<td>30.8 ug/L</td>
<td>0.500</td>
<td>20.0</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>8/3/16</td>
<td>17:05</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beryllium</td>
<td>0.200 ug/L</td>
<td>0.200</td>
<td>2.00</td>
<td>U</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>8/3/16</td>
<td>17:05</td>
<td></td>
</tr>
</tbody>
</table>

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
**Sample Information**

<table>
<thead>
<tr>
<th>Client:</th>
<th>Big Bend Power Station</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lab Sample ID:</td>
<td>L16G005-01</td>
</tr>
<tr>
<td>Sample Description:</td>
<td>PZ1</td>
</tr>
<tr>
<td>Sample Collection Method:</td>
<td>Grab</td>
</tr>
<tr>
<td>Sampled By:</td>
<td>Robert Barthelette</td>
</tr>
<tr>
<td>Date and Time Collected:</td>
<td>7/27/16 13:45</td>
</tr>
<tr>
<td>Date of Sample Receipt:</td>
<td>7/27/16 15:50</td>
</tr>
</tbody>
</table>

**Laboratory Results**

**Sample Qualifier:**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier Code</th>
<th>Dil</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boron</td>
<td>306</td>
<td>ug/L</td>
<td>10.0</td>
<td>50.0</td>
<td>1</td>
<td></td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>8/3/16 17:05</td>
</tr>
<tr>
<td>Calcium</td>
<td>227000</td>
<td>ug/L</td>
<td>30.0</td>
<td>1000</td>
<td>1</td>
<td></td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>8/4/16 11:42</td>
</tr>
<tr>
<td>Chromium</td>
<td>1.60</td>
<td>ug/L</td>
<td>1.60</td>
<td>12.0</td>
<td>1</td>
<td></td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>8/3/16 17:05</td>
</tr>
<tr>
<td>Molybdenum</td>
<td>105</td>
<td>ug/L</td>
<td>1.00</td>
<td>20.0</td>
<td>1</td>
<td></td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>8/3/16 17:05</td>
</tr>
</tbody>
</table>

**Radium - 226**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier Code</th>
<th>Dil</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rad - 226</td>
<td>31</td>
<td>pCi/L</td>
<td>0.4</td>
<td>0.4</td>
<td>1</td>
<td></td>
<td>EPA 903.0</td>
<td>KL1</td>
<td>8/2/16 11:46</td>
</tr>
<tr>
<td>Rad - 226 Counting Error +/-</td>
<td>1.6</td>
<td>pCi/L</td>
<td>0.8</td>
<td>0.8</td>
<td>1</td>
<td></td>
<td>EPA Ra-05</td>
<td>KL1</td>
<td>8/8/16 11:15</td>
</tr>
</tbody>
</table>

**Radium - 228**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier Code</th>
<th>Dil</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rad - 228</td>
<td>1.7</td>
<td>pCi/L</td>
<td>0.8</td>
<td>0.8</td>
<td>1</td>
<td></td>
<td>EPA Ra-05</td>
<td>KL1</td>
<td>8/8/16 11:15</td>
</tr>
<tr>
<td>Rad - 228 Counting Error +/-</td>
<td>0.6</td>
<td>pCi/L</td>
<td>0.8</td>
<td>0.8</td>
<td>1</td>
<td></td>
<td>EPA Ra-05</td>
<td>KL1</td>
<td>8/8/16 11:15</td>
</tr>
</tbody>
</table>

**Radium-226/228**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier Code</th>
<th>Dil</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rad-226/228</td>
<td>33</td>
<td>pCi/L</td>
<td>0.8</td>
<td>0.8</td>
<td>1</td>
<td></td>
<td>Calc</td>
<td>KL1</td>
<td>8/8/16 11:15</td>
</tr>
<tr>
<td>Rad-226/228 Counting Error +/-</td>
<td>1.6</td>
<td>pCi/L</td>
<td>0.8</td>
<td>0.8</td>
<td>1</td>
<td></td>
<td>Calc</td>
<td>KL1</td>
<td>8/8/16 11:15</td>
</tr>
</tbody>
</table>

**Metals (ICP)**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier Code</th>
<th>Dil</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithium</td>
<td>0.015</td>
<td>mg/L</td>
<td>0.0010</td>
<td>0.050</td>
<td>1</td>
<td></td>
<td>200.7 Rev 4.4 Z01</td>
<td>GESP</td>
<td>8/3/16 16:14</td>
</tr>
</tbody>
</table>

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
**Sample Information**

Client: Big Bend Power Station  
Lab Sample ID: L16G005-02  
Sample Description: PZ2  
Sample Collection Method: Grab  
Sampled By: Robert Barthelette  
Date and Time Collected: 7/27/16 13:16  
Date of Sample Receipt: 7/27/16 15:50

**Laboratory Results**

### Sample Qualifier:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier Code</th>
<th>Dil</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>General Chemistry Parameters</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chloride</td>
<td>140</td>
<td>mg/L</td>
<td>2.00</td>
<td>50.0</td>
<td>100</td>
<td>EPA 300.0</td>
<td>TMH</td>
<td>8/11/16 11:30</td>
<td></td>
</tr>
<tr>
<td>Specific Conductance</td>
<td>1700</td>
<td>umhos/cm</td>
<td>100</td>
<td>100</td>
<td>1</td>
<td>FDEP SOP FT 1200</td>
<td>RAB</td>
<td>7/27/16 13:16</td>
<td></td>
</tr>
<tr>
<td>Dissolved Oxygen</td>
<td>0.130</td>
<td>mg/L</td>
<td>0.100</td>
<td>0.100</td>
<td>1</td>
<td>FDEP SOP FT 1500</td>
<td>RAB</td>
<td>7/27/16 13:16</td>
<td></td>
</tr>
<tr>
<td>Fluoride</td>
<td>0.183</td>
<td>mg/L</td>
<td>0.0100</td>
<td>0.0500</td>
<td>1</td>
<td>EPA 300.0</td>
<td>TMH</td>
<td>8/11/16 10:59</td>
<td></td>
</tr>
<tr>
<td>pH</td>
<td>6.68</td>
<td>pH Units</td>
<td>1.00</td>
<td>1.00</td>
<td>1</td>
<td>FDEP SOP FT 1100</td>
<td>RAB</td>
<td>7/27/16 13:16</td>
<td></td>
</tr>
<tr>
<td>REDOX Potential</td>
<td>-67.4</td>
<td>mV</td>
<td>-999</td>
<td>-999</td>
<td>1</td>
<td>SM 2580B</td>
<td>RAB</td>
<td>7/27/16 13:16</td>
<td></td>
</tr>
<tr>
<td>Total Dissolved Solids</td>
<td>1170</td>
<td>mg/L</td>
<td>24.0</td>
<td>40.0</td>
<td>2</td>
<td>SM 2540C</td>
<td>RFL</td>
<td>8/3/16 12:00</td>
<td></td>
</tr>
<tr>
<td>Sulfate</td>
<td>542</td>
<td>mg/L</td>
<td>50.0</td>
<td>200</td>
<td>100</td>
<td>EPA 300.0</td>
<td>TMH</td>
<td>8/11/16 11:30</td>
<td></td>
</tr>
<tr>
<td>Turbidity</td>
<td>7.16</td>
<td>NTU</td>
<td>0.100</td>
<td>0.100</td>
<td>1</td>
<td>FDEP SOP FT 1600</td>
<td>RAB</td>
<td>7/27/16 13:16</td>
<td></td>
</tr>
<tr>
<td><strong>Total Mercury by SW846 Method 7470/7471</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mercury</td>
<td>0.0500</td>
<td>ug/L</td>
<td>0.0500</td>
<td>0.200</td>
<td>U</td>
<td>1</td>
<td>EPA 7470A</td>
<td>RLC</td>
<td>8/5/16 9:11</td>
</tr>
<tr>
<td><strong>Total Recoverable Metals by 200 Series</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Antimony</td>
<td>0.830</td>
<td>ug/L</td>
<td>0.600</td>
<td>2.00</td>
<td>I</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RC</td>
<td>8/2/16 10:13</td>
</tr>
<tr>
<td>Arsenic</td>
<td>0.990</td>
<td>ug/L</td>
<td>0.320</td>
<td>2.00</td>
<td>I</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RC</td>
<td>8/2/16 10:13</td>
</tr>
<tr>
<td>Cadmium</td>
<td>0.100</td>
<td>ug/L</td>
<td>0.100</td>
<td>0.500</td>
<td>U</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RC</td>
<td>8/3/16 11:19</td>
</tr>
<tr>
<td>Cobalt</td>
<td>0.0900</td>
<td>ug/L</td>
<td>0.0400</td>
<td>2.00</td>
<td>I</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RC</td>
<td>8/2/16 10:13</td>
</tr>
<tr>
<td>Lead</td>
<td>0.110</td>
<td>ug/L</td>
<td>0.0800</td>
<td>2.00</td>
<td>I</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RC</td>
<td>8/3/16 11:19</td>
</tr>
<tr>
<td>Selenium</td>
<td>0.280</td>
<td>ug/L</td>
<td>0.200</td>
<td>2.00</td>
<td>I</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RC</td>
<td>8/2/16 10:13</td>
</tr>
<tr>
<td>Thallium</td>
<td>0.100</td>
<td>ug/L</td>
<td>0.100</td>
<td>0.500</td>
<td>U</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RC</td>
<td>8/3/16 11:19</td>
</tr>
<tr>
<td><strong>Total Recoverable Metals by SW846 Method 6010B</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Barium</td>
<td>64.8</td>
<td>ug/L</td>
<td>0.500</td>
<td>20.0</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>8/3/16 17:08</td>
<td></td>
</tr>
<tr>
<td>Beryllium</td>
<td>0.200</td>
<td>ug/L</td>
<td>0.200</td>
<td>2.00</td>
<td>U</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>8/3/16 17:08</td>
</tr>
</tbody>
</table>

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
## Sample Information

<table>
<thead>
<tr>
<th>Client:</th>
<th>Big Bend Power Station</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lab Sample ID:</td>
<td>L16G005-02</td>
</tr>
<tr>
<td>Sample Description:</td>
<td>PZ2</td>
</tr>
<tr>
<td>Sample Collection Method:</td>
<td>Grab</td>
</tr>
<tr>
<td>Sampled By:</td>
<td>Robert Barthelette</td>
</tr>
<tr>
<td>Date and Time Collected:</td>
<td>7/27/16 13:16</td>
</tr>
<tr>
<td>Date of Sample Receipt:</td>
<td>7/27/16 15:50</td>
</tr>
</tbody>
</table>

## Laboratory Results

### Sample Qualifier:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier Code</th>
<th>Dil</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Boron</strong></td>
<td>2810</td>
<td>ug/L</td>
<td>10.0</td>
<td>50.0</td>
<td>1</td>
<td></td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>8/3/16 17:08</td>
</tr>
<tr>
<td><strong>Calcium</strong></td>
<td>193000</td>
<td>ug/L</td>
<td>30.0</td>
<td>1000</td>
<td>J-</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>8/4/16 11:45</td>
</tr>
<tr>
<td><strong>Chromium</strong></td>
<td>1.60</td>
<td>ug/L</td>
<td>1.60</td>
<td>12.0</td>
<td>1</td>
<td></td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>8/3/16 17:08</td>
</tr>
<tr>
<td><strong>Molybdenum</strong></td>
<td>1.00</td>
<td>ug/L</td>
<td>1.00</td>
<td>20.0</td>
<td>1</td>
<td></td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>8/3/16 17:08</td>
</tr>
</tbody>
</table>

**KNL Laboratory**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier Code</th>
<th>Dil</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Radium - 226</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rad - 226</td>
<td>12.8</td>
<td>pCi/L</td>
<td>0.4</td>
<td>0.4</td>
<td>1</td>
<td></td>
<td>EPA 903.0</td>
<td>KL1</td>
<td>8/2/16 11:46</td>
</tr>
<tr>
<td>Rad - 226 Counting Error +/-</td>
<td>1.1</td>
<td>pCi/L</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td>EPA 903.0</td>
<td>KL1</td>
<td>8/2/16 11:46</td>
</tr>
</tbody>
</table>

**Radium - 228**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier Code</th>
<th>Dil</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rad - 228</td>
<td>0.9</td>
<td>pCi/L</td>
<td>0.9</td>
<td>0.9</td>
<td>U</td>
<td>1</td>
<td>EPA Ra-05</td>
<td>KL1</td>
<td>8/4/16 10:47</td>
</tr>
<tr>
<td>Rad - 228 Counting Error +/-</td>
<td>0.6</td>
<td>pCi/L</td>
<td></td>
<td></td>
<td>U</td>
<td>1</td>
<td>EPA Ra-05</td>
<td>KL1</td>
<td>8/4/16 10:47</td>
</tr>
</tbody>
</table>

**Radium-226/228**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier Code</th>
<th>Dil</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rad-226/228</td>
<td>13.2</td>
<td>pCi/L</td>
<td>0.9</td>
<td>0.9</td>
<td>1</td>
<td></td>
<td>Calc</td>
<td>KL1</td>
<td>8/4/16 10:47</td>
</tr>
<tr>
<td>Rad-226/228 Counting Error +/-</td>
<td>1.1</td>
<td>pCi/L</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td>Calc</td>
<td>KL1</td>
<td>8/4/16 10:47</td>
</tr>
</tbody>
</table>

**TestAmerica Pensacola**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier Code</th>
<th>Dil</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Lithium</strong></td>
<td>0.017</td>
<td>mg/L</td>
<td>0.0010</td>
<td>0.050</td>
<td>I</td>
<td>1</td>
<td>200.7 Rev 4.4 Z01</td>
<td>GESP</td>
<td>8/3/16 16:31</td>
</tr>
</tbody>
</table>

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
Laboratory Results

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier Code</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chloride</td>
<td>140 mg/L</td>
<td>2.00</td>
<td>50.0</td>
<td>100</td>
<td>EPA 300.0</td>
<td>TMH</td>
<td>8/11/16 11:50</td>
<td></td>
</tr>
<tr>
<td>Specific Conductance</td>
<td>1740 umhos/cm</td>
<td>100</td>
<td>100</td>
<td>1</td>
<td>FDEP SOP FT 1200</td>
<td>RAB</td>
<td>7/27/16 12:45</td>
<td></td>
</tr>
<tr>
<td>Dissolved Oxygen</td>
<td>0.100 mg/L</td>
<td>0.100</td>
<td>0.100</td>
<td>U</td>
<td>FDEP SOP FT 1500</td>
<td>RAB</td>
<td>7/27/16 12:45</td>
<td></td>
</tr>
<tr>
<td>Fluoride</td>
<td>0.262 mg/L</td>
<td>0.0100</td>
<td>0.0500</td>
<td>1</td>
<td>EPA 300.0</td>
<td>TMH</td>
<td>8/11/16 11:40</td>
<td></td>
</tr>
<tr>
<td>pH</td>
<td>6.19 pH Units</td>
<td>1.00</td>
<td>1.00</td>
<td>1</td>
<td>FDEP SOP FT 1100</td>
<td>RAB</td>
<td>7/27/16 12:45</td>
<td></td>
</tr>
<tr>
<td>REDOX Potential</td>
<td>-74.4 mV</td>
<td>-999</td>
<td>-999</td>
<td>1</td>
<td>SM 2580B</td>
<td>RAB</td>
<td>7/27/16 12:45</td>
<td></td>
</tr>
<tr>
<td>Total Dissolved Solids</td>
<td>1220 mg/L</td>
<td>24.0</td>
<td>40.0</td>
<td>2</td>
<td>SM 2540C</td>
<td>RFL</td>
<td>8/3/16 12:00</td>
<td></td>
</tr>
<tr>
<td>Sulfate</td>
<td>516 mg/L</td>
<td>50.0</td>
<td>200</td>
<td>100</td>
<td>EPA 300.0</td>
<td>TMH</td>
<td>8/11/16 11:50</td>
<td></td>
</tr>
<tr>
<td>Turbidity</td>
<td>8.04 NTU</td>
<td>0.100</td>
<td>0.100</td>
<td>1</td>
<td>FDEP SOP FT 1600</td>
<td>RAB</td>
<td>7/27/16 12:45</td>
<td></td>
</tr>
</tbody>
</table>

**Total Mercury by SW846 Method 7470/7471**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier Code</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mercury</td>
<td>0.0500 ug/L</td>
<td>0.0500</td>
<td>0.200</td>
<td>U</td>
<td>EPA 7470A</td>
<td>RLC</td>
<td>8/5/16 9:15</td>
<td></td>
</tr>
</tbody>
</table>

**Total Recoverable Metals by 200 Series**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier Code</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antimony</td>
<td>0.770 ug/L</td>
<td>0.600</td>
<td>2.00</td>
<td>I</td>
<td>EPA 200.8</td>
<td>RC</td>
<td>8/2/16 10:16</td>
<td></td>
</tr>
<tr>
<td>Arsenic</td>
<td>0.540 ug/L</td>
<td>0.320</td>
<td>2.00</td>
<td>I</td>
<td>EPA 200.8</td>
<td>RC</td>
<td>8/2/16 10:16</td>
<td></td>
</tr>
<tr>
<td>Cadmium</td>
<td>0.100 ug/L</td>
<td>0.100</td>
<td>0.500</td>
<td>U</td>
<td>EPA 200.8</td>
<td>RC</td>
<td>8/3/16 11:23</td>
<td></td>
</tr>
<tr>
<td>Cobalt</td>
<td>0.0900 ug/L</td>
<td>0.0400</td>
<td>2.00</td>
<td>I</td>
<td>EPA 200.8</td>
<td>RC</td>
<td>8/2/16 10:16</td>
<td></td>
</tr>
<tr>
<td>Lead</td>
<td>0.0800 ug/L</td>
<td>0.0800</td>
<td>2.00</td>
<td>I</td>
<td>EPA 200.8</td>
<td>RC</td>
<td>8/3/16 11:23</td>
<td></td>
</tr>
<tr>
<td>Selenium</td>
<td>0.270 ug/L</td>
<td>0.200</td>
<td>2.00</td>
<td>I</td>
<td>EPA 200.8</td>
<td>RC</td>
<td>8/2/16 10:16</td>
<td></td>
</tr>
<tr>
<td>Thallium</td>
<td>0.100 ug/L</td>
<td>0.100</td>
<td>0.500</td>
<td>U</td>
<td>EPA 200.8</td>
<td>RC</td>
<td>8/3/16 11:23</td>
<td></td>
</tr>
</tbody>
</table>

**Total Recoverable Metals by SW846 Method 6010B**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier Code</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barium</td>
<td>67.6 ug/L</td>
<td>0.500</td>
<td>20.0</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>8/3/16 17:10</td>
<td></td>
</tr>
<tr>
<td>Beryllium</td>
<td>0.200 ug/L</td>
<td>0.200</td>
<td>2.00</td>
<td>U</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>8/3/16 17:10</td>
<td></td>
</tr>
</tbody>
</table>

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
## Sample Information

<table>
<thead>
<tr>
<th>Client:</th>
<th>Big Bend Power Station</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lab Sample ID:</td>
<td>L16G005-03</td>
</tr>
<tr>
<td>Sample Description:</td>
<td>PZ3</td>
</tr>
<tr>
<td>Sample Collection Method:</td>
<td>Grab</td>
</tr>
<tr>
<td>Sampled By:</td>
<td>Robert Barthelette</td>
</tr>
<tr>
<td>Date and Time Collected:</td>
<td>7/27/16 12:45</td>
</tr>
<tr>
<td>Date of Sample Receipt:</td>
<td>7/27/16 15:50</td>
</tr>
</tbody>
</table>

## Laboratory Results

### Sample Qualifier:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier Code</th>
<th>Dil</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boron</td>
<td>13200</td>
<td>ug/L</td>
<td>10.0</td>
<td>50.0</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>8/3/16 17:10</td>
<td></td>
</tr>
<tr>
<td>Calcium</td>
<td>19600</td>
<td>ug/L</td>
<td>30.0</td>
<td>1000</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>8/4/16 11:47</td>
<td></td>
</tr>
<tr>
<td>Chromium</td>
<td>1.60</td>
<td>ug/L</td>
<td>1.60</td>
<td>12.0</td>
<td>U</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>8/3/16 17:10</td>
</tr>
<tr>
<td>Molybdenum</td>
<td>2.23</td>
<td>ug/L</td>
<td>1.00</td>
<td>20.0</td>
<td>I</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>8/3/16 17:10</td>
</tr>
</tbody>
</table>

**BNL Laboratory**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier Code</th>
<th>Dil</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Radium - 226</td>
<td>10.9</td>
<td>pCi/L</td>
<td>0.4</td>
<td>0.4</td>
<td>1</td>
<td>EPA 903.0</td>
<td>KL1</td>
<td>8/2/16 11:46</td>
<td></td>
</tr>
<tr>
<td>Rad - 226 Counting Error +/-</td>
<td>0.9</td>
<td>pCi/L</td>
<td></td>
<td></td>
<td>1</td>
<td>EPA 903.0</td>
<td>KL1</td>
<td>8/2/16 11:46</td>
<td></td>
</tr>
</tbody>
</table>

**Radium - 228**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier Code</th>
<th>Dil</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rad - 228</td>
<td>1.4</td>
<td>pCi/L</td>
<td>0.9</td>
<td>0.9</td>
<td>1</td>
<td>EPA Ra-05</td>
<td>KL1</td>
<td>8/8/16 11:15</td>
<td></td>
</tr>
<tr>
<td>Rad - 228 Counting Error +/-</td>
<td>0.6</td>
<td>pCi/L</td>
<td></td>
<td></td>
<td>1</td>
<td>EPA Ra-05</td>
<td>KL1</td>
<td>8/8/16 11:15</td>
<td></td>
</tr>
</tbody>
</table>

**Radium-226/228**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier Code</th>
<th>Dil</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rad-226/228</td>
<td>12.3</td>
<td>pCi/L</td>
<td>0.9</td>
<td>0.9</td>
<td>1</td>
<td>Calc</td>
<td>KL1</td>
<td>8/8/16 11:15</td>
<td></td>
</tr>
<tr>
<td>Rad-226/228 Counting Error +/-</td>
<td>0.9</td>
<td>pCi/L</td>
<td></td>
<td></td>
<td>1</td>
<td>Calc</td>
<td>KL1</td>
<td>8/8/16 11:15</td>
<td></td>
</tr>
</tbody>
</table>

**TestAmerica Pensacola**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier Code</th>
<th>Dil</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithium</td>
<td>0.011</td>
<td>mg/L</td>
<td>0.0010</td>
<td>0.050</td>
<td>I</td>
<td>1</td>
<td>200.7 Rev 4.4 Z01</td>
<td>GESP</td>
<td>8/3/16 16:34</td>
</tr>
</tbody>
</table>

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
## Sample Information

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier Code</th>
<th>Dil</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Client: Big Bend Power Station</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lab Sample ID: L16G005-04</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sample Description: PZ4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sample Collection Method: Grab</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Date and Time Collected: 7/27/16 12:00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Date of Sample Receipt:   7/27/16 15:50</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## Laboratory Results

### Sample Qualifier:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier Code</th>
<th>Dil</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chloride</td>
<td>35.8</td>
<td>mg/L</td>
<td>0.0200</td>
<td>0.500</td>
<td>1</td>
<td>EPA 300.0</td>
<td>TMH</td>
<td>8/11/16 12:00</td>
<td></td>
</tr>
<tr>
<td>Specific Conductance</td>
<td>1450</td>
<td>umhos/cm</td>
<td>100</td>
<td>100</td>
<td>1</td>
<td>FDEP SOP FT 1200</td>
<td>RAB</td>
<td>7/27/16 12:00</td>
<td></td>
</tr>
<tr>
<td>Dissolved Oxygen</td>
<td>0.150</td>
<td>mg/L</td>
<td>0.100</td>
<td>0.100</td>
<td>1</td>
<td>FDEP SOP FT 1500</td>
<td>RAB</td>
<td>7/27/16 12:00</td>
<td></td>
</tr>
<tr>
<td>Fluoride</td>
<td>0.900</td>
<td>mg/L</td>
<td>0.0100</td>
<td>0.0500</td>
<td>1</td>
<td>EPA 300.0</td>
<td>TMH</td>
<td>8/11/16 12:00</td>
<td></td>
</tr>
<tr>
<td>pH</td>
<td>6.55</td>
<td>pH Units</td>
<td>1.00</td>
<td>1.00</td>
<td>1</td>
<td>FDEP SOP FT 1100</td>
<td>RAB</td>
<td>7/27/16 12:00</td>
<td></td>
</tr>
<tr>
<td>REDOX Potential</td>
<td>-71.7</td>
<td>mV</td>
<td>-999</td>
<td>-999</td>
<td>1</td>
<td>SM 2580B</td>
<td>RAB</td>
<td>7/27/16 12:00</td>
<td></td>
</tr>
<tr>
<td>Total Dissolved Solids</td>
<td>1080</td>
<td>mg/L</td>
<td>24.0</td>
<td>40.0</td>
<td>2</td>
<td>SM 2540C</td>
<td>RFL</td>
<td>8/3/16 12:00</td>
<td></td>
</tr>
<tr>
<td>Sulfate</td>
<td>499</td>
<td>mg/L</td>
<td>50.0</td>
<td>200</td>
<td>100</td>
<td>EPA 300.0</td>
<td>TMH</td>
<td>8/11/16 12:10</td>
<td></td>
</tr>
<tr>
<td>Turbidity</td>
<td>3.21</td>
<td>NTU</td>
<td>0.100</td>
<td>0.100</td>
<td>1</td>
<td>FDEP SOP FT 1600</td>
<td>RAB</td>
<td>7/27/16 12:00</td>
<td></td>
</tr>
</tbody>
</table>

### Total Mercury by SW846 Method 7470/7471

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier Code</th>
<th>Dil</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mercury</td>
<td>0.0500</td>
<td>ug/L</td>
<td>0.0500</td>
<td>0.200</td>
<td>U</td>
<td>1</td>
<td>EPA 7470A</td>
<td>RLC</td>
<td>8/5/16 9:18</td>
</tr>
</tbody>
</table>

### Total Recoverable Metals by 200 Series

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier Code</th>
<th>Dil</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antimony</td>
<td>0.730</td>
<td>ug/L</td>
<td>0.600</td>
<td>2.00</td>
<td>I</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RC</td>
<td>8/2/16 10:20</td>
</tr>
<tr>
<td>Arsenic</td>
<td>46.7</td>
<td>ug/L</td>
<td>0.320</td>
<td>2.00</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RC</td>
<td>8/2/16 10:20</td>
<td></td>
</tr>
<tr>
<td>Cadmium</td>
<td>0.100</td>
<td>ug/L</td>
<td>0.100</td>
<td>0.500</td>
<td>U</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RC</td>
<td>8/3/16 11:26</td>
</tr>
<tr>
<td>Cobalt</td>
<td>0.0500</td>
<td>ug/L</td>
<td>0.0400</td>
<td>2.00</td>
<td>I</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RC</td>
<td>8/2/16 10:20</td>
</tr>
<tr>
<td>Lead</td>
<td>0.0800</td>
<td>ug/L</td>
<td>0.0800</td>
<td>2.00</td>
<td>U</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RC</td>
<td>8/3/16 11:26</td>
</tr>
<tr>
<td>Selenium</td>
<td>0.260</td>
<td>ug/L</td>
<td>0.200</td>
<td>2.00</td>
<td>I</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RC</td>
<td>8/2/16 10:20</td>
</tr>
<tr>
<td>Thallium</td>
<td>0.100</td>
<td>ug/L</td>
<td>0.100</td>
<td>0.500</td>
<td>U</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RC</td>
<td>8/3/16 11:26</td>
</tr>
</tbody>
</table>

### Total Recoverable Metals by SW846 Method 6010B

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier Code</th>
<th>Dil</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barium</td>
<td>61.7</td>
<td>ug/L</td>
<td>0.500</td>
<td>20.0</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>8/3/16 17:13</td>
<td></td>
</tr>
<tr>
<td>Beryllium</td>
<td>0.200</td>
<td>ug/L</td>
<td>0.200</td>
<td>2.00</td>
<td>U</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>8/3/16 17:13</td>
</tr>
</tbody>
</table>

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
### Laboratory Results

**Sample Qualifier:**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier Code</th>
<th>Dil</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boron</td>
<td>13500</td>
<td>ug/L</td>
<td>10.0</td>
<td>50.0</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>8/3/16  17:13</td>
<td></td>
</tr>
<tr>
<td>Calcium</td>
<td>237000</td>
<td>ug/L</td>
<td>30.0</td>
<td>1000</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>8/4/16  11:50</td>
<td></td>
</tr>
<tr>
<td>Chromium</td>
<td>1.60</td>
<td>ug/L</td>
<td>1.60</td>
<td>12.0</td>
<td>U</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>8/3/16  17:13</td>
</tr>
<tr>
<td>Molybdenum</td>
<td>1.00</td>
<td>ug/L</td>
<td>1.00</td>
<td>20.0</td>
<td>U</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>8/3/16  17:13</td>
</tr>
</tbody>
</table>

**Radium - 226**

| Rad - 226         | 10.8   | pCi/L | 0.3 | 0.3 | 1              | EPA 903.0 | KL1         | 8/8/16  11:25          |
| Rad - 226 Counting Error +/- | 1.0 | pCi/L | 0.3 | 0.3 | 1              | EPA 903.0 | KL1         | 8/8/16  11:25          |

**Radium - 228**

| Rad - 228         | 2.1    | pCi/L | 0.8 | 0.8 | 1              | EPA Ra-05 | KL1         | 8/8/16  11:15          |
| Rad - 228 Counting Error +/- | 0.6 | pCi/L | 0.8 | 0.8 | 1              | EPA Ra-05 | KL1         | 8/8/16  11:15          |

**Radium-226/228**

| Rad-226/228       | 12.9   | pCi/L | 0.8 | 0.8 | 1              | Calc      | KL1         | 8/8/16  11:15          |
| Rad-226/228 Counting Error +/- | 1.0 | pCi/L | 0.8 | 0.8 | 1              | Calc      | KL1         | 8/8/16  11:15          |

**Metals (ICP)**

| Lithium           | 0.0077 | mg/L  | 0.0010 | 0.050 | I              | 1    | 200.7 Rev 4.4 Z01 | GESP | 8/3/16  16:37 |

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
### Sample Information

**Client:** Big Bend Power Station  
**Lab Sample ID:** L16G005-05  
**Sample Description:** PZ5  
**Sample Collection Method:** Grab  
**Sampled By:** Robert Barthelette  
**Date and Time Collected:** 7/27/16 11:18  
**Date of Sample Receipt:** 7/27/16 15:50

### Laboratory Results

#### Sample Qualifier:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier Code</th>
<th>Dil</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>General Chemistry Parameters</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chloride</td>
<td>1120</td>
<td>mg/L</td>
<td>2.00</td>
<td>50.0</td>
<td>100</td>
<td>EPA 300.0</td>
<td>TMH</td>
<td>8/11/16 12:30</td>
<td></td>
</tr>
<tr>
<td>Specific Conductance</td>
<td>5420</td>
<td>umhos/cm</td>
<td>100</td>
<td>100</td>
<td>1</td>
<td>FDEP SOP FT 1200</td>
<td>RAB</td>
<td>7/27/16 11:18</td>
<td></td>
</tr>
<tr>
<td>Dissolved Oxygen</td>
<td>0.170</td>
<td>mg/L</td>
<td>0.100</td>
<td>0.100</td>
<td>1</td>
<td>FDEP SOP FT 1500</td>
<td>RAB</td>
<td>7/27/16 11:18</td>
<td></td>
</tr>
<tr>
<td>Fluoride</td>
<td>0.110</td>
<td>mg/L</td>
<td>0.0100</td>
<td>0.0500</td>
<td>1</td>
<td>EPA 300.0</td>
<td>TMH</td>
<td>8/11/16 12:20</td>
<td></td>
</tr>
<tr>
<td>pH</td>
<td>6.38</td>
<td>pH Units</td>
<td>1.00</td>
<td>1.00</td>
<td>1</td>
<td>FDEP SOP FT 1100</td>
<td>RAB</td>
<td>7/27/16 11:18</td>
<td></td>
</tr>
<tr>
<td>REDOX Potential</td>
<td>-7.30</td>
<td>mV</td>
<td>-999</td>
<td>-999</td>
<td>1</td>
<td>SM 2580B</td>
<td>RAB</td>
<td>7/27/16 11:18</td>
<td></td>
</tr>
<tr>
<td>Total Dissolved Solids</td>
<td>4190</td>
<td>mg/L</td>
<td>24.0</td>
<td>40.0</td>
<td>J-2</td>
<td>SM 2540C</td>
<td>RFL</td>
<td>8/3/16 12:00</td>
<td></td>
</tr>
<tr>
<td>Sulfate</td>
<td>1510</td>
<td>mg/L</td>
<td>50.0</td>
<td>200</td>
<td>100</td>
<td>EPA 300.0</td>
<td>TMH</td>
<td>8/11/16 12:30</td>
<td></td>
</tr>
<tr>
<td>Turbidity</td>
<td>7.10</td>
<td>NTU</td>
<td>0.100</td>
<td>0.100</td>
<td>1</td>
<td>FDEP SOP FT 1600</td>
<td>RAB</td>
<td>7/27/16 11:18</td>
<td></td>
</tr>
<tr>
<td><strong>Total Mercury by SW846 Method 7470/7471</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mercury</td>
<td>0.0500</td>
<td>ug/L</td>
<td>0.0500</td>
<td>0.200</td>
<td>U</td>
<td>1</td>
<td>EPA 7470A</td>
<td>RLC</td>
<td>8/5/16 9:22</td>
</tr>
<tr>
<td><strong>Total Recoverable Metals by 200 Series</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Antimony</td>
<td>0.600</td>
<td>ug/L</td>
<td>0.600</td>
<td>2.00</td>
<td>U</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RC</td>
<td>8/2/16 10:32</td>
</tr>
<tr>
<td>Arsenic</td>
<td>8.10</td>
<td>ug/L</td>
<td>0.320</td>
<td>2.00</td>
<td>U</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RC</td>
<td>8/2/16 10:32</td>
</tr>
<tr>
<td>Cadmium</td>
<td>0.100</td>
<td>ug/L</td>
<td>0.100</td>
<td>0.500</td>
<td>U</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RC</td>
<td>8/3/16 11:40</td>
</tr>
<tr>
<td>Cobalt</td>
<td>1.33</td>
<td>ug/L</td>
<td>0.0400</td>
<td>2.00</td>
<td>I</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RC</td>
<td>8/2/16 10:32</td>
</tr>
<tr>
<td>Lead</td>
<td>0.200</td>
<td>ug/L</td>
<td>0.0800</td>
<td>2.00</td>
<td>I</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RC</td>
<td>8/3/16 11:40</td>
</tr>
<tr>
<td>Selenium</td>
<td>1.92</td>
<td>ug/L</td>
<td>0.200</td>
<td>2.00</td>
<td>I</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RC</td>
<td>8/2/16 10:32</td>
</tr>
<tr>
<td>Thallium</td>
<td>0.100</td>
<td>ug/L</td>
<td>0.100</td>
<td>0.500</td>
<td>U</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RC</td>
<td>8/3/16 11:40</td>
</tr>
<tr>
<td><strong>Total Recoverable Metals by SW846 Method 6010B</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Barium</td>
<td>68.2</td>
<td>ug/L</td>
<td>0.500</td>
<td>20.0</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>8/3/16 17:16</td>
<td></td>
</tr>
<tr>
<td>Beryllium</td>
<td>0.200</td>
<td>ug/L</td>
<td>0.200</td>
<td>2.00</td>
<td>U</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>8/3/16 17:16</td>
</tr>
</tbody>
</table>

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
### Sample Information

- **Client:** Big Bend Power Station
- **Lab Sample ID:** L16G005-05
- **Sample Description:** PZ5
- **Sample Collection Method:** Grab
- **Sampled By:** Robert Barthelette
- **Date and Time Collected:** 7/27/16 11:18
- **Date of Sample Receipt:** 7/27/16 15:50

### Laboratory Results

#### Sample Qualifier:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier Code</th>
<th>Dil</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boron</td>
<td>56900</td>
<td>ug/L</td>
<td>10.0</td>
<td>50.0</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>8/3/16 17:16</td>
<td></td>
</tr>
<tr>
<td>Calcium</td>
<td>737000</td>
<td>ug/L</td>
<td>30.0</td>
<td>1000</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>8/4/16 11:52</td>
<td></td>
</tr>
<tr>
<td>Chromium</td>
<td>1.60</td>
<td>ug/L</td>
<td>1.60</td>
<td>12.0</td>
<td>U</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>8/3/16 17:16</td>
</tr>
<tr>
<td>Molybdenum</td>
<td>2.88</td>
<td>ug/L</td>
<td>1.00</td>
<td>20.0</td>
<td>I</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>8/3/16 17:16</td>
</tr>
</tbody>
</table>

**KNL Laboratory**

- **Radium - 226**
  - Rad - 226: 31 pCi/L, 0.3 0.3, 1 EPA 903.0, KL1, 8/8/16 11:25
  - Rad - 226 Counting Error +/-: 1.6 pCi/L, 1 EPA 903.0, KL1, 8/8/16 11:25

- **Radium - 228**
  - Rad - 228: 4.5 pCi/L, 0.8 0.8, 1 EPA Ra-05, KL1, 8/8/16 11:15
  - Rad - 228 Counting Error +/-: 0.8 pCi/L, 1 EPA Ra-05, KL1, 8/8/16 11:15

- **Radium-226/228**
  - Rad-226/228: 35 pCi/L, 0.8 0.8, 1 Calc, KL1, 8/8/16 11:15
  - Rad-226/228 Counting Error +/-: 1.6 pCi/L, 1 Calc, KL1, 8/8/16 11:15

**TestAmerica Pensacola**

- **Metals (ICP)**
  - Lithium: 0.020 mg/L, 0.0010 0.050, I 200.7 Rev 4.4 Z01, GESP, 8/3/16 16:41

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
# Laboratory Results

## Sample Qualifier:

### General Chemistry Parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Unit</th>
<th>Result</th>
<th>MDL</th>
<th>PQL</th>
<th>Code</th>
<th>Dil</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chloride</td>
<td>mg/L</td>
<td>116</td>
<td>2.00</td>
<td>50.0</td>
<td>100</td>
<td>EPA 300.0</td>
<td>TMH</td>
<td>8/11/16 12:50</td>
<td></td>
</tr>
<tr>
<td>Specific Conductance</td>
<td>umhos/cm</td>
<td>1500</td>
<td>100</td>
<td>100</td>
<td>1</td>
<td>FDEP SOP FT 1200</td>
<td>RAB</td>
<td>7/27/16 10:15</td>
<td></td>
</tr>
<tr>
<td>Dissolved Oxygen</td>
<td>mg/L</td>
<td>0.150</td>
<td>0.100</td>
<td>0.100</td>
<td>1</td>
<td>FDEP SOP FT 1500</td>
<td>RAB</td>
<td>7/27/16 10:15</td>
<td></td>
</tr>
<tr>
<td>Fluoride</td>
<td>mg/L</td>
<td>0.432</td>
<td>0.0100</td>
<td>0.0500</td>
<td>1</td>
<td>EPA 300.0</td>
<td>TMH</td>
<td>8/11/16 12:40</td>
<td></td>
</tr>
<tr>
<td>pH</td>
<td>pH Units</td>
<td>6.48</td>
<td>1.00</td>
<td>1.00</td>
<td>1</td>
<td>FDEP SOP FT 1100</td>
<td>RAB</td>
<td>7/27/16 10:15</td>
<td></td>
</tr>
<tr>
<td>REDOX Potential</td>
<td>mV</td>
<td>-84.1</td>
<td>-999</td>
<td>-999</td>
<td>1</td>
<td>SM 2580B</td>
<td>RAB</td>
<td>7/27/16 10:15</td>
<td></td>
</tr>
<tr>
<td>Total Dissolved Solids</td>
<td>mg/L</td>
<td>1060</td>
<td>24.0</td>
<td>40.0</td>
<td>2</td>
<td>SM 2540C</td>
<td>RFL</td>
<td>8/3/16 12:00</td>
<td></td>
</tr>
<tr>
<td>Sulfate</td>
<td>mg/L</td>
<td>341</td>
<td>50.0</td>
<td>200</td>
<td>100</td>
<td>EPA 300.0</td>
<td>TMH</td>
<td>8/11/16 12:50</td>
<td></td>
</tr>
<tr>
<td>Turbidity</td>
<td>NTU</td>
<td>4.86</td>
<td>0.100</td>
<td>0.100</td>
<td>1</td>
<td>FDEP SOP FT 1600</td>
<td>RAB</td>
<td>7/27/16 10:15</td>
<td></td>
</tr>
</tbody>
</table>

### Total Mercury by SW846 Method 7470/7471

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Unit</th>
<th>Result</th>
<th>MDL</th>
<th>PQL</th>
<th>Code</th>
<th>Dil</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mercury</td>
<td>ug/L</td>
<td>0.0500</td>
<td>0.0500</td>
<td>0.200</td>
<td>U</td>
<td>1</td>
<td>EPA 7470A</td>
<td>RLC</td>
<td>8/5/16 9:25</td>
</tr>
</tbody>
</table>

### Total Recoverable Metals by 200 Series

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Unit</th>
<th>Result</th>
<th>MDL</th>
<th>PQL</th>
<th>Code</th>
<th>Dil</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antimony</td>
<td>ug/L</td>
<td>0.600</td>
<td>0.600</td>
<td>2.00</td>
<td>U</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RC</td>
<td>8/2/16 10:36</td>
</tr>
<tr>
<td>Arsenic</td>
<td>ug/L</td>
<td>1.75</td>
<td>0.320</td>
<td>2.00</td>
<td>I</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RC</td>
<td>8/2/16 10:36</td>
</tr>
<tr>
<td>Cadmium</td>
<td>ug/L</td>
<td>0.100</td>
<td>0.100</td>
<td>0.500</td>
<td>U</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RC</td>
<td>8/3/16 11:44</td>
</tr>
<tr>
<td>Cobalt</td>
<td>ug/L</td>
<td>0.140</td>
<td>0.0400</td>
<td>2.00</td>
<td>I</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RC</td>
<td>8/2/16 10:36</td>
</tr>
<tr>
<td>Lead</td>
<td>ug/L</td>
<td>0.0800</td>
<td>0.0800</td>
<td>2.00</td>
<td>U</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RC</td>
<td>8/3/16 11:44</td>
</tr>
<tr>
<td>Selenium</td>
<td>ug/L</td>
<td>0.760</td>
<td>0.200</td>
<td>2.00</td>
<td>I</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RC</td>
<td>8/2/16 10:36</td>
</tr>
<tr>
<td>Thallium</td>
<td>ug/L</td>
<td>0.100</td>
<td>0.100</td>
<td>0.500</td>
<td>U</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RC</td>
<td>8/3/16 11:44</td>
</tr>
</tbody>
</table>

### Total Recoverable Metals by SW846 Method 6010B

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Unit</th>
<th>Result</th>
<th>MDL</th>
<th>PQL</th>
<th>Code</th>
<th>Dil</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barium</td>
<td>ug/L</td>
<td>49.8</td>
<td>0.500</td>
<td>20.0</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>8/3/16 17:18</td>
<td></td>
</tr>
<tr>
<td>Beryllium</td>
<td>ug/L</td>
<td>0.200</td>
<td>0.200</td>
<td>2.00</td>
<td>U</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>8/3/16 17:18</td>
</tr>
</tbody>
</table>

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
**Sample Information**

<table>
<thead>
<tr>
<th>Client:</th>
<th>Big Bend Power Station</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lab Sample ID:</td>
<td>L16G005-06</td>
</tr>
<tr>
<td>Sample ID:</td>
<td>PZ6</td>
</tr>
<tr>
<td>Sample Collection Method:</td>
<td>Grab</td>
</tr>
<tr>
<td>Sample Description:</td>
<td></td>
</tr>
<tr>
<td>Sampled By:</td>
<td>Robert Barthelette</td>
</tr>
<tr>
<td>Date and Time Collected:</td>
<td>7/27/16 10:15</td>
</tr>
<tr>
<td>Date of Sample Receipt:</td>
<td>7/27/16 15:50</td>
</tr>
</tbody>
</table>

**Laboratory Results**

**Sample Qualifier:**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier Code</th>
<th>Dil</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boron</td>
<td>4250</td>
<td>ug/L</td>
<td>10.0</td>
<td>50.0</td>
<td>1</td>
<td></td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>8/3/16 17:18</td>
</tr>
<tr>
<td>Calcium</td>
<td>271000</td>
<td>ug/L</td>
<td>30.0</td>
<td>1000</td>
<td>1</td>
<td></td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>8/4/16 12:02</td>
</tr>
<tr>
<td>Chromium</td>
<td>1.60</td>
<td>ug/L</td>
<td>1.60</td>
<td>12.0</td>
<td>U</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>8/3/16 17:18</td>
</tr>
<tr>
<td>Molybdenum</td>
<td>1.00</td>
<td>ug/L</td>
<td>1.00</td>
<td>20.0</td>
<td>U</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>8/3/16 17:18</td>
</tr>
</tbody>
</table>

**Rad - 226**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier Code</th>
<th>Dil</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rad - 226</td>
<td>4.6</td>
<td>pCi/L</td>
<td>0.4</td>
<td>0.4</td>
<td>1</td>
<td></td>
<td>EPA 903.0</td>
<td>KL1</td>
<td>8/8/16 11:25</td>
</tr>
<tr>
<td>Rad - 226 Counting Error +/-</td>
<td>0.7</td>
<td>pCi/L</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>EPA 903.0</td>
<td>KL1</td>
<td>8/8/16 11:25</td>
</tr>
</tbody>
</table>

**Rad - 228**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier Code</th>
<th>Dil</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rad - 228</td>
<td>0.8</td>
<td>pCi/L</td>
<td>0.8</td>
<td>0.8</td>
<td>U</td>
<td>1</td>
<td>EPA Ra-05</td>
<td>KL1</td>
<td>8/8/16 11:15</td>
</tr>
<tr>
<td>Rad - 228 Counting Error +/-</td>
<td>0.5</td>
<td>pCi/L</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>EPA Ra-05</td>
<td>KL1</td>
<td>8/8/16 11:15</td>
</tr>
</tbody>
</table>

**Rad-226/228**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier Code</th>
<th>Dil</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rad-226/228</td>
<td>5.1</td>
<td>pCi/L</td>
<td>0.8</td>
<td>0.8</td>
<td>Calc</td>
<td></td>
<td>KL1</td>
<td>TestAmerica Pensacola</td>
<td></td>
</tr>
<tr>
<td>Rad-226/228 Counting Error +/-</td>
<td>0.7</td>
<td>pCi/L</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>KL1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Metals (ICP)**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier Code</th>
<th>Dil</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithium</td>
<td>0.0091</td>
<td>mg/L</td>
<td>0.0010</td>
<td>0.050</td>
<td>I</td>
<td>1</td>
<td>200.7 Rev 4.4 Z01</td>
<td>GESP</td>
<td>8/3/16 16:44</td>
</tr>
</tbody>
</table>

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
### Sample Information

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier Code</th>
<th>Dil</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>General Chemistry Parameters</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chloride</td>
<td><strong>15.4</strong></td>
<td>mg/L</td>
<td>0.0200</td>
<td>0.500</td>
<td>1</td>
<td>EPA 300.0</td>
<td>TMH</td>
<td>8/11/16 13:00</td>
<td></td>
</tr>
<tr>
<td>Specific Conductance</td>
<td><strong>1310</strong></td>
<td>umhos/cm</td>
<td>100</td>
<td>100</td>
<td>1</td>
<td>FDEP SOP FT 1200</td>
<td>RAB</td>
<td>7/27/16 10:42</td>
<td></td>
</tr>
<tr>
<td>Dissolved Oxygen</td>
<td><strong>0.160</strong></td>
<td>mg/L</td>
<td>0.100</td>
<td>0.100</td>
<td>1</td>
<td>FDEP SOP FT 1500</td>
<td>RAB</td>
<td>7/27/16 10:42</td>
<td></td>
</tr>
<tr>
<td>Fluoride</td>
<td><strong>0.933</strong></td>
<td>mg/L</td>
<td>0.0100</td>
<td>0.0500</td>
<td>1</td>
<td>EPA 300.0</td>
<td>TMH</td>
<td>8/11/16 13:00</td>
<td></td>
</tr>
<tr>
<td>pH</td>
<td><strong>6.64</strong></td>
<td>pH Units</td>
<td>1.00</td>
<td>1.00</td>
<td>1</td>
<td>FDEP SOP FT 1100</td>
<td>RAB</td>
<td>7/27/16 10:42</td>
<td></td>
</tr>
<tr>
<td>REDOX Potential</td>
<td><strong>-77.9</strong></td>
<td>mV</td>
<td>-999</td>
<td>-999</td>
<td>1</td>
<td>SM 2580B</td>
<td>RAB</td>
<td>7/27/16 10:42</td>
<td></td>
</tr>
<tr>
<td>Total Dissolved Solids</td>
<td><strong>856</strong></td>
<td>mg/L</td>
<td>24.0</td>
<td>40.0</td>
<td>2</td>
<td>SM 2540C</td>
<td>RFL</td>
<td>8/3/16 12:00</td>
<td></td>
</tr>
<tr>
<td>Sulfate</td>
<td><strong>211</strong></td>
<td>mg/L</td>
<td>50.0</td>
<td>200</td>
<td>100</td>
<td>EPA 300.0</td>
<td>TMH</td>
<td>8/11/16 13:31</td>
<td></td>
</tr>
<tr>
<td>Turbidity</td>
<td><strong>1.15</strong></td>
<td>NTU</td>
<td>0.100</td>
<td>0.100</td>
<td>1</td>
<td>FDEP SOP FT 1600</td>
<td>RAB</td>
<td>7/27/16 10:42</td>
<td></td>
</tr>
<tr>
<td><strong>Total Mercury by SW846 Method 7470/7471</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mercury</td>
<td><strong>0.0500</strong></td>
<td>ug/L</td>
<td>0.0500</td>
<td>0.200</td>
<td>U</td>
<td>1</td>
<td>EPA 7470A</td>
<td>RLC</td>
<td>8/5/16 9:37</td>
</tr>
<tr>
<td><strong>Total Recoverable Metals by 200 Series</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Antimony</td>
<td><strong>0.600</strong></td>
<td>ug/L</td>
<td>0.600</td>
<td>2.00</td>
<td>U</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RC</td>
<td>8/2/16 10:40</td>
</tr>
<tr>
<td>Arsenic</td>
<td><strong>2.92</strong></td>
<td>ug/L</td>
<td>0.320</td>
<td>2.00</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RC</td>
<td>8/2/16 10:40</td>
<td></td>
</tr>
<tr>
<td>Cadmium</td>
<td><strong>0.100</strong></td>
<td>ug/L</td>
<td>0.100</td>
<td>0.500</td>
<td>U</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RC</td>
<td>8/3/16 11:47</td>
</tr>
<tr>
<td>Cobalt</td>
<td><strong>0.0500</strong></td>
<td>ug/L</td>
<td>0.0400</td>
<td>2.00</td>
<td>I</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RC</td>
<td>8/2/16 10:40</td>
</tr>
<tr>
<td>Lead</td>
<td><strong>0.0800</strong></td>
<td>ug/L</td>
<td>0.0800</td>
<td>2.00</td>
<td>U</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RC</td>
<td>8/3/16 11:47</td>
</tr>
<tr>
<td>Selenium</td>
<td><strong>0.460</strong></td>
<td>ug/L</td>
<td>0.200</td>
<td>2.00</td>
<td>I</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RC</td>
<td>8/2/16 10:40</td>
</tr>
<tr>
<td>Thallium</td>
<td><strong>0.100</strong></td>
<td>ug/L</td>
<td>0.100</td>
<td>0.500</td>
<td>U</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RC</td>
<td>8/3/16 11:47</td>
</tr>
<tr>
<td><strong>Total Recoverable Metals by SW846 Method 6010B</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Barium</td>
<td><strong>43.2</strong></td>
<td>ug/L</td>
<td>0.500</td>
<td>20.0</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>8/3/16 17:27</td>
<td></td>
</tr>
<tr>
<td>Beryllium</td>
<td><strong>0.200</strong></td>
<td>ug/L</td>
<td>0.200</td>
<td>2.00</td>
<td>U</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>8/3/16 17:27</td>
</tr>
</tbody>
</table>

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
Sample Information

Client: Big Bend Power Station  
Lab Sample ID: L16G005-07  
Sample Description: MWB-35  
Sample Collection Method: Grab  
Sampled By: Robert Barthelette  
Date and Time Collected: 7/27/16 10:42  
Date of Sample Receipt: 7/27/16 15:50

Laboratory Results

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier Code</th>
<th>Dil</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boron</td>
<td>2260</td>
<td>ug/L</td>
<td>10.0</td>
<td>50.0</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>8/3/16 17:27</td>
<td></td>
</tr>
<tr>
<td>Calcium</td>
<td>231000</td>
<td>ug/L</td>
<td>30.0</td>
<td>1000</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>8/4/16 12:04</td>
<td></td>
</tr>
<tr>
<td>Chromium</td>
<td>1.60</td>
<td>ug/L</td>
<td>1.60</td>
<td>12.0</td>
<td>U</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>8/3/16 17:27</td>
</tr>
<tr>
<td>Molybdenum</td>
<td>11.8</td>
<td>ug/L</td>
<td>1.00</td>
<td>20.0</td>
<td>I</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>8/3/16 17:27</td>
</tr>
</tbody>
</table>

Radium - 226

Rad - 226  
1.6 pCi/L  
Rad - 226 Counting Error +/-  
0.5 pCi/L

Radium - 228

Rad - 228  
0.8 pCi/L  
Rad - 228 Counting Error +/-  
0.5 pCi/L

Radium-226/228

Rad-226/228  
1.9 pCi/L  
Rad-226/228 Counting Error +/-  
0.5 pCi/L

Metals (ICP)

Lithium  
0.0080 mg/L  
0.0010 0.050 I  
1 200.7 Rev 4.4 Z01 GESP  
8/3/16 16:57

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
### Sample Information

**Client:** Big Bend Power Station  
**Lab Sample ID:** L16G005-08  
**Sample Description:** MWB-36  
**Sample Collection Method:** Grab  
**Sampled By:** Robert Barthelette  
**Date and Time Collected:** 7/27/16 9:47  
**Date of Sample Receipt:** 7/27/16 15:50

### Laboratory Results

#### Sample Qualifier:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier</th>
<th>Code</th>
<th>Dil</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>General Chemistry Parameters</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chloride</td>
<td>105</td>
<td>mg/L</td>
<td>2.00</td>
<td>50.0</td>
<td>100</td>
<td>EPA 300.0</td>
<td>TMH</td>
<td>8/11/16 13:51</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Specific Conductance</td>
<td>2050</td>
<td>umhos/cm</td>
<td>100</td>
<td>100</td>
<td>1</td>
<td>FDEP SOP FT 1200</td>
<td>RAB</td>
<td>7/27/16 9:47</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dissolved Oxygen</td>
<td>0.280</td>
<td>mg/L</td>
<td>0.100</td>
<td>0.100</td>
<td>1</td>
<td>FDEP SOP FT 1500</td>
<td>RAB</td>
<td>7/27/16 9:47</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fluoride</td>
<td>0.756</td>
<td>mg/L</td>
<td>0.0100</td>
<td>0.0500</td>
<td>1</td>
<td>EPA 300.0</td>
<td>TMH</td>
<td>8/11/16 13:41</td>
<td></td>
<td></td>
</tr>
<tr>
<td>pH</td>
<td>6.90</td>
<td>pH Units</td>
<td>1.00</td>
<td>1.00</td>
<td>1</td>
<td>FDEP SOP FT 1100</td>
<td>RAB</td>
<td>7/27/16 9:47</td>
<td></td>
<td></td>
</tr>
<tr>
<td>REDOX Potential</td>
<td>-157</td>
<td>mV</td>
<td>-999</td>
<td>-999</td>
<td>1</td>
<td>SM 2580B</td>
<td>RAB</td>
<td>7/27/16 9:47</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Dissolved Solids</td>
<td>1530</td>
<td>mg/L</td>
<td>24.0</td>
<td>40.0</td>
<td>2</td>
<td>SM 2540C</td>
<td>RFL</td>
<td>8/3/16 12:00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sulfate</td>
<td>767</td>
<td>mg/L</td>
<td>50.0</td>
<td>200</td>
<td>100</td>
<td>EPA 300.0</td>
<td>TMH</td>
<td>8/11/16 13:51</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Turbidity</td>
<td>4.09</td>
<td>NTU</td>
<td>0.100</td>
<td>0.100</td>
<td>1</td>
<td>FDEP SOP FT 1600</td>
<td>RAB</td>
<td>7/27/16 9:47</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total Mercury by SW846 Method 7470/7471</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mercury</td>
<td>0.0500</td>
<td>ug/L</td>
<td>0.0500</td>
<td>0.200</td>
<td>U</td>
<td>1</td>
<td>EPA 7470A</td>
<td>RLC</td>
<td>8/5/16 9:41</td>
<td></td>
</tr>
<tr>
<td><strong>Total Recoverable Metals by 200 Series</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Antimony</td>
<td>0.600</td>
<td>ug/L</td>
<td>0.600</td>
<td>2.00</td>
<td>U</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RC</td>
<td>8/2/16 10:44</td>
<td></td>
</tr>
<tr>
<td>Arsenic</td>
<td>17.3</td>
<td>ug/L</td>
<td>0.320</td>
<td>2.00</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RC</td>
<td>8/2/16 10:44</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cadmium</td>
<td>0.100</td>
<td>ug/L</td>
<td>0.100</td>
<td>0.500</td>
<td>U</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RC</td>
<td>8/3/16 11:51</td>
<td></td>
</tr>
<tr>
<td>Cobalt</td>
<td>0.0600</td>
<td>ug/L</td>
<td>0.0400</td>
<td>2.00</td>
<td>I</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RC</td>
<td>8/2/16 10:44</td>
<td></td>
</tr>
<tr>
<td>Lead</td>
<td>0.0800</td>
<td>ug/L</td>
<td>0.0800</td>
<td>2.00</td>
<td>U</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RC</td>
<td>8/3/16 11:51</td>
<td></td>
</tr>
<tr>
<td>Selenium</td>
<td>0.580</td>
<td>ug/L</td>
<td>0.200</td>
<td>2.00</td>
<td>J-I</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RC</td>
<td>8/2/16 10:44</td>
<td></td>
</tr>
<tr>
<td>Thallium</td>
<td>0.100</td>
<td>ug/L</td>
<td>0.100</td>
<td>0.500</td>
<td>U</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RC</td>
<td>8/3/16 11:51</td>
<td></td>
</tr>
<tr>
<td><strong>Total Recoverable Metals by SW846 Method 6010B</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Barium</td>
<td>69.9</td>
<td>ug/L</td>
<td>0.500</td>
<td>20.0</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>8/3/16 17:30</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beryllium</td>
<td>0.200</td>
<td>ug/L</td>
<td>0.200</td>
<td>2.00</td>
<td>U</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>8/3/16 17:30</td>
<td></td>
</tr>
</tbody>
</table>

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
Sample Information

Client: Big Bend Power Station
Lab Sample ID: L16G005-08
Sample Description: MWB-36
Sample Collection Method: Grab
Sampled By: Robert Barthelette
Date and Time Collected: 7/27/16 9:47
Date of Sample Receipt: 7/27/16 15:50

Laboratory Results

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier</th>
<th>Code</th>
<th>Dil</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boron</td>
<td>4680</td>
<td>ug/L</td>
<td>10.0</td>
<td>50.0</td>
<td></td>
<td></td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>8/3/16 17:30</td>
</tr>
<tr>
<td>Calcium</td>
<td>344000</td>
<td>ug/L</td>
<td>30.0</td>
<td>1000</td>
<td></td>
<td></td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>8/4/16 12:07</td>
</tr>
<tr>
<td>Chromium</td>
<td>1.60</td>
<td>ug/L</td>
<td>1.60</td>
<td>12.0</td>
<td>U</td>
<td></td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>8/3/16 17:30</td>
</tr>
<tr>
<td>Molybdenum</td>
<td>11.5</td>
<td>ug/L</td>
<td>1.00</td>
<td>20.0</td>
<td>I</td>
<td></td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>8/3/16 17:30</td>
</tr>
</tbody>
</table>

**KNL Laboratory**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier</th>
<th>Code</th>
<th>Dil</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Radium - 226</td>
<td>3.2</td>
<td>pCi/L</td>
<td>0.3</td>
<td>0.3</td>
<td></td>
<td></td>
<td>1</td>
<td>EPA 903.0</td>
<td>KL1</td>
<td>8/8/16 11:25</td>
</tr>
<tr>
<td>Radium - 228</td>
<td>0.6</td>
<td>pCi/L</td>
<td>0.8</td>
<td>0.8</td>
<td></td>
<td></td>
<td>1</td>
<td>EPA Ra-05</td>
<td>KL1</td>
<td>8/8/16 11:15</td>
</tr>
</tbody>
</table>

**Radium-226/228**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier</th>
<th>Code</th>
<th>Dil</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Radium-226/228</td>
<td>0.9</td>
<td>pCi/L</td>
<td>0.8</td>
<td>0.8</td>
<td></td>
<td></td>
<td>1</td>
<td>EPA Ra-05</td>
<td>KL1</td>
<td>8/8/16 11:15</td>
</tr>
<tr>
<td>Rad-226/228 Counting Error +/-</td>
<td>0.6</td>
<td>pCi/L</td>
<td>0.8</td>
<td>0.8</td>
<td>Calc</td>
<td></td>
<td>1</td>
<td>Calc</td>
<td>KL1</td>
<td>8/8/16 11:15</td>
</tr>
</tbody>
</table>

**TestAmerica Pensacola**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier</th>
<th>Code</th>
<th>Dil</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metals (ICP)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lithium</td>
<td>0.0081</td>
<td>mg/L</td>
<td>0.0010</td>
<td>0.050</td>
<td>I</td>
<td></td>
<td>1</td>
<td>200.7 Rev 4.4 Z01</td>
<td>GESP</td>
<td>8/3/16 17:01</td>
</tr>
</tbody>
</table>

**Comments**

U Indicates that the compound was analyzed for but not detected.
J- The reported value is an estimated value, see the case narrative for specifics.
I Estimated value
J The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.

**Subcontract Laboratories:**

<table>
<thead>
<tr>
<th>Laboratory</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>KNL Laboratory</td>
<td>E84025</td>
</tr>
<tr>
<td>TestAmerica Pensacola</td>
<td>E81010</td>
</tr>
</tbody>
</table>

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
Tampa Electric Laboratory Services

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
### Site: Big Bend

<table>
<thead>
<tr>
<th>LICM #</th>
<th>Location Code</th>
<th>Time</th>
<th>FE²</th>
<th>pH (SU)</th>
<th>Temp °C</th>
<th>Cond (μS/cm)</th>
<th>DO mg/L</th>
<th>Turbidity (NTU)</th>
<th>Redox (mV)</th>
<th>Sulfate (mg/L)</th>
<th>OD</th>
<th>Color</th>
<th>RAB</th>
<th>TECO</th>
<th>Initials</th>
</tr>
</thead>
<tbody>
<tr>
<td>L16G005-01</td>
<td>CCR-PZ-2</td>
<td>13:45</td>
<td>6.67</td>
<td>29.41</td>
<td>4185</td>
<td>0.22</td>
<td>3.88</td>
<td>74.10</td>
<td>50.3</td>
<td>48</td>
<td>CLEAR</td>
<td>RED</td>
<td>NO</td>
<td>VEL</td>
<td></td>
</tr>
<tr>
<td>L16G005-02</td>
<td>CCR-PZ-2</td>
<td>13:16</td>
<td>6.68</td>
<td>29.42</td>
<td>4189</td>
<td>0.13</td>
<td>3.88</td>
<td>74.10</td>
<td>50.3</td>
<td>48</td>
<td>CLEAR</td>
<td>RED</td>
<td>NO</td>
<td>VEL</td>
<td></td>
</tr>
</tbody>
</table>

#### LIMS #
- 250ml (3): Cyan (3)
- 1l (1)
- 500ml Iontrate (3)
- 250ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
- 500ml Iontrate (3)
### Big Bend

**Date:** 07/27/16  
**File Name:** 072716_Wells_RAB  
**Weather:** PTLY CLOUDY HOT

<table>
<thead>
<tr>
<th>LIMS #</th>
<th>Location Code</th>
<th>Time</th>
<th>pH (ST)</th>
<th>Temp (°C)</th>
<th>Cond (µS/m)</th>
<th>DO (mg/L)</th>
<th>Turbidity (NTU)</th>
<th>Redox (mv)</th>
<th>Salinity (mg/L)</th>
<th>Color</th>
<th>Odor</th>
<th>Sample(s) / Initials</th>
</tr>
</thead>
<tbody>
<tr>
<td>L16G0005-03</td>
<td>CCR-PZ-3</td>
<td>12:45</td>
<td>6.19</td>
<td>27.26</td>
<td>1744</td>
<td>0.09</td>
<td>8.04</td>
<td>-74.40</td>
<td>5014</td>
<td>REDOX</td>
<td>BD-3-F</td>
<td>CDOR-W</td>
</tr>
<tr>
<td>L16G0005-04</td>
<td>CCR-PZ-4</td>
<td>12:30</td>
<td>6.55</td>
<td>27.60</td>
<td>1446</td>
<td>0.15</td>
<td>3.21</td>
<td>-71.70</td>
<td>5014</td>
<td>REDOX</td>
<td>BD-3-F</td>
<td>CDOR-W</td>
</tr>
</tbody>
</table>

**Preservation:**

<table>
<thead>
<tr>
<th>Sample</th>
<th>Sample Code</th>
<th>Preservation</th>
<th>Temperature</th>
<th>Pres ID</th>
<th>Pres ID</th>
</tr>
</thead>
<tbody>
<tr>
<td>L16G0005-03</td>
<td>CCR-PZ-3</td>
<td>12:45</td>
<td>6.55</td>
<td>27.60</td>
<td>1446</td>
</tr>
<tr>
<td>L16G0005-04</td>
<td>CCR-PZ-4</td>
<td>12:30</td>
<td>6.19</td>
<td>27.26</td>
<td>1744</td>
</tr>
</tbody>
</table>

**pH Meter Calibration:**

<table>
<thead>
<tr>
<th>Buffer ID</th>
<th>Buffer Value</th>
<th>Cal</th>
<th>Time</th>
<th>ICV</th>
<th>Time</th>
<th>CCV</th>
<th>Time</th>
<th>Redox Cal</th>
<th>Time</th>
<th>Temp (°C)</th>
<th>Reading (mv)</th>
<th>Thio Value (mv)</th>
</tr>
</thead>
<tbody>
<tr>
<td>L16G0005-03</td>
<td>CCR-PZ-3</td>
<td>12:45</td>
<td>6.55</td>
<td>27.60</td>
<td>1446</td>
<td>0.15</td>
<td>3.21</td>
<td>-71.70</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>L16G0005-04</td>
<td>CCR-PZ-4</td>
<td>12:30</td>
<td>6.19</td>
<td>27.26</td>
<td>1744</td>
<td>0.09</td>
<td>8.04</td>
<td>-74.40</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Conductivity Meter Calibrations:**

<table>
<thead>
<tr>
<th>Standard ID</th>
<th>StDe Value</th>
<th>Cal</th>
<th>Time</th>
<th>ICV</th>
<th>Time</th>
<th>CCV</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>L16G0005-03</td>
<td>CCR-PZ-3</td>
<td>12:45</td>
<td>6.55</td>
<td>27.60</td>
<td>1446</td>
<td>0.15</td>
<td>3.21</td>
</tr>
<tr>
<td>L16G0005-04</td>
<td>CCR-PZ-4</td>
<td>12:30</td>
<td>6.19</td>
<td>27.26</td>
<td>1744</td>
<td>0.09</td>
<td>8.04</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Tubing Inside Diameter</th>
<th>Capacity (gal/mil): 3/4&quot;</th>
<th>1/2&quot;</th>
<th>1/4&quot;</th>
</tr>
</thead>
</table>

### Purge Information

#### 1 "2 x 0.14 x 0.065" Gallons to Purge: 0.12

<table>
<thead>
<tr>
<th>Well</th>
<th>Compartment</th>
<th>Screen Interval (ft)</th>
<th>Intake Depth (ft)</th>
<th>Wet Weight (lbs)</th>
<th>Wet Depth (ft)</th>
<th>Wet Depth (ft)</th>
<th>Capacity (gal)</th>
<th>Wet Capacity (gal)</th>
<th>Wet Capacity (gal)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CCR-PZ-3</td>
<td>1</td>
<td>15.38</td>
<td>20.33</td>
<td>3.60</td>
<td>16.78</td>
<td>0.16</td>
<td>2.68</td>
<td>0.0026</td>
<td>21.38</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Purge Start</th>
<th>Time (min)</th>
<th>Rate (gpm)</th>
<th>Total Vol (gal)</th>
<th>Water Column (ft)</th>
<th>pH (STU)</th>
<th>Cond (µS/m)</th>
<th>DO (mg/L)</th>
<th>Turbidity (NTU)</th>
<th>Purge Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>11:36</td>
<td>330</td>
<td>0.49</td>
<td>3.46</td>
<td>6.53</td>
<td>27.55</td>
<td>1447</td>
<td>0.35</td>
<td>4.10</td>
<td>STABLE</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Purge Start</th>
<th>Time (min)</th>
<th>Rate (gpm)</th>
<th>Total Vol (gal)</th>
<th>Water Column (ft)</th>
<th>pH (STU)</th>
<th>Cond (µS/m)</th>
<th>DO (mg/L)</th>
<th>Turbidity (NTU)</th>
<th>Purge Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>11:40</td>
<td>330</td>
<td>0.50</td>
<td>3.46</td>
<td>6.53</td>
<td>27.55</td>
<td>1447</td>
<td>0.35</td>
<td>4.10</td>
<td>STABLE</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Purge Complete</th>
<th>Time (min)</th>
<th>Rate (gpm)</th>
<th>Total Vol (gal)</th>
<th>Water Column (ft)</th>
<th>pH (STU)</th>
<th>Cond (µS/m)</th>
<th>DO (mg/L)</th>
<th>Turbidity (NTU)</th>
<th>Purge Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>11:42</td>
<td>330</td>
<td>0.50</td>
<td>3.46</td>
<td>6.53</td>
<td>27.55</td>
<td>1447</td>
<td>0.35</td>
<td>4.10</td>
<td>STABLE</td>
</tr>
</tbody>
</table>

#### 2 "14.32 x 0.14 x 0.065" Gallons to Purge: 0.12

<table>
<thead>
<tr>
<th>Well</th>
<th>Compartment</th>
<th>Screen Interval (ft)</th>
<th>Intake Depth (ft)</th>
<th>Wet Weight (lbs)</th>
<th>Wet Depth (ft)</th>
<th>Wet Depth (ft)</th>
<th>Capacity (gal)</th>
<th>Wet Capacity (gal)</th>
<th>Wet Capacity (gal)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CCR-PZ-4</td>
<td>2</td>
<td>3.14</td>
<td>11.5</td>
<td>1.0</td>
<td>1.0</td>
<td>1.0</td>
<td>1.0</td>
<td>1.0</td>
<td>1.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Purge Start</th>
<th>Time (min)</th>
<th>Rate (gpm)</th>
<th>Total Vol (gal)</th>
<th>Water Column (ft)</th>
<th>pH (STU)</th>
<th>Cond (µS/m)</th>
<th>DO (mg/L)</th>
<th>Turbidity (NTU)</th>
<th>Purge Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>11:36</td>
<td>330</td>
<td>0.49</td>
<td>3.46</td>
<td>6.53</td>
<td>27.55</td>
<td>1447</td>
<td>0.35</td>
<td>4.10</td>
<td>STABLE</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Purge Start</th>
<th>Time (min)</th>
<th>Rate (gpm)</th>
<th>Total Vol (gal)</th>
<th>Water Column (ft)</th>
<th>pH (STU)</th>
<th>Cond (µS/m)</th>
<th>DO (mg/L)</th>
<th>Turbidity (NTU)</th>
<th>Purge Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>11:40</td>
<td>330</td>
<td>0.50</td>
<td>3.46</td>
<td>6.53</td>
<td>27.55</td>
<td>1447</td>
<td>0.35</td>
<td>4.10</td>
<td>STABLE</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Purge Complete</th>
<th>Time (min)</th>
<th>Rate (gpm)</th>
<th>Total Vol (gal)</th>
<th>Water Column (ft)</th>
<th>pH (STU)</th>
<th>Cond (µS/m)</th>
<th>DO (mg/L)</th>
<th>Turbidity (NTU)</th>
<th>Purge Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>11:42</td>
<td>330</td>
<td>0.50</td>
<td>3.46</td>
<td>6.53</td>
<td>27.55</td>
<td>1447</td>
<td>0.35</td>
<td>4.10</td>
<td>STABLE</td>
</tr>
</tbody>
</table>

### Comments:

- Stability Values = 6.55
- pH = 6.55
- Total Time: 15:50
- Total Miles: 10
<table>
<thead>
<tr>
<th>LIMS #</th>
<th>Location Code</th>
<th>Time</th>
<th>FE</th>
<th>pH (SU)</th>
<th>Temp °C</th>
<th>Cond (μS/cm)</th>
<th>DO (mg/L)</th>
<th>Turbidity (NTU)</th>
<th>Color</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>L16G005-06</td>
<td>CCC-PZ-2</td>
<td>11:18</td>
<td>6.38</td>
<td>28.25</td>
<td>5424</td>
<td>0.2</td>
<td>7.10</td>
<td>84.19</td>
<td>LT YELLOW</td>
<td>MILD</td>
</tr>
<tr>
<td>L16G005-06</td>
<td>CCC-PZ-2-6</td>
<td>10:15</td>
<td>6.48</td>
<td>27.56</td>
<td>1503</td>
<td>0.2</td>
<td>8.66</td>
<td>84.19</td>
<td>LT YELLOW</td>
<td>MILD</td>
</tr>
</tbody>
</table>

**Notes:**
- 250 ml Cyan (3): 1L Inorg (1) 500 ml Inorg (2) 250 ml Inorg (3) 1L Rad (1) 250 ml Mils (2) 60 ml Mils (2) 250 ml Nuls (3) 40 ml Vial (6) 500 ml Nils (2) 10 L Rads Diss. (1) 10 L Total Containers
- 10 ml amber glass (AG)

**Preservation**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Pres ID</th>
<th>Preservation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1L bottles (nads): 5 ml HNO3 to pH &lt;2</td>
<td>L 011653</td>
<td>500 ml bottles (nads) 1 ml H2SO4 to pH &lt;2</td>
</tr>
<tr>
<td>500 ml bottles (metal): 2 ml HNO3 to pH &lt;2</td>
<td>L 040192</td>
<td>40 ml Vial (TCC): 0.5 ml H2SO4 to pH &lt;2</td>
</tr>
<tr>
<td>250 ml bottles (metal): 1 ml HNO3 to pH &lt;2</td>
<td>L 011653</td>
<td>250 ml bottles (Cyan): 1 ml H2SO4 to pH &lt;2</td>
</tr>
</tbody>
</table>

**pH Meter Calibration**

<table>
<thead>
<tr>
<th>Buffer ID</th>
<th>Buffer Value</th>
<th>CAL</th>
<th>Time</th>
<th>ICV</th>
<th>Time</th>
<th>OCV</th>
<th>Time</th>
<th>CV</th>
<th>Time</th>
<th>REDOX</th>
</tr>
</thead>
<tbody>
<tr>
<td>3900688</td>
<td>7</td>
<td>7.02</td>
<td>6:25</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6:05</td>
<td></td>
</tr>
</tbody>
</table>

**Conductivity Meter Calib.**

<table>
<thead>
<tr>
<th>Standard</th>
<th>Std Value</th>
<th>CAL</th>
<th>Time</th>
<th>ICV</th>
<th>Time</th>
<th>OCV</th>
<th>Time</th>
<th>CV</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>MPM08</td>
<td>016463</td>
<td>1.00</td>
<td>8:05</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Substrate Info (EM Check)**

<table>
<thead>
<tr>
<th>QO Result</th>
<th>Time</th>
<th>Titrator ID</th>
<th>Na Thio ID</th>
<th>DO 3 Phlorid</th>
<th>Starch Inc</th>
<th>lodo/oriside Inc</th>
<th>TITR</th>
<th>pH</th>
<th>Conduct. (% DO (mg/L)</th>
<th>Redox (mv)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ino/Thio500 mg DI</td>
<td>L</td>
<td>L</td>
<td>L</td>
<td>L</td>
<td>L</td>
<td>L</td>
<td>L</td>
<td>L</td>
<td>L</td>
<td>L</td>
</tr>
</tbody>
</table>

**Purging Information**

- Well #1 Diam/Comp: 2 0.16 4.06 20000 mg L
- Tubing Inside Diam. Capacities Galls (stainless): 1/4" = 0.926 3/8" = 0.055

<table>
<thead>
<tr>
<th>Weil #</th>
<th>Diam/Comp</th>
<th>Screen Interval (ft)</th>
<th>Intake Depth (ft)</th>
<th>Water Depth (ft)</th>
<th>pH (SU)</th>
<th>Temp °C</th>
<th>Cond (μS/cm)</th>
<th>DO (mg/L)</th>
<th>Turbidity (NTU)</th>
<th>Purge Criteria</th>
<th>Status</th>
<th>Equipment ID</th>
<th>Eject Table</th>
</tr>
</thead>
<tbody>
<tr>
<td>1A</td>
<td>10:00</td>
<td>10</td>
<td>10</td>
<td>4.03</td>
<td>26.19</td>
<td>6.84</td>
<td>5424</td>
<td>0.2</td>
<td>7.10</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1A</td>
<td>10:11</td>
<td>1500</td>
<td>5.94</td>
<td>5.94</td>
<td>26.64</td>
<td>6.38</td>
<td>5410</td>
<td>0.18</td>
<td>8.47</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Purging Complete At 10:54**

- Gallons to Purge: 0.18
- Stability Values = 6.38 28.25 5424 0.17 7.10

<table>
<thead>
<tr>
<th>Weil #</th>
<th>Diam/Comp</th>
<th>Screen Interval (ft)</th>
<th>Intake Depth (ft)</th>
<th>Well Depth (ft)</th>
<th>Water Depth (ft)</th>
<th>pH (SU)</th>
<th>Temp °C</th>
<th>Cond (μS/cm)</th>
<th>DO (mg/L)</th>
<th>Turbidity (NTU)</th>
<th>Purge Criteria</th>
<th>Status</th>
<th>Equipment ID</th>
<th>Eject Table</th>
</tr>
</thead>
<tbody>
<tr>
<td>1A</td>
<td>10:00</td>
<td>10</td>
<td>10</td>
<td>4.03</td>
<td>26.19</td>
<td>6.84</td>
<td>5424</td>
<td>0.2</td>
<td>7.10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Weil #</th>
<th>Diam/Comp</th>
<th>Screen Interval (ft)</th>
<th>Intake Depth (ft)</th>
<th>Well Depth (ft)</th>
<th>Water Depth (ft)</th>
<th>pH (SU)</th>
<th>Temp °C</th>
<th>Cond (μS/cm)</th>
<th>DO (mg/L)</th>
<th>Turbidity (NTU)</th>
<th>Purge Criteria</th>
<th>Status</th>
<th>Equipment ID</th>
<th>Eject Table</th>
</tr>
</thead>
<tbody>
<tr>
<td>1A</td>
<td>10:00</td>
<td>10</td>
<td>10</td>
<td>4.03</td>
<td>26.19</td>
<td>6.84</td>
<td>5424</td>
<td>0.2</td>
<td>7.10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Comments:**
- Total Time: 15:50
- Total Miles: 8.50
<table>
<thead>
<tr>
<th>Site: Big Bend</th>
<th>Date: 07/27/16</th>
<th>File Name: 072716_Wells_RAB</th>
<th>Weather: PTLY CLOUDY HOT</th>
<th>Sample(s)/Initia(l): RAB /TECO</th>
<th>Initials: NGVD</th>
</tr>
</thead>
</table>

### pH, Temp, Conductivity, DO, Turbidity, Redox, Sulphate, Color

<table>
<thead>
<tr>
<th>LIMS #</th>
<th>Location Code</th>
<th>Time</th>
<th>pH (pH)</th>
<th>Temp (°C)</th>
<th>Conductivity (μS/cm)</th>
<th>DO (mg/L)</th>
<th>Turbidity (NTU)</th>
<th>Redox (mV)</th>
<th>Sulphate (mg/L)</th>
<th>Color</th>
</tr>
</thead>
<tbody>
<tr>
<td>L16G005-07</td>
<td>MVB-35</td>
<td>10:42</td>
<td>PH</td>
<td>6.64</td>
<td>27.94</td>
<td>3000</td>
<td>1.15</td>
<td>-77.90</td>
<td>5030-TR</td>
<td>CLEAR</td>
</tr>
<tr>
<td>L16G005-08</td>
<td>MVB-36</td>
<td>9:47</td>
<td>6.90</td>
<td>29.67</td>
<td>2051</td>
<td>0.28</td>
<td>4.00</td>
<td>-57.40</td>
<td>LT YELLOw</td>
<td>MILD</td>
</tr>
</tbody>
</table>

### Preservation

- **Pres. ID**: 0107301Y
- **Pres. ID**: 0218201Y
- **Pres. ID**: 0307301Y
- **Pres. ID**: 0107301Y
- **Pres. ID**: 0107301Y

### Bottles (pH & Temp)

- **Buffer Code**: MPM08
- **Buffer Value**: L018683
- **Buffer Value**: L015173

### Conductivity

- **Conductivity Meter Calibration**: Standard (μS/cm)
- **Conductivity Value**: L018683

### Turbidity

- **Turbidity Meter Calibration**: Standard (μS/cm)
- **Turbidity Value**: L018683

### Sulphate

- **Sulphate Value**: L018683

### Purging Information

- **Well #: MVB-35**
- **Purge Meth: 1A**
- **Time**: 10:28
- **Pulse**: 300ml
- **Volume**: 0.57
- **pH**: 6.64
- **Temp**: 27.94
- **Cond (μS/cm)**: 1309
- **DO (mg/L)**: 1.15
- **Turbidity (NTU)**: 1.15

### Purge Complete

- **Gallons to Purge**: 0.19
- **Stability Values**: 0.19

### Comments:

- **Total Time**: 10:28
- **Total Miles**
# GROUNDWATER WELL SAMPLING EQUIPMENT CALIBRATION

**Date:** 07/27/10  
**Sampler(s):** RAB  
**Initials:**

<table>
<thead>
<tr>
<th>pH Meter Calibration</th>
<th>Buffer ID</th>
<th>Buffer Value</th>
<th>Cal</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>MPM08</td>
<td>L</td>
<td>015168U</td>
<td>7</td>
<td>7.02</td>
</tr>
<tr>
<td>FDEP FT 1100</td>
<td>L</td>
<td>015170</td>
<td>10</td>
<td>10.04</td>
</tr>
<tr>
<td>Units: SU</td>
<td>L</td>
<td>015032A</td>
<td>4</td>
<td>4.01</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Conductivity Meter Calibrations</th>
<th>Standard</th>
<th>Std Value</th>
<th>Cal</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>MPM08</td>
<td>L 0140688</td>
<td>1000</td>
<td>1000</td>
<td>8:05</td>
</tr>
<tr>
<td>FDEP FT 1200, Units: µS/H 1</td>
<td>10000</td>
<td>10253</td>
<td>8:15</td>
<td>Pass</td>
</tr>
<tr>
<td>Turbidity Meter Calibration</td>
<td>Standard</td>
<td>Std Value</td>
<td>Acceptability Range</td>
<td>CCV</td>
</tr>
<tr>
<td>MPM08</td>
<td>L 013977</td>
<td>5.40</td>
<td>4.86</td>
<td>5.94</td>
</tr>
<tr>
<td>FDEP FT 1600, Units: NTU</td>
<td>10328</td>
<td>53.40</td>
<td>49.93</td>
<td>59.87</td>
</tr>
</tbody>
</table>

**Buffer Info/GOV Checks (WPA-377-1)**

<table>
<thead>
<tr>
<th>Buffer</th>
<th>GOV Result</th>
<th>Time</th>
<th>Test ID</th>
<th>Na/Thd ID</th>
<th>DC 3 Result</th>
<th>Test ID</th>
<th>Test ID</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Redox Cal</th>
<th>Time</th>
<th>Tp/°C</th>
<th>Reading /mV</th>
<th>Theoretical mV</th>
<th>Pass/Cal</th>
<th>DO Meter Cal</th>
<th>Time</th>
<th>Oxi/°C</th>
<th>Reading/mV</th>
<th>Temperature</th>
<th>Theoretical</th>
<th>Pass/Cal</th>
</tr>
</thead>
<tbody>
<tr>
<td>MPM08</td>
<td>8:30</td>
<td>22.1</td>
<td>236.0</td>
<td>234.9</td>
<td>Pass</td>
<td>FDEP FT 1500</td>
<td>7:55</td>
<td>21.0</td>
<td>8.60</td>
<td>8.015</td>
<td>Pass</td>
<td></td>
</tr>
<tr>
<td></td>
<td>16:10</td>
<td>21.0</td>
<td>235.3</td>
<td>238.2</td>
<td>Pass</td>
<td>MPM08</td>
<td>16:50</td>
<td>20.4</td>
<td>9.22</td>
<td>0.021</td>
<td>Pass</td>
<td></td>
</tr>
</tbody>
</table>

**Reagent: Cl:**

<table>
<thead>
<tr>
<th>Type ID</th>
<th>pH</th>
<th>Conduct%</th>
<th>Cl (mg/L)</th>
<th>Redox (mV)</th>
<th>CL2</th>
<th>Caterlass</th>
<th>Ferrous Iron</th>
</tr>
</thead>
<tbody>
<tr>
<td>MPM08</td>
<td>0.2</td>
<td>5</td>
<td>0.3</td>
<td>10.2</td>
<td>0.2</td>
<td>Calibration</td>
<td></td>
</tr>
</tbody>
</table>

**ClO₂ DPD Check must read < 0.10 mg/L ClO₂**

**Continuous Calibration Verification CCV**

**Method 10129**

**COMMENTS:** CL2 Std. ID: L
**DEP-SOP-001/01**
**FS 2200 Groundwater Sampling**
**Form FD 9000-24**

**GROUNDWATER SAMPLING LOG**

**FACILITY NAME:** Big Bend  
**SITE LOCATION:** Apollo Beach, FL.

**WELL NO.:** CCR-PZ-1  
**SAMPLE ID:** L16G005-01  
**DATE:** 7/27/16

### PURGING DATA

<table>
<thead>
<tr>
<th>WELL DIAMETER (inches)</th>
<th>TUBING DIAMETER (inches)</th>
<th>1/4</th>
<th>WELL SCREEN INTERVAL (NGV)</th>
<th>DEPTH TO WATER (feet)</th>
<th>PUMP CAPACITY</th>
<th>OR BAILER</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>10.29</td>
<td>20.29</td>
<td></td>
<td>PP</td>
</tr>
</tbody>
</table>

**WELL VOLUME PURGE:**

\[
V_{\text{WELL PURGE}} = (\text{TOTAL DEPTH - STATIC DEPTH}) \times \text{WELL CAPACITY} 
\]

**EQUIPMENT VOLUME PURGE:**

\[
V_{\text{EQUIPMENT PURGE}} = V_{\text{PUMP VOLUME}} + (\text{TUBING CAPACITY} \times \text{TUBING LENGTH}) + \text{FLOW CELL VOLUME} 
\]

**INITIAL PUMP OR TUBING DEPTH IN WELL (feet):** 15.29

**FINAL PUMP OR TUBING DEPTH IN WELL (feet):** 15.29

<table>
<thead>
<tr>
<th>TIME (h:m)</th>
<th>VOLUME PURGED (GALLONS)</th>
<th>PUMP RATE (GPM)</th>
<th>DEPTH TO WATER (FEET)</th>
<th>PH (standard units)</th>
<th>REDOX (mV)</th>
<th>DO (ppm)</th>
<th>OXYGEN SATURATED (%)</th>
<th>OXYGEN CONSUMPTION</th>
<th>TURBIDITY (NTU)</th>
<th>COLOR (describe)</th>
<th>ODOR (describe)</th>
</tr>
</thead>
<tbody>
<tr>
<td>13:29</td>
<td>0.82</td>
<td>0.10</td>
<td>5.11</td>
<td>6.67</td>
<td>26.37</td>
<td>4186</td>
<td>0.38</td>
<td>5.13</td>
<td>CLEAR</td>
<td>NONE</td>
<td>NONE</td>
</tr>
<tr>
<td>13:31</td>
<td>0.21</td>
<td>1.03</td>
<td>5.11</td>
<td>6.65</td>
<td>26.39</td>
<td>4187</td>
<td>0.37</td>
<td>3.63</td>
<td>CLEAR</td>
<td>NONE</td>
<td>NONE</td>
</tr>
<tr>
<td>13:33</td>
<td>0.21</td>
<td>1.24</td>
<td>0.11</td>
<td>6.67</td>
<td>26.41</td>
<td>4185</td>
<td>0.22</td>
<td>3.88</td>
<td>CLEAR</td>
<td>NONE</td>
<td>NONE</td>
</tr>
</tbody>
</table>

**WELL CAPACITY (Gallons Per Foot):** 0.73°< 0.02; 1°< 0.04; 1.25°< 0.06; 2°< 0.16; 2°< 0.37; 4°< 0.68; 6°< 1.02; 8°< 1.47; 12°< 5.58

**TUBING INSIDE DIA, CAPACITY (Gal/L):** 10°< 0.0005; 20°< 0.001; 30°< 0.002; 40°< 0.005; 60°< 0.009; 80°< 0.016

### SAMPLING DATA

**SAMPLED BY (PRINT)/AFFILIATION:**

**TECO**

<table>
<thead>
<tr>
<th>PUMP OR TUBING DEPTH IN WELL (feet):</th>
<th>SAMPLED BY</th>
<th>PUMPING RATE (mL per minute):</th>
<th>TUBING MATERIAL CODE:</th>
<th>FIELD DECONTAMINATION:</th>
<th>FILTER SIZE:</th>
<th>DUPLICATE:</th>
<th>INTENDED ANALYSIS AND/OR METHOD:</th>
<th>SAMPLING EQUIPMENT CODE:</th>
</tr>
</thead>
<tbody>
<tr>
<td>15.3</td>
<td></td>
<td>397</td>
<td>PE/S</td>
<td>Y</td>
<td>µm</td>
<td>Y</td>
<td>Inorganics</td>
<td>PP</td>
</tr>
</tbody>
</table>

**SAMPLE CONTAINER SPECIFICATION:**

<table>
<thead>
<tr>
<th>SAMPLE ID CODE</th>
<th>CONTAINERS</th>
<th>MATERIAL CODE</th>
<th>VOLUME</th>
<th>PRESERVATIVE USED</th>
<th>TOTAL VOL ADDED IN FIELD (ml)</th>
<th>pH</th>
<th>INTENDED ANALYSIS AND/OR METHOD</th>
</tr>
</thead>
<tbody>
<tr>
<td>@no-500</td>
<td>1</td>
<td>PE</td>
<td>500ml</td>
<td>NONE</td>
<td>NONE</td>
<td>N/A</td>
<td>Inorganics</td>
</tr>
<tr>
<td>@Met-250</td>
<td>2</td>
<td>PE</td>
<td>250ml</td>
<td>HNO3</td>
<td>1ml</td>
<td>&lt;2</td>
<td>Metals</td>
</tr>
<tr>
<td>@Rad-1L</td>
<td>2</td>
<td>PE</td>
<td>1L</td>
<td>HNO3</td>
<td>5ml</td>
<td>&lt;2</td>
<td>Radiologicals</td>
</tr>
</tbody>
</table>

**REMARKS:**

1. Sample bottles pre-preserved at laboratory prior to sample collection.

**MATERIAL CODES:**

A = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicon; T = Teflon; O = Other (Specify)

**SAMPLING/PURGING EQUIPMENT CODES:**

APP = After Pesticide Pump; BP = Baller; SP = Sluice Pump; EPP = Electric Submersible Pump; PP = Pneumatic Pump

**NOTES:**

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

2. **STABILIZATION CRITERIA FOR VARIATION OF LAST THREE CONSECUTIVE READINGS:**
   - pH: ± 0.2 units
   - Temperature: ± 0.2°C
   - Specific Conductance: ± 5% Dissolved Oxygen contents ± 20% saturation (see Table FS 2200-2)
   - Oxygen: ± 0.2 mg/L or ± 10% (whichever is greater)
   - Turbidity: readings ≤ 20 NTU, optionally ± 5 NTU or ± 10% (whichever is greater)

Page 32 of 32

Revision Date: February 1, 2004
# GROUNDWATER SAMPLING LOG

## Site Information
- **NAME:** Big Bend  
- **SITE LOCATION:** Apollo Beach, FL.
- **WELL NO.:** CCR-PZ-2  
- **SAMPLE ID:** L16G005-02  
- **DATE:** 7/27/16

## Purging Data

<table>
<thead>
<tr>
<th>Time</th>
<th>Volume Purged (Gallons)</th>
<th>Purge Rate (gpm)</th>
<th>Depth to Water (Feet)</th>
<th>PH (Standard Units)</th>
<th>Temp. (°C)</th>
<th>Cond. (μmhos/cm)</th>
<th>Dissolved Oxygen (ppm)</th>
<th>Turbidity (NTU)</th>
<th>Color (describe)</th>
<th>Odor (describe)</th>
</tr>
</thead>
<tbody>
<tr>
<td>13:02</td>
<td>0.54</td>
<td>0.54</td>
<td>5.38</td>
<td>6.70</td>
<td>26.45</td>
<td>1677</td>
<td>0.25</td>
<td>11.30</td>
<td>LT YELLOW</td>
<td>NONE</td>
</tr>
<tr>
<td>13:04</td>
<td>0.18</td>
<td>0.72</td>
<td>5.38</td>
<td>6.68</td>
<td>26.42</td>
<td>1698</td>
<td>0.15</td>
<td>8.49</td>
<td>LT YELLOW</td>
<td>NONE</td>
</tr>
<tr>
<td>13:06</td>
<td>0.18</td>
<td>0.90</td>
<td>5.39</td>
<td>6.62</td>
<td>26.42</td>
<td>1697</td>
<td>0.13</td>
<td>7.16</td>
<td>LT YELLOW</td>
<td>NONE</td>
</tr>
</tbody>
</table>

## Sampling Data

- **Sampled By:**  
- **Affiliation:** TECO  
- **Sampler's Signature:**  
- **Sample Taken At:** 13:06  
- **Sample Ended At:** 13:16  
- **Pump or Tubing Depth in Well (feet):** 15.6  
- **Sample Pump Flow Rate (ml per minute):** 347  
- **Tubing Material Code:** PE/S  
- **Field Decontamination:** Y  
- **Filter Size:** μm  
- **Duplicate:** Y  
- **Sample Container Specification:**  
  - **Sample ID Code:** 
    - @hno-500: 1 PE 500ml NONE NONE N/A Inorganics PP  
    - @Mel-250: 2 PE 250ml HNO3 <2 Metals PP  
    - @Rad-1L: 2 PE 1L HNO3 5ml <2 Radiologicals PP

## Remarks:
(1) Sample bottles pre-preserved at laboratory prior to sample collection.

## Material Codes:
- **AA:** Amber Glass  
- **CG:** Clear Glass  
- **PE:** Polyethylene  
- **PP:** Polypropylene  
- **S:** Silicone  
- **T:** Teflon  
- **O:** Other (Specify)

## Sampling/Purging Equipment Codes:
- **APP:** After Peristaltic Pump  
- **B:** Balloon  
- **BP:** Bladder Pump  
- **ESP:** Electric Submersible Pump  
- **PP:** Peristaltic Pump  
- **RFP:** Reverse Flow Peristaltic Pump  
- **SM:** Straw Method (using Gravity Drains)  
- **VT:** Vacuum Trap  
- **O:** Other (Specify)

## Notes:
1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 43)
   - pH: ± 0.2 units  
   - Temperature: ± 0.2 °C  
   - Conductivity: ± 1.5%  
   - Dissolved Oxygen: ± 2%  
   - Turbidity: ± 0.2 NTU  
   - Intensity: ± 3 NTU or 10% (whichever is greater)
**DEP-SOP-001/01**  
**FS 2200 Groundwater Sampling**  
**Form FD 9000-24**

**GROUNDWATER SAMPLING LOG**

<table>
<thead>
<tr>
<th><strong>SITE NAME:</strong></th>
<th>Big Bend</th>
<th><strong>SAMPLE ID:</strong></th>
<th>L16G005-03</th>
<th><strong>DATE:</strong></th>
<th>7/27/16</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>WELL NO.:</strong></td>
<td>CCR-PZ-3</td>
<td><strong>LOCATION:</strong></td>
<td>Apollo Beach, FL</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**PURGING DATA**

| **WELL DIAMETER (inches):** | 4  |
| **TUBING DIAMETER (inches):** | 1/4 |
| **WELL SCREEN INTERVAL DEPTH:** | 10.38 feet |
| **FEET:** | 20.36 feet |
| **STATIC DEPTH TO WATER (feet):** | 3.60 |
| **PURGE PUMP TYPE OR BAILER:** | PP |

**WELL VOLUME PURGE:**

(only if lift is applicable)

1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY

\[ \text{Volume} = \text{Total Depth} - \text{Static Depth} \times \text{Well Capacity} \]

**EQUIPMENT VOLUME PURGE:**

(only if lift is applicable)

1 EQUIPMENT VOL. = PURGE VOLUME = (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME

\[ \text{Volume} = \text{Tubing Capacity} \times \text{Tubing Length} + \text{Flow Cell Volume} \]

**TOTAL VOLUME PURGED (gallons):** 0.77

**INITIAL PUMP OR TUBING DEPTH IN WELL (feet):** 15.38

**FINAL PUMP OR TUBING DEPTH IN WELL (feet):** 15.38

**PURGING INITIATED AT:** 12:19

**PURGING ENDED AT:** 12:31

---

**SAMPLING DATA**

| **SAMPLED BY (PRINT)/AFFILIATION:** | RAB |
| **SAMPLER (S) SIGNATURE:** | TECO |
| **INITIATED AT:** | 12:31 |
| **ENDED AT:** | 12:45 |

| **PUMP OR TUBING DEPTH IN WELL (feet):** | 15.4 |

**SAMPLE PUMP FLOW RATE (ml, per minute):** 240

**FILTER MATERIAL CODE:** PE/S

**FIELD DECONTAMINATION:** Y N ✅

**FILTER SIZE:** µm

**DUPLICATE:** Y N ✅

**SAMPLE CONTAINER SPECIFICATION**

<table>
<thead>
<tr>
<th><strong>SAMPLE ID CODE</strong></th>
<th><strong>CONTAINERS</strong></th>
<th><strong>MATERIAL CODE</strong></th>
<th><strong>VOLUME</strong></th>
<th><strong>PRESERVATIVE USED</strong></th>
<th><strong>TOTAL VOL. ADDED IN FIELD (ml)</strong></th>
<th><strong>FINAL pH</strong></th>
<th><strong>INTENDED ANALYSIS AND/OR METHOD</strong></th>
<th><strong>SAMPLING EQUIPMENT CODE</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>@hno-500</td>
<td>1</td>
<td>PE</td>
<td>500ml</td>
<td>NONE</td>
<td>N/A</td>
<td>&lt;2</td>
<td>Inorganics</td>
<td>PP</td>
</tr>
<tr>
<td>@Met-250</td>
<td>2</td>
<td>PE</td>
<td>250ml</td>
<td>HNO3</td>
<td>1ml</td>
<td>&lt;2</td>
<td>Metals</td>
<td>PP</td>
</tr>
<tr>
<td>@Rad-1L</td>
<td>2</td>
<td>PE</td>
<td>1L</td>
<td>HNO3</td>
<td>5ml</td>
<td>&lt;2</td>
<td>Radiologicales</td>
<td>PP</td>
</tr>
</tbody>
</table>

**REMARKS**

(1) Sample bottles pre-preserved at laboratory prior to sample collection.

**MATERIAL CODES:**

- AG = Amber Glass
- CG = Clear Glass
- PE = Polyethylene
- PP = Polypropylene
- G = Glass
- T = Teflon
- O = Other (Specify)

**SAMPLING/PURGING EQUIPMENT CODES:**

- APP = After Peristaltic Pump
- B = Baller
- BP = Bladder Pump
- ESP = Electric Submersible Pump
- PP = Peristaltic Pump
- RPM = Reverse Flow Peristaltic Pump
- SM = Straw Method
- VT = Vacuum Trap
- O = Other (Specify)

**NOTES:**

1. The above do not constitute all of the information required by Chapter 62-163, F.A.C.
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS: (See Table FS 2212, Section 3)
   - pH ± 0.2 units
   - Temperature ± 0.2°C
   - Specific Conductance ± 5% Dissolved Oxygen: all readings ± 2% saturation
   - turbidity: all readings ± 20 NTU, optionally ± 5 NTU or 10% (whichever is greater)

---

Page 32 of 32  
Revision Date: February 1, 2004
**DEP-SOP-001/01**  
**FS 2200 Groundwater Sampling**  
**Form FD 9000-24**

**GROUNDWATER SAMPLING LOG**

**SITE NAME:** Big Bend  
**WELL NO.:** CCR-PZ-4  
**SAMPLE ID:** L16G005-04  
**LOCATION:** Apollo Beach, FL.  
**DATE:** 7/27/16

### PURGING DATA

<table>
<thead>
<tr>
<th>WELL DIAMETER (inches)</th>
<th>TUBING DIAMETER (inches)</th>
<th>1/4 WELL SCREEN INTERVAL DEPTH (feet)</th>
<th>FEET TO 18.00 (feet)</th>
<th>STATIC DEPTH TO WATER (feet)</th>
<th>PURGE PUMP VOLUME</th>
<th>PURGE PUMP TYPE OR BAILER</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>4</td>
<td>6.00</td>
<td>1.00</td>
<td>3.24</td>
<td>0.73</td>
<td>PP</td>
</tr>
</tbody>
</table>

**WELL VOLUME PURGE:**  
1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY

**EQUIPMENT VOLUME:**  
1 EQUIPMENT VOLUME = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME

### SAMPLING DATA

<table>
<thead>
<tr>
<th>INITIAL PUMP OR TUBING DEPTH IN WELL (feet)</th>
<th>FINAL PUMP OR TUBING DEPTH IN WELL (feet)</th>
<th>PURGING INITIATED AT</th>
<th>PURGING ENDED AT</th>
<th>TOTAL VOLUME PURGED (gallons)</th>
</tr>
</thead>
<tbody>
<tr>
<td>14.00</td>
<td>14.00</td>
<td>11:30</td>
<td>11:42</td>
<td>0.73</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TIME</th>
<th>VOLUME PURGED (GALLONS)</th>
<th>CORRECT VOLUME PURGED (GALLONS)</th>
<th>PURGE RATE (GPM)</th>
<th>DEPTH TO WATER (FEET)</th>
<th>pH (Standard units)</th>
<th>TEMP. (°C)</th>
<th>COND. (mg/L or picoSiemens)</th>
<th>DISSOLVED OXYGEN (ppm or % saturation)</th>
<th>TURBIDITY (NTUs)</th>
<th>COLOR (describe)</th>
<th>ODOR (describe)</th>
</tr>
</thead>
<tbody>
<tr>
<td>11:38</td>
<td>0.49</td>
<td>0.49</td>
<td>0.06</td>
<td>3.46</td>
<td>6.53</td>
<td>27.55</td>
<td>1447</td>
<td>0.35, 4.10</td>
<td>LT YELLOW</td>
<td>MILD</td>
<td></td>
</tr>
<tr>
<td>11:40</td>
<td>0.12</td>
<td>0.61</td>
<td>0.06</td>
<td>3.47</td>
<td>6.54</td>
<td>27.54</td>
<td>1445</td>
<td>0.22, 3.83</td>
<td>LT YELLOW</td>
<td>MILD</td>
<td></td>
</tr>
<tr>
<td>11:42</td>
<td>0.12</td>
<td>0.61</td>
<td>0.06</td>
<td>3.47</td>
<td>6.55</td>
<td>27.50</td>
<td>1446</td>
<td>0.15, 3.21</td>
<td>LT YELLOW</td>
<td>MILD</td>
<td></td>
</tr>
</tbody>
</table>

**SAMPLER BY (PRINT) / AFFILIATION:** RAB  
**TECO**

**SAMPLER (S) SIGNATURES:**

**SAMPLING INITIATED AT:** 11:42  
**SAMPLING ENDED AT:** 12:00

**SAMPLE CONTAINER SPECIFICATION:**

<table>
<thead>
<tr>
<th>SAMPLE CONTAINER</th>
<th>VOLUME</th>
<th>SPECIFICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>@hno-000</td>
<td>500ml</td>
<td>NONE</td>
</tr>
<tr>
<td>@met-250</td>
<td>250ml</td>
<td>HNO3</td>
</tr>
<tr>
<td>@rad-1L</td>
<td>1L</td>
<td>HNO3</td>
</tr>
</tbody>
</table>

**SAMPLE PRESERVATION:**

<table>
<thead>
<tr>
<th>SAMPLE CODE</th>
<th>TOTAL VOL. ADDED IN FIELD (mL)</th>
<th>FINAL pH</th>
<th>INTENDED ANALYSIS AND/OR METHOD</th>
<th>SAMPLING EQUIPMENT CODE</th>
</tr>
</thead>
<tbody>
<tr>
<td>@hno-000</td>
<td>0</td>
<td>N/A</td>
<td>Inorganics</td>
<td>PP</td>
</tr>
<tr>
<td>@met-250</td>
<td>1</td>
<td>&lt;2</td>
<td>Metals</td>
<td>PP</td>
</tr>
<tr>
<td>@rad-1L</td>
<td>5</td>
<td>&lt;2</td>
<td>Radiologicals</td>
<td>PP</td>
</tr>
</tbody>
</table>

**REMARKS:**

1. Sample bottles pre-preserved at laboratory prior to sample collection.

**MATERIAL CODES:**  
AG = Amber Glass;  
CG = Clear Glass;  
P = Polyethylene;  
PP = Polypropylene;  
S = Silicone;  
T = Teflon;  
o = Other (Specify)

**SAMPLING/PURGING EQUIPMENT CODES:**  
APP = After Peristaltic Pump;  
B = Bailer;  
BP = Bladder Pump;  
ESP = Electric Submersible Pump;  
PP = Peristaltic Pump;  
RPPP = Reverse Flow Peristaltic Pump;  
SM = Straw Method (using Gravity Drainage);  
VT = Vacuum Trap;  
o = Other (Specify)

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

Page 32 of 32  
Revision Date: February 1, 2004
## GROUNDWATER SAMPLING LOG

**SITE NAME:** Big Bend  
**WELL NO.:** CCR-PZ-5  
**SAMPLE ID:** L16G005-05  
**DATE:** 7/27/16  
**LOCATION:** Apollo Beach, FL.

### PURGING DATA
- **WELL VOLUME PURGE:**  
  - 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY
  - VOLUME PURGE = 36.03 gallons

### PURGING DATA (cont.)
<table>
<thead>
<tr>
<th>TIME</th>
<th>VOLUME PURGED (GALLONS)</th>
<th>VOLUME PURGED (GALLONS)</th>
<th>PURGE RATE (GPM)</th>
<th>DEPTH TO WATER (FEET)</th>
<th>pH (standard units)</th>
<th>TEMP. (°C)</th>
<th>COND. (μS/cm or Gohm)</th>
<th>DISSOLVED OXYGEN (ppm or % saturated)</th>
<th>TURBIDITY (NTU/μ)</th>
<th>COLOR (describe)</th>
<th>ODOR (describe)</th>
</tr>
</thead>
<tbody>
<tr>
<td>11:09</td>
<td>5.94</td>
<td>5.94</td>
<td>0.40</td>
<td>26.94</td>
<td>6.38</td>
<td>28.24</td>
<td>5369</td>
<td>0.3 16.20</td>
<td>CLOUDY</td>
<td>NONE</td>
<td></td>
</tr>
<tr>
<td>11:11</td>
<td>0.79</td>
<td>6.73</td>
<td>0.40</td>
<td>26.93</td>
<td>6.38</td>
<td>28.28</td>
<td>5410</td>
<td>0.8 8.47</td>
<td>CLOUDY</td>
<td>NONE</td>
<td></td>
</tr>
<tr>
<td>11:13</td>
<td>0.79</td>
<td>7.52</td>
<td>0.40</td>
<td>26.95</td>
<td>6.38</td>
<td>28.25</td>
<td>5424</td>
<td>0.17 7.10</td>
<td>CLOUDY</td>
<td>NONE</td>
<td></td>
</tr>
</tbody>
</table>

### PURGING DATA (cont.)
- **WELL CAPACITY:** 0.75 = 0.02; 1'' = 0.04; 1.25'' = 0.05; 2'' = 0.10; 3'' = 0.37; 4'' = 0.65; 5'' = 1.02; 6'' = 1.25; 12'' = 6.88
- **TUBING INSIDE DIAM. CAPACITY:** (Gal/Ft) = 18'' = 0.00026; 3/4'' = 0.0016; 1/2'' = 0.0023; 1/4'' = 0.0037; 1/8'' = 0.0062

### SAMPLING DATA
- **SAMPLED BY:** TECO  
- **AFFILIATION:** D.B.  
- **SAMPLED AT:** 11:13  
- **REMARKS:** (1) Sample bottles pre-preserved at laboratory prior to sample collection.

### SAMPLING DATA (cont.)
- **SAMPLE CONTAINER SPECIFICATION:**
  - **@hO-500:** 1 PE 600ml NONE NONE N/A Inorganics ESP
  - **@Met-250:** 2 PE 250ml HNO3 1ml <2 Metals ESP
  - **@Rad-1L:** 2 PE 1L HNO3 5ml <2 Radiologics ESP

### NOTES:
1. The above do not constitute all of the information required by Chapter 62-180, F.A.C.
2. STABILIZATION CRITERIA FOR RANGE OF PP/VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2200.25.4)
   - pH ± 0.2 units
   - Temperature ± 0.2°C
   - Specific Conductance ± 5%
   - Dissolved Oxygen: all readings ± 20% saturation (see Table FS 2200-2)
   - Turbidity: all readings ± 20 NTU or ± 10% (whichever is greater)
**DEP-SCF-001/01**
**FS 2200 Groundwater Sampling**
**Form FD 9600-24**

**GROUNDWATER SAMPLING LOG**

<table>
<thead>
<tr>
<th>SITE NAME:</th>
<th>Big Bend</th>
</tr>
</thead>
<tbody>
<tr>
<td>SITE LOCATION:</td>
<td>Apollo Beach, FL.</td>
</tr>
</tbody>
</table>

| WELL NO: | CCR-PZ-6 |
| SAMPLE ID: | L16G005-06 |
| DATE: | 7/27/16 |

### PURGING DATA

**WELL VOLUME PURGE (only if applicable)**

1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY

**EQUIPMENT VOLUME PURGE (only if applicable)**

1 EQUIPMENT VOL = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME

| INITIAL PUMP OR TUBING DEPTH IN WELL (feet): | 16.1 |
|FINAL PUMP OR TUBING DEPTH IN WELL (feet): | 16.1 |

<table>
<thead>
<tr>
<th>TIME</th>
<th>VOLUME PURGED (GALLONS)</th>
<th>PURGE RATE (GPM)</th>
<th>DEPTH TO WATER (FEET)</th>
<th>pH (standard units)</th>
<th>TEMP. (°C)</th>
<th>COND. (µhos/cm)</th>
<th>DISSOLVED OXYGEN (ppm)</th>
<th>TURBIDITY (NTU)</th>
<th>COLOR (describe)</th>
<th>ODOR (describe)</th>
</tr>
</thead>
<tbody>
<tr>
<td>10:00</td>
<td>0.78</td>
<td>0.78</td>
<td>0.11</td>
<td>5.71</td>
<td>6.46</td>
<td>27.47</td>
<td>1500</td>
<td>0.21</td>
<td>4.91</td>
<td>LT YELLOW</td>
</tr>
<tr>
<td>10:02</td>
<td>0.22</td>
<td>1.00</td>
<td>0.11</td>
<td>5.70</td>
<td>6.47</td>
<td>27.56</td>
<td>1501</td>
<td>0.18</td>
<td>3.31</td>
<td>LT YELLOW</td>
</tr>
<tr>
<td>10:04</td>
<td>0.22</td>
<td>1.22</td>
<td>0.11</td>
<td>5.68</td>
<td>6.48</td>
<td>27.56</td>
<td>1500</td>
<td>0.15</td>
<td>4.86</td>
<td>LT YELLOW</td>
</tr>
</tbody>
</table>

### SAMPLING DATA

**PUMP OR TUBING DEPTH IN WELL (feet):** 16.1

**FIELD DECONTAMINATION:** Y [ ] N [x]

**FIELD FILTERED:** [ ]

**FILTER SIZE:** µm

**DUPLICATE:** Y [ ] N [x]

**SAMPLE CONTAINER SPECIFICATION**

<table>
<thead>
<tr>
<th>SAMPLE ID CODE</th>
<th># CONTAINERS</th>
<th>MATERIAL CODE</th>
<th>VOLUME</th>
<th>PRESERVATIVE USED</th>
<th>PRESERVATIVE SPECIFICATION</th>
<th>FINAL pH</th>
<th>INTENDED ANALYSIS AND/OR METHOD</th>
<th>SAMPLING EQUIPMENT CODE</th>
</tr>
</thead>
<tbody>
<tr>
<td>@no 500</td>
<td>1</td>
<td>PE</td>
<td>500ml</td>
<td>NONE</td>
<td>NONE</td>
<td>N/A</td>
<td>Inorganics</td>
<td>PP</td>
</tr>
<tr>
<td>@Met 250</td>
<td>2</td>
<td>PE</td>
<td>250ml</td>
<td>HNO3</td>
<td>1ml</td>
<td>&lt;2</td>
<td>Metals</td>
<td>PP</td>
</tr>
<tr>
<td>@Rad 1L</td>
<td>2</td>
<td>PE</td>
<td>1L</td>
<td>HNO3</td>
<td>5ml</td>
<td>&lt;2</td>
<td>Radiologicals</td>
<td>PP</td>
</tr>
</tbody>
</table>

### REMARKS:

(1) Sample bottles pre- preserved at laboratory prior to sample collection.

**MATERIAL CODES:**

- AG = Amber Glass
- CG = Clear Glass
- PE = Polyethylene
- PP = Polypropylene
- S = Silicone
- T = Teflon
- O = Other (Specify)

**SAMPLING AND PURGING CODES:**

- APP = After Peristaltic Pump
- B = Bailer
- BB = Bladder Pump
- ESP = Electro Submersible Pump
- PP = Peristaltic Pump
- RFPP = Reverse Flow Peristaltic Pump
- SW = Shallow Method (Using Gravity Drain)
- V = Vacuum Trap
- O = Other (Specify)

### NOTES:

1. The above do not constitute all of the information required by Chapter 63-160, F.A.C.
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE F3 2212, SECTION 43)
   - pH ± 0.2 units
   - Temperature ± 0.2 °C
   - Specific Conductance ± 1% Dissolved Oxygen ± 20% saturation (See Table F3 2200-3)
   - pH, ± 0.2 mg/L, or ± 10% (whichever is greater)
   - Turbidity, ± 5 NTU, optionally ± 5 NTU or 10% (whichever is greater)

Page 32 of 32

Revision Date: February 1, 2004
## GROUNDWATER SAMPLING LOG

**SITE NAME:** Big Bend  
**SITE LOCATION:** Apollo Beach, FL.  
**WELL NO:** MWB-35  
**SAMPLE ID:** L16G0607-07  
**DATE:** 7/27/16

### PURGING DATA

<table>
<thead>
<tr>
<th>TIME</th>
<th>VOLUME PURGED (GALLONS)</th>
<th>FINAL PUMP OR TUBING DEPTH IN WELL (feet):</th>
<th>PURGING INITIATED AT:</th>
<th>PURGING ENDED AT:</th>
<th>TOTAL VOLUME PURGED (gallons):</th>
</tr>
</thead>
<tbody>
<tr>
<td>10:26</td>
<td>0.57</td>
<td>15.00</td>
<td>10:22</td>
<td>10:32</td>
<td>0.95</td>
</tr>
<tr>
<td>10:30</td>
<td>0.19</td>
<td>15.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10:32</td>
<td>0.19</td>
<td>15.00</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**WELL CAPACITY (Gallons Per Foot):** 249.2gal/ft  
**TUBING INSIDE DIA. CAPACITY (Gal/ft):** 18.78gal/ft

### SAMPLING DATA

**SAMPLED BY (PRINT)/AFFILIATION:** RAB  
**SAMPLED BY SIGNATURE:** TECO  
**SAMPLED INITIATED AT:** 10:32  
**SAMPLED ENDED AT:** 10:42

<table>
<thead>
<tr>
<th>PUMP OR TUBING DEPTH IN WELL (feet):</th>
<th>SAMPLED PUMP FLOW RATE (ML per minute):</th>
<th>TUBING MATERIAL CODE:</th>
<th>FIELD DECONTAMINATION:</th>
<th>FIELD FILTERED:</th>
<th>FILTER SIZE:</th>
<th>INTENDED ANALYSIS AND/OR METHOD</th>
<th>SAMPLING CODE:</th>
</tr>
</thead>
<tbody>
<tr>
<td>15.0</td>
<td>360</td>
<td>PE/S</td>
<td>Y</td>
<td>N</td>
<td>5 µm</td>
<td>Metals</td>
<td>@Met-250</td>
</tr>
</tbody>
</table>

**SAMPLE CONTAINER SPECIFICATION:**  
@ino-500  
@ino-250  
@ino-1L

**SAMPLE PRESERVATION:**  
@ino-500 NONE  
@ino-250 HNO3  
@ino-1L HNO3

**FINAL PH:**  
@ino-500 <2  
@ino-250 <2  
@ino-1L <2

**INTENDED ANALYSIS AND/OR METHOD:**  
@ino-500 Inorganics  
@ino-250 Metals  
@ino-1L Radiologicals

**SAMPLE PRESERVATION:**  
@ino-500  
@ino-250  
@ino-1L

**FINAL PH:**  
@ino-500 <2  
@ino-250 <2  
@ino-1L <2

**INTENDED ANALYSIS AND/OR METHOD:**  
@ino-500 Inorganics  
@ino-250 Metals  
@ino-1L Radiologicals

**SAMPLE PRESERVATION:**  
@ino-500  
@ino-250  
@ino-1L

**FINAL PH:**  
@ino-500 <2  
@ino-250 <2  
@ino-1L <2

**INTENDED ANALYSIS AND/OR METHOD:**  
@ino-500 Inorganics  
@ino-250 Metals  
@ino-1L Radiologicals

### REMARKS:

1. Sample bottles pre-preserved at laboratory prior to sample collection.

### MATERIAL CODES:

- AG = Amber Glass  
- CG = Clear Glass  
- PP = Polypropylene  
- PS = Polystyrene  
- B = Borosilicate Glass  
- S = Silicone  
- T = Teflon  
- O = Other (Specify)

### SAMPLING/PURGING CODES:

- APP = Air Peristaltic Pump  
- B = Baller  
- BP = Bladder Pump  
- ESP = Electric Submersible Pump  
- PP = Peristaltic Pump

### EQUIPMENT CODES:

- RPFP = Reverse Flow Peristaltic Pump  
- STM = Straw Method (tubing Gravity Drain)  
- VT = Vacuum Trap  
- O = Other (Specify)

### NOTES:

1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)
   - pH: ±0.2 units  
   - Temperature: ±0.2°C  
   - Specific Conductance: ±5%  
   - Dissolved Oxygen: all readings ±20% saturation (see Table FS 2220-2); optionally, ±0.2 mg/L or ±10% (whichever is greater)  
   - Turbidity: all readings ±20 NTU; optionally ±5 NTU or 10% (whichever is greater)

---

Page 32 of 32  
Revision Date: February 1, 2004
### PURGING DATA

<table>
<thead>
<tr>
<th>TIME</th>
<th>VOLUME PURGED (GALLONS)</th>
<th>PUMP Ip PURGED (GALLONS)</th>
<th>PLUNGE RATE (GPM)</th>
<th>DEPTH TO WATER (FEET)</th>
<th>pH (standard units)</th>
<th>TEMP. (°C)</th>
<th>COND. (μS/cm)</th>
<th>DISSOLVED OXYGEN (ppm)</th>
<th>TEMP OR SATURATION</th>
<th>TURBIDITY (NTUs)</th>
<th>COLOR (describe)</th>
<th>ODOR (describe)</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:30</td>
<td>0.69</td>
<td>0.69</td>
<td>0.07</td>
<td>8.27</td>
<td>6.90</td>
<td>25.64</td>
<td>2083</td>
<td>0.33</td>
<td>4.37</td>
<td>LT YELLOW</td>
<td>MODERATE</td>
<td></td>
</tr>
<tr>
<td>9:32</td>
<td>0.69</td>
<td>0.69</td>
<td>0.07</td>
<td>8.26</td>
<td>6.90</td>
<td>25.69</td>
<td>2065</td>
<td>0.26</td>
<td>4.46</td>
<td>LT YELLOW</td>
<td>MODERATE</td>
<td></td>
</tr>
<tr>
<td>9:34</td>
<td>0.69</td>
<td>0.69</td>
<td>0.07</td>
<td>8.27</td>
<td>6.90</td>
<td>25.67</td>
<td>2051</td>
<td>0.28</td>
<td>4.09</td>
<td>LT YELLOW</td>
<td>MODERATE</td>
<td></td>
</tr>
</tbody>
</table>

### SAMPLING DATA

- **Sampled by (Print):** RAB
- **Affiliation:** TECO
- **Sample(s) signatures:**
  - [Signature]
- **Sampling initiated at:** 9:34
- **Sampling ended at:** 9:47
- **Pump or Tending Depth in Well (feet):** 15.0
- **Sampled Pump Flow Rate (gpm per minute):** 253
- **Tending Material Code:** PE/S
- **Field Decontamination:** Y
  - Field-Filtered Equipment Type: X
  - Filter Size: μm
- **Duplicate:** Y

*Sample Container Specification*

<table>
<thead>
<tr>
<th>Sample ID Code</th>
<th>Material Code</th>
<th>Volume</th>
<th>Preservation Used</th>
<th>Total Vol Added in Field (ml)</th>
<th>Final pH</th>
<th>Sample Preservation</th>
<th>Intended Analysis and/or Method</th>
<th>Sampling Equipment Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>@Ino-500</td>
<td>PE</td>
<td>500ml</td>
<td>NONE</td>
<td>NONE</td>
<td>N/A</td>
<td>Inorganics</td>
<td>PP</td>
<td></td>
</tr>
<tr>
<td>@Met-250</td>
<td>PE</td>
<td>250ml</td>
<td>HNO3</td>
<td>1ml</td>
<td>&lt;2</td>
<td>Metals</td>
<td>PP</td>
<td></td>
</tr>
<tr>
<td>@Rad-1L</td>
<td>PE</td>
<td>1L</td>
<td>HNO3</td>
<td>5ml</td>
<td>&lt;2</td>
<td>Radiologicals</td>
<td>PP</td>
<td></td>
</tr>
</tbody>
</table>

### REMARKS:

1. Sample bottles pre-preserved at laboratory prior to field collection.
2. Stabilization Criteria for Range of Variation of Last Three Consecutive Readings (See FS 2212, Section 3):
   - pH ± 0.2 units
   - Temperature ± 0.2°C
   - Specific Conductivity ± 5%
   - Dissolved Oxygen: All readings ± 2% saturation (See Table FS 2200-3);
   - optionally, ± 0.2 mg/L or ± 10% (whichever is greater)
   - Turbidity: All readings < 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)
AUGUST 2016
Big Bend Power Station
Terry Eastley
13031 Wyandott Rd
Apollo Beach, FL 33572
tleastley@tecoenergy.com

Report Date: 09/15/16 15:45

Case Narrative

6 sample(s) were received on 08/26/16 14:38.

There were no issues noted with the sample(s) associated with this workorder unless noted below.

The Radiological analysis was subcontracted to KNL Laboratories. The report is attached.

Lithium analysis was subcontracted to TestAmerica Labs. The report is attached.
Laboratory Results

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier Code</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>General Chemistry Parameters</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chloride</td>
<td>695</td>
<td>mg/L</td>
<td>0.400</td>
<td>10.0</td>
<td>20</td>
<td>EPA 300.0</td>
<td>TMH</td>
<td>8/29/16 17:35</td>
</tr>
<tr>
<td>Specific Conductance</td>
<td>4000</td>
<td>umhos/cm</td>
<td>100</td>
<td>100</td>
<td>1</td>
<td>FDEP SOP FT 1200</td>
<td>RAB</td>
<td>8/26/16 12:52</td>
</tr>
<tr>
<td>Dissolved Oxygen</td>
<td>0.140</td>
<td>mg/L</td>
<td>0.100</td>
<td>0.100</td>
<td>1</td>
<td>FDEP SOP FT 1500</td>
<td>RAB</td>
<td>8/26/16 12:52</td>
</tr>
<tr>
<td>Fluoride</td>
<td>0.454</td>
<td>mg/L</td>
<td>0.0100</td>
<td>0.0500</td>
<td>1</td>
<td>EPA 300.0</td>
<td>TMH</td>
<td>8/29/16 17:25</td>
</tr>
<tr>
<td>pH</td>
<td>6.71</td>
<td>pH Units</td>
<td>1.00</td>
<td>1.00</td>
<td>1</td>
<td>FDEP SOP FT 1100</td>
<td>RAB</td>
<td>8/26/16 12:52</td>
</tr>
<tr>
<td>REDOX Potential</td>
<td>-34.8</td>
<td>mV</td>
<td>-999</td>
<td>-999</td>
<td>1</td>
<td>SM 2580B</td>
<td>RAB</td>
<td>8/26/16 12:52</td>
</tr>
<tr>
<td>Total Dissolved Solids</td>
<td>2980</td>
<td>mg/L</td>
<td>24.0</td>
<td>40.0</td>
<td>2</td>
<td>SM 2540C</td>
<td>RFL</td>
<td>8/31/16 11:00</td>
</tr>
<tr>
<td>Sulfate</td>
<td>1240</td>
<td>mg/L</td>
<td>10.0</td>
<td>40.0</td>
<td>20</td>
<td>EPA 300.0</td>
<td>TMH</td>
<td>8/29/16 17:35</td>
</tr>
<tr>
<td>Turbidity</td>
<td>2.08</td>
<td>NTU</td>
<td>0.100</td>
<td>0.100</td>
<td>1</td>
<td>FDEP SOP FT 1600</td>
<td>RAB</td>
<td>8/26/16 12:52</td>
</tr>
<tr>
<td><strong>Total Mercury by SW846 Method 7470/7471</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mercury</td>
<td>0.0500</td>
<td>ug/L</td>
<td>0.0500</td>
<td>0.200</td>
<td>U</td>
<td>EPA 7470A</td>
<td>RLC</td>
<td>8/30/16 15:05</td>
</tr>
<tr>
<td><strong>Total Recoverable Metals by 200 Series</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Antimony</td>
<td>0.600</td>
<td>ug/L</td>
<td>0.600</td>
<td>2.00</td>
<td>U</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>8/30/16 11:25</td>
</tr>
<tr>
<td>Arsenic</td>
<td>7.94</td>
<td>ug/L</td>
<td>0.320</td>
<td>2.00</td>
<td>U</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>8/30/16 11:25</td>
</tr>
<tr>
<td>Cadmium</td>
<td>0.100</td>
<td>ug/L</td>
<td>0.100</td>
<td>0.500</td>
<td>U</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>8/30/16 11:25</td>
</tr>
<tr>
<td>Cobalt</td>
<td>0.485</td>
<td>ug/L</td>
<td>0.0400</td>
<td>2.00</td>
<td>I</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>8/30/16 11:25</td>
</tr>
<tr>
<td>Lead</td>
<td>0.0800</td>
<td>ug/L</td>
<td>0.0800</td>
<td>2.00</td>
<td>U</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>8/30/16 11:25</td>
</tr>
<tr>
<td>Selenium</td>
<td>0.385</td>
<td>ug/L</td>
<td>0.200</td>
<td>2.00</td>
<td>I</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>8/30/16 11:25</td>
</tr>
<tr>
<td>Thallium</td>
<td>0.100</td>
<td>ug/L</td>
<td>0.100</td>
<td>0.500</td>
<td>U</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>8/30/16 11:25</td>
</tr>
<tr>
<td><strong>Total Recoverable Metals by SW846 Method 6010B</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Barium</td>
<td>115</td>
<td>ug/L</td>
<td>0.500</td>
<td>20.0</td>
<td>U</td>
<td>EPA 6010B</td>
<td>RLC</td>
<td>8/29/16 11:45</td>
</tr>
<tr>
<td>Beryllium</td>
<td>0.200</td>
<td>ug/L</td>
<td>0.200</td>
<td>2.00</td>
<td>U</td>
<td>EPA 6010B</td>
<td>RLC</td>
<td>8/29/16 11:45</td>
</tr>
<tr>
<td>Boron</td>
<td>11400</td>
<td>ug/L</td>
<td>10.0</td>
<td>50.0</td>
<td>V</td>
<td>EPA 6010B</td>
<td>RLC</td>
<td>8/30/16 12:04</td>
</tr>
<tr>
<td>Calcium</td>
<td>556000</td>
<td>ug/L</td>
<td>30.0</td>
<td>1000</td>
<td>1</td>
<td>EPA 6010B</td>
<td>RLC</td>
<td>8/30/16 9:08</td>
</tr>
<tr>
<td>Chromium</td>
<td>1.60</td>
<td>ug/L</td>
<td>1.60</td>
<td>12.0</td>
<td>U</td>
<td>EPA 6010B</td>
<td>RLC</td>
<td>8/29/16 11:45</td>
</tr>
<tr>
<td>Molybdenum</td>
<td>80.3</td>
<td>ug/L</td>
<td>1.00</td>
<td>20.0</td>
<td>1</td>
<td>EPA 6010B</td>
<td>RLC</td>
<td>8/30/16 12:04</td>
</tr>
</tbody>
</table>

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
**Laboratory Results**

**Sample Information**

- **Client:** Big Bend Power Station
- **Lab Sample ID:** L16H075-02
- **Sample Description:**
- **Sample Collection Method:** Grab
- **Sampled By:** Robert Barthelette
- **Date and Time Collected:** 8/26/16 12:23
- **Date of Sample Receipt:** 8/26/16 14:38

**Laboratory Results**

### Sample Qualifier:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Code</th>
<th>Dil</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>General Chemistry Parameters</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chloride</td>
<td>124</td>
<td>mg/L</td>
<td>0.400</td>
<td>10.0</td>
<td>20</td>
<td></td>
<td>EPA 300.0</td>
<td>TMH</td>
<td>8/29/16 17:55</td>
</tr>
<tr>
<td>Specific Conductance</td>
<td>1570</td>
<td>umhos/cm</td>
<td>100</td>
<td>100</td>
<td>1</td>
<td></td>
<td>FDEP SOP FT 1200</td>
<td>RAB</td>
<td>8/26/16 12:23</td>
</tr>
<tr>
<td>Dissolved Oxygen</td>
<td>0.100</td>
<td>mg/L</td>
<td>0.100</td>
<td>0.0500</td>
<td>U</td>
<td>1</td>
<td>FDEP SOP FT 1500</td>
<td>RAB</td>
<td>8/26/16 12:23</td>
</tr>
<tr>
<td>Fluoride</td>
<td>0.150</td>
<td>mg/L</td>
<td>0.0100</td>
<td>0.0500</td>
<td>1</td>
<td></td>
<td>EPA 300.0</td>
<td>TMH</td>
<td>8/29/16 17:45</td>
</tr>
<tr>
<td>pH</td>
<td>6.74</td>
<td>pH Units</td>
<td>1.00</td>
<td>1.00</td>
<td>1</td>
<td></td>
<td>FDEP SOP FT 1100</td>
<td>RAB</td>
<td>8/26/16 12:23</td>
</tr>
<tr>
<td>REDOX Potential</td>
<td>-27.3</td>
<td>mV</td>
<td>-999</td>
<td>-999</td>
<td>1</td>
<td></td>
<td>SM 2580B</td>
<td>RAB</td>
<td>8/26/16 12:23</td>
</tr>
<tr>
<td>Total Dissolved Solids</td>
<td>1120</td>
<td>mg/L</td>
<td>24.0</td>
<td>40.0</td>
<td>2</td>
<td></td>
<td>SM 2540C</td>
<td>RFL</td>
<td>8/31/16 11:00</td>
</tr>
<tr>
<td>Sulfate</td>
<td>484</td>
<td>mg/L</td>
<td>10.0</td>
<td>40.0</td>
<td>20</td>
<td></td>
<td>EPA 300.0</td>
<td>TMH</td>
<td>8/29/16 17:55</td>
</tr>
<tr>
<td>Turbidity</td>
<td>3.31</td>
<td>NTU</td>
<td>0.100</td>
<td>0.100</td>
<td>1</td>
<td></td>
<td>FDEP SOP FT 1600</td>
<td>RAB</td>
<td>8/26/16 12:23</td>
</tr>
<tr>
<td><strong>Total Mercury by SW846 Method 7470/7471</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mercury</td>
<td>0.0500</td>
<td>ug/L</td>
<td>0.0500</td>
<td>0.200</td>
<td>U</td>
<td>1</td>
<td>EPA 7470A</td>
<td>RLC</td>
<td>8/30/16 15:27</td>
</tr>
<tr>
<td><strong>Total Recoverable Metals by 200 Series</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Antimony</td>
<td>0.600</td>
<td>ug/L</td>
<td>0.600</td>
<td>2.00</td>
<td>U</td>
<td>1</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>8/30/16 11:29</td>
</tr>
<tr>
<td>Arsenic</td>
<td>1.25</td>
<td>ug/L</td>
<td>0.320</td>
<td>2.00</td>
<td>I</td>
<td>1</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>8/30/16 11:29</td>
</tr>
<tr>
<td>Cadmium</td>
<td>0.100</td>
<td>ug/L</td>
<td>0.100</td>
<td>0.500</td>
<td>U</td>
<td>1</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>8/30/16 11:29</td>
</tr>
<tr>
<td>Cobalt</td>
<td>0.0776</td>
<td>ug/L</td>
<td>0.0400</td>
<td>2.00</td>
<td>I</td>
<td>1</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>8/30/16 11:29</td>
</tr>
<tr>
<td>Lead</td>
<td>0.0800</td>
<td>ug/L</td>
<td>0.0800</td>
<td>2.00</td>
<td>U</td>
<td>1</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>8/30/16 11:29</td>
</tr>
<tr>
<td>Selenium</td>
<td>0.200</td>
<td>ug/L</td>
<td>0.200</td>
<td>2.00</td>
<td>U</td>
<td>1</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>8/30/16 11:29</td>
</tr>
<tr>
<td>Thallium</td>
<td>0.100</td>
<td>ug/L</td>
<td>0.100</td>
<td>0.500</td>
<td>U</td>
<td>1</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>8/30/16 11:29</td>
</tr>
<tr>
<td><strong>Total Recoverable Metals by SW846 Method 6010B</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Barium</td>
<td>61.4</td>
<td>ug/L</td>
<td>0.500</td>
<td>20.0</td>
<td>1</td>
<td></td>
<td>EPA 6010B</td>
<td>RLC</td>
<td>8/29/16 11:48</td>
</tr>
<tr>
<td>Beryllium</td>
<td>0.200</td>
<td>ug/L</td>
<td>0.200</td>
<td>2.00</td>
<td>U</td>
<td>1</td>
<td>EPA 6010B</td>
<td>RLC</td>
<td>8/29/16 11:48</td>
</tr>
<tr>
<td>Boron</td>
<td>2860</td>
<td>ug/L</td>
<td>10.0</td>
<td>50.0</td>
<td>V</td>
<td>1</td>
<td>EPA 6010B</td>
<td>RLC</td>
<td>8/30/16 12:06</td>
</tr>
<tr>
<td>Calcium</td>
<td>192000</td>
<td>ug/L</td>
<td>30.0</td>
<td>1000</td>
<td></td>
<td>1</td>
<td>EPA 6010B</td>
<td>RLC</td>
<td>8/30/16 9:10</td>
</tr>
<tr>
<td>Chromium</td>
<td>1.60</td>
<td>ug/L</td>
<td>1.60</td>
<td>12.0</td>
<td>U</td>
<td>1</td>
<td>EPA 6010B</td>
<td>RLC</td>
<td>8/29/16 11:48</td>
</tr>
<tr>
<td>Molybdenum</td>
<td>7.78</td>
<td>ug/L</td>
<td>1.00</td>
<td>20.0</td>
<td>I</td>
<td>1</td>
<td>EPA 6010B</td>
<td>RLC</td>
<td>8/30/16 12:06</td>
</tr>
</tbody>
</table>

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
Sample Information

- **Client:** Big Bend Power Station
- **Lab Sample ID:** L16H075-03
- **Sample Description:** Sampled By: Robert Barthelette
- **Date and Time Collected:** 8/26/16 11:33
- **Date of Sample Receipt:** 8/26/16 14:38

Laboratory Results

**Sample Qualifier:**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Code</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>General Chemistry Parameters</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chloride</td>
<td>136</td>
<td>mg/L</td>
<td>0.400</td>
<td>10.0</td>
<td>20</td>
<td>EPA 300.0</td>
<td>TMH</td>
<td>8/29/16 18:16</td>
</tr>
<tr>
<td>Specific Conductance</td>
<td>1690</td>
<td>umhos/cm</td>
<td>100</td>
<td>100</td>
<td>1</td>
<td>FDEP SOP FT 1200</td>
<td>RAB</td>
<td>8/26/16 11:33</td>
</tr>
<tr>
<td>Dissolved Oxygen</td>
<td>0.150</td>
<td>mg/L</td>
<td>0.100</td>
<td>0.100</td>
<td>1</td>
<td>FDEP SOP FT 1500</td>
<td>RAB</td>
<td>8/26/16 11:33</td>
</tr>
<tr>
<td>Fluoride</td>
<td>0.286</td>
<td>mg/L</td>
<td>0.0100</td>
<td>0.0500</td>
<td>1</td>
<td>EPA 300.0</td>
<td>TMH</td>
<td>8/29/16 18:06</td>
</tr>
<tr>
<td>pH</td>
<td>6.29</td>
<td>pH Units</td>
<td>1.00</td>
<td>1.00</td>
<td>1</td>
<td>FDEP SOP FT 1100</td>
<td>RAB</td>
<td>8/26/16 11:33</td>
</tr>
<tr>
<td>REDOX Potential</td>
<td>-155</td>
<td>mV</td>
<td>-999</td>
<td>-999</td>
<td>1</td>
<td>SM 2580B</td>
<td>RAB</td>
<td>8/26/16 11:33</td>
</tr>
<tr>
<td>Total Dissolved Solids</td>
<td>1210</td>
<td>mg/L</td>
<td>24.0</td>
<td>40.0</td>
<td>2</td>
<td>SM 2540C</td>
<td>RFL</td>
<td>8/31/16 11:00</td>
</tr>
<tr>
<td>Sulfate</td>
<td>51</td>
<td>mg/L</td>
<td>10.0</td>
<td>40.0</td>
<td>20</td>
<td>EPA 300.0</td>
<td>TMH</td>
<td>8/29/16 18:16</td>
</tr>
<tr>
<td>Turbidity</td>
<td>6.35</td>
<td>NTU</td>
<td>0.100</td>
<td>0.100</td>
<td>1</td>
<td>FDEP SOP FT 1600</td>
<td>RAB</td>
<td>8/26/16 11:33</td>
</tr>
<tr>
<td><strong>Total Mercury by SW846 Method 7470/7471</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mercury</td>
<td>0.0500</td>
<td>ug/L</td>
<td>0.0500</td>
<td>0.200</td>
<td>U</td>
<td>1</td>
<td>EPA 7470A</td>
<td>RLC</td>
</tr>
<tr>
<td><strong>Total Recoverable Metals by 200 Series</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Antimony</td>
<td>0.600</td>
<td>ug/L</td>
<td>0.600</td>
<td>2.00</td>
<td>U</td>
<td>1</td>
<td>EPA 200.8</td>
<td>MCR</td>
</tr>
<tr>
<td>Arsenic</td>
<td>0.603</td>
<td>ug/L</td>
<td>0.320</td>
<td>2.00</td>
<td>I</td>
<td>1</td>
<td>EPA 200.8</td>
<td>MCR</td>
</tr>
<tr>
<td>Cadmium</td>
<td>0.100</td>
<td>ug/L</td>
<td>0.100</td>
<td>0.500</td>
<td>U</td>
<td>1</td>
<td>EPA 200.8</td>
<td>MCR</td>
</tr>
<tr>
<td>Cobalt</td>
<td>0.125</td>
<td>ug/L</td>
<td>0.0400</td>
<td>2.00</td>
<td>I</td>
<td>1</td>
<td>EPA 200.8</td>
<td>MCR</td>
</tr>
<tr>
<td>Lead</td>
<td>0.0800</td>
<td>ug/L</td>
<td>0.0800</td>
<td>2.00</td>
<td>U</td>
<td>1</td>
<td>EPA 200.8</td>
<td>MCR</td>
</tr>
<tr>
<td>Selenium</td>
<td>0.200</td>
<td>ug/L</td>
<td>0.200</td>
<td>2.00</td>
<td>U</td>
<td>1</td>
<td>EPA 200.8</td>
<td>MCR</td>
</tr>
<tr>
<td>Thallium</td>
<td>0.100</td>
<td>ug/L</td>
<td>0.100</td>
<td>0.500</td>
<td>U</td>
<td>1</td>
<td>EPA 200.8</td>
<td>MCR</td>
</tr>
<tr>
<td><strong>Total Recoverable Metals by SW846 Method 6010B</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Barium</td>
<td>63.6</td>
<td>ug/L</td>
<td>0.500</td>
<td>20.0</td>
<td>1</td>
<td>1</td>
<td>EPA 6010B</td>
<td>RLC</td>
</tr>
<tr>
<td>Beryllium</td>
<td>0.272</td>
<td>ug/L</td>
<td>0.200</td>
<td>2.00</td>
<td>I</td>
<td>1</td>
<td>EPA 6010B</td>
<td>RLC</td>
</tr>
<tr>
<td>Boron</td>
<td>540</td>
<td>ug/L</td>
<td>10.0</td>
<td>50.0</td>
<td>V</td>
<td>1</td>
<td>EPA 6010B</td>
<td>RLC</td>
</tr>
<tr>
<td>Calcium</td>
<td>200000</td>
<td>ug/L</td>
<td>30.0</td>
<td>1000</td>
<td>1</td>
<td>1</td>
<td>EPA 6010B</td>
<td>RLC</td>
</tr>
<tr>
<td>Chromium</td>
<td>1.60</td>
<td>ug/L</td>
<td>1.60</td>
<td>12.0</td>
<td>U</td>
<td>1</td>
<td>EPA 6010B</td>
<td>RLC</td>
</tr>
<tr>
<td>Molybdenum</td>
<td>8.10</td>
<td>ug/L</td>
<td>1.00</td>
<td>20.0</td>
<td>I</td>
<td>1</td>
<td>EPA 6010B</td>
<td>RLC</td>
</tr>
</tbody>
</table>

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
## Sample Information

<table>
<thead>
<tr>
<th>Client:</th>
<th>Big Bend Power Station</th>
<th>Lab Sample ID:</th>
<th>L16H075-05</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample Description:</td>
<td>PZ5</td>
<td>Sampled By:</td>
<td>Robert Barthelette</td>
</tr>
<tr>
<td>Sample Collection Method:</td>
<td>Grab</td>
<td>Date and Time Collected:</td>
<td>8/26/16 10:56</td>
</tr>
<tr>
<td>Date of Sample Receipt:</td>
<td>8/26/16  14:38</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## Laboratory Results

### Sample Qualifier:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier Code</th>
<th>Dil</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis</th>
<th>Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>General Chemistry Parameters</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chloride</td>
<td>1030</td>
<td>mg/L</td>
<td>0.400</td>
<td>10.0</td>
<td>20</td>
<td></td>
<td>EPA 300.0</td>
<td>TMH</td>
<td>8/29/16 18:36</td>
<td></td>
</tr>
<tr>
<td>Specific Conductance</td>
<td>5140</td>
<td>umhos/cm</td>
<td>100</td>
<td>100</td>
<td>1</td>
<td>FDEP SOP FT 1200</td>
<td>RAB</td>
<td>8/26/16 10:56</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dissolved Oxygen</td>
<td>0.120</td>
<td>mg/L</td>
<td>0.100</td>
<td>0.100</td>
<td>1</td>
<td>FDEP SOP FT 1500</td>
<td>RAB</td>
<td>8/26/16 10:56</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fluoride</td>
<td>0.180</td>
<td>mg/L</td>
<td>0.0100</td>
<td>0.0500</td>
<td>1</td>
<td>EPA 300.0</td>
<td>TMH</td>
<td>8/29/16 18:26</td>
<td></td>
<td></td>
</tr>
<tr>
<td>pH</td>
<td>6.41</td>
<td>pH Units</td>
<td>1.00</td>
<td>1.00</td>
<td>1</td>
<td>FDEP SOP FT 1100</td>
<td>RAB</td>
<td>8/26/16 10:56</td>
<td></td>
<td></td>
</tr>
<tr>
<td>REDOX Potential</td>
<td>-22.8</td>
<td>mV</td>
<td>-999</td>
<td>-999</td>
<td>1</td>
<td>SM 2580B</td>
<td>RAB</td>
<td>8/26/16 10:56</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Dissolved Solids</td>
<td>4290</td>
<td>mg/L</td>
<td>120</td>
<td>200</td>
<td>10</td>
<td>SM 2540C</td>
<td>RFL</td>
<td>8/31/16 11:00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sulfate</td>
<td>1420</td>
<td>mg/L</td>
<td>10.0</td>
<td>40.0</td>
<td>20</td>
<td>EPA 300.0</td>
<td>TMH</td>
<td>8/29/16 18:36</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Turbidity</td>
<td>6.47</td>
<td>NTU</td>
<td>0.100</td>
<td>0.100</td>
<td>1</td>
<td>FDEP SOP FT 1600</td>
<td>RAB</td>
<td>8/26/16 10:56</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Total Mercury by SW846 Method 7470/7471**

| Mercury            | 0.0500 | ug/L | 0.0500 |0.200 |U |1 | EPA 7470A | RLC | 8/30/16 15:15 |

**Total Recoverable Metals by 200 Series**

| Antimony           | 1.77   | ug/L | 1.20 | 4.00 |I |2 | EPA 200.8 | MCR | 8/30/16 12:26 |
| Arsenic            | 8.89   | ug/L | 0.320 |2.00 |1 | EPA 200.8 | MCR | 8/30/16 11:37 |
| Cadmium            | 0.100  | ug/L | 0.100 |0.500 |U |1 | EPA 200.8 | MCR | 8/30/16 11:37 |
| Cobalt             | 1.52   | ug/L | 0.0400 |2.00 |I |1 | EPA 200.8 | MCR | 8/30/16 11:37 |
| Lead               | 0.111  | ug/L | 0.0800 |2.00 |I |1 | EPA 200.8 | MCR | 8/30/16 11:37 |
| Selenium           | 1.73   | ug/L | 0.200 |2.00 |I |1 | EPA 200.8 | MCR | 8/30/16 11:37 |
| Thallium           | 0.100  | ug/L | 0.100 |0.500 |U |1 | EPA 200.8 | MCR | 8/30/16 11:37 |

**Total Recoverable Metals by SW846 Method 6010B**

| Barium             | 61.4   | ug/L | 0.500 | 20.0 |1 | EPA 6010B | RLC | 8/29/16 11:56 |
| Beryllium          | 0.200  | ug/L | 0.200 |2.00 |U |1 | EPA 6010B | RLC | 8/29/16 11:56 |
| Boron              | 53700  | ug/L | 10.0 | 50.0 |V |1 | EPA 6010B | RLC | 8/30/16 12:11 |
| Calcium            | 729000 | ug/L | 30.0 | 1000 |1 | EPA 6010B | RLC | 8/30/16 9:15 |
| Chromium           | 1.60   | ug/L | 1.60 | 12.0 |U |1 | EPA 6010B | RLC | 8/29/16 11:56 |
| Molybdenum         | 11.1   | ug/L | 1.00 | 20.0 |I |1 | EPA 6010B | RLC | 8/30/16 12:11 |
**Sample Information**

- **Client:** Big Bend Power Station  
- **Lab Sample ID:** L16H075-06  
- **Sample Description:** PZ6  
- **Sample Collection Method:** Grab  
- **Sampled By:** Robert Barthelette  
- **Date and Time Collected:** 8/26/16 10:10  
- **Date of Sample Receipt:** 8/26/16 14:38

**Laboratory Results**

### Sample Qualifier:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier</th>
<th>Test Code</th>
<th>Dil</th>
<th>Method</th>
<th>Analyst</th>
<th>Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>General Chemistry Parameters</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chloride</td>
<td>116</td>
<td>mg/L</td>
<td>0.400</td>
<td>10.0</td>
<td>20</td>
<td>EPA 300.0</td>
<td>TMH</td>
<td>8/29/16 19:16</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Specific Conductance</td>
<td>1380</td>
<td>umhos/cm</td>
<td>100</td>
<td>100</td>
<td>1</td>
<td>FDEP SOP FT 1200</td>
<td>RAB</td>
<td>8/26/16 10:10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dissolved Oxygen</td>
<td>0.100</td>
<td>mg/L</td>
<td>0.100</td>
<td>0.100</td>
<td>U</td>
<td>FDEP SOP FT 1500</td>
<td>RAB</td>
<td>8/26/16 10:10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fluoride</td>
<td>0.455</td>
<td>mg/L</td>
<td>0.0100</td>
<td>0.0500</td>
<td>1</td>
<td>EPA 300.0</td>
<td>TMH</td>
<td>8/29/16 18:46</td>
<td></td>
<td></td>
</tr>
<tr>
<td>pH</td>
<td>6.48</td>
<td>pH Units</td>
<td>1.00</td>
<td>1.00</td>
<td>1</td>
<td>FDEP SOP FT 1100</td>
<td>RAB</td>
<td>8/26/16 10:10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>REDOX Potential</td>
<td>-59.5</td>
<td>mV</td>
<td>-999</td>
<td>-999</td>
<td>1</td>
<td>SM 2580B</td>
<td>RAB</td>
<td>8/26/16 10:10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Dissolved Solids</td>
<td>980</td>
<td>mg/L</td>
<td>24.0</td>
<td>40.0</td>
<td>2</td>
<td>SM 2540C</td>
<td>RFL</td>
<td>8/31/16 11:00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sulfate</td>
<td>276</td>
<td>mg/L</td>
<td>10.0</td>
<td>40.0</td>
<td>20</td>
<td>EPA 300.0</td>
<td>TMH</td>
<td>8/29/16 19:16</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Turbidity</td>
<td>1.73</td>
<td>NTU</td>
<td>0.100</td>
<td>0.100</td>
<td>1</td>
<td>FDEP SOP FT 1600</td>
<td>RAB</td>
<td>8/26/16 10:10</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total Mercury by SW846 Method 7470/7471</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mercury</td>
<td>0.0500</td>
<td>ug/L</td>
<td>0.0500</td>
<td>0.200</td>
<td>U</td>
<td>EPA 7470A</td>
<td>RLC</td>
<td>8/30/16 15:19</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total Recoverable Metals by 200 Series</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Antimony</td>
<td>0.600</td>
<td>ug/L</td>
<td>0.600</td>
<td>2.00</td>
<td>U</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>8/30/16 11:40</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arsenic</td>
<td>2.03</td>
<td>ug/L</td>
<td>0.320</td>
<td>2.00</td>
<td>1</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>8/30/16 11:40</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cadmium</td>
<td>0.100</td>
<td>ug/L</td>
<td>0.100</td>
<td>0.500</td>
<td>U</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>8/30/16 11:40</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cobalt</td>
<td>0.153</td>
<td>ug/L</td>
<td>0.0400</td>
<td>2.00</td>
<td>I</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>8/30/16 11:40</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lead</td>
<td>0.0800</td>
<td>ug/L</td>
<td>0.0800</td>
<td>2.00</td>
<td>U</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>8/30/16 11:40</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Selenium</td>
<td>0.577</td>
<td>ug/L</td>
<td>0.200</td>
<td>2.00</td>
<td>I</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>8/30/16 11:40</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thallium</td>
<td>0.100</td>
<td>ug/L</td>
<td>0.100</td>
<td>0.500</td>
<td>U</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>8/30/16 11:40</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total Recoverable Metals by SW846 Method 6010B</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Barium</td>
<td>43.2</td>
<td>ug/L</td>
<td>0.500</td>
<td>20.0</td>
<td>1</td>
<td>EPA 6010B</td>
<td>RLC</td>
<td>8/29/16 11:59</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beryllium</td>
<td>0.200</td>
<td>ug/L</td>
<td>0.200</td>
<td>2.00</td>
<td>U</td>
<td>EPA 6010B</td>
<td>RLC</td>
<td>8/29/16 11:59</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Boron</td>
<td>3700</td>
<td>ug/L</td>
<td>10.0</td>
<td>50.0</td>
<td>V</td>
<td>EPA 6010B</td>
<td>RLC</td>
<td>8/30/16 12:41</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Calcium</td>
<td>237000</td>
<td>ug/L</td>
<td>30.0</td>
<td>1000</td>
<td>1</td>
<td>EPA 6010B</td>
<td>RLC</td>
<td>8/30/16 9:18</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chromium</td>
<td>1.60</td>
<td>ug/L</td>
<td>1.60</td>
<td>12.0</td>
<td>U</td>
<td>EPA 6010B</td>
<td>RLC</td>
<td>8/29/16 11:59</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Molybdenum</td>
<td>7.57</td>
<td>ug/L</td>
<td>1.00</td>
<td>20.0</td>
<td>I</td>
<td>EPA 6010B</td>
<td>RLC</td>
<td>8/30/16 12:14</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Comments**

- U Indicates that the compound was analyzed for but not detected.
- J- The reported value is an estimated value, see the case narrative for specifics.
- I Estimated value
- V Analyte detected in the method blank

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
Total Recoverable Metals by SW846 Method 6010B - Quality Control

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>MDL</th>
<th>PQL</th>
<th>Units</th>
<th>Spike Level</th>
<th>Source</th>
<th>%Rec</th>
<th>%Rec Limits</th>
<th>RPD Limit</th>
<th>Qualifier</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barium</td>
<td>0.500</td>
<td>0.50</td>
<td>20.0</td>
<td>ug/L</td>
<td>96.9</td>
<td>U</td>
<td>80-120</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beryllium</td>
<td>0.200</td>
<td>0.20</td>
<td>2.00</td>
<td>ug/L</td>
<td>101</td>
<td>U</td>
<td>80-120</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Calcium</td>
<td>3.00</td>
<td>3.00</td>
<td>1000</td>
<td>ug/L</td>
<td>99.8</td>
<td>U</td>
<td>80-120</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chromium</td>
<td>1.60</td>
<td>1.60</td>
<td>12.0</td>
<td>ug/L</td>
<td>99.8</td>
<td>U</td>
<td>80-120</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Barium</td>
<td>969</td>
<td>0.50</td>
<td>20.0</td>
<td>ug/L</td>
<td>1000.0</td>
<td>L16H075-06</td>
<td>43.2</td>
<td>91.9</td>
<td>75-125</td>
<td></td>
</tr>
<tr>
<td>Beryllium</td>
<td>1010</td>
<td>0.20</td>
<td>2.00</td>
<td>ug/L</td>
<td>1000.0</td>
<td>U</td>
<td>95.4</td>
<td>75-125</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chromium</td>
<td>998</td>
<td>1.60</td>
<td>12.0</td>
<td>ug/L</td>
<td>1000.0</td>
<td>U</td>
<td>94.6</td>
<td>75-125</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Barium</td>
<td>962</td>
<td>0.50</td>
<td>20.0</td>
<td>ug/L</td>
<td>1000.0</td>
<td>L16H075-06</td>
<td>43.2</td>
<td>95.7</td>
<td>75-125</td>
<td>3.90</td>
</tr>
<tr>
<td>Beryllium</td>
<td>954</td>
<td>0.20</td>
<td>2.00</td>
<td>ug/L</td>
<td>1000.0</td>
<td>U</td>
<td>99.3</td>
<td>75-125</td>
<td>4.02</td>
<td>20</td>
</tr>
<tr>
<td>Chromium</td>
<td>946</td>
<td>1.60</td>
<td>12.0</td>
<td>ug/L</td>
<td>1000.0</td>
<td>U</td>
<td>98.3</td>
<td>75-125</td>
<td>3.81</td>
<td>20</td>
</tr>
</tbody>
</table>

Batch 16H0254 - EPA 6010B

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>MDL</th>
<th>PQL</th>
<th>Units</th>
<th>Spike Level</th>
<th>Source</th>
<th>%Rec</th>
<th>%Rec Limits</th>
<th>RPD Limit</th>
<th>Qualifier</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boron</td>
<td>47.3</td>
<td>10.0</td>
<td>50.0</td>
<td>ug/L</td>
<td>1000.0</td>
<td>L16H075-06</td>
<td>105</td>
<td>80-120</td>
<td></td>
<td>V</td>
</tr>
<tr>
<td>Molybdenum</td>
<td>1.00</td>
<td>1.00</td>
<td>20.0</td>
<td>ug/L</td>
<td>1000.0</td>
<td>L16H075-06</td>
<td>95.5</td>
<td>80-120</td>
<td></td>
<td>V</td>
</tr>
</tbody>
</table>

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
## Total Recoverable Metals by SW846 Method 6010B - Quality Control

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>MDL</th>
<th>PQL</th>
<th>Units</th>
<th>Spike Level</th>
<th>Source</th>
<th>%Rec</th>
<th>%Rec Limits</th>
<th>RPD Limit</th>
<th>Qualifier</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Batch 16H0254 - EPA 6010B</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4580</td>
<td>10.0</td>
<td>50.0</td>
<td>ug/L</td>
<td>1000.0</td>
<td>3330</td>
</tr>
<tr>
<td>Boron</td>
<td>1020</td>
<td>1.00</td>
<td>20.0</td>
<td>ug/L</td>
<td>1000.0</td>
<td>15.1</td>
<td>101</td>
<td>75-125</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Molybdenum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4550</td>
<td>10.0</td>
<td>50.0</td>
<td>ug/L</td>
<td>1000.0</td>
<td>3330</td>
</tr>
<tr>
<td><strong>Matrix Spike Dup (16H0254-MSD1)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1000</td>
<td>1.00</td>
<td>20.0</td>
<td>ug/L</td>
<td>1000.0</td>
<td>15.1</td>
</tr>
</tbody>
</table>

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>MDL</th>
<th>PQL</th>
<th>Units</th>
<th>Spike Level</th>
<th>Source</th>
<th>%Rec Limits</th>
<th>RPD Limit</th>
<th>Qualifier</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Batch 16H0256 - EPA 7470A</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blank (16H0256-BLK1)</td>
<td>0.0500</td>
<td>0.0500</td>
<td>0.200</td>
<td>ug/L</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mercury</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>LCS (16H0256-BS1)</strong></td>
<td>0.946</td>
<td>0.0500</td>
<td>0.200</td>
<td>ug/L</td>
<td>1.0000</td>
<td>94.6</td>
<td>80-120</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mercury</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Matrix Spike (16H0256-MS1)</td>
<td>0.838</td>
<td>0.0500</td>
<td>0.200</td>
<td>ug/L</td>
<td>1.0000</td>
<td>U</td>
<td>83.8</td>
<td>75-125</td>
<td></td>
</tr>
<tr>
<td><strong>Matrix Spike Dup (16H0256-MSD1)</strong></td>
<td>0.866</td>
<td>0.0500</td>
<td>0.200</td>
<td>ug/L</td>
<td>1.0000</td>
<td>U</td>
<td>86.6</td>
<td>75-125</td>
<td>3.33</td>
</tr>
<tr>
<td>Mercury</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Analyte</td>
<td>Result</td>
<td>MDL</td>
<td>PQL</td>
<td>Units</td>
<td>Spike</td>
<td>Source</td>
<td>%Rec</td>
<td>%Rec Limits</td>
<td>RPD Limit</td>
</tr>
<tr>
<td>-------------------------</td>
<td>--------</td>
<td>-----</td>
<td>-----</td>
<td>-------</td>
<td>-------</td>
<td>--------</td>
<td>------</td>
<td>-------------</td>
<td>-----------</td>
</tr>
<tr>
<td><strong>Batch 16H0242 - EPA 200.8</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Antimony</td>
<td>0.600</td>
<td>0.600</td>
<td>2.00</td>
<td>ug/L</td>
<td>2.00</td>
<td>ug/L</td>
<td>U</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arsenic</td>
<td>0.320</td>
<td>0.320</td>
<td>2.00</td>
<td>ug/L</td>
<td>2.00</td>
<td>ug/L</td>
<td>U</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cadmium</td>
<td>0.100</td>
<td>0.100</td>
<td>0.500</td>
<td>ug/L</td>
<td>2.00</td>
<td>ug/L</td>
<td>U</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cobalt</td>
<td>0.0400</td>
<td>0.0400</td>
<td>2.00</td>
<td>ug/L</td>
<td>2.00</td>
<td>ug/L</td>
<td>U</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lead</td>
<td>0.0800</td>
<td>0.0800</td>
<td>2.00</td>
<td>ug/L</td>
<td>2.00</td>
<td>ug/L</td>
<td>U</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Selenium</td>
<td>0.200</td>
<td>0.200</td>
<td>2.00</td>
<td>ug/L</td>
<td>2.00</td>
<td>ug/L</td>
<td>U</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thallium</td>
<td>0.100</td>
<td>0.100</td>
<td>0.500</td>
<td>ug/L</td>
<td>2.00</td>
<td>ug/L</td>
<td>U</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>LCS (16H0242-BS1)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Antimony</td>
<td>95.8</td>
<td>0.600</td>
<td>2.00</td>
<td>ug/L</td>
<td>100.00</td>
<td>95.8</td>
<td>85-115</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arsenic</td>
<td>94.7</td>
<td>0.320</td>
<td>2.00</td>
<td>ug/L</td>
<td>100.00</td>
<td>94.7</td>
<td>85-115</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cadmium</td>
<td>92.4</td>
<td>0.100</td>
<td>0.500</td>
<td>ug/L</td>
<td>100.00</td>
<td>92.4</td>
<td>85-115</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cobalt</td>
<td>95.2</td>
<td>0.0400</td>
<td>2.00</td>
<td>ug/L</td>
<td>100.00</td>
<td>95.2</td>
<td>85-115</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lead</td>
<td>97.0</td>
<td>0.0800</td>
<td>2.00</td>
<td>ug/L</td>
<td>100.00</td>
<td>97.0</td>
<td>85-115</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Selenium</td>
<td>94.4</td>
<td>0.200</td>
<td>2.00</td>
<td>ug/L</td>
<td>100.00</td>
<td>94.4</td>
<td>85-115</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thallium</td>
<td>96.6</td>
<td>0.100</td>
<td>0.500</td>
<td>ug/L</td>
<td>100.00</td>
<td>96.6</td>
<td>85-115</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Matrix Spike (16H0242-MS1)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Antimony</td>
<td>97.5</td>
<td>3.00</td>
<td>10.0</td>
<td>ug/L</td>
<td>100.00</td>
<td>1.04</td>
<td>97.5</td>
<td>70-130</td>
<td></td>
</tr>
<tr>
<td>Arsenic</td>
<td>107</td>
<td>1.60</td>
<td>10.0</td>
<td>ug/L</td>
<td>100.00</td>
<td>10.3</td>
<td>97.0</td>
<td>70-130</td>
<td></td>
</tr>
<tr>
<td>Cadmium</td>
<td>87.4</td>
<td>0.500</td>
<td>2.50</td>
<td>ug/L</td>
<td>100.00</td>
<td>U</td>
<td>87.4</td>
<td>70-130</td>
<td></td>
</tr>
<tr>
<td>Cobalt</td>
<td>93.1</td>
<td>0.200</td>
<td>10.0</td>
<td>ug/L</td>
<td>100.00</td>
<td>0.368</td>
<td>92.7</td>
<td>70-130</td>
<td></td>
</tr>
<tr>
<td>Lead</td>
<td>87.9</td>
<td>0.400</td>
<td>10.0</td>
<td>ug/L</td>
<td>100.00</td>
<td>0.469</td>
<td>87.4</td>
<td>70-130</td>
<td></td>
</tr>
<tr>
<td>Selenium</td>
<td>92.3</td>
<td>1.00</td>
<td>10.0</td>
<td>ug/L</td>
<td>100.00</td>
<td>0.773</td>
<td>92.3</td>
<td>70-130</td>
<td></td>
</tr>
<tr>
<td>Thallium</td>
<td>88.8</td>
<td>0.500</td>
<td>2.50</td>
<td>ug/L</td>
<td>100.00</td>
<td>U</td>
<td>88.8</td>
<td>70-130</td>
<td></td>
</tr>
<tr>
<td><strong>Matrix Spike Dup (16H0242-MSD1)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Antimony</td>
<td>98.5</td>
<td>3.00</td>
<td>10.0</td>
<td>ug/L</td>
<td>100.00</td>
<td>1.04</td>
<td>98.5</td>
<td>70-130</td>
<td>1.03</td>
</tr>
<tr>
<td>Arsenic</td>
<td>109</td>
<td>1.60</td>
<td>10.0</td>
<td>ug/L</td>
<td>100.00</td>
<td>10.3</td>
<td>98.9</td>
<td>70-130</td>
<td>1.78</td>
</tr>
<tr>
<td>Cadmium</td>
<td>87.5</td>
<td>0.500</td>
<td>2.50</td>
<td>ug/L</td>
<td>100.00</td>
<td>U</td>
<td>87.5</td>
<td>70-130</td>
<td>0.122</td>
</tr>
<tr>
<td>Cobalt</td>
<td>96.4</td>
<td>0.200</td>
<td>10.0</td>
<td>ug/L</td>
<td>100.00</td>
<td>0.368</td>
<td>96.0</td>
<td>70-130</td>
<td>3.47</td>
</tr>
<tr>
<td>Lead</td>
<td>87.6</td>
<td>0.400</td>
<td>10.0</td>
<td>ug/L</td>
<td>100.00</td>
<td>0.469</td>
<td>87.1</td>
<td>70-130</td>
<td>0.334</td>
</tr>
<tr>
<td>Selenium</td>
<td>94.0</td>
<td>1.00</td>
<td>10.0</td>
<td>ug/L</td>
<td>100.00</td>
<td>0.773</td>
<td>94.0</td>
<td>70-130</td>
<td>1.82</td>
</tr>
<tr>
<td>Thallium</td>
<td>88.3</td>
<td>0.500</td>
<td>2.50</td>
<td>ug/L</td>
<td>100.00</td>
<td>U</td>
<td>88.3</td>
<td>70-130</td>
<td>0.611</td>
</tr>
</tbody>
</table>

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.

Page 11 of 13
<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>+ MDL</th>
<th>Spike</th>
<th>Level</th>
<th>MDL</th>
<th>%Rec</th>
<th>&amp; Qualifier</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chloride</td>
<td>0.0200</td>
<td>0.0200</td>
<td>0.500</td>
<td>mg/L</td>
<td>5.000</td>
<td>105</td>
<td>90-110</td>
</tr>
<tr>
<td>Fluoride</td>
<td>0.0100</td>
<td>0.0100</td>
<td>0.0500</td>
<td>mg/L</td>
<td>5.000</td>
<td>104</td>
<td>90-110</td>
</tr>
<tr>
<td>Sulfate</td>
<td>0.500</td>
<td>0.500</td>
<td>2.00</td>
<td>mg/L</td>
<td>5.000</td>
<td>100</td>
<td>90-110</td>
</tr>
<tr>
<td>Chloride</td>
<td>5.26</td>
<td>0.0200</td>
<td>0.500</td>
<td>mg/L</td>
<td>5.000</td>
<td>105</td>
<td>90-110</td>
</tr>
<tr>
<td>Fluoride</td>
<td>5.20</td>
<td>0.0100</td>
<td>0.0500</td>
<td>mg/L</td>
<td>5.000</td>
<td>104</td>
<td>90-110</td>
</tr>
<tr>
<td>Sulfate</td>
<td>5.01</td>
<td>0.500</td>
<td>2.00</td>
<td>mg/L</td>
<td>5.000</td>
<td>100</td>
<td>90-110</td>
</tr>
<tr>
<td>Chloride</td>
<td>456</td>
<td>0.400</td>
<td>1.00</td>
<td>mg/L</td>
<td>100.0</td>
<td>353</td>
<td>90-110</td>
</tr>
<tr>
<td>Fluoride</td>
<td>107</td>
<td>0.200</td>
<td>1.00</td>
<td>mg/L</td>
<td>100.0</td>
<td>96.7</td>
<td>90-110</td>
</tr>
<tr>
<td>Sulfate</td>
<td>757</td>
<td>10.0</td>
<td>40.0</td>
<td>mg/L</td>
<td>100.0</td>
<td>666</td>
<td>90-110</td>
</tr>
<tr>
<td>Chloride</td>
<td>452</td>
<td>0.400</td>
<td>1.00</td>
<td>mg/L</td>
<td>100.0</td>
<td>352</td>
<td>90-110</td>
</tr>
<tr>
<td>Fluoride</td>
<td>106</td>
<td>0.200</td>
<td>1.00</td>
<td>mg/L</td>
<td>100.0</td>
<td>95.3</td>
<td>90-110</td>
</tr>
<tr>
<td>Sulfate</td>
<td>753</td>
<td>10.0</td>
<td>40.0</td>
<td>mg/L</td>
<td>100.0</td>
<td>666</td>
<td>90-110</td>
</tr>
</tbody>
</table>

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
## General Chemistry Parameters - Quality Control

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>MDL</th>
<th>PQL</th>
<th>Units</th>
<th>Spike Level</th>
<th>Source Result</th>
<th>%Rec Limits</th>
<th>RPD Limit</th>
<th>Qualifier</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Batch 16H0279 - SM 2540C</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Source: L16H067-01</td>
<td>Prepared &amp; Analyzed: 08/31/16</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Duplicate (16H0279-DUP1)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>10</td>
<td>U</td>
</tr>
<tr>
<td>Total Dissolved Solids</td>
<td>12.0</td>
<td>12.0</td>
<td>20.0</td>
<td>mg/L</td>
<td>U</td>
<td>U</td>
<td></td>
<td></td>
<td>U</td>
</tr>
</tbody>
</table>

---

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

---

Tampa Electric Company, Laboratory Services

Peggy Penner, Manager, Laboratory Services

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
**DEP-SOP-001/01**
**FS 2200 Groundwater Sampling**
**Form FD 9000-24**

**GROUNDWATER SAMPLING LOG**

**FACILITY NAME:** Big Bend  
**SITE LOCATION:** Apollo Beach, FL.

**WELL NO.:** CCR-PZ-1  
**SAMPLE ID:** L16H075-01  
**DATE:** 8/25/16

### PURGING DATA

**WELL DIAMETER (inches):** [Diameter1]  
**TUBING DIAMETER (inches):** [Diameter2]  
**WELL SCREEN INTERVAL (NGVD):** 10.29 feet to 20.29 feet (feet)  
**STATIC DEPTH TO WATER (feet):** 5.06  
**PURGE PUMP TYPE OR BAILER:** PP

**WELL VOLUME PURGE:** 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) x WELL CAPACITY

**EQUIPMENT VOLUME PURGE:** 1 EQUIPMENT VOL = PUMP VOLUME + (TUBING CAPACITY x TUBING LENGTH) + FLOW CELL VOLUME

**INITIAL PUMP OR TUBING DEPTH IN WELL (feet):** 15.29  
**FINAL PUMP OR TUBING DEPTH IN WELL (feet):** 15.29

<table>
<thead>
<tr>
<th>TIME (h:m)</th>
<th>VOLUME PURGED (GALLONS)</th>
<th>PURGE RATE (GPM)</th>
<th>DEPTH TO WATER (feet)</th>
<th>PH (standard units)</th>
<th>TEMP. (°C)</th>
<th>COND. (microsiemens cm-1)</th>
<th>DISSOLVED OXYGEN (ppm)</th>
<th>TURBIDITY (NTU)</th>
<th>COLOR (describe)</th>
<th>ODOR (describe)</th>
</tr>
</thead>
<tbody>
<tr>
<td>12:36</td>
<td>0.80</td>
<td>0.04</td>
<td>5.19</td>
<td>6.70</td>
<td>26.89</td>
<td>3997</td>
<td>0.05</td>
<td>3.14</td>
<td>CLEAR</td>
<td>NONE</td>
</tr>
<tr>
<td>12:38</td>
<td>0.20</td>
<td>1.00</td>
<td>5.20</td>
<td>6.71</td>
<td>27.02</td>
<td>3998</td>
<td>0.20</td>
<td>2.26</td>
<td>CLEAR</td>
<td>NONE</td>
</tr>
<tr>
<td>12:40</td>
<td>0.20</td>
<td>1.20</td>
<td>5.22</td>
<td>6.71</td>
<td>27.05</td>
<td>3995</td>
<td>0.14</td>
<td>2.08</td>
<td>CLEAR</td>
<td>NONE</td>
</tr>
</tbody>
</table>

**WELL CAPACITY (Gallons Per Foot):** 0.675 ± 0.208

**TUBING INSIDE DIA. CAPACITY (Gallons):** 0.36

### SAMPLING DATA

**PUMP OR TUBING DEPTH IN WELL (feet):** 15.3

| PUMP OR TUBING FLOW RATE (ml per minute): | 380 |
| TUBING MATERIAL CODE: | PE/S |

**FIELD DECONTAMINATION:** Y  
**FILTERED:** N  
**FILTER SIZE:** N  
**DUPLICATE:** Y  
**SIMULATED:** N  
**POLLUTANT:** N  
**RADIATION:** N

<table>
<thead>
<tr>
<th>SAMPLE CONTAINER SPECIFICATION</th>
<th>CONTAINERS</th>
<th>MATERIAL CODE</th>
<th>VOLUME</th>
<th>PRESERVATIVE USED</th>
<th>TOTAL VOL ADDED IN FIELD (ml)</th>
<th>FINAL pH</th>
<th>INTENDED ANALYSIS AND/OR METHOD</th>
<th>SAMPLING EQUIPMENT CODE</th>
</tr>
</thead>
<tbody>
<tr>
<td>@Hpo-500</td>
<td>1</td>
<td>PE</td>
<td>500ml</td>
<td>NONE</td>
<td>N/A</td>
<td>N/A</td>
<td>Inorganics</td>
<td>PP</td>
</tr>
<tr>
<td>@Met-250</td>
<td>2</td>
<td>PE</td>
<td>250ml</td>
<td>HNO3</td>
<td>1ml</td>
<td>&lt;2</td>
<td>Metals</td>
<td>PP</td>
</tr>
<tr>
<td>@Rad-1L</td>
<td>2</td>
<td>PE</td>
<td>1L</td>
<td>HNO3</td>
<td>5ml</td>
<td>&lt;2</td>
<td>Radiologicals</td>
<td>PP</td>
</tr>
</tbody>
</table>

**REMARKS:**  
1. Sample bottles pre-preserved at laboratory prior to sample collection.

**MATERIAL CODES:**  
AG = Amber Glass  
CG = Clear Glass  
PE = Polyethylene  
PP = Polypropylene  
S = Silicons  
T = Teflon  
Q = Other (Specify)

**SAMPLING/PURGING EQUIPMENT CODES:**  
APP = Air Peristaltic Pump  
B = Baller  
BP = Bladder Pump  
ESP = Electric Submersible Pump  
PP = Peristaltic Pump  
RSSP = Reverse Flow Peristaltic Pump  
SM = Straw Method (using Gravity Drain)  
VT = Vacuum Trap  
D = Other (Specify)

**NOTES:**  
1. The above do not constitute all of the information required by Chapter 62-189, F.A.C.
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)
   - pH: ± 0.2 units  
   - Temperature: ± 0.2 °C  
   - Conductivity: ± 5%  
   - Dissolved Oxygen: readings ± 20% saturation (see Table FS 2200-2); optionally ± 0.2 mg/L, or ± 10% (whichever is greater)  
   - Turbidity: all readings ± 20 NTU; optionally ± 1 NTU or ± 10% (whichever is greater)
## DEP-SOP-001/01
### FS 2200 Groundwater Sampling
#### Form FD 9000-24

**GROUNDWATER SAMPLING LOG**

**SITE NAME:** Big Bend  
**SITE LOCATION:** Apollo Beach, FL.

**WELL NO:** CCR-PZ-2  
**SAMPLE ID:** L16H075-02  
**DATE:** 8/25/16

### PURGING DATA

<table>
<thead>
<tr>
<th>Time</th>
<th>Volume Purged (Gallons)</th>
<th>PORE-VOLUME PURGED (GALLONS)</th>
<th>PURGE RATE (GPM)</th>
<th>Depth to Water (FEET)</th>
<th>pH (Standard units)</th>
<th>TEMP. (°C)</th>
<th>COND. (mhos/cm)</th>
<th>O2 (%)</th>
<th>D.O. (% saturation)</th>
<th>TURBIDITY (NTU)</th>
<th>COLOR (describe)</th>
<th>ODOR (describe)</th>
</tr>
</thead>
<tbody>
<tr>
<td>12:01</td>
<td>0.59</td>
<td>0.59</td>
<td>0.07</td>
<td>5.42</td>
<td>6.73</td>
<td>27.37</td>
<td>1550</td>
<td>0.31</td>
<td>10.00</td>
<td>LT. YELLOW</td>
<td>NONE</td>
<td></td>
</tr>
<tr>
<td>12:03</td>
<td>0.16</td>
<td>0.75</td>
<td>0.08</td>
<td>5.43</td>
<td>6.72</td>
<td>27.50</td>
<td>1552</td>
<td>0.30</td>
<td>5.55</td>
<td>LT. YELLOW</td>
<td>NONE</td>
<td></td>
</tr>
<tr>
<td>12:05</td>
<td>0.16</td>
<td>0.91</td>
<td>0.08</td>
<td>5.43</td>
<td>6.74</td>
<td>27.35</td>
<td>1570</td>
<td>0.07</td>
<td>3.31</td>
<td>LT. YELLOW</td>
<td>NONE</td>
<td></td>
</tr>
</tbody>
</table>

### WELL CAPACITY

- **Gallons Per Foot:** 1.14, 0.89, 0.67
- **Total:** 21.64 feet * 0.0026 gallons/foot = 0.12 gallons

### SAMPLING DATA

- **Sample Code:** @Ino-500
- **Sample Code:** @Met-250
- **Sample Code:** @Radi-1L

### REMARKS

1. Sample bottles pre-preserved at laboratory prior to sample collection.
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)
   - pH: ± 0.2 unit
   - Temperature: ± 0.2 °C
   - Conductivity: ± 5%
   - Dissolved Oxygen: all readings ≤ 30% saturation (see Table FS 2203-2)
   - Turbidity: all readings ≤ 20 NTU
   - Total dissolved solids: ± 5 NTU or % (whichever is greater)

Page 32 of 32  
Revision Date: February 1, 2004
## DEP-SOP-001/01
### FS 2200 Groundwater Sampling
Form FD 9000-24

**GROUNDWATER SAMPLING LOG**

**SITE NAME:** Big Bend  
**WELL NO:** CCR-PZ-3  
**SITE LOCATION:** Apollo Beach, FL  
**SAMPLE ID:** L16H075-03  
**DATE:** 8/25/16

### PURGING DATA

**WELL DIAMETER (inches):** 1/4  
**TUBING DIAMETER (inches):** 1/4  
**WELL SCREEN INTERVAL DEPTH:** 10.38 feet  
**WELL VOLUME PURGE:** 
- **WELL VOLUME =** (TOTAL WELL DEPTH X STATIC DEPTH TO WATER) / X WELL CAPACITY
- **EQUIPMENT VOLUME PURGE:** 
  - **EQUIPMENT VOL. =** PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME

### PURGING DATA

**INITIAL PUMP OR TUBING DEPTH IN WELL (feet):** 15.38  
**FINAL PUMP OR TUBING DEPTH IN WELL (feet):** 15.38  
**PURGING INITIATED AT:** 11:03  
**PURGING ENDED AT:** 11:16  
**TOTAL VOLUME PURGED (gallons):** 1.03

### SAMPLING DATA

**SAMPLED BY:** [Signature]  
**AFFILIATION:** RAB  
**TECO**  
**PUMP OR TUBING DEPTH IN WELL (feet):** 15.4  
**SAMPLE PUMP FLOW RATE (ml per minute):** 303  
**TUBING MATERIAL CODE:** PE/S

### FIELD DECONTAMINATION

**Y ☐ N ☑**  
**FILTER SIZE:** µm  
**DUPLICATE:** Y ☐ N ☑

### SAMPLE CONTAINER SPECIFICATION

<table>
<thead>
<tr>
<th>SAMPLE ID CODE</th>
<th>CONTAINERS</th>
<th>MATERIAL CODE</th>
<th>VOLUME</th>
<th>PRESERVATIVE USED</th>
<th>TOTAL VOLUME ADDED IN FIELD (ml)</th>
<th>FINAL pH</th>
<th>INTENDED ANALYSIS AND/OR METHOD</th>
<th>SAMPLING EQUIPMENT CODE</th>
</tr>
</thead>
<tbody>
<tr>
<td>@Ino-500</td>
<td>1</td>
<td>PE</td>
<td>500ml</td>
<td>NONE</td>
<td>NONE</td>
<td>N/A</td>
<td>Inorganics</td>
<td>PP</td>
</tr>
<tr>
<td>@Met-250</td>
<td>2</td>
<td>PE</td>
<td>250ml</td>
<td>HNO3</td>
<td>1ml</td>
<td>&lt;2</td>
<td>Metals</td>
<td>PP</td>
</tr>
<tr>
<td>@Rad-1L</td>
<td>2</td>
<td>PE</td>
<td>1L</td>
<td>HNO3</td>
<td>5ml</td>
<td>&lt;2</td>
<td>Radiologics</td>
<td>PP</td>
</tr>
</tbody>
</table>

### REMARKS

1. Sample bottles pre-preserved at laboratory prior to sample collection.

### MATERIAL CODES:

- AG = Amber Glass;  
- CG = Clear Glass;  
- PE = Polyethylene;  
- PP = Polypropylene;  
- S = Silicone;  
- T = Teflon;  
- O = Other (Specify)

### SAMPLING/PURGING CODES:

- APP = After Peristaltic Pump;  
- B = Baller;  
- BP = Bladder Pump;  
- ESP = Electric Submersible Pump;  
- PP = Peristaltic Pump

### EQUIPMENT CODES:

- RPP = Reverse Flow Peristaltic Pump;  
- SM = Straw Method (tubing gravity drain);  
- VT = Vacuum Trap;  
- O = Other (Specify)

### NOTES:

1. The above do not constitute all of the information required by Chapter 62-166, F.A.C.
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)
   - pH ± 0.2 units Temperature ± 0.2 °C Specific Conductance ± 5% Dissolved Oxygen ± 20% saturation (see Table FS 2200-3); optionally, ± 0.2 mg/L or ± 10% (whichever is greater)
   - Turbidity: all readings ± 20 NTU; optionally ± 5 NTU or 10% (whichever is greater)

Page 32 of 32  
Revision Date: February 1, 2004
### Purging Data

**Well Diameter (inches):** CCR-PZ-5  
**Sample ID:** L16H075-02  
**Date:** 8/25/16  
**Site Name:** Big Bend  
**Site Location:** Apollo Beach, FL.

<table>
<thead>
<tr>
<th>Time</th>
<th>Volume Purged (Gallons)</th>
<th>Volume Purged (Gallons)</th>
<th>Purge Rate (GPM)</th>
<th>Depth to Water (feet)</th>
<th>pH (Standard Units)</th>
<th>Temp. (°C)</th>
<th>Conductivity (μS/cm or μA/m)</th>
<th>Dissolved Oxygen (% saturation)</th>
<th>Turbidity (NTU)</th>
<th>Color (Describe)</th>
<th>Odor (Describe)</th>
</tr>
</thead>
<tbody>
<tr>
<td>10:47</td>
<td>5.15</td>
<td>5.15</td>
<td>0.40</td>
<td>26.62</td>
<td>6.41</td>
<td>28.13</td>
<td>5024</td>
<td>0.14</td>
<td>17.20</td>
<td>CLEAR</td>
<td>NONE</td>
</tr>
<tr>
<td>10:49</td>
<td>0.79</td>
<td>5.94</td>
<td>0.40</td>
<td>26.60</td>
<td>6.41</td>
<td>28.14</td>
<td>5066</td>
<td>0.13</td>
<td>9.08</td>
<td>CLEAR</td>
<td>NONE</td>
</tr>
<tr>
<td>10:51</td>
<td>0.79</td>
<td>6.73</td>
<td>0.40</td>
<td>26.58</td>
<td>6.41</td>
<td>28.11</td>
<td>5140</td>
<td>0.12</td>
<td>6.47</td>
<td>CLEAR</td>
<td>NONE</td>
</tr>
</tbody>
</table>

**Equipment Volume Purge:** 1 gallon

**Initial Pump or Tubing Depth in Well (feet):** 36.0  
**Final Pump or Tubing Depth in Well (feet):** 35.0  
**Pumping Initiated At:** 10:34  
**Pumping Ended At:** 10:51  
**Total Volume Purged (gallons):** 6.73

### Sampling Data

**Sampled By/Print Affiliation:**  
**Sampler/Signature:**  
**Sampling Initiated At:** 10:51  
**Sampling Ended At:** 10:56  
**Pump/Tubing Material Code:** PE  
**Field Disinfection:** Y  
**Filter Size:** μm

<table>
<thead>
<tr>
<th>Sample ID Code</th>
<th># Containers</th>
<th>Material Code</th>
<th>Volume</th>
<th>Preservative Used</th>
<th>Total Vol. Added in Field (ml)</th>
<th>Final pH</th>
<th>Intended Analysis and/or Method</th>
<th>Sampling Equipment Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>@lno-500</td>
<td>1</td>
<td>PE</td>
<td>500ml</td>
<td>NONE</td>
<td>NONE</td>
<td>NIA</td>
<td>inorganics</td>
<td>ESP</td>
</tr>
<tr>
<td>@met-250</td>
<td>2</td>
<td>PE</td>
<td>250ml</td>
<td>HNO3</td>
<td>1ml</td>
<td>&lt;2</td>
<td>Metals</td>
<td>ESP</td>
</tr>
<tr>
<td>@rad-1L</td>
<td>2</td>
<td>PE</td>
<td>1L</td>
<td>HNO3</td>
<td>5ml</td>
<td>&lt;2</td>
<td>Radiologicals</td>
<td>ESP</td>
</tr>
</tbody>
</table>

### Remarks

1. Sample bottles pre-preserved at laboratory prior to sample collection.

### Notes

1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.
2. Stabilization criteria for range of variation of last three consecutive readings (See FS 2212, Section 3)
   - pH: ±0.2 units
   - Temperature: ±0.2 °C
   - Conductance: ±5% of Dissolved Oxygen: all readings ±20% saturation (see Table FS 2202-3); optionally, ±0.2 mg/L or ±10% ( whichever is greater)
   - Turbidity: all readings ±20 NTU; optionally ±5 NTU or 10% ( whichever is greater)
**DEP-SOP-031/01**
**FS 2200 Groundwater Sampling**
**Form FD 9000-24**

**GROUNDWATER SAMPLING LOG**

**SITE NAME:** Big Bend  
**LOCATION:** Apollo Beach, FL.

**WELL NO:** CCR-PZ-6  
**SAMPLE ID:** L16H075-01  
**DATE:** 8/25/16

### PURGING DATA

<table>
<thead>
<tr>
<th>WELL VOLUME PURGE (gallons)</th>
<th>EQP VOLUME PURGE (gallons)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY</td>
<td></td>
</tr>
<tr>
<td>1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME</td>
<td></td>
</tr>
</tbody>
</table>

### INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 16.11

<table>
<thead>
<tr>
<th>TIME</th>
<th>VOLUME PURGED (GALLONS)</th>
<th>VOLUME PURGED (GALLONS)</th>
<th>PURGE RATE (GPM)</th>
<th>DEPTH TO WATER (FEET)</th>
<th>pH (standard units)</th>
<th>TEMP. (°C)</th>
<th>COND. (µhos/cm)</th>
<th>DISSOLVED OXYGEN (% saturation)</th>
<th>TURBIDITY (NTU)</th>
<th>COLOR (describe)</th>
<th>ODOR (describe)</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:58</td>
<td>1.33</td>
<td>1.33</td>
<td>0.15</td>
<td>5.48</td>
<td>6.50</td>
<td>27.61</td>
<td>1383</td>
<td>0.13</td>
<td>3.02</td>
<td>CLEAR</td>
<td>NONE</td>
</tr>
<tr>
<td>10:00</td>
<td>0.29</td>
<td>1.62</td>
<td>0.15</td>
<td>5.49</td>
<td>6.47</td>
<td>27.67</td>
<td>1383</td>
<td>0.09</td>
<td>2.09</td>
<td>CLEAR</td>
<td>NONE</td>
</tr>
<tr>
<td>10:02</td>
<td>0.29</td>
<td>1.91</td>
<td>0.15</td>
<td>5.50</td>
<td>6.48</td>
<td>27.74</td>
<td>1381</td>
<td>0.09</td>
<td>1.73</td>
<td>CLEAR</td>
<td>NONE</td>
</tr>
</tbody>
</table>

### WELL CAPACITY (Gallons Per Feet): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 6.88

### TUBING INSIDE DIAMETER (CAPACITY (µl/min)): 1/8" = 0.0002; 3/16" = 0.0016; 1/8" = 0.0024; 5/32" = 0.004; 3/16" = 0.006; 1/4" = 0.010; 5/32" = 0.015

### PURGING INITIATED AT: 9:49  
**PURGING ENDED AT:** 10:02  
**TOTAL VOLUME PURGED (gallons):** 1.91

### SAMPLING DATA

**SAMPLED BY (PRINT)/ AFFILIATION:** RAB  
**TECO**  
**SAMPLED BY (SIGNATURE):** [Signature]

**SAMPLED INITIATED AT:** 10:02  
**SAMPLED ENDED AT:** 10:10

**PUMP OR TUBING DEPTH IN WELL (feet):** 16.1

**SAMPLE PUMP PLOW RATE (ml per minute):** 553

**TUBING MATERIAL CODE:** PE/S

**FIELD DECONTAMINATION:**  
- CONTAMINATION: Y N  
- FILTERED: Y N

**FILTER SIZE:** µm

**SAMPLE CONTAINER SPECIFICATION**

<table>
<thead>
<tr>
<th>SAMPLE ID CODE</th>
<th>CONTAINERS</th>
<th>MATERIAL CODE</th>
<th>VOLUME</th>
<th>PRESERVATIVE USED</th>
<th>TOTAL VOLUME ADDED/ APPLIED</th>
<th>FINAL pH</th>
<th>INTENDED ANALYSIS AND/or METHOD</th>
<th>EQUIPMENT CODE</th>
</tr>
</thead>
<tbody>
<tr>
<td>@lho-50C</td>
<td>1</td>
<td>PE</td>
<td>500ml</td>
<td>NONE</td>
<td>NONE</td>
<td>N/A</td>
<td>Inorganics</td>
<td>PP</td>
</tr>
<tr>
<td>@Met-250</td>
<td>2</td>
<td>PE</td>
<td>250ml</td>
<td>HNO3</td>
<td>1ml</td>
<td>&lt;2</td>
<td>Metals</td>
<td>PP</td>
</tr>
<tr>
<td>@Rad-1L</td>
<td>2</td>
<td>PE</td>
<td>1L</td>
<td>HNO3</td>
<td>5ml</td>
<td>&lt;2</td>
<td>Radiologically</td>
<td>PP</td>
</tr>
</tbody>
</table>

**REMARKS:**

1. Sample bottles pre-preserved at laboratory prior to sample collection.

**MATERIAL CODES:**  
- AG = Amber Glass;  
- CG = Clear Glass;  
- PP = Polypropylene;  
- PE = Polyethylene;  
- S = Silicone;  
- T = Teflon;  
- O = Other (Specify)

**SAMPLING/PURGING:**  
- APP = After Peristaltic Pump;  
- B = Balloon;  
- BP = Bladder Pump;  
- ESP = Electric Submersible Pump;  
- PP = Peristaltic Pump

**EQUIPMENT CODES:**  
- RPP = Reverse Flow Peristaltic Pump;  
- SM = Stator Method (submerged Gravity Drain);  
- VT = Vacuum Trap;  
- O = Other (Specify)

**NOTES:**

1. The above do not constitute all of the information required by Chapter 62-166, F.A.C.
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)
   - pH ± 0.2 units  
   - Temperature ± 0.2 °C  
   - Conductance ± 5%  
   - Dissolved Oxygen: all readings ± 20% saturation (see Table FS 2200-3)
   - Turbidity: all readings ± 20 NTU, optionally ± 5 NTU or 10% (whichever is greater)

Page 32 of 32  
Revision Date: February 1, 2004
### Field Custody: Client
### Client/Field ID: L16H075-01
### Sample Collection: 8-26-16/1252
### Lab ID No: 16.9238
### Lab Custody Date: 8-31-16/1415
### Sample description: Water

## CERTIFICATE OF ANALYSIS

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Units</th>
<th>Results</th>
<th>Analysis Date</th>
<th>Method</th>
<th>Detection Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Combined Radium (Radium-226 + Radium-228)</td>
<td>pCi/l</td>
<td>15.0 ± 1.1</td>
<td>Calc</td>
<td>Calc</td>
<td>0.7</td>
</tr>
<tr>
<td>Radium-226</td>
<td>pCi/l</td>
<td>13.7 ± 1.1</td>
<td>9-6-16/1114</td>
<td>EPA 903.0</td>
<td>0.3</td>
</tr>
<tr>
<td>Radium-228</td>
<td>pCi/l</td>
<td>1.3 ± 0.5</td>
<td>9-6-16/1039</td>
<td>EPA Ra-05</td>
<td>0.7</td>
</tr>
</tbody>
</table>

Alpha Standard: Th-230

---

Test results meet all requirements of the NELAC standards. Statement of estimated uncertainty available upon request. Test results refer only to sample(s) listed.

Contact person: Jim Hayes (813) 229-2879.
DOH Certification #E84025  
DEP COMPQAP # 870251  

Report Date: September 7, 2016  

TECO  
5012 Causeway Blvd.  
Tampa, FL 33619  

Attn: Peggy Penner  

Field Custody:  
Client  

Client/Field ID:  
L16H075-02  

Sample Collection:  
8-26-16/1223  

Lab ID No:  
16.9239  

Lab Custody Date:  
8-31-16/1415  

Sample description:  
Water  

---  

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Units</th>
<th>Results</th>
<th>Analysis Date</th>
<th>Method</th>
<th>Detection Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Combined Radium (Radium-226 + Radium 228)</td>
<td>pCi/l</td>
<td>32 ± 1.6</td>
<td>Calc</td>
<td>Calc</td>
<td>0.7</td>
</tr>
<tr>
<td>Radium-226</td>
<td>pCi/l</td>
<td>31 ± 1.6</td>
<td>9-6-16/1114</td>
<td>EPA 903.0</td>
<td>0.3</td>
</tr>
<tr>
<td>Radium-228</td>
<td>pCi/l</td>
<td>1.2 ± 0.5</td>
<td>9-6-16/1039</td>
<td>EPA Ra-05</td>
<td>0.7</td>
</tr>
</tbody>
</table>

Alpha Standard: Th-230  

---  

James W. Hayes  
Laboratory Manager  

Test results meet all requirements of the NELAC standards. Statement of estimated uncertainty available upon request. Test results refer only to sample(s) listed.  
Contact person: Jim Hayes (813) 229-2879.
DOH Certification #E84025  
DEP COMPQAP # 870251

Report Date: September 7, 2016

TECO  
5012 Causeway Blvd.  
Tampa, FL 33619

Attn: Peggy Penner

Field Custody: Client  
Client/Field ID: L16H075-03

Sample Collection: 8-26-16/1133  
Lab ID No: 16.9240

Lab Custody Date: 8-31-16/1415  
Sample description: Water

---

**CERTIFICATE OF ANALYSIS**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Units</th>
<th>Results</th>
<th>Analysis</th>
<th>Method</th>
<th>Detection Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Combined Radium (Radium-226 + Radium 228)</td>
<td>pCi/l</td>
<td>15.0 ± 1.1</td>
<td>Calc</td>
<td>Calc</td>
<td>0.7</td>
</tr>
<tr>
<td>Radium-226</td>
<td>pCi/l</td>
<td>13.6 ± 1.1</td>
<td>9-6-16/1114</td>
<td>EPA 903.0</td>
<td>0.3</td>
</tr>
<tr>
<td>Radium-228</td>
<td>pCi/l</td>
<td>1.4 ± 0.5</td>
<td>9-6-16/1039</td>
<td>EPA Ra-05</td>
<td>0.7</td>
</tr>
</tbody>
</table>

Alpha Standard: Th-230

---

Test results meet all requirements of the NELAC standards. Statement of estimated uncertainty available upon request. Test results refer only to sample(s) listed.  
Contact person: Jim Hayes (913) 229-2879.

Page 1 of 1
TECO
5012 Causeway Blvd.
Tampa, FL 33619

Attn: Peggy Penner

Field Custody: Client
Client/Field ID: L16H075-05
Sample Collection: 8-26-16/1056
Lab ID No: 16.9241
Lab Custody Date: 8-31-16/1415
Sample description: Water

CERTIFICATE OF ANALYSIS

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Units</th>
<th>Results ±</th>
<th>Analysis Date</th>
<th>Method</th>
<th>Detection Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Combined Radium (Radium-226 + Radium 228)</td>
<td>pCi/l</td>
<td>31 ± 1.4</td>
<td>Calc</td>
<td>Calc</td>
<td>0.7</td>
</tr>
<tr>
<td>Radium-226</td>
<td>pCi/l</td>
<td>27 ± 1.4</td>
<td>9-6-16/1114</td>
<td>EPA 903.0</td>
<td>0.3</td>
</tr>
<tr>
<td>Radium-228</td>
<td>pCi/l</td>
<td>3.7 ± 0.6</td>
<td>9-6-16/1039</td>
<td>EPA Ra-05</td>
<td>0.7</td>
</tr>
</tbody>
</table>

Alpha Standard: Th-230

James W. Hayes
Laboratory Manager

Test results meet all requirements of the NELAC standards. Statement of estimated uncertainty available upon request. Test results refer only to sample(s) listed. Contact person: Jim Hayes (813) 229-2879.
TECO
5012 Causeway Blvd.
Tampa, FL 33619
Attn: Peggy Penner

DOH Certification #E84025
DEP COMPOAP # 870251

Report Date: September 7, 2016

Field Custody: Client
Client/Field ID: L16H075-06
Sample Collection: 8-26-16/1010
Lab ID No: 16.9242
Lab Custody Date: 8-31-16/1415
Sample description: Water

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Units</th>
<th>Results</th>
<th>Analysis Date</th>
<th>Method</th>
<th>Detection Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Combined Radium (Radium-226 + Radium 228)</td>
<td>pCi/l</td>
<td>4.0 ± 0.5</td>
<td>Calc</td>
<td>Calc</td>
<td>0.7</td>
</tr>
<tr>
<td>Radium-226</td>
<td>pCi/l</td>
<td>3.4 ± 0.5</td>
<td>9-6-16/1114</td>
<td>EPA 903.0</td>
<td>0.3</td>
</tr>
<tr>
<td>Radium-228</td>
<td>pCi/l</td>
<td>0.6 ± 0.4</td>
<td>9-6-16/1039</td>
<td>EPA Ra-05</td>
<td>0.7</td>
</tr>
</tbody>
</table>

Alpha Standard: Th-230

---

Test results meet all requirements of the NELAC standards. Statement of estimated uncertainty available upon request. Test results refer only to sample(s) listed. Contact person: Jim Hayes (813) 229-2879.

Page 1 of 1
<table>
<thead>
<tr>
<th>Sample ID</th>
<th>Lab ID</th>
<th>Comments</th>
</tr>
</thead>
</table>
| L16H075-01 | 08/26/16 12:52 | Radium 226 EPA 903.0 02/22/17 12:52
| L16H075-02 | 08/26/16 12:23 | Radium 226 EPA 903.0 02/22/17 12:23
| L16H075-03 | 08/26/16 11:33 | Radium 226 EPA 903.0 02/22/17 11:33
| L16H075-05 | 08/26/16 10:56 | Radium 226 EPA 903.0 02/22/17 10:56

**Analysis:**

- **Sampled:**
  - 08/26/16 12:52
  - 08/26/16 12:23
  - 08/26/16 11:33
  - 08/26/16 10:56

- **Containers Supplied:**
  - RAD Poly HNO3 - 1000mL (C)
  - RAD Poly HNO3 - 1000mL (D)
## Analysis

<table>
<thead>
<tr>
<th>Sample ID: L16H075-06</th>
<th>Expires</th>
<th>Laboratory ID</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>PZ6</td>
<td>Water</td>
<td>16 9242</td>
<td></td>
</tr>
</tbody>
</table>

### Sampled: 08/26/16 10:10

- **Radium 228 Ra-05**: 02/22/17 10:10
- **Radium 226 EPA 903.0**: 02/22/17 10:10
- **Radium 226+228, Total**: 02/22/17 10:10

### Containers Supplied:

- **RAD Poly HNO3 - 1000mL (C)**
- **RAD Poly HNO3 - 1000mL (D)**

---

**Released By**

8-31-16 14:15

**Received By**

Date & Time

---

Page 2 of 3
FL DOH Certification # E84025

QC Summary: Radium 228 Analysis

Client Project #: L16 H075

Analysis Completion Date: 9/6/16

**Precision Data:**

<table>
<thead>
<tr>
<th>Sample Analysis (pCi/l)</th>
<th>Duplicate Analysis (pCi/l)</th>
<th>Range (pCi/l)</th>
<th>RPD (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1</td>
<td>4.7</td>
<td>2.6</td>
<td></td>
</tr>
</tbody>
</table>

**Spike Data:**

<table>
<thead>
<tr>
<th>Sample Analysis (pCi/l)</th>
<th>Spike Added (pCi/l)</th>
<th>Analytical Result (pCi/l)</th>
<th>Spike Rec (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.6</td>
<td>4.0</td>
<td>4.7</td>
<td>103%</td>
</tr>
</tbody>
</table>

**LCS Data:**

<table>
<thead>
<tr>
<th>Analytical Result (pCi/l)</th>
<th>True Value (pCi/l)</th>
<th>% Recovery</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.6</td>
<td>4.4</td>
<td>105%</td>
</tr>
</tbody>
</table>

**Lab Blank:**

<table>
<thead>
<tr>
<th>Lab Blank</th>
<th>Analytical Result (pCi/l)</th>
<th>Analysis Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0 ± 0.2</td>
<td>9/6/16</td>
<td></td>
</tr>
</tbody>
</table>
FL DOH Certification # E84025

QC Summary: Radium 226 Analysis

Client Project #: L16 H075

Analysis Completion Date: 91 6 14

<table>
<thead>
<tr>
<th>Precision Data:</th>
<th>Sample #: 16, 9144</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample Analysis (pCi/l)</td>
<td>11.1</td>
</tr>
<tr>
<td>Duplicate Analysis (pCi/l)</td>
<td>12.4</td>
</tr>
<tr>
<td>Range (pCi/l)</td>
<td>1.3</td>
</tr>
<tr>
<td>RPD (%)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Spike Data:</th>
<th>Sample #: 16, 9144</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample Analysis (pCi/l)</td>
<td>7.3</td>
</tr>
<tr>
<td>Spike Added (pCi/l)</td>
<td>4.5</td>
</tr>
<tr>
<td>Analytical Result (pCi/l)</td>
<td>12.4</td>
</tr>
<tr>
<td>Spike Rec (%)</td>
<td>113%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>LCS Data:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Analytical Result (pCi/l)</td>
</tr>
<tr>
<td>True Value (pCi/l)</td>
</tr>
<tr>
<td>% Recovery</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Lab Blank:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Analytical Result (pCi/l)</td>
</tr>
<tr>
<td>Analysis Date</td>
</tr>
</tbody>
</table>
ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Tampa
6712 Benjamin Road
Suite 100
Tampa, FL 33634
Tel: (813)885-7427

TestAmerica Job ID: 660-75848-1
Client Project/Site: L16H075

For:
Tampa Electric Company
5010 Causeway Boulevard
Tampa, Florida 33619

Attn: Ms. Peggy Penner

Authorized for release by:
9/9/2016 11:31:10 AM
Haukur Gudnason, Project Manager II
(813)280-8342
haukur.gudnason@testamericainc.com

Designee for
Keaton Conner, Project Mgmt. Assistant
(813)885-7427
keaton.conner@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.
# Table of Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cover Page</td>
<td>1</td>
</tr>
<tr>
<td>Table of Contents</td>
<td>2</td>
</tr>
<tr>
<td>Sample Summary</td>
<td>3</td>
</tr>
<tr>
<td>Definitions</td>
<td>4</td>
</tr>
<tr>
<td>Case Narrative</td>
<td>5</td>
</tr>
<tr>
<td>Detection Summary</td>
<td>6</td>
</tr>
<tr>
<td>Client Sample Results</td>
<td>7</td>
</tr>
<tr>
<td>QC Sample Results</td>
<td>8</td>
</tr>
<tr>
<td>QC Association</td>
<td>9</td>
</tr>
<tr>
<td>Chronicle</td>
<td>10</td>
</tr>
<tr>
<td>Certification Summary</td>
<td>11</td>
</tr>
<tr>
<td>Method Summary</td>
<td>12</td>
</tr>
<tr>
<td>Chain of Custody</td>
<td>13</td>
</tr>
<tr>
<td>Receipt Checklists</td>
<td>15</td>
</tr>
</tbody>
</table>
## Sample Summary

**Client:** Tampa Electric Company  
**Project/Site:** L16H075

<table>
<thead>
<tr>
<th>Lab Sample ID</th>
<th>Client Sample ID</th>
<th>Matrix</th>
<th>Collected</th>
<th>Received</th>
</tr>
</thead>
<tbody>
<tr>
<td>660-75848-1</td>
<td>L16H075-01</td>
<td>Water</td>
<td>08/26/16 12:52</td>
<td>08/31/16 14:00</td>
</tr>
<tr>
<td>660-75848-2</td>
<td>L16H075-02</td>
<td>Water</td>
<td>08/26/16 12:23</td>
<td>08/31/16 14:00</td>
</tr>
<tr>
<td>660-75848-3</td>
<td>L16H075-03</td>
<td>Water</td>
<td>08/26/16 11:33</td>
<td>08/31/16 14:00</td>
</tr>
<tr>
<td>660-75848-4</td>
<td>L16H075-05</td>
<td>Water</td>
<td>08/26/16 10:56</td>
<td>08/31/16 14:00</td>
</tr>
<tr>
<td>660-75848-5</td>
<td>L16H075-06</td>
<td>Water</td>
<td>08/26/16 10:10</td>
<td>08/31/16 14:00</td>
</tr>
</tbody>
</table>
### Qualifiers

#### Metals

<table>
<thead>
<tr>
<th>Qualifier</th>
<th>Qualifier Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.</td>
</tr>
<tr>
<td>U</td>
<td>Indicates that the compound was analyzed for but not detected.</td>
</tr>
</tbody>
</table>

### Glossary

These commonly used abbreviations may or may not be present in this report.

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>%R</td>
<td>Percent Recovery</td>
</tr>
<tr>
<td>CFL</td>
<td>Contains Free Liquid</td>
</tr>
<tr>
<td>CNF</td>
<td>Contains no Free Liquid</td>
</tr>
<tr>
<td>DER</td>
<td>Duplicate error ratio (normalized absolute difference)</td>
</tr>
<tr>
<td>Dil Fac</td>
<td>Dilution Factor</td>
</tr>
<tr>
<td>DL, RA, RE, IN</td>
<td>Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample</td>
</tr>
<tr>
<td>DLC</td>
<td>Decision level concentration</td>
</tr>
<tr>
<td>MDA</td>
<td>Minimum detectable activity</td>
</tr>
<tr>
<td>EDL</td>
<td>Estimated Detection Limit</td>
</tr>
<tr>
<td>MDC</td>
<td>Minimum detectable concentration</td>
</tr>
<tr>
<td>MDL</td>
<td>Method Detection Limit</td>
</tr>
<tr>
<td>ML</td>
<td>Minimum Level (Dioxin)</td>
</tr>
<tr>
<td>NC</td>
<td>Not Calculated</td>
</tr>
<tr>
<td>ND</td>
<td>Not detected at the reporting limit (or MDL or EDL if shown)</td>
</tr>
<tr>
<td>PQL</td>
<td>Practical Quantitation Limit</td>
</tr>
<tr>
<td>QC</td>
<td>Quality Control</td>
</tr>
<tr>
<td>RER</td>
<td>Relative error ratio</td>
</tr>
<tr>
<td>RL</td>
<td>Reporting Limit or Requested Limit (Radiochemistry)</td>
</tr>
<tr>
<td>RPD</td>
<td>Relative Percent Difference, a measure of the relative difference between two points</td>
</tr>
<tr>
<td>TEF</td>
<td>Toxicity Equivalent Factor (Dioxin)</td>
</tr>
<tr>
<td>TEQ</td>
<td>Toxicity Equivalent Quotient (Dioxin)</td>
</tr>
</tbody>
</table>
Job ID: 660-75848-1

Laboratory: TestAmerica Tampa

Narrative

Job Narrative
660-75848-1

Comments
No additional comments.

Receipt
The samples were received on 8/31/2016 2:00 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 1.0º C.

Metals
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.
<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>Qualifier</th>
<th>PQL</th>
<th>MDL</th>
<th>Unit</th>
<th>Dil Fac</th>
<th>D</th>
<th>Method</th>
<th>Prep Type</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithium</td>
<td>0.0074</td>
<td>I</td>
<td>0.050</td>
<td>0.0010</td>
<td>mg/L</td>
<td>T</td>
<td></td>
<td>200.7 Rev 4.4</td>
<td>Total/NA</td>
<td></td>
</tr>
</tbody>
</table>

**Client Sample ID: L16H075-02**

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>Qualifier</th>
<th>PQL</th>
<th>MDL</th>
<th>Unit</th>
<th>Dil Fac</th>
<th>D</th>
<th>Method</th>
<th>Prep Type</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithium</td>
<td>0.011</td>
<td>I</td>
<td>0.050</td>
<td>0.0010</td>
<td>mg/L</td>
<td>T</td>
<td></td>
<td>200.7 Rev 4.4</td>
<td>Total/NA</td>
<td></td>
</tr>
</tbody>
</table>

**Client Sample ID: L16H075-03**

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>Qualifier</th>
<th>PQL</th>
<th>MDL</th>
<th>Unit</th>
<th>Dil Fac</th>
<th>D</th>
<th>Method</th>
<th>Prep Type</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithium</td>
<td>0.0061</td>
<td>I</td>
<td>0.050</td>
<td>0.0010</td>
<td>mg/L</td>
<td>T</td>
<td></td>
<td>200.7 Rev 4.4</td>
<td>Total/NA</td>
<td></td>
</tr>
</tbody>
</table>

**Client Sample ID: L16H075-05**

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>Qualifier</th>
<th>PQL</th>
<th>MDL</th>
<th>Unit</th>
<th>Dil Fac</th>
<th>D</th>
<th>Method</th>
<th>Prep Type</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithium</td>
<td>0.0074</td>
<td>I</td>
<td>0.050</td>
<td>0.0010</td>
<td>mg/L</td>
<td>T</td>
<td></td>
<td>200.7 Rev 4.4</td>
<td>Total/NA</td>
<td></td>
</tr>
</tbody>
</table>

**Client Sample ID: L16H075-06**

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>Qualifier</th>
<th>PQL</th>
<th>MDL</th>
<th>Unit</th>
<th>Dil Fac</th>
<th>D</th>
<th>Method</th>
<th>Prep Type</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithium</td>
<td>0.0020</td>
<td>I</td>
<td>0.050</td>
<td>0.0010</td>
<td>mg/L</td>
<td>T</td>
<td></td>
<td>200.7 Rev 4.4</td>
<td>Total/NA</td>
<td></td>
</tr>
<tr>
<td>Client Sample ID: L16H075-01</td>
<td>Lab Sample ID: 660-75848-1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<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>Date Collected: 08/26/16 12:52</td>
<td>Date Received: 08/31/16 14:00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Method: 200.7 Rev 4.4 - Metals (ICP)</td>
<td>Matrix: Water</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>Qualifier</th>
<th>PQL</th>
<th>MDL</th>
<th>Unit</th>
<th>D</th>
<th>Prepared</th>
<th>Analyzed</th>
<th>Dil Fac</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithium</td>
<td>0.0074</td>
<td>I</td>
<td>0.050</td>
<td>0.0010</td>
<td>mg/L</td>
<td>09/03/16 09:37</td>
<td>09/07/16 16:34</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Client Sample ID: L16H075-02</th>
<th>Lab Sample ID: 660-75848-2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date Collected: 08/26/16 12:23</td>
<td>Date Received: 08/31/16 14:00</td>
</tr>
<tr>
<td>Method: 200.7 Rev 4.4 - Metals (ICP)</td>
<td>Matrix: Water</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>Qualifier</th>
<th>PQL</th>
<th>MDL</th>
<th>Unit</th>
<th>D</th>
<th>Prepared</th>
<th>Analyzed</th>
<th>Dil Fac</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithium</td>
<td>0.011</td>
<td>I</td>
<td>0.050</td>
<td>0.0010</td>
<td>mg/L</td>
<td>09/03/16 09:37</td>
<td>09/07/16 17:00</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Client Sample ID: L16H075-03</th>
<th>Lab Sample ID: 660-75848-3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date Collected: 08/26/16 11:33</td>
<td>Date Received: 08/31/16 14:00</td>
</tr>
<tr>
<td>Method: 200.7 Rev 4.4 - Metals (ICP)</td>
<td>Matrix: Water</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>Qualifier</th>
<th>PQL</th>
<th>MDL</th>
<th>Unit</th>
<th>D</th>
<th>Prepared</th>
<th>Analyzed</th>
<th>Dil Fac</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithium</td>
<td>0.0061</td>
<td>I</td>
<td>0.050</td>
<td>0.0010</td>
<td>mg/L</td>
<td>09/03/16 09:37</td>
<td>09/07/16 17:03</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Client Sample ID: L16H075-05</th>
<th>Lab Sample ID: 660-75848-4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date Collected: 08/26/16 10:56</td>
<td>Date Received: 08/31/16 14:00</td>
</tr>
<tr>
<td>Method: 200.7 Rev 4.4 - Metals (ICP)</td>
<td>Matrix: Water</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>Qualifier</th>
<th>PQL</th>
<th>MDL</th>
<th>Unit</th>
<th>D</th>
<th>Prepared</th>
<th>Analyzed</th>
<th>Dil Fac</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithium</td>
<td>0.0074</td>
<td>I</td>
<td>0.050</td>
<td>0.0010</td>
<td>mg/L</td>
<td>09/03/16 09:37</td>
<td>09/07/16 17:07</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Client Sample ID: L16H075-06</th>
<th>Lab Sample ID: 660-75848-5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date Collected: 08/26/16 10:10</td>
<td>Date Received: 08/31/16 14:00</td>
</tr>
<tr>
<td>Method: 200.7 Rev 4.4 - Metals (ICP)</td>
<td>Matrix: Water</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>Qualifier</th>
<th>PQL</th>
<th>MDL</th>
<th>Unit</th>
<th>D</th>
<th>Prepared</th>
<th>Analyzed</th>
<th>Dil Fac</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithium</td>
<td>0.0020</td>
<td>I</td>
<td>0.050</td>
<td>0.0010</td>
<td>mg/L</td>
<td>09/03/16 09:37</td>
<td>09/07/16 17:10</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>
## QC Sample Results

TestAmerica Job ID: 660-75848-1  
Client: Tampa Electric Company  
Project/Site: L16H075

### Method: 200.7 Rev 4.4 - Metals (ICP)

- **Lab Sample ID:** MB 400-321282/1-A  
  - **Matrix:** Water  
  - **Analysis Batch:** 321733

<table>
<thead>
<tr>
<th>Analyte</th>
<th>MB Result</th>
<th>MB Qualifier</th>
<th>PQL</th>
<th>MDL</th>
<th>Unit</th>
<th>D Prepared</th>
<th>Analyzed</th>
<th>Dil Fac</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithium</td>
<td>0.0010 U</td>
<td></td>
<td>0.050</td>
<td>0.0010 mg/L</td>
<td>09/03/16 09:37</td>
<td>09/07/16 16:27</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

- **Lab Sample ID:** LCS 400-321282/2-A  
  - **Matrix:** Water  
  - **Analysis Batch:** 321733

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Spike Added</th>
<th>LCS Result</th>
<th>LCS Qualifier</th>
<th>Unit</th>
<th>D %Rec</th>
<th>%Rec. Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithium</td>
<td>1.00</td>
<td>0.986 mg/L</td>
<td></td>
<td>mg/L</td>
<td>99</td>
<td>85 - 115</td>
</tr>
</tbody>
</table>

- **Lab Sample ID:** 660-75848-1 MS  
  - **Matrix:** Water  
  - **Analysis Batch:** 321733

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Sample Result</th>
<th>Sample Qualifier</th>
<th>Spike Added</th>
<th>MS Result</th>
<th>MS Qualifier</th>
<th>Unit</th>
<th>D %Rec</th>
<th>%Rec. Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithium</td>
<td>0.0074 I</td>
<td></td>
<td>1.00</td>
<td>1.15</td>
<td></td>
<td>mg/L</td>
<td>114</td>
<td>70 - 130</td>
</tr>
</tbody>
</table>

- **Lab Sample ID:** 660-75848-1 MSD  
  - **Matrix:** Water  
  - **Analysis Batch:** 321733

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Sample Result</th>
<th>Sample Qualifier</th>
<th>Spike Added</th>
<th>MSD Result</th>
<th>MSD Qualifier</th>
<th>Unit</th>
<th>D %Rec</th>
<th>%Rec. Limits</th>
<th>RPD</th>
<th>Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithium</td>
<td>0.0074 I</td>
<td></td>
<td>1.00</td>
<td>1.15</td>
<td></td>
<td>mg/L</td>
<td>114</td>
<td>70 - 130</td>
<td>0</td>
<td>20</td>
</tr>
</tbody>
</table>
## Metals

### Prep Batch: 321282

<table>
<thead>
<tr>
<th>Lab Sample ID</th>
<th>Client Sample ID</th>
<th>Prep Type</th>
<th>Matrix</th>
<th>Method</th>
<th>Prep Batch</th>
</tr>
</thead>
<tbody>
<tr>
<td>660-75848-1</td>
<td>L16H075-01</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7</td>
<td></td>
</tr>
<tr>
<td>660-75848-2</td>
<td>L16H075-02</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7</td>
<td></td>
</tr>
<tr>
<td>660-75848-3</td>
<td>L16H075-03</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7</td>
<td></td>
</tr>
<tr>
<td>660-75848-4</td>
<td>L16H075-05</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7</td>
<td></td>
</tr>
<tr>
<td>660-75848-5</td>
<td>L16H075-06</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7</td>
<td></td>
</tr>
<tr>
<td>MB 400-321282/1-A</td>
<td>Method Blank</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7</td>
<td></td>
</tr>
<tr>
<td>LCS 400-321282/2-A</td>
<td>Lab Control Sample</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7</td>
<td></td>
</tr>
<tr>
<td>660-75848-1 MS</td>
<td>L16H075-01</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7</td>
<td></td>
</tr>
<tr>
<td>660-75848-1 MSD</td>
<td>L16H075-01</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7</td>
<td></td>
</tr>
</tbody>
</table>

### Analysis Batch: 321733

<table>
<thead>
<tr>
<th>Lab Sample ID</th>
<th>Client Sample ID</th>
<th>Prep Type</th>
<th>Matrix</th>
<th>Method</th>
<th>Prep Batch</th>
</tr>
</thead>
<tbody>
<tr>
<td>660-75848-1</td>
<td>L16H075-01</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7 Rev 4.4</td>
<td>321282</td>
</tr>
<tr>
<td>660-75848-2</td>
<td>L16H075-02</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7 Rev 4.4</td>
<td>321282</td>
</tr>
<tr>
<td>660-75848-3</td>
<td>L16H075-03</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7 Rev 4.4</td>
<td>321282</td>
</tr>
<tr>
<td>660-75848-4</td>
<td>L16H075-05</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7 Rev 4.4</td>
<td>321282</td>
</tr>
<tr>
<td>660-75848-5</td>
<td>L16H075-06</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7 Rev 4.4</td>
<td>321282</td>
</tr>
<tr>
<td>MB 400-321282/1-A</td>
<td>Method Blank</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7 Rev 4.4</td>
<td>321282</td>
</tr>
<tr>
<td>LCS 400-321282/2-A</td>
<td>Lab Control Sample</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7 Rev 4.4</td>
<td>321282</td>
</tr>
<tr>
<td>660-75848-1 MS</td>
<td>L16H075-01</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7 Rev 4.4</td>
<td>321282</td>
</tr>
<tr>
<td>660-75848-1 MSD</td>
<td>L16H075-01</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7 Rev 4.4</td>
<td>321282</td>
</tr>
</tbody>
</table>
## Lab Chronicle

**Client:** Tampa Electric Company  
**Project/Site:** L16H075  
**TestAmerica Job ID:** 660-75848-1

### Client Sample ID: L16H075-01
**Date Collected:** 08/26/16 12:52  
**Date Received:** 08/31/16 14:00  
**Matrix:** Water  
**Sample Information:**
- **Client Sample ID:** L16H075-01  
- **Lab Sample ID:** 660-75848-1  
- **Prep Type:** Total/NA  
- **Batch Type:** Preparations  
- **Method:** Batch  
- **Run:** 200.7  
- **Dil Factor:** 1  
- **Initial Amount:** 50 mL  
- **Final Amount:** 50 mL  
- **Batch Number:** 321282  
- **Prepared or Analyzed:** 09/03/16 09:37  
- **Analyst:** DN1  
- **Lab:** TAL PEN  
- **Instrument ID:** 6500 ICP Duo

### Client Sample ID: L16H075-02
**Date Collected:** 08/26/16 12:23  
**Date Received:** 08/31/16 14:00  
**Matrix:** Water  
**Sample Information:**
- **Client Sample ID:** L16H075-02  
- **Lab Sample ID:** 660-75848-2  
- **Prep Type:** Total/NA  
- **Batch Type:** Preparations  
- **Method:** Batch  
- **Run:** 200.7 Rev 4.4  
- **Dil Factor:** 1  
- **Initial Amount:** 50 mL  
- **Final Amount:** 50 mL  
- **Batch Number:** 321733  
- **Prepared or Analyzed:** 09/07/16 17:00  
- **Analyst:** JMH  
- **Lab:** TAL PEN  
- **Instrument ID:** 6500 ICP Duo

### Client Sample ID: L16H075-03
**Date Collected:** 08/26/16 11:33  
**Date Received:** 08/31/16 14:00  
**Matrix:** Water  
**Sample Information:**
- **Client Sample ID:** L16H075-03  
- **Lab Sample ID:** 660-75848-3  
- **Prep Type:** Total/NA  
- **Batch Type:** Preparations  
- **Method:** Batch  
- **Run:** 200.7 Rev 4.4  
- **Dil Factor:** 1  
- **Initial Amount:** 50 mL  
- **Final Amount:** 50 mL  
- **Batch Number:** 321733  
- **Prepared or Analyzed:** 09/07/16 17:03  
- **Analyst:** JMH  
- **Lab:** TAL PEN  
- **Instrument ID:** 6500 ICP Duo

### Client Sample ID: L16H075-05
**Date Collected:** 08/26/16 10:56  
**Date Received:** 08/31/16 14:00  
**Matrix:** Water  
**Sample Information:**
- **Client Sample ID:** L16H075-05  
- **Lab Sample ID:** 660-75848-4  
- **Prep Type:** Total/NA  
- **Batch Type:** Preparations  
- **Method:** Batch  
- **Run:** 200.7 Rev 4.4  
- **Dil Factor:** 1  
- **Initial Amount:** 50 mL  
- **Final Amount:** 50 mL  
- **Batch Number:** 321733  
- **Prepared or Analyzed:** 09/07/16 17:07  
- **Analyst:** JMH  
- **Lab:** TAL PEN  
- **Instrument ID:** 6500 ICP Duo

### Client Sample ID: L16H075-06
**Date Collected:** 08/26/16 10:10  
**Date Received:** 08/31/16 14:00  
**Matrix:** Water  
**Sample Information:**
- **Client Sample ID:** L16H075-06  
- **Lab Sample ID:** 660-75848-5  
- **Prep Type:** Total/NA  
- **Batch Type:** Preparations  
- **Method:** Batch  
- **Run:** 200.7 Rev 4.4  
- **Dil Factor:** 1  
- **Initial Amount:** 50 mL  
- **Final Amount:** 50 mL  
- **Batch Number:** 321733  
- **Prepared or Analyzed:** 09/07/16 17:10  
- **Analyst:** JMH  
- **Lab:** TAL PEN  
- **Instrument ID:** 6500 ICP Duo

---

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

---

**TestAmerica Tampa**  
**Page 10 of 16**  
**9/9/2016**
## Certification Summary

Client: Tampa Electric Company  
TestAmerica Job ID: 660-75848-1  
Project/Site: L16H075

### Laboratory: TestAmerica Tampa
The certifications listed below are applicable to this report.

<table>
<thead>
<tr>
<th>Authority</th>
<th>Program</th>
<th>EPA Region</th>
<th>Certification ID</th>
<th>Expiration Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Florida</td>
<td>NELAP</td>
<td>4</td>
<td>E84282</td>
<td>06-30-17</td>
</tr>
</tbody>
</table>

### Laboratory: TestAmerica Pensacola
The certifications listed below are applicable to this report.

<table>
<thead>
<tr>
<th>Authority</th>
<th>Program</th>
<th>EPA Region</th>
<th>Certification ID</th>
<th>Expiration Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Florida</td>
<td>NELAP</td>
<td>4</td>
<td>E81010</td>
<td>06-30-17</td>
</tr>
</tbody>
</table>
**Method Summary**

Client: Tampa Electric Company  
Project/Site: L16H075

<table>
<thead>
<tr>
<th>Method</th>
<th>Method Description</th>
<th>Protocol</th>
<th>Laboratory</th>
</tr>
</thead>
<tbody>
<tr>
<td>200.7 Rev 4.4</td>
<td>Metals (ICP)</td>
<td>EPA</td>
<td>TAL PEN</td>
</tr>
</tbody>
</table>

**Protocol References:**  
EPA = US Environmental Protection Agency

**Laboratory References:**  
TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001
### SUBCONTRACT ORDER
Tampa Electric Company, Laboratory Services
L16H075

**SENDING LABORATORY:**
Tampa Electric Company, Laboratory Services
5012 Causeway Blvd
Tampa, FL 33619
Phone: (813) 630-7490
Fax: (813) 630-7360
Project Manager: Peggy Penner

**RECEIVING LABORATORY:**
TestAmerica Laboratories, Inc. - Tampa
6712 Benjamin Rd., Suite 100
Tampa, FL 33634
Phone :(813) 885-7427
Fax: -

**Due Date:** 09/12/16 16:00

<table>
<thead>
<tr>
<th>Analysis</th>
<th>Expires</th>
<th>Laboratory ID</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample ID: L16H075-01</td>
<td>PZ1</td>
<td>Water</td>
<td></td>
</tr>
<tr>
<td>Sampled: 08/26/16 12:52</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lithium, Total EPA 6010</td>
<td>02/22/17 12:52</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Containers Supplied:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poly HNO3 - 250mL (A)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| Sample ID: L16H075-02 | PZ2 | Water |          |
| Sampled: 08/26/16 12:23 | | | |
| Lithium, Total EPA 6010 | 02/22/17 12:23 | | |
| **Containers Supplied:** | | | |
| Poly HNO3 - 250mL (A) | | | |

| Sample ID: L16H075-03 | PZ3 | Water |          |
| Sampled: 08/26/16 11:33 | | | |
| Lithium, Total EPA 6010 | 02/22/17 11:33 | | |
| **Containers Supplied:** | | | |
| Poly HNO3 - 250mL (A) | | | |

| Sample ID: L16H075-05 | PZ5 | Water |          |
| Sampled: 08/26/16 10:56 | | | |
| Lithium, Total EPA 6010 | 02/22/17 10:56 | | |
| **Containers Supplied:** | | | |
| Poly HNO3 - 250mL (A) | | | |

| Sample ID: L16H075-06 | PZ6 | Water |          |
| Sampled: 08/26/16 10:10 | | | |
| Lithium, Total EPA 6010 | 02/22/17 10:10 | | |
| **Containers Supplied:** | | | |
| Poly HNO3 - 250mL (A) | | | |

---

**Loc:** 660
**75848**

**8/26/16 1955**

**8-31-16 00945**

**8-31-16 01400**

**8/31/16 1900**

**8/31/16 1900**

---

Page 13 of 16
9/9/2016
# Chain of Custody Record

**Client Information (Sub Contract Lab)**
- **Company:** TestAmerica Laboratories, Inc.
- **Address:** 3355 McNamara Drive,
- **City:** Pensacola
- **State, Zip:** FL, 32514
- **Phone:** 850-474-1001(Tel) 850-478-2671(Fax)
- **Email:** keaton.conner@testamericainc.com

**Sample Information - Client ID (Lab ID)**

<table>
<thead>
<tr>
<th>Sample Identification - Client ID (Lab ID)</th>
<th>Sample Date</th>
<th>Sample Time</th>
<th>Sample Type</th>
<th>Preservation Code</th>
<th>Total Number of Containers</th>
</tr>
</thead>
<tbody>
<tr>
<td>L16H075-01 (660-75848-1)</td>
<td>8/26/16</td>
<td>12:52 Eastern</td>
<td>Water</td>
<td>X</td>
<td>1</td>
</tr>
<tr>
<td>L16H075-02 (660-75848-2)</td>
<td>8/26/16</td>
<td>12:23 Eastern</td>
<td>Water</td>
<td>X</td>
<td>1</td>
</tr>
<tr>
<td>L16H075-03 (660-75848-3)</td>
<td>8/26/16</td>
<td>11:53 Eastern</td>
<td>Water</td>
<td>X</td>
<td>1</td>
</tr>
<tr>
<td>L16H075-04 (660-75848-4)</td>
<td>8/26/16</td>
<td>10:56 Eastern</td>
<td>Water</td>
<td>X</td>
<td>1</td>
</tr>
<tr>
<td>L16H075-05 (660-75848-5)</td>
<td>8/26/16</td>
<td>10:10 Eastern</td>
<td>Water</td>
<td>X</td>
<td>1</td>
</tr>
</tbody>
</table>

**Possible Hazard Identification**

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

**Deliverable Requested:** I, II, III, IV, Other (specify)
- **Primary Deliverable Rank:** 2

**Empty Kit Relinquished by:**
- **Date/Time:** 9/1/16 17:00
- **Company:** TATOA

**Custody Seals Intact:** Yes

**Custody Seal No.:**

**Cooer Temperature(s) °C and Other Remarks:**
Login Sample Receipt Checklist

Client: Tampa Electric Company
Job Number: 660-75848-1

Login Number: 75848
List Number: 1
Creator: Southers, Kristin B
List Source: TestAmerica Tampa

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

Client: Tampa Electric Company

Login Number: 75848
List Number: 2
Creator: Johnson, Jeremy N

<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Radioactivity wasn't checked or is &lt;= background as measured by a survey meter.</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>The cooler's custody seal, if present, is intact.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Sample custody seals, if present, are intact.</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>The cooler or samples do not appear to have been compromised or tampered with.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Samples were received on ice.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Cooler Temperature is acceptable.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Cooler Temperature is recorded.</td>
<td>True</td>
<td>0.0°C IR6</td>
</tr>
<tr>
<td>COC is present.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>COC is filled out in ink and legible.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>COC is filled out with all pertinent information.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Is the Field Sampler's name present on COC?</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>There are no discrepancies between the containers received and the COC.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Samples are received within Holding Time (excluding tests with immediate HTs)</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Sample containers have legible labels.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Containers are not broken or leaking.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Sample collection date/times are provided.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Appropriate sample containers are used.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Sample bottles are completely filled.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Sample Preservation Verified.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Containers requiring zero headspace have no headspace or bubble is &lt;6mm (1/4&quot;).</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Multiphasic samples are not present.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Samples do not require splitting or compositing.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Residual Chlorine Checked.</td>
<td>N/A</td>
<td></td>
</tr>
</tbody>
</table>
OCTOBER 2016
Big Bend Power Station
Terry Eastley
13031 Wyandott Rd
Apollo Beach, FL 33572
tleastley@tecoenergy.com

Work Order - L16J027

Project - CCR Wells Economizer Ash Pond

Case Narrative

5 sample(s) were received on 10/28/16 12:45.

There were no issues noted with the sample(s) associated with this workorder unless noted below.

**EPA 300.0**

The recovery of the matrix spike for Chloride and Sulfate was just below the control limits. The parent sample is flagged with a J qualifier.

**EPA 6010**

The recovery of the matrix spike and spike duplicate for Calcium could not be accurately determined due to the amount of target analyte in the sample matrix. The parent sample is flagged with a J qualifier.

**SM 2540C**

A constant weight could not be achieved after three consecutive weighing and drying cycles for samples BBS-CCR-1 and BBS-CCR-BW-1. The sample(s) are flagged with a J qualifier.
### Sample Information

**Client:** Big Bend Power Station  
**Lab Sample ID:** L16J027-01  
**Sample Description:** BBS-CCR-1  
**Sample Collection Method:** Grab  
**Sampled By:** Robert Barthelette  
**Date and Time Collected:** 10/28/16 11:42  
**Date of Sample Receipt:** 10/28/16 12:45

### Laboratory Results

#### Sample Qualifier:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier Code</th>
<th>Dilution</th>
<th>Test Method &amp; Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>General Chemistry Parameters</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chloride</td>
<td>743 mg/L</td>
<td>0.400</td>
<td>10.0</td>
<td>J-V</td>
<td>20 EPA 300.0</td>
<td></td>
<td>TMH 11/1/16 16:05</td>
<td></td>
</tr>
<tr>
<td>Specific Conductance</td>
<td>4060 umhos/cm</td>
<td>100</td>
<td>100</td>
<td>1</td>
<td>FDEP SOP FT 1200</td>
<td>RAB</td>
<td>10/28/16 11:42</td>
<td></td>
</tr>
<tr>
<td>Dissolved Oxygen</td>
<td>0.100 mg/L</td>
<td>0.100</td>
<td>0.100</td>
<td>U</td>
<td>1 FDEP SOP FT 1500</td>
<td>RAB</td>
<td>10/28/16 11:42</td>
<td></td>
</tr>
<tr>
<td>Fluoride</td>
<td>0.104 mg/L</td>
<td>0.0100</td>
<td>0.0500</td>
<td>1</td>
<td>EPA 300.0</td>
<td></td>
<td>TMH 11/1/16 15:55</td>
<td></td>
</tr>
<tr>
<td>pH</td>
<td>6.83 pH Units</td>
<td>1.00</td>
<td>1.00</td>
<td>1</td>
<td>FDEP SOP FT 1100</td>
<td>RAB</td>
<td>10/28/16 11:42</td>
<td></td>
</tr>
<tr>
<td>REDOX Potential</td>
<td>-107 mV</td>
<td>-999</td>
<td>-999</td>
<td>1</td>
<td>SM 2580B</td>
<td></td>
<td>RAB 10/28/16 11:42</td>
<td></td>
</tr>
<tr>
<td>Total Dissolved Solids</td>
<td>3170 mg/L</td>
<td>24.0</td>
<td>40.0</td>
<td>J-</td>
<td>2 SM 2540C</td>
<td>RFL</td>
<td>10/31/16 12:40</td>
<td></td>
</tr>
<tr>
<td>Sulfate</td>
<td>1230 mg/L</td>
<td>10.0</td>
<td>40.0</td>
<td>J-</td>
<td>20 EPA 300.0</td>
<td>TMH</td>
<td>11/1/16 16:05</td>
<td></td>
</tr>
<tr>
<td>Turbidity</td>
<td>3.22 NTU</td>
<td>0.100</td>
<td>0.100</td>
<td>1</td>
<td>FDEP SOP FT 1600</td>
<td>RAB</td>
<td>10/28/16 11:42</td>
<td></td>
</tr>
<tr>
<td><strong>Total Mercury by SW846 Method 7470/7471</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mercury</td>
<td>0.0500 ug/L</td>
<td>0.0500</td>
<td>0.200</td>
<td>U</td>
<td>1 EPA 7470A</td>
<td>RLC</td>
<td>11/4/16 9:47</td>
<td></td>
</tr>
<tr>
<td><strong>Total Recoverable Metals by 200 Series</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Antimony</td>
<td>0.600 ug/L</td>
<td>0.600</td>
<td>2.00</td>
<td>U</td>
<td>1 EPA 200.8</td>
<td>RLC</td>
<td>11/2/16 9:35</td>
<td></td>
</tr>
<tr>
<td>Arsenic</td>
<td>8.30 ug/L</td>
<td>0.320</td>
<td>2.00</td>
<td>U</td>
<td>1 EPA 200.8</td>
<td>RLC</td>
<td>11/2/16 9:35</td>
<td></td>
</tr>
<tr>
<td>Cadmium</td>
<td>0.100 ug/L</td>
<td>0.100</td>
<td>0.500</td>
<td>U</td>
<td>1 EPA 200.8</td>
<td>RLC</td>
<td>11/2/16 9:35</td>
<td></td>
</tr>
<tr>
<td>Cobalt</td>
<td>0.507 ug/L</td>
<td>0.0400</td>
<td>2.00</td>
<td>I</td>
<td>1 EPA 200.8</td>
<td>RLC</td>
<td>11/2/16 9:35</td>
<td></td>
</tr>
<tr>
<td>Lead</td>
<td>0.0800 ug/L</td>
<td>0.0800</td>
<td>2.00</td>
<td>U</td>
<td>1 EPA 200.8</td>
<td>RLC</td>
<td>11/2/16 9:35</td>
<td></td>
</tr>
<tr>
<td>Selenium</td>
<td>0.690 ug/L</td>
<td>0.200</td>
<td>2.00</td>
<td>I</td>
<td>1 EPA 200.8</td>
<td>RLC</td>
<td>11/2/16 9:35</td>
<td></td>
</tr>
<tr>
<td>Thallium</td>
<td>0.100 ug/L</td>
<td>0.100</td>
<td>0.500</td>
<td>U</td>
<td>1 EPA 200.8</td>
<td>RLC</td>
<td>11/2/16 9:35</td>
<td></td>
</tr>
<tr>
<td><strong>Total Recoverable Metals by SW846 Method 6010B</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Barium</td>
<td>122 ug/L</td>
<td>0.500</td>
<td>20.0</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>11/1/16 9:59</td>
<td></td>
</tr>
<tr>
<td>Beryllium</td>
<td>0.200 ug/L</td>
<td>0.200</td>
<td>2.00</td>
<td>U</td>
<td>1 EPA 6010B</td>
<td>MCR</td>
<td>11/1/16 9:59</td>
<td></td>
</tr>
<tr>
<td>Boron</td>
<td>15700 ug/L</td>
<td>10.0</td>
<td>50.0</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>11/2/16 11:23</td>
<td></td>
</tr>
<tr>
<td>Calcium</td>
<td>5560000 ug/L</td>
<td>30.0</td>
<td>1000</td>
<td>V</td>
<td>1 EPA 6010B</td>
<td>MCR</td>
<td>11/1/16 11:22</td>
<td></td>
</tr>
<tr>
<td>Chromium</td>
<td>1.60 ug/L</td>
<td>1.60</td>
<td>12.0</td>
<td>U</td>
<td>1 EPA 6010B</td>
<td>MCR</td>
<td>11/1/16 9:59</td>
<td></td>
</tr>
<tr>
<td>Molybdenum</td>
<td>95.5 ug/L</td>
<td>1.00</td>
<td>20.0</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>11/1/16 9:59</td>
<td></td>
</tr>
</tbody>
</table>

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
Sample Information

<table>
<thead>
<tr>
<th>Sample Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Client: Big Bend Power Station</td>
</tr>
<tr>
<td>Lab Sample ID: L16J027-02</td>
</tr>
<tr>
<td>Sample Description: BBS-CCR-2</td>
</tr>
<tr>
<td>Sample Collection Method: Grab</td>
</tr>
<tr>
<td>Sampled By: Robert Barthelette</td>
</tr>
<tr>
<td>Date and Time Collected: 10/28/16 11:15</td>
</tr>
<tr>
<td>Date of Sample Receipt: 10/28/16 12:45</td>
</tr>
</tbody>
</table>

Laboratory Results

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Code</th>
<th>Dil</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>General Chemistry Parameters</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chloride</td>
<td>112</td>
<td>mg/L</td>
<td>0.400</td>
<td>10.0</td>
<td>V</td>
<td>20</td>
<td>EPA 300.0</td>
<td>TMH</td>
<td>11/1/16 16:45</td>
</tr>
<tr>
<td>Specific Conductance</td>
<td>1500</td>
<td>umhos/cm</td>
<td>100</td>
<td>100</td>
<td>1</td>
<td>FDEP SOP FT 1200</td>
<td>RAB</td>
<td>10/28/16 11:15</td>
<td></td>
</tr>
<tr>
<td>Dissolved Oxygen</td>
<td>0.100</td>
<td>mg/L</td>
<td>0.100</td>
<td>0.100</td>
<td>1</td>
<td>FDEP SOP FT 1500</td>
<td>RAB</td>
<td>10/28/16 11:15</td>
<td></td>
</tr>
<tr>
<td>Fluoride</td>
<td>0.171</td>
<td>mg/L</td>
<td>0.0100</td>
<td>0.0500</td>
<td>1</td>
<td>EPA 300.0</td>
<td>TMH</td>
<td>11/1/16 16:35</td>
<td></td>
</tr>
<tr>
<td>pH</td>
<td>6.87</td>
<td>pH Units</td>
<td>1.00</td>
<td>1.00</td>
<td>1</td>
<td>FDEP SOP FT 1100</td>
<td>RAB</td>
<td>10/28/16 11:15</td>
<td></td>
</tr>
<tr>
<td>REDOX Potential</td>
<td>-183</td>
<td>mV</td>
<td>-0.99</td>
<td>-0.99</td>
<td>1</td>
<td>SM 2580B</td>
<td>RAB</td>
<td>10/28/16 11:15</td>
<td></td>
</tr>
<tr>
<td>Total Dissolved Solids</td>
<td>1130</td>
<td>mg/L</td>
<td>24.0</td>
<td>40.0</td>
<td>2</td>
<td>SM 2540C</td>
<td>RFL</td>
<td>10/31/16 12:40</td>
<td></td>
</tr>
<tr>
<td>Sulfate</td>
<td>468</td>
<td>mg/L</td>
<td>10.0</td>
<td>40.0</td>
<td>20</td>
<td>EPA 300.0</td>
<td>TMH</td>
<td>11/1/16 16:45</td>
<td></td>
</tr>
<tr>
<td>Turbidity</td>
<td>3.73</td>
<td>NTU</td>
<td>0.100</td>
<td>0.100</td>
<td>1</td>
<td>FDEP SOP FT 1600</td>
<td>RAB</td>
<td>10/28/16 11:15</td>
<td></td>
</tr>
<tr>
<td><strong>Total Mercury by SW846 Method 7470/7471</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mercury</td>
<td>0.0500</td>
<td>ug/L</td>
<td>0.0500</td>
<td>0.200</td>
<td>U</td>
<td>1</td>
<td>EPA 7470A</td>
<td>RLC</td>
<td>11/4/16 9:50</td>
</tr>
<tr>
<td><strong>Total Recoverable Metals by 200 Series</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Antimony</td>
<td>0.600</td>
<td>ug/L</td>
<td>0.600</td>
<td>2.00</td>
<td>U</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RLC</td>
<td>11/2/16 9:39</td>
</tr>
<tr>
<td>Arsenic</td>
<td>1.16</td>
<td>ug/L</td>
<td>0.320</td>
<td>2.00</td>
<td>I</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RLC</td>
<td>11/2/16 9:39</td>
</tr>
<tr>
<td>Cadmium</td>
<td>0.100</td>
<td>ug/L</td>
<td>0.100</td>
<td>0.500</td>
<td>U</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RLC</td>
<td>11/2/16 9:39</td>
</tr>
<tr>
<td>Cobalt</td>
<td>0.107</td>
<td>ug/L</td>
<td>0.0400</td>
<td>2.00</td>
<td>I</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RLC</td>
<td>11/2/16 9:39</td>
</tr>
<tr>
<td>Lead</td>
<td>0.129</td>
<td>ug/L</td>
<td>0.0800</td>
<td>2.00</td>
<td>I</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RLC</td>
<td>11/2/16 9:39</td>
</tr>
<tr>
<td>Selenium</td>
<td>0.333</td>
<td>ug/L</td>
<td>0.200</td>
<td>2.00</td>
<td>I</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RLC</td>
<td>11/2/16 9:39</td>
</tr>
<tr>
<td>Thallium</td>
<td>0.100</td>
<td>ug/L</td>
<td>0.100</td>
<td>0.500</td>
<td>U</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RLC</td>
<td>11/2/16 9:39</td>
</tr>
<tr>
<td><strong>Total Recoverable Metals by SW846 Method 6010B</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Barium</td>
<td>60.6</td>
<td>ug/L</td>
<td>0.500</td>
<td>20.0</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>11/1/16 10:02</td>
<td></td>
</tr>
<tr>
<td>Beryllium</td>
<td>0.200</td>
<td>ug/L</td>
<td>0.200</td>
<td>2.00</td>
<td>U</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>11/1/16 10:02</td>
</tr>
<tr>
<td>Boron</td>
<td>2080</td>
<td>ug/L</td>
<td>10.0</td>
<td>50.0</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>11/2/16 11:25</td>
<td></td>
</tr>
<tr>
<td>Calcium</td>
<td>181000</td>
<td>ug/L</td>
<td>30.0</td>
<td>1000</td>
<td>V</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>11/1/16 11:25</td>
</tr>
<tr>
<td>Chromium</td>
<td>1.60</td>
<td>ug/L</td>
<td>1.60</td>
<td>12.0</td>
<td>U</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>11/1/16 10:02</td>
</tr>
<tr>
<td>Molybdenum</td>
<td>1.00</td>
<td>ug/L</td>
<td>1.00</td>
<td>20.0</td>
<td>U</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>11/1/16 10:02</td>
</tr>
</tbody>
</table>

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
### Sample Information

**Client:** Big Bend Power Station  
**Lab Sample ID:** L16J027-03  
**Sample Description:** BBS-CCR-3  
**Sample Collection Method:** Grab  
**Sampled By:** Robert Barthelette  
**Date and Time Collected:** 10/28/16 10:50  
**Date of Sample Receipt:** 10/28/16 12:45

### Laboratory Results

#### Sample Qualifier:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier Code</th>
<th>Dil</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis</th>
<th>Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>General Chemistry Parameters</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chloride</td>
<td>140</td>
<td>mg/L</td>
<td>0.400</td>
<td>10.0</td>
<td>V</td>
<td>20</td>
<td>EPA 300.0</td>
<td>TMH</td>
<td>11/1/16</td>
<td>17:26</td>
</tr>
<tr>
<td>Specific Conductance</td>
<td>1640</td>
<td>umhos/cm</td>
<td>100</td>
<td>100</td>
<td>1</td>
<td>FDEP SOP FT 1200</td>
<td>RAB</td>
<td>10/28/16</td>
<td>10:50</td>
<td></td>
</tr>
<tr>
<td>Dissolved Oxygen</td>
<td>0.100</td>
<td>mg/L</td>
<td>0.100</td>
<td>0.100</td>
<td>U</td>
<td>1</td>
<td>FDEP SOP FT 1500</td>
<td>RAB</td>
<td>10/28/16</td>
<td>10:50</td>
</tr>
<tr>
<td>Fluoride</td>
<td>0.299</td>
<td>mg/L</td>
<td>0.0100</td>
<td>0.0500</td>
<td>1</td>
<td>EPA 300.0</td>
<td>TMH</td>
<td>11/1/16</td>
<td>17:15</td>
<td></td>
</tr>
<tr>
<td>pH</td>
<td>6.42</td>
<td>pH Units</td>
<td>1.00</td>
<td>1.00</td>
<td>1</td>
<td>FDEP SOP FT 1100</td>
<td>RAB</td>
<td>10/28/16</td>
<td>10:50</td>
<td></td>
</tr>
<tr>
<td>REDOX Potential</td>
<td>-266</td>
<td>mV</td>
<td>-999</td>
<td>-999</td>
<td>1</td>
<td>SM 2580B</td>
<td>RAB</td>
<td>10/28/16</td>
<td>10:50</td>
<td></td>
</tr>
<tr>
<td>Total Dissolved Solids</td>
<td>1220</td>
<td>mg/L</td>
<td>24.0</td>
<td>40.0</td>
<td>2</td>
<td>SM 2540C</td>
<td>RFL</td>
<td>10/31/16</td>
<td>12:40</td>
<td></td>
</tr>
<tr>
<td>Sulfate</td>
<td>541</td>
<td>mg/L</td>
<td>10.0</td>
<td>40.0</td>
<td>20</td>
<td>EPA 300.0</td>
<td>TMH</td>
<td>11/1/16</td>
<td>17:26</td>
<td></td>
</tr>
<tr>
<td>Turbidity</td>
<td>3.26</td>
<td>NTU</td>
<td>0.100</td>
<td>0.100</td>
<td>1</td>
<td>FDEP SOP FT 1600</td>
<td>RAB</td>
<td>10/28/16</td>
<td>10:50</td>
<td></td>
</tr>
<tr>
<td><strong>Total Mercury by SW846 Method 7470/7471</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mercury</td>
<td>0.0500</td>
<td>ug/L</td>
<td>0.0500</td>
<td>0.200</td>
<td>U</td>
<td>1</td>
<td>EPA 7470A</td>
<td>RLC</td>
<td>11/4/16</td>
<td>9:54</td>
</tr>
<tr>
<td><strong>Total Recoverable Metals by 200 Series</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Antimony</td>
<td>0.600</td>
<td>ug/L</td>
<td>0.600</td>
<td>2.00</td>
<td>U</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RLC</td>
<td>11/2/16</td>
<td>9:43</td>
</tr>
<tr>
<td>Arsenic</td>
<td>0.623</td>
<td>ug/L</td>
<td>0.320</td>
<td>2.00</td>
<td>I</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RLC</td>
<td>11/2/16</td>
<td>9:43</td>
</tr>
<tr>
<td>Cadmium</td>
<td>0.100</td>
<td>ug/L</td>
<td>0.100</td>
<td>0.500</td>
<td>U</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RLC</td>
<td>11/2/16</td>
<td>9:43</td>
</tr>
<tr>
<td>Cobalt</td>
<td>0.124</td>
<td>ug/L</td>
<td>0.0400</td>
<td>2.00</td>
<td>I</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RLC</td>
<td>11/2/16</td>
<td>9:43</td>
</tr>
<tr>
<td>Lead</td>
<td>0.107</td>
<td>ug/L</td>
<td>0.0800</td>
<td>2.00</td>
<td>I</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RLC</td>
<td>11/2/16</td>
<td>9:43</td>
</tr>
<tr>
<td>Selenium</td>
<td>0.200</td>
<td>ug/L</td>
<td>0.200</td>
<td>2.00</td>
<td>U</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RLC</td>
<td>11/2/16</td>
<td>9:43</td>
</tr>
<tr>
<td>Thallium</td>
<td>0.100</td>
<td>ug/L</td>
<td>0.100</td>
<td>0.500</td>
<td>U</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RLC</td>
<td>11/2/16</td>
<td>9:43</td>
</tr>
<tr>
<td><strong>Total Recoverable Metals by SW846 Method 6010B</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Barium</td>
<td>66.3</td>
<td>ug/L</td>
<td>0.500</td>
<td>20.0</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>11/1/16</td>
<td>10:04</td>
<td></td>
</tr>
<tr>
<td>Beryllium</td>
<td>0.200</td>
<td>ug/L</td>
<td>0.200</td>
<td>2.00</td>
<td>U</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>11/1/16</td>
<td>10:04</td>
</tr>
<tr>
<td>Boron</td>
<td>532</td>
<td>ug/L</td>
<td>10.0</td>
<td>50.0</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>11/2/16</td>
<td>11:28</td>
<td></td>
</tr>
<tr>
<td>Calcium</td>
<td>201000</td>
<td>ug/L</td>
<td>30.0</td>
<td>1000</td>
<td>V</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>11/1/16</td>
<td>11:27</td>
</tr>
<tr>
<td>Chromium</td>
<td>1.60</td>
<td>ug/L</td>
<td>1.60</td>
<td>12.0</td>
<td>U</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>11/1/16</td>
<td>10:04</td>
</tr>
<tr>
<td>Molybdenium</td>
<td>3.63</td>
<td>ug/L</td>
<td>1.00</td>
<td>20.0</td>
<td>I</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>11/1/16</td>
<td>10:04</td>
</tr>
</tbody>
</table>

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
Laboratory Results

### Parameter Qualifier:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier Code</th>
<th>Dil</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>General Chemistry Parameters</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chloride</td>
<td>939</td>
<td>mg/L</td>
<td>0.400</td>
<td>10.0</td>
<td>V</td>
<td>20</td>
<td>EPA 300.0</td>
<td>TMH</td>
<td>11/1/16 17:46</td>
</tr>
<tr>
<td>Specific Conductance</td>
<td>4860</td>
<td>umhos/cm</td>
<td>100</td>
<td>100</td>
<td>1</td>
<td></td>
<td>FDEP SOP FT 1200</td>
<td>RAB</td>
<td>10/28/16 10:14</td>
</tr>
<tr>
<td>Dissolved Oxygen</td>
<td>0.130</td>
<td>mg/L</td>
<td>0.100</td>
<td>0.100</td>
<td>1</td>
<td></td>
<td>FDEP SOP FT 1500</td>
<td>RAB</td>
<td>10/28/16 10:14</td>
</tr>
<tr>
<td>Fluoride</td>
<td>0.194</td>
<td>mg/L</td>
<td>0.0100</td>
<td>0.0500</td>
<td>1</td>
<td></td>
<td>EPA 300.0</td>
<td>TMH</td>
<td>11/1/16 17:36</td>
</tr>
<tr>
<td>pH</td>
<td>6.50</td>
<td>pH Units</td>
<td>1.00</td>
<td>1.00</td>
<td>1</td>
<td></td>
<td>FDEP SOP FT 1100</td>
<td>RAB</td>
<td>10/28/16 10:14</td>
</tr>
<tr>
<td>REDOX Potential</td>
<td>-76.2</td>
<td>mV</td>
<td>-999</td>
<td>-999</td>
<td>1</td>
<td></td>
<td>SM 2580B</td>
<td>RAB</td>
<td>10/28/16 10:14</td>
</tr>
<tr>
<td>Total Dissolved Solids</td>
<td>4120</td>
<td>mg/L</td>
<td>24.00</td>
<td>40.00</td>
<td>J-</td>
<td>2</td>
<td>SM 2540C</td>
<td>RFL</td>
<td>10/31/16 12:40</td>
</tr>
<tr>
<td>Sulfate</td>
<td>1400</td>
<td>mg/L</td>
<td>10.00</td>
<td>40.00</td>
<td>20</td>
<td></td>
<td>EPA 300.0</td>
<td>TMH</td>
<td>11/1/16 17:46</td>
</tr>
<tr>
<td>Turbidity</td>
<td>4.08</td>
<td>NTU</td>
<td>0.100</td>
<td>0.100</td>
<td>1</td>
<td></td>
<td>FDEP SOP FT 1600</td>
<td>RAB</td>
<td>10/28/16 10:14</td>
</tr>
<tr>
<td><strong>Total Mercury by SW846 Method 7470/7471</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mercury</td>
<td>0.0500</td>
<td>ug/L</td>
<td>0.0500</td>
<td>0.200</td>
<td>U</td>
<td>1</td>
<td>EPA 7470A</td>
<td>RLC</td>
<td>11/4/16 9:57</td>
</tr>
<tr>
<td><strong>Total Recoverable Metals by 200 Series</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Antimony</td>
<td>6.00</td>
<td>ug/L</td>
<td>6.000</td>
<td>20.00</td>
<td>U</td>
<td>10</td>
<td>EPA 200.8</td>
<td>RLC</td>
<td>11/2/16 11:17</td>
</tr>
<tr>
<td>Arsenic</td>
<td>3.20</td>
<td>ug/L</td>
<td>3.200</td>
<td>20.00</td>
<td>U</td>
<td>10</td>
<td>EPA 200.8</td>
<td>RLC</td>
<td>11/2/16 11:17</td>
</tr>
<tr>
<td>Cadmium</td>
<td>1.00</td>
<td>ug/L</td>
<td>1.000</td>
<td>5.000</td>
<td>U</td>
<td>10</td>
<td>EPA 200.8</td>
<td>RLC</td>
<td>11/2/16 11:17</td>
</tr>
<tr>
<td>Cobalt</td>
<td>0.963</td>
<td>ug/L</td>
<td>0.400</td>
<td>20.00</td>
<td>I</td>
<td>10</td>
<td>EPA 200.8</td>
<td>RLC</td>
<td>11/2/16 11:17</td>
</tr>
<tr>
<td>Lead</td>
<td>0.800</td>
<td>ug/L</td>
<td>0.800</td>
<td>20.00</td>
<td>U</td>
<td>10</td>
<td>EPA 200.8</td>
<td>RLC</td>
<td>11/2/16 11:17</td>
</tr>
<tr>
<td>Selenium</td>
<td>2.00</td>
<td>ug/L</td>
<td>2.000</td>
<td>20.00</td>
<td>U</td>
<td>10</td>
<td>EPA 200.8</td>
<td>RLC</td>
<td>11/2/16 11:17</td>
</tr>
<tr>
<td>Thallium</td>
<td>1.00</td>
<td>ug/L</td>
<td>1.000</td>
<td>5.000</td>
<td>U</td>
<td>10</td>
<td>EPA 200.8</td>
<td>RLC</td>
<td>11/2/16 11:17</td>
</tr>
<tr>
<td><strong>Total Recoverable Metals by SW846 Method 6010B</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Barium</td>
<td>60.0</td>
<td>ug/L</td>
<td>0.500</td>
<td>20.00</td>
<td>1</td>
<td></td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>11/1/16 10:07</td>
</tr>
<tr>
<td>Beryllium</td>
<td>0.200</td>
<td>ug/L</td>
<td>0.200</td>
<td>2.000</td>
<td>U</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>11/1/16 10:07</td>
</tr>
<tr>
<td>Boron</td>
<td>51400</td>
<td>ug/L</td>
<td>10.00</td>
<td>50.00</td>
<td>1</td>
<td></td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>11/2/16 11:31</td>
</tr>
<tr>
<td>Calcium</td>
<td>675000</td>
<td>ug/L</td>
<td>30.00</td>
<td>1000</td>
<td>V</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>11/1/16 11:30</td>
</tr>
<tr>
<td>Chromium</td>
<td>1.60</td>
<td>ug/L</td>
<td>1.600</td>
<td>12.00</td>
<td>U</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>11/1/16 10:07</td>
</tr>
<tr>
<td>Molybdenium</td>
<td>6.00</td>
<td>ug/L</td>
<td>1.000</td>
<td>20.00</td>
<td>I</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>11/1/16 10:07</td>
</tr>
</tbody>
</table>

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
## Sample Information

<table>
<thead>
<tr>
<th>Sample Information</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Client:</td>
<td>Big Bend Power Station</td>
</tr>
<tr>
<td>Lab Sample ID: L16J027-05</td>
<td></td>
</tr>
<tr>
<td>Sample Description: BBS-CCR-BW-2</td>
<td></td>
</tr>
<tr>
<td>Sample Collection Method: Grab</td>
<td></td>
</tr>
<tr>
<td>Sampled By: Robert Barthelette</td>
<td></td>
</tr>
<tr>
<td>Date and Time Collected: 10/28/16 9:42</td>
<td></td>
</tr>
<tr>
<td>Date of Sample Receipt: 10/28/16 12:45</td>
<td></td>
</tr>
</tbody>
</table>

## Laboratory Results

### Sample Qualifier:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier Code</th>
<th>Dil</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>General Chemistry Parameters</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chloride</td>
<td>125</td>
<td>mg/L</td>
<td>0.400</td>
<td>10.0</td>
<td>V</td>
<td>20</td>
<td>EPA 300.0</td>
<td>TMH</td>
<td>11/1/16 18:06</td>
</tr>
<tr>
<td>Specific Conductance</td>
<td>1340</td>
<td>umhos/cm</td>
<td>100</td>
<td>100</td>
<td>1</td>
<td>FDEP SOP FT 1200</td>
<td>RAB</td>
<td>10/28/16 9:42</td>
<td></td>
</tr>
<tr>
<td>Dissolved Oxygen</td>
<td>0.370</td>
<td>mg/L</td>
<td>0.100</td>
<td>0.100</td>
<td>1</td>
<td>FDEP SOP FT 1500</td>
<td>RAB</td>
<td>10/28/16 9:42</td>
<td></td>
</tr>
<tr>
<td>Fluoride</td>
<td>0.440</td>
<td>mg/L</td>
<td>0.0100</td>
<td>0.0500</td>
<td>1</td>
<td>EPA 300.0</td>
<td>TMH</td>
<td>11/1/16 17:56</td>
<td></td>
</tr>
<tr>
<td>pH</td>
<td>6.67</td>
<td>pH Units</td>
<td>1.00</td>
<td>1.00</td>
<td>1</td>
<td>FDEP SOP FT 1100</td>
<td>RAB</td>
<td>10/28/16 9:42</td>
<td></td>
</tr>
<tr>
<td>REDOX Potential</td>
<td>-91.5</td>
<td>mV</td>
<td>-999</td>
<td>-999</td>
<td>1</td>
<td>SM 2580B</td>
<td>RAB</td>
<td>10/28/16 9:42</td>
<td></td>
</tr>
<tr>
<td>Total Dissolved Solids</td>
<td>1010</td>
<td>mg/L</td>
<td>24.0</td>
<td>40.0</td>
<td>2</td>
<td>SM 2540C</td>
<td>RFL</td>
<td>10/31/16 12:40</td>
<td></td>
</tr>
<tr>
<td>Sulfate</td>
<td>246</td>
<td>mg/L</td>
<td>10.0</td>
<td>40.0</td>
<td>20</td>
<td>EPA 300.0</td>
<td>TMH</td>
<td>11/1/16 18:06</td>
<td></td>
</tr>
<tr>
<td>Turbidity</td>
<td>3.99</td>
<td>NTU</td>
<td>0.100</td>
<td>0.100</td>
<td>1</td>
<td>FDEP SOP FT 1600</td>
<td>RAB</td>
<td>10/28/16 9:42</td>
<td></td>
</tr>
<tr>
<td><strong>Total Mercury by SW846 Method 7470/7471</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mercury</td>
<td>0.0500</td>
<td>ug/L</td>
<td>0.0500</td>
<td>0.200</td>
<td>U</td>
<td>1</td>
<td>EPA 7470A</td>
<td>RLC</td>
<td>11/4/16 10:27</td>
</tr>
<tr>
<td><strong>Total Recoverable Metals by 200 Series</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Antimony</td>
<td>0.600</td>
<td>ug/L</td>
<td>0.600</td>
<td>2.00</td>
<td>U</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RLC</td>
<td>11/2/16 9:50</td>
</tr>
<tr>
<td>Arsenic</td>
<td>1.62</td>
<td>ug/L</td>
<td>0.320</td>
<td>2.00</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RLC</td>
<td>11/2/16 9:50</td>
<td></td>
</tr>
<tr>
<td>Cadmium</td>
<td>0.100</td>
<td>ug/L</td>
<td>0.100</td>
<td>0.500</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RLC</td>
<td>11/2/16 9:50</td>
<td></td>
</tr>
<tr>
<td>Cobalt</td>
<td>0.151</td>
<td>ug/L</td>
<td>0.0400</td>
<td>2.00</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RLC</td>
<td>11/2/16 9:50</td>
<td></td>
</tr>
<tr>
<td>Lead</td>
<td>0.0800</td>
<td>ug/L</td>
<td>0.0800</td>
<td>2.00</td>
<td>U</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RLC</td>
<td>11/2/16 9:50</td>
</tr>
<tr>
<td>Selenium</td>
<td>0.489</td>
<td>ug/L</td>
<td>0.200</td>
<td>2.00</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RLC</td>
<td>11/2/16 9:50</td>
<td></td>
</tr>
<tr>
<td>Thallium</td>
<td>0.100</td>
<td>ug/L</td>
<td>0.100</td>
<td>0.500</td>
<td>U</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RLC</td>
<td>11/2/16 9:50</td>
</tr>
<tr>
<td><strong>Total Recoverable Metals by SW846 Method 6010B</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Barium</td>
<td>46.3</td>
<td>ug/L</td>
<td>0.500</td>
<td>20.0</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>11/1/16 10:10</td>
<td></td>
</tr>
<tr>
<td>Beryllium</td>
<td>0.200</td>
<td>ug/L</td>
<td>0.200</td>
<td>2.00</td>
<td>U</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>11/1/16 10:10</td>
</tr>
<tr>
<td>Boron</td>
<td>3900</td>
<td>ug/L</td>
<td>10.0</td>
<td>50.0</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>11/2/16 11:33</td>
<td></td>
</tr>
<tr>
<td>Calcium</td>
<td>238000</td>
<td>ug/L</td>
<td>30.0</td>
<td>1000</td>
<td>J-V</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>11/1/16 11:32</td>
</tr>
<tr>
<td>Chromium</td>
<td>1.60</td>
<td>ug/L</td>
<td>1.60</td>
<td>12.0</td>
<td>U</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>11/1/16 10:10</td>
</tr>
<tr>
<td>Molybdenum</td>
<td>1.42</td>
<td>ug/L</td>
<td>1.00</td>
<td>20.0</td>
<td>I</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>11/1/16 10:10</td>
</tr>
</tbody>
</table>

## Comments

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>U</td>
<td>Indicates that the compound was analyzed for but not detected.</td>
</tr>
<tr>
<td>J</td>
<td>The reported value is an estimated value, see the case narrative for specifics.</td>
</tr>
<tr>
<td>I</td>
<td>Estimated value</td>
</tr>
<tr>
<td>V</td>
<td>Analyte detected in the method blank</td>
</tr>
</tbody>
</table>

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
### Total Recoverable Metals by SW846 Method 6010B - Quality Control

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>MDL</th>
<th>PQL</th>
<th>Units</th>
<th>Spike Level</th>
<th>Source</th>
<th>%Rec</th>
<th>%Rec Limits</th>
<th>RPD</th>
<th>RPD Limit</th>
<th>Qualifier</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Batch 16J0236 - EPA 6010B</strong></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><strong>Blank (16J0236-BLK1)</strong></td>
<td>Prepared: 10/31/16 Analyzed: 11/01/16</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Barium</td>
<td>0.500</td>
<td>0.500</td>
<td>20.0</td>
<td>ug/L</td>
<td></td>
<td>U</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beryllium</td>
<td>0.200</td>
<td>0.200</td>
<td>2.00</td>
<td>ug/L</td>
<td></td>
<td>U</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Boron</td>
<td>10.0</td>
<td>10.0</td>
<td>50.0</td>
<td>ug/L</td>
<td></td>
<td>U</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Calcium</td>
<td>38.1</td>
<td>30.0</td>
<td>1000</td>
<td>ug/L</td>
<td></td>
<td>I</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chromium</td>
<td>1.60</td>
<td>1.60</td>
<td>12.0</td>
<td>ug/L</td>
<td></td>
<td>U</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Molybdenum</td>
<td>1.00</td>
<td>1.00</td>
<td>20.0</td>
<td>ug/L</td>
<td></td>
<td>U</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>LCS (16J0236-BS1)</strong></td>
<td>Prepared: 10/31/16 Analyzed: 11/01/16</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Barium</td>
<td>1030</td>
<td>0.500</td>
<td>20.0</td>
<td>ug/L</td>
<td>1000.0</td>
<td>103</td>
<td>80-120</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beryllium</td>
<td>1060</td>
<td>0.200</td>
<td>2.00</td>
<td>ug/L</td>
<td>1000.0</td>
<td>106</td>
<td>80-120</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Boron</td>
<td>1070</td>
<td>10.0</td>
<td>50.0</td>
<td>ug/L</td>
<td>1000.0</td>
<td>107</td>
<td>80-120</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chromium</td>
<td>1040</td>
<td>1.60</td>
<td>12.0</td>
<td>ug/L</td>
<td>1000.0</td>
<td>104</td>
<td>80-120</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Molybdenum</td>
<td>978</td>
<td>1.00</td>
<td>20.0</td>
<td>ug/L</td>
<td>1000.0</td>
<td>97.8</td>
<td>80-120</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Matrix Spike (16J0236-MS1)</strong></td>
<td>Source: L16J027-05</td>
<td>Prepared: 10/31/16 Analyzed: 11/01/16</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Barium</td>
<td>1050</td>
<td>0.500</td>
<td>20.0</td>
<td>ug/L</td>
<td>1000.0</td>
<td>46.3</td>
<td>99.9</td>
<td>75-125</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beryllium</td>
<td>1030</td>
<td>0.200</td>
<td>2.00</td>
<td>ug/L</td>
<td>1000.0</td>
<td>U</td>
<td>103</td>
<td>75-125</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Boron</td>
<td>4890</td>
<td>10.0</td>
<td>50.0</td>
<td>ug/L</td>
<td>1000.0</td>
<td>3900</td>
<td>98.6</td>
<td>75-125</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chromium</td>
<td>1000</td>
<td>1.60</td>
<td>12.0</td>
<td>ug/L</td>
<td>1000.0</td>
<td>U</td>
<td>100</td>
<td>75-125</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Molybdenum</td>
<td>970</td>
<td>1.00</td>
<td>20.0</td>
<td>ug/L</td>
<td>1000.0</td>
<td>1.42</td>
<td>96.8</td>
<td>75-125</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Matrix Spike Dup (16J0236-MSD1)</strong></td>
<td>Source: L16J027-05</td>
<td>Prepared: 10/31/16 Analyzed: 11/01/16</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Barium</td>
<td>1080</td>
<td>0.500</td>
<td>20.0</td>
<td>ug/L</td>
<td>1000.0</td>
<td>46.3</td>
<td>104</td>
<td>75-125</td>
<td>3.62</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Beryllium</td>
<td>1060</td>
<td>0.200</td>
<td>2.00</td>
<td>ug/L</td>
<td>1000.0</td>
<td>U</td>
<td>106</td>
<td>75-125</td>
<td>2.92</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Boron</td>
<td>4950</td>
<td>10.0</td>
<td>50.0</td>
<td>ug/L</td>
<td>1000.0</td>
<td>3900</td>
<td>105</td>
<td>75-125</td>
<td>1.32</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Chromium</td>
<td>1040</td>
<td>1.60</td>
<td>12.0</td>
<td>ug/L</td>
<td>1000.0</td>
<td>U</td>
<td>104</td>
<td>75-125</td>
<td>3.52</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Molybdenum</td>
<td>1020</td>
<td>1.00</td>
<td>20.0</td>
<td>ug/L</td>
<td>1000.0</td>
<td>1.42</td>
<td>102</td>
<td>75-125</td>
<td>5.04</td>
<td>20</td>
<td></td>
</tr>
</tbody>
</table>

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
### Total Mercury by SW846 Method 7470/7471 - Quality Control

<table>
<thead>
<tr>
<th>Analyte Description</th>
<th>Result</th>
<th>MDL</th>
<th>PQL</th>
<th>Units</th>
<th>Spike Level</th>
<th>Source</th>
<th>%Rec</th>
<th>%Rec Limits</th>
<th>RPD Limit</th>
<th>Qualifier</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blank (16K0037-BLK1)</td>
<td></td>
<td></td>
<td></td>
<td>ug/L</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prepared: 11/03/16, Analyzed: 11/04/16</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mercury</td>
<td>0.0500</td>
<td>0.0500</td>
<td>0.200</td>
<td>ug/L</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LCS (16K0037-BS1)</td>
<td></td>
<td></td>
<td></td>
<td>ug/L</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prepared: 11/03/16, Analyzed: 11/04/16</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mercury</td>
<td>1.04</td>
<td>0.0500</td>
<td>0.200</td>
<td>ug/L</td>
<td>1.0000</td>
<td>104</td>
<td>80-120</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Matrix Spike (16K0037-MS1)</td>
<td></td>
<td></td>
<td></td>
<td>ug/L</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Source: L16K028-03</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prepared: 11/03/16, Analyzed: 11/04/16</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mercury</td>
<td>0.893</td>
<td>0.0500</td>
<td>0.200</td>
<td>ug/L</td>
<td>1.0000</td>
<td>U</td>
<td>89.3</td>
<td>75-125</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Matrix Spike Dup (16K0037-MSD1)</td>
<td></td>
<td></td>
<td></td>
<td>ug/L</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Source: L16K028-03</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prepared: 11/03/16, Analyzed: 11/04/16</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mercury</td>
<td>0.922</td>
<td>0.0500</td>
<td>0.200</td>
<td>ug/L</td>
<td>1.0000</td>
<td>U</td>
<td>92.2</td>
<td>75-125</td>
<td>3.22</td>
<td>20</td>
</tr>
</tbody>
</table>

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>MDL</th>
<th>PQL</th>
<th>Units</th>
<th>Spike Level</th>
<th>Source</th>
<th>%Rec Limits</th>
<th>RPD Limit</th>
<th>Qualifier</th>
</tr>
</thead>
<tbody>
<tr>
<td>Batch 16J0235 - EPA 200.8</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Antimony</td>
<td>0.600</td>
<td>0.600</td>
<td>2.00</td>
<td>ug/L</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>U</td>
</tr>
<tr>
<td>Arsenic</td>
<td>0.320</td>
<td>0.320</td>
<td>2.00</td>
<td>ug/L</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>U</td>
</tr>
<tr>
<td>Cadmium</td>
<td>0.100</td>
<td>0.100</td>
<td>0.500</td>
<td>ug/L</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>U</td>
</tr>
<tr>
<td>Cobalt</td>
<td>0.0400</td>
<td>0.0400</td>
<td>2.00</td>
<td>ug/L</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>U</td>
</tr>
<tr>
<td>Lead</td>
<td>0.0800</td>
<td>0.0800</td>
<td>2.00</td>
<td>ug/L</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>U</td>
</tr>
<tr>
<td>Selenium</td>
<td>0.200</td>
<td>0.200</td>
<td>2.00</td>
<td>ug/L</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>U</td>
</tr>
<tr>
<td>Thallium</td>
<td>0.100</td>
<td>0.100</td>
<td>0.500</td>
<td>ug/L</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>U</td>
</tr>
<tr>
<td>LCS (16J0235-BS1)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Antimony</td>
<td>103</td>
<td>0.600</td>
<td>2.00</td>
<td>ug/L</td>
<td>100.00</td>
<td>103</td>
<td>85-115</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arsenic</td>
<td>98.4</td>
<td>0.320</td>
<td>2.00</td>
<td>ug/L</td>
<td>100.00</td>
<td>98.4</td>
<td>85-115</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cadmium</td>
<td>102</td>
<td>0.100</td>
<td>0.500</td>
<td>ug/L</td>
<td>100.00</td>
<td>102</td>
<td>85-115</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cobalt</td>
<td>104</td>
<td>0.0400</td>
<td>2.00</td>
<td>ug/L</td>
<td>100.00</td>
<td>104</td>
<td>85-115</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lead</td>
<td>106</td>
<td>0.0800</td>
<td>2.00</td>
<td>ug/L</td>
<td>100.00</td>
<td>106</td>
<td>85-115</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Selenium</td>
<td>95.2</td>
<td>0.200</td>
<td>2.00</td>
<td>ug/L</td>
<td>100.00</td>
<td>95.2</td>
<td>85-115</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thallium</td>
<td>106</td>
<td>0.100</td>
<td>0.500</td>
<td>ug/L</td>
<td>100.00</td>
<td>106</td>
<td>85-115</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Matrix Spike (16J0235-MS1)</td>
<td>Source: L16J027-01</td>
<td>Prepared: 10/31/16</td>
<td>Analyzed: 11/02/16</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Antimony</td>
<td>99.1</td>
<td>0.600</td>
<td>2.00</td>
<td>ug/L</td>
<td>100.00</td>
<td>U</td>
<td>99.1</td>
<td>70-130</td>
<td></td>
</tr>
<tr>
<td>Arsenic</td>
<td>92.9</td>
<td>0.320</td>
<td>2.00</td>
<td>ug/L</td>
<td>100.00</td>
<td>8.30</td>
<td>84.6</td>
<td>70-130</td>
<td></td>
</tr>
<tr>
<td>Cadmium</td>
<td>77.6</td>
<td>0.100</td>
<td>0.500</td>
<td>ug/L</td>
<td>100.00</td>
<td>U</td>
<td>77.6</td>
<td>70-130</td>
<td></td>
</tr>
<tr>
<td>Cobalt</td>
<td>85.1</td>
<td>0.0400</td>
<td>2.00</td>
<td>ug/L</td>
<td>100.00</td>
<td>0.507</td>
<td>84.6</td>
<td>70-130</td>
<td></td>
</tr>
<tr>
<td>Lead</td>
<td>88.4</td>
<td>0.0800</td>
<td>2.00</td>
<td>ug/L</td>
<td>100.00</td>
<td>U</td>
<td>88.4</td>
<td>70-130</td>
<td></td>
</tr>
<tr>
<td>Selenium</td>
<td>82.3</td>
<td>0.200</td>
<td>2.00</td>
<td>ug/L</td>
<td>100.00</td>
<td>0.690</td>
<td>81.6</td>
<td>70-130</td>
<td></td>
</tr>
<tr>
<td>Thallium</td>
<td>92.1</td>
<td>0.100</td>
<td>0.500</td>
<td>ug/L</td>
<td>100.00</td>
<td>U</td>
<td>92.1</td>
<td>70-130</td>
<td></td>
</tr>
<tr>
<td>Matrix Spike Dup (16J0235-MSD1)</td>
<td>Source: L16J027-01</td>
<td>Prepared: 10/31/16</td>
<td>Analyzed: 11/02/16</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Antimony</td>
<td>99.3</td>
<td>0.600</td>
<td>2.00</td>
<td>ug/L</td>
<td>100.00</td>
<td>U</td>
<td>99.3</td>
<td>70-130</td>
<td>0.240</td>
</tr>
<tr>
<td>Arsenic</td>
<td>94.6</td>
<td>0.320</td>
<td>2.00</td>
<td>ug/L</td>
<td>100.00</td>
<td>8.30</td>
<td>86.3</td>
<td>70-130</td>
<td>1.88</td>
</tr>
<tr>
<td>Cadmium</td>
<td>78.8</td>
<td>0.100</td>
<td>0.500</td>
<td>ug/L</td>
<td>100.00</td>
<td>U</td>
<td>78.8</td>
<td>70-130</td>
<td>1.46</td>
</tr>
<tr>
<td>Cobalt</td>
<td>88.2</td>
<td>0.0400</td>
<td>2.00</td>
<td>ug/L</td>
<td>100.00</td>
<td>0.507</td>
<td>87.6</td>
<td>70-130</td>
<td>3.47</td>
</tr>
<tr>
<td>Lead</td>
<td>88.2</td>
<td>0.0800</td>
<td>2.00</td>
<td>ug/L</td>
<td>100.00</td>
<td>U</td>
<td>88.2</td>
<td>70-130</td>
<td>0.156</td>
</tr>
<tr>
<td>Selenium</td>
<td>84.6</td>
<td>0.200</td>
<td>2.00</td>
<td>ug/L</td>
<td>100.00</td>
<td>0.690</td>
<td>83.9</td>
<td>70-130</td>
<td>2.73</td>
</tr>
<tr>
<td>Thallium</td>
<td>92.3</td>
<td>0.100</td>
<td>0.500</td>
<td>ug/L</td>
<td>100.00</td>
<td>U</td>
<td>92.3</td>
<td>70-130</td>
<td>0.295</td>
</tr>
</tbody>
</table>

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
## General Chemistry Parameters - Quality Control

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>MDL</th>
<th>PQL</th>
<th>Units</th>
<th>Spike Level</th>
<th>Source</th>
<th>%Rec Limits</th>
<th>RPD Limit</th>
<th>Qualifier</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Batch 16J0241 - SM 2540C</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blank (16J0241-BLK1)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Prepared &amp; Analyzed: 10/31/16</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Dissolved Solids</td>
<td>12.0</td>
<td>12.0</td>
<td>20.0</td>
<td>mg/L</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>U</td>
</tr>
<tr>
<td>LCS (16J0241-BS1)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Prepared &amp; Analyzed: 10/31/16</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Dissolved Solids</td>
<td>1020</td>
<td>12.0</td>
<td>20.0</td>
<td>mg/L</td>
<td>1000.0</td>
<td>102</td>
<td>80-120</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Duplicate (16J0241-DUP1)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Source: L16J027-01</td>
<td>Prepared &amp; Analyzed: 10/31/16</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Dissolved Solids</td>
<td>3200</td>
<td>24.0</td>
<td>40.0</td>
<td>mg/L</td>
<td>3170</td>
<td>1.01</td>
<td>10</td>
<td>J-</td>
<td></td>
</tr>
<tr>
<td>Duplicate (16J0241-DUP2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Source: L16J141-02</td>
<td>Prepared &amp; Analyzed: 10/31/16</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Dissolved Solids</td>
<td>135</td>
<td>12.0</td>
<td>20.0</td>
<td>mg/L</td>
<td>128</td>
<td>5.32</td>
<td>10</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Batch 16K0007 - EPA 300.0</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blank (16K0007-BLK1)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Prepared &amp; Analyzed: 11/01/16</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chloride</td>
<td>0.101</td>
<td>0.0200</td>
<td>0.500</td>
<td>mg/L</td>
<td></td>
<td>I</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fluoride</td>
<td>0.0100</td>
<td>0.0100</td>
<td>0.0500</td>
<td>mg/L</td>
<td></td>
<td>U</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sulfate</td>
<td>0.500</td>
<td>0.500</td>
<td>2.00</td>
<td>mg/L</td>
<td></td>
<td>U</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LCS (16K0007-BS1)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Prepared &amp; Analyzed: 11/01/16</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chloride</td>
<td>4.88</td>
<td>0.0200</td>
<td>0.500</td>
<td>mg/L</td>
<td>5.0000</td>
<td>97.5</td>
<td>90-110</td>
<td>V</td>
<td></td>
</tr>
<tr>
<td>Fluoride</td>
<td>4.76</td>
<td>0.0100</td>
<td>0.0500</td>
<td>mg/L</td>
<td>5.0000</td>
<td>95.2</td>
<td>90-110</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sulfate</td>
<td>5.12</td>
<td>0.500</td>
<td>2.00</td>
<td>mg/L</td>
<td>5.0000</td>
<td>102</td>
<td>90-110</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Matrix Spike (16K0007-MS1)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Source: L16J027-01</td>
<td>Prepared &amp; Analyzed: 11/01/16</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chloride</td>
<td>831</td>
<td>0.400</td>
<td>10.0</td>
<td>mg/L</td>
<td>100.00</td>
<td>743</td>
<td>87.9</td>
<td>90-110</td>
<td>J-,V</td>
</tr>
<tr>
<td>Fluoride</td>
<td>105</td>
<td>0.200</td>
<td>1.00</td>
<td>mg/L</td>
<td>100.00</td>
<td>0.104</td>
<td>105</td>
<td>90-110</td>
<td></td>
</tr>
<tr>
<td>Sulfate</td>
<td>1310</td>
<td>10.0</td>
<td>40.0</td>
<td>mg/L</td>
<td>100.00</td>
<td>1230</td>
<td>80.7</td>
<td>90-110</td>
<td>J-</td>
</tr>
</tbody>
</table>

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
## General Chemistry Parameters - Quality Control

### Batch 16K0007 - EPA 300.0

Matrix Spike Dup (16K0007-MSD1)  
Prepared & Analyzed: 11/01/16

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>Source</th>
<th>%Rec</th>
<th>RPD Limit</th>
<th>Qualifier</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chloride</td>
<td>8.36</td>
<td>100.00</td>
<td>93.4</td>
<td>0.659</td>
<td>20</td>
</tr>
<tr>
<td>Fluoride</td>
<td>1.06</td>
<td>100.00</td>
<td>104.0</td>
<td>0.900</td>
<td>20</td>
</tr>
<tr>
<td>Sulfate</td>
<td>13.20</td>
<td>100.00</td>
<td>90.2</td>
<td>0.726</td>
<td>20</td>
</tr>
</tbody>
</table>

---

Tampa Electric Company, Laboratory Services  
Peggy Penner, Manager, Laboratory Services

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
<table>
<thead>
<tr>
<th>Site: Big Bend</th>
<th>Date: 10/28/116</th>
<th>File Name: 10/28/116_Wells_RAB</th>
<th>Weather: PTLY CLOUDY &amp; WARM</th>
<th>Sample(s) / initials: RAB / TECO</th>
<th>Initials: NGVD</th>
</tr>
</thead>
<tbody>
<tr>
<td>LIMS #</td>
<td>Lociton Code</td>
<td>Time</td>
<td>FE$^2$</td>
<td>pH (SU)</td>
<td>Temp °C</td>
</tr>
<tr>
<td>L16J027-01</td>
<td>BBS-CCR-1</td>
<td>11:42</td>
<td>6.83</td>
<td>25.78</td>
<td>4084</td>
</tr>
<tr>
<td>L16J027-02</td>
<td>BBS-CCR-2</td>
<td>11:15</td>
<td>6.87</td>
<td>25.64</td>
<td>1505</td>
</tr>
<tr>
<td>L16J027-01</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>L16J027-02</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Preservation</td>
<td>Pres ID</td>
<td>Buffer ID</td>
<td>Buffer Value</td>
<td>Cal</td>
<td>Time</td>
</tr>
<tr>
<td>FDEP FT 1100</td>
<td>L016500A</td>
<td>10</td>
<td>10.05</td>
<td>8.20</td>
<td>QC: (pH &lt; 0.3) (DO +/-. 3mg/L) (Redox +/-. 10mv)</td>
</tr>
<tr>
<td>Conductivity Meter Calib.</td>
<td>Standard</td>
<td>Std Value</td>
<td>Cal</td>
<td>Time</td>
<td>pH</td>
</tr>
<tr>
<td>MPM08</td>
<td>L016396E</td>
<td>7</td>
<td>7.02</td>
<td>8.20</td>
<td>QC: (pH &lt; 0.3) (DO +/-. 3mg/L) (Redox +/-. 10mv)</td>
</tr>
<tr>
<td>FDEP FT 1200</td>
<td>L016396E</td>
<td>10000</td>
<td>10000</td>
<td>8.29</td>
<td>QC: (pH &lt; 0.3) (DO +/-. 3mg/L) (Redox +/-. 10mv)</td>
</tr>
<tr>
<td>Turbidity Meter Calibration</td>
<td>Standard</td>
<td>Std Value</td>
<td>Acceptability Range</td>
<td>ICV</td>
<td>Time</td>
</tr>
<tr>
<td>MPM08</td>
<td>L016396E</td>
<td>10000</td>
<td>10000</td>
<td>8.29</td>
<td>QC: (pH &lt; 0.3) (DO +/-. 3mg/L) (Redox +/-. 10mv)</td>
</tr>
<tr>
<td>Sulfate Info (QC Check)</td>
<td>(EPA 377.1)</td>
<td>QC Result mg/l</td>
<td>Time</td>
<td>Titrator ID</td>
<td>Na Thio ID</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Purging Information</td>
<td>Well Capacities (gallons/ft): 2&quot; = 0.16&quot; - 0.40&quot; = 0.65&quot;</td>
<td>Tubing Inside Diameter, Capacities (gallons/ft): 1/4&quot; = 0.0026, 3/8&quot; = 0.006</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Well #</td>
<td>Diam/ Comp</td>
<td>Screen Interval (ft)</td>
<td>Intake Depth (ft)</td>
<td>Well Depth (ft)</td>
<td>Well Water Depth (ft)</td>
</tr>
<tr>
<td>BBS-CCR-1</td>
<td>2</td>
<td>10</td>
<td>17.32</td>
<td>22.32</td>
<td>6.78</td>
</tr>
<tr>
<td>Purge Method</td>
<td>Time</td>
<td>Rate (ml/min)</td>
<td>Volume (gal)</td>
<td>Total Vol (gal)</td>
<td>Water Depth (ft)</td>
</tr>
<tr>
<td>1A</td>
<td>11:14</td>
<td>700</td>
<td>1.29</td>
<td>1.29</td>
<td>6.94</td>
</tr>
<tr>
<td>Purge Start</td>
<td>11:18</td>
<td>700</td>
<td>0.37</td>
<td>1.66</td>
<td>6.94</td>
</tr>
<tr>
<td>Purge Complete At: 11:08</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Purge Method</td>
<td>Time</td>
<td>Rate (ml/min)</td>
<td>Volume (gal)</td>
<td>Total Vol (gal)</td>
<td>Water Depth (ft)</td>
</tr>
<tr>
<td>1A</td>
<td>11:04</td>
<td>720</td>
<td>0.95</td>
<td>0.95</td>
<td>6.92</td>
</tr>
<tr>
<td>Purge Start</td>
<td>11:04</td>
<td>720</td>
<td>0.95</td>
<td>0.95</td>
<td>6.92</td>
</tr>
<tr>
<td>Purge Complete At: 11:04</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Comments:

<table>
<thead>
<tr>
<th>Total Time</th>
<th>Total Miles</th>
</tr>
</thead>
<tbody>
<tr>
<td>Site:</td>
<td>Big Bend</td>
</tr>
<tr>
<td>------</td>
<td>----------</td>
</tr>
<tr>
<td>LIMS #</td>
<td>Location Code</td>
</tr>
<tr>
<td>L16J027-03</td>
<td>BBS-CCR-3</td>
</tr>
<tr>
<td>L16J027-03</td>
<td>CCR-PZ-4</td>
</tr>
</tbody>
</table>

**Notes:**
- 1L plastic (PP)
- 2) 500ml plastic (PP)
- 3) 500ml plastic (PP)
- 4) 100ml colorm fox bottle
- 5) 1L amber glass (AG)
- 6) 40ml VOA vial (GO)

<table>
<thead>
<tr>
<th>Preservation</th>
<th>Pres ID</th>
<th>Preservation</th>
<th>Pres ID</th>
<th>Preservation</th>
<th>Pres ID</th>
</tr>
</thead>
<tbody>
<tr>
<td>L100688</td>
<td>L</td>
<td>010688</td>
<td>L</td>
<td>010688</td>
<td>L</td>
</tr>
<tr>
<td>satellite (bottle)</td>
<td>5 ml HNO3 to pH &lt;2</td>
<td>L</td>
<td>010688</td>
<td>L</td>
<td>010688</td>
</tr>
<tr>
<td>500 ml bottle (metal)</td>
<td>2 ml HNO3 to pH &lt;2</td>
<td>L</td>
<td>010688</td>
<td>L</td>
<td>010688</td>
</tr>
<tr>
<td>250 ml bottle (metal)</td>
<td>1 ml HNO3 to pH &lt;2</td>
<td>L</td>
<td>010688</td>
<td>L</td>
<td>010688</td>
</tr>
</tbody>
</table>

**Comments:**
- A checked box indicates that the sample was verified to a pH of <2

**Additional Notes:**
- Purge Start:
  - DO Meter Cal
  - Temp °C
  - Reading mg/L
  - Theo Value mg/L
- Purge End:
  - DO % Sat.
  - pH
  - Conduct. (%)
  - DO (mg/l)
  - Redox (mv)

**Purging Information:**
- Well Name: BBS-CCR-3
- Diam/Comp: 2
- Screen Interval (ft): 23.23
- Intake Depth (ft): 18.23
- Well Depth (ft): 18.23
- Purge Method: Pump
- Time: 10:35
- Rate (l/min): 340
- Volume (gal): 16.69
- Water Depth (ft): 6.42
- pH (SU): 6.42
- Redox (mv): 26.08
- DO mg/L: 1685
- Temp °C: 24.23

**Purging Criteria:**
- Status: STABLE
- Equipment ID: WLM08

**Purge Complete At 10:28 Gallons to Purge:**
- Stability Values = 6.42
- Total Gallons: 26.20
- Total Volume: 1645
- Total Time: 0.06

<table>
<thead>
<tr>
<th>Well Name</th>
<th>Diam/Comp</th>
<th>Screen Interval (ft)</th>
<th>Intake Depth (ft)</th>
<th>Well Depth (ft)</th>
<th>Purge Method</th>
<th>Rate (l/min)</th>
<th>Volume (gal)</th>
<th>Water Depth (ft)</th>
<th>pH (SU)</th>
<th>DO mg/L</th>
<th>Temp °C</th>
<th>Turbidity (mv)</th>
<th>Redox (mv)</th>
<th>Status</th>
<th>Equipment ID</th>
</tr>
</thead>
<tbody>
<tr>
<td>BBS-CCR-3</td>
<td>2</td>
<td>23.23</td>
<td>18.23</td>
<td>6.42</td>
<td>Pump</td>
<td>340</td>
<td>16.69</td>
<td>6.42</td>
<td>6.42</td>
<td>1685</td>
<td>24.23</td>
<td>0</td>
<td>0.06</td>
<td>0.12</td>
<td>WLM08</td>
</tr>
</tbody>
</table>

**Additional Notes:**
- Purge End:
  - DO % Sat.
  - pH
  - Conduct. (%)
  - DO (mg/l)
  - Redox (mv)
- Purge Complete At Gallons to Purge: 6.42
- Stability Values = 6.42

**Additional Notes:**
- Purge Method: Pump
- Time: 10:35
- Rate (l/min): 340
- Volume (gal): 16.69
- Water Depth (ft): 6.42
- pH (SU): 6.42
- Total Time: 0.06
- Total Gallons: 26.20

**Comments:**
- A checked box indicates that the sample was verified to a pH of <2

**Additional Notes:**
- Purge Start:
  - DO Meter Cal
  - Temp °C
  - Reading mg/L
  - Theo Value mg/L
- Purge End:
  - DO % Sat.
  - pH
  - Conduct. (%)
  - DO (mg/l)
  - Redox (mv)

**Purging Information:**
- Well Name: CCR-PZ-4
- Diam/Comp: 2
- Screen Interval (ft): 23.23
- Intake Depth (ft): 18.23
- Well Depth (ft): 18.00
- Purge Method: Pump
- Time: 10:35
- Rate (l/min): 340
- Volume (gal): 18.00
- Water Depth (ft): 6.42
- pH (SU): 6.42
- Redox (mv): 26.08
- DO mg/L: 1685
- Temp °C: 24.23

**Purging Criteria:**
- Status: STABLE
- Equipment ID: WLM08

**Purge Complete At Gallons to Purge:**
- Stability Values = 6.42
- Total Gallons: 26.20
- Total Volume: 1645
- Total Time: 0.06
### Purging Information

#### Well Capacities (gallons/ft): 2 = 0.16 4 = 0.65

| Well # | Diam/Comp | Screen Interval (ft) | Intake Depth (ft) | Well Depth (ft) - Depth to Water (ft) = Well Capacity (gallons) | Water Column (ft) X (Tubing Volume (gal) + Pump Volume (gal)) + Cell Volume (gal) = 1 Eqpt. Volume (gal) | Purge Meth | Time | Rate (ml/min) | Volume (gal) | Temp °C | Cond (µS/µL) | DO (mg/L) | Turbidity (NTU) | Purge Criteria | Status | Equipment ID |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BBS-CCR-BW-1 | 2 | 40 | 39.3 | 44.3 | 29.42 | 14.88 | 0.16 | 2.38 | 0.0026 | 100 | 0 | 0.06 | 0.32 |
| Purge Meth | Time | Rate (ml/min) | Volume (gal) | Total Vol (gal) | Water Depth (ft) | pH (SU) | Temp °C | Cond (µS/µL) | DO (mg/L) | Turbidity (NTU) | Purge Criteria | Status | Equipment ID |
| 1A | 10:06 | 1600 | 5.92 | 5.92 | 30.33 | 6.51 | 27.47 | 4790 | 0.14 | 13.30 | ph:< 8.2 | STABLE | Level Meter: WLM08 |
| Purge Start | 10:08 | 1600 | 0.85 | 6.77 | 30.33 | 6.51 | 27.48 | 4858 | 0.13 | 4.08 | Cond % +/- 5 | STABLE | Tubing: PE |
| Purge End | 9:52 | 10:10 | 1600 | 10:06 | 5.92 | 5.92 | 30.33 | 6.50 | 27.46 | 4858 | 0.13 | 4.08 | No |
| 10:10 | | | | | | | | | | | | | |

#### Purge Complete At

| 9:53 Gallons to Purge 0.32 | Stability Values = 6.50 | 27.46 | 4858 | 0.13 | 4.08 |

---

#### Purge Meth | Time | Rate (ml/min) | Volume (gal) | Total Vol (gal) | Water Depth (ft) | pH (SU) | Temp °C | Cond (µS/µL) | DO (mg/L) | Turbidity (NTU) | Purge Criteria | Status | Equipment ID |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1A</td>
<td>9:30</td>
<td>500</td>
<td>0.66</td>
<td>0.66</td>
<td>8.28</td>
<td>6.67</td>
<td>27.27</td>
<td>1346</td>
<td>0.19</td>
<td>5.36</td>
<td>ph:&lt; 8.2</td>
<td>STABLE</td>
</tr>
<tr>
<td>Purge Start</td>
<td>9:32</td>
<td>500</td>
<td>0.26</td>
<td>0.92</td>
<td>8.29</td>
<td>6.67</td>
<td>27.25</td>
<td>1346</td>
<td>0.17</td>
<td>4.39</td>
<td>Cond % +/- 5</td>
<td>STABLE</td>
</tr>
<tr>
<td>Purge End</td>
<td>9:25</td>
<td>9:34</td>
<td>480</td>
<td>2.5</td>
<td>1.17</td>
<td>8.29</td>
<td>6.67</td>
<td>27.22</td>
<td>1345</td>
<td>0.37</td>
<td>3.99</td>
<td>No</td>
</tr>
<tr>
<td>9:34</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>
</tbody>
</table>

#### Purge Complete At

| 9:26 Gallons to Purge 0.12 | Stability Values = 6.67 | 27.22 | 1345 | 0.37 | 3.99 |

---

### Comments:

Total Time: 10:10
Total Miles: 0.00
### GROUNDWATER SAMPLING LOG

**WELL NO:** BBS-CCR-1  
**SITE LOCATION:** Apollo Beach, FL.  
**SAMPLE ID:** L16J027-01  
**DATE:** 10/28/16

#### PURGING DATA

<table>
<thead>
<tr>
<th>TIME</th>
<th>INICIAL PUMP OR TUBING DEPTH IN WELL (feet):</th>
<th>FINAL PUMP OR TUBING DEPTH IN WELL (feet):</th>
<th>VOLUME PURGED (GALLONS)</th>
<th>DEPTH TO WATER (FEET)</th>
<th>pH</th>
<th>TEMP. (ºC)</th>
<th>COND. (µmhos/cm OR µS/cm)</th>
<th>DISSOLVED OXYGEN (circle mg/l or % saturation)</th>
<th>TURBIDITY (NTUs)</th>
<th>COLOR (describe)</th>
<th>ODOR (describe)</th>
<th>TOTAL VOLUME PURGED (gallons):</th>
</tr>
</thead>
<tbody>
<tr>
<td>11:14</td>
<td>17.32</td>
<td>17.32</td>
<td>1/4</td>
<td>12.32 feet to 22.32</td>
<td>6.78</td>
<td>0.0026</td>
<td>23.3 feet</td>
<td>6.94 0.18</td>
<td>6.84 25.82</td>
<td>20 4056 0.05</td>
<td>CLEAR</td>
<td>NONE</td>
</tr>
<tr>
<td>11:16</td>
<td>0.37</td>
<td>1.29</td>
<td>1/4</td>
<td>12.32 feet to 22.32</td>
<td>6.78</td>
<td>0.0026</td>
<td>23.3 feet</td>
<td>6.94 0.18</td>
<td>6.83 25.80</td>
<td>20 4067 0.04</td>
<td>CLEAR</td>
<td>NONE</td>
</tr>
<tr>
<td>11:18</td>
<td>0.37</td>
<td>2.03</td>
<td>1/4</td>
<td>12.32 feet to 22.32</td>
<td>6.78</td>
<td>0.0026</td>
<td>23.3 feet</td>
<td>6.92 0.19</td>
<td>6.83 25.78</td>
<td>20 4064 0.04</td>
<td>CLEAR</td>
<td>NONE</td>
</tr>
</tbody>
</table>

#### SAMPLING DATA

<table>
<thead>
<tr>
<th>SAMPLED BY (PRINT) / AFFILIATION:</th>
<th>RAB</th>
<th>TECO</th>
<th>SAMPLE (S) SIGNATURES:</th>
<th>SAMPLING INITIATED AT:</th>
<th>11:18</th>
<th>SAMPLING ENDED AT:</th>
<th>11:42</th>
</tr>
</thead>
<tbody>
<tr>
<td>PUMP OR TUBING DEPTH IN WELL (feet):</td>
<td>17.3</td>
<td>SAMPLE PUMP FLOW RATE (mL per minute):</td>
<td>700</td>
<td>TUBING MATERIAL CODE:</td>
<td>PE/S</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FIELD DECONTAMINATION:</td>
<td>Y</td>
<td>N</td>
<td>FIELD-FILTERED:</td>
<td>&quot; &quot;</td>
<td>FILTER SIZE:</td>
<td>µm</td>
<td>DUPLICATE:</td>
</tr>
<tr>
<td>SAMPLE CONTAINER SPECIFICATION:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SAMPLE ID CODE</td>
<td># CONTAINERS</td>
<td>MATERIAL CODE</td>
<td>VOLUME</td>
<td>PRESERVATIVE USED</td>
<td>TOTAL VOL ADDED IN FIELD (ml):</td>
<td>FINAL pH</td>
<td>INTENDED ANALYSIS AND/OR METHOD</td>
</tr>
<tr>
<td>@Ino-500</td>
<td>1</td>
<td>PE</td>
<td>500ml</td>
<td>NONE</td>
<td>NONE</td>
<td>N/A</td>
<td>Inorganics</td>
</tr>
<tr>
<td>@Met-250</td>
<td>2</td>
<td>PE</td>
<td>250ml</td>
<td>HNO3</td>
<td>1ml</td>
<td>&lt;2</td>
<td>Metals</td>
</tr>
<tr>
<td>@Rad-1L</td>
<td>2</td>
<td>PE</td>
<td>1L</td>
<td>HNO3</td>
<td>5ml</td>
<td>&lt;2</td>
<td>Radiologicals</td>
</tr>
</tbody>
</table>

**REMARKS:**

(1) Sample bottles pre-preserved at laboratory prior to sample collection.

### NOTES:

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

**MATERIAL CODES:**
- AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

**SAMPLING/PURGING EQUIPMENT CODES:**
- APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (tubing Gravity Drain); VT = Vacuum Trap; O = Other (Specify)

Page 32 of 32  
Revision Date: February 1, 2004
### PURGING DATA

<table>
<thead>
<tr>
<th>Time</th>
<th>Initial Pump or Tubing Depth in Well (feet)</th>
<th>Final Pump or Tubing Depth in Well (feet)</th>
<th>Initial Pump or Tubing Depth in Well</th>
<th>Final Pump or Tubing Depth in Well</th>
<th>pH</th>
<th>Temperature (°C)</th>
<th>Conductivity (µmhos/cm or µS/cm)</th>
<th>Dissolved Oxygen</th>
<th>TURBIDITY (NTUs)</th>
<th>Color</th>
<th>Odor</th>
</tr>
</thead>
<tbody>
<tr>
<td>11:04</td>
<td>0.95</td>
<td>16.84</td>
<td>16.84</td>
<td>0.95</td>
<td>6.92</td>
<td>25.64</td>
<td>1467</td>
<td>0.08</td>
<td>6.03</td>
<td>LT YELLOW</td>
<td>NONE</td>
</tr>
<tr>
<td>11:06</td>
<td>0.37</td>
<td>16.84</td>
<td>16.84</td>
<td>0.37</td>
<td>6.92</td>
<td>25.62</td>
<td>1485</td>
<td>0.09</td>
<td>3.88</td>
<td>LT YELLOW</td>
<td>NONE</td>
</tr>
<tr>
<td>11:08</td>
<td>0.37</td>
<td>16.84</td>
<td>16.84</td>
<td>0.37</td>
<td>6.92</td>
<td>25.64</td>
<td>1505</td>
<td>0.10</td>
<td>3.73</td>
<td>LT YELLOW</td>
<td>NONE</td>
</tr>
</tbody>
</table>

**WELL CAPACITY (Gallons Per Foot):**

- 0.75” = 0.02
- 1” = 0.04
- 1.25” = 0.06
- 2” = 0.16
- 3” = 0.37
- 4” = 0.65
- 5” = 1.02
- 6” = 1.47
- 12” = 5.88

**TUBING INSIDE DIAM. CAPACITY (Gal./Ft.):**

- 1/8” = 0.00006
- 3/16” = 0.0014
- 1/4” = 0.0026
- 5/32” = 0.004
- 3/32” = 0.005
- 1/2” = 0.010
- 5/32” = 0.016

### SAMPLING DATA

<table>
<thead>
<tr>
<th>Sampled By (Print)/Affiliation:</th>
<th>Sampler (s) Signatures:</th>
<th>Sampling Initiated At:</th>
<th>Sampling Ended At:</th>
</tr>
</thead>
<tbody>
<tr>
<td>RAB</td>
<td>TECO</td>
<td>11:08</td>
<td>11:15</td>
</tr>
</tbody>
</table>

**PUMP OR TUBING DEPTH IN WELL (feet):** 16.8

**Sampled Pump Flow Rate (mL per minute):** 707

**Tubing Material Code:** PE/S

**Field Decontamination:** Y N

**Sample Container Specification:**

<table>
<thead>
<tr>
<th>Sample ID Code</th>
<th>Containers</th>
<th>Material Code</th>
<th>Volume</th>
<th>Preservation Used</th>
<th>Total Volume Added in Field (mL)</th>
<th>pH</th>
<th>Intended Analysis and/or Method</th>
<th>Sampling Equipment Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>@Ino-500</td>
<td>1</td>
<td>PE</td>
<td>500ml</td>
<td>NONE</td>
<td>NONE</td>
<td>N/A</td>
<td>Inorganics</td>
<td>PP</td>
</tr>
<tr>
<td>@Met-250</td>
<td>2</td>
<td>PE</td>
<td>250ml</td>
<td>HINO3</td>
<td>1ml</td>
<td>&lt;2</td>
<td>Metals</td>
<td>PP</td>
</tr>
<tr>
<td>@Rad-1L</td>
<td>2</td>
<td>PE</td>
<td>1L</td>
<td>HINO3</td>
<td>5ml</td>
<td>&lt;2</td>
<td>Radiologicals</td>
<td>PP</td>
</tr>
</tbody>
</table>

**Remarks:**

1. Sample bottles pre-preserved at laboratory prior to sample collection.

**Material Codes:**

- AG = Amber Glass
- CG = Clear Glass
- PE = Polyethylene
- PP = Polypropylene
- S = Silicone
- T = Teflon
- O = Other (Specify)

**Sampling/Purging Equipment Codes:**

- APP = After Peristaltic Pump
- B = Bailer
- BP = Bladder Pump
- ESP = Electric Submersible Pump
- PP = Peristaltic Pump
- RFPP = Reverse Flow Peristaltic Pump
- SM = Straw Method (tubing gravity drain)
- VT = Vacuum Trap
- O = Other (Specify)

**Notes:**

1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212. SECTION 3)
   - pH: ± 0.2 units
   - Temperature: ± 0.2 °C
   - Specific Conductance: ± 5%
   - Dissolved Oxygen: all readings ≤ 20% saturation
   - Turbidity: all readings ≤ 20 NTU
   - Optionally, ± 0.2 mg/L or ± 10% (whichever is greater)
<table>
<thead>
<tr>
<th>TIME</th>
<th>INITIAL PUMP OR TUBING DEPTH IN WELL (feet):</th>
<th>FINAL PUMP OR TUBING DEPTH IN WELL (feet):</th>
<th>PURGING INITIATED AT:</th>
<th>PURGING ENDED AT:</th>
<th>TOTAL VOLUME PURGED (gallons):</th>
</tr>
</thead>
<tbody>
<tr>
<td>10:35</td>
<td>18.23</td>
<td>18.23</td>
<td>10:27</td>
<td>10:39</td>
<td>1.08</td>
</tr>
<tr>
<td>10:37</td>
<td>10.18</td>
<td>6.98</td>
<td>26.08</td>
<td>1685</td>
<td>5.33</td>
</tr>
<tr>
<td>10:39</td>
<td>10.18</td>
<td>6.98</td>
<td>26.20</td>
<td>1645</td>
<td>3.26</td>
</tr>
</tbody>
</table>

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

**Material Codes:**
- AG= Amber Glass
- CG= Clear Glass
- PE= Polyethylene
- PP= Polypropylene
- B=Silicone
- T= Teflon
- O= Other (Specify)

**Sampling/Purging Equipment Codes:**
- APP= After Peristaltic Pump
- B= Bailer
- BP= Bladder Pump
- ESP= Electric Submersible Pump
- PP= Peristaltic Pump
- RFP= Reverse Flow Peristaltic Pump
- SM= Straw Method (tubing Gravity Drain)
- VT= Vacuum Trap
- O= Other (Specify)
### PURGING DATA

<table>
<thead>
<tr>
<th>TIME</th>
<th>VOLUME PURGED (GALLONS)</th>
<th>PURGE RATE (GPM)</th>
<th>DEPTH TO WATER (FEET)</th>
<th>pH (standard units)</th>
<th>TEMP. (ºC)</th>
<th>COND. (µmhos/cm or µS/cm)</th>
<th>DISSOLVED OXYGEN (% saturation)</th>
<th>TURBIDITY (NTUs)</th>
<th>COLOR (describe)</th>
<th>ODOR (describe)</th>
</tr>
</thead>
<tbody>
<tr>
<td>10:06</td>
<td>5.92</td>
<td>0.42</td>
<td>30.33</td>
<td>6.51</td>
<td>27.47</td>
<td>4790</td>
<td>0.14</td>
<td>Cleat</td>
<td>Mild</td>
<td></td>
</tr>
<tr>
<td>10:08</td>
<td>0.85</td>
<td>0.43</td>
<td>30.33</td>
<td>6.51</td>
<td>27.44</td>
<td>4838</td>
<td>0.14</td>
<td>7.31</td>
<td>Cleat</td>
<td>Mild</td>
</tr>
<tr>
<td>10:10</td>
<td>0.85</td>
<td>0.43</td>
<td>30.33</td>
<td>6.50</td>
<td>27.46</td>
<td>4858</td>
<td>0.13</td>
<td>4.08</td>
<td>Cleat</td>
<td>Mild</td>
</tr>
</tbody>
</table>

### EQUIPMENT VOLUME PURGE:

\[ \text{1 EQUIPMENT VOLUME} = \left( \frac{\text{PUMP VOLUME} + \text{(TUBING CAPACITY x TUBING LENGTH)} + \text{FLOW CELL VOLUME}}{\text{EQUIPMENT VOLUME PURGE}} \right) \]

\[ \text{INITIAL PUMP OR TUBING DEPTH IN WELL (feet):} 39.30 \]

\[ \text{FINAL PUMP OR TUBING DEPTH IN WELL (feet):} 39.30 \]

\[ \text{PURGING INITIATED AT:} 9:52 \]

\[ \text{PURGING ENDED AT:} 10:10 \]

\[ \text{TOTAL VOLUME PURGED (gallons):} 100 \]

\[ \text{TOTAL PUMP OR TUBING VOLUME (gallons):} 7.62 \]

### WELL CAPACITY (Gallons Per Foot):

\[ 0.75” = 0.03; \quad 1” = 0.04; \quad 1.25” = 0.06; \quad 2” = 0.16; \quad 3” = 0.37; \quad 4” = 0.65; \quad 5” = 1.02; \quad 6” = 1.47; \quad 12” = 6.88 \]

### TUBING INSIDE DIAM. CAPACITY (Gal./Ft.):

\[ \frac{1}{8”} = 0.00006; \quad \frac{3}{16”} = 0.0014; \quad \frac{1}{4”} = 0.0026; \quad \frac{5}{16”} = 0.004; \quad \frac{3}{8”} = 0.006; \quad \frac{1}{2”} = 0.010; \quad \frac{5}{8”} = 0.016 \]

### SAMPLING DATA

<table>
<thead>
<tr>
<th>SAMPLED BY (PRINT)/AFFILIATION</th>
<th>SAMPLER (s) SIGNATURES</th>
<th>SAMPLING EQUIPMENT CODE:</th>
</tr>
</thead>
<tbody>
<tr>
<td>RAB</td>
<td>TECO</td>
<td>PE</td>
</tr>
</tbody>
</table>

### PUMP OR TUBING DEPTH IN WELL (feet):

\[ 39.3 \]

### SAMPLED BY (PRINT)/AFFILIATION:

<table>
<thead>
<tr>
<th>SAMPLED BY (PRINT)/AFFILIATION</th>
<th>SAMPLER (s) SIGNATURES</th>
<th>SAMPLING EQUIPMENT CODE:</th>
</tr>
</thead>
<tbody>
<tr>
<td>RAB</td>
<td>TECO</td>
<td>PE</td>
</tr>
</tbody>
</table>

### FIELD DECONTAMINATION:

- **Y**: Y N
- **FILTER SIZE**: µm
- **DUPLICATE**: Y N

### SAMPLE CONTAINER SPECIFICATION:

<table>
<thead>
<tr>
<th>SAMPLE CONTAINER SPECIFICATION</th>
<th># CONTAINERS</th>
<th>MATERIAL CODE</th>
<th>VOLUME</th>
<th>PRESERVATIVE USED</th>
<th>TOTAL VOL. ADDED IN FIELD (ml)</th>
<th>pH</th>
<th>INTENDED ANALYSIS AND/OR METHOD</th>
</tr>
</thead>
<tbody>
<tr>
<td>@Ino-500</td>
<td>1</td>
<td>PE</td>
<td>500ml</td>
<td>NONE</td>
<td>NONE</td>
<td>N/A</td>
<td>Inorganics</td>
</tr>
<tr>
<td>@Met-250</td>
<td>2</td>
<td>PE</td>
<td>250ml</td>
<td>HNO3</td>
<td>1ml</td>
<td>&lt;2</td>
<td>Metals</td>
</tr>
<tr>
<td>@Rad-1L</td>
<td>2</td>
<td>PE</td>
<td>1L</td>
<td>HNO3</td>
<td>5ml</td>
<td>&lt;2</td>
<td>Radiologicals</td>
</tr>
</tbody>
</table>

### REMARKS:

(1) Sample bottles pre-preserved at laboratory prior to sample collection.

### MATERIAL CODES:

- **AG**: Amber Glass
- **CG**: Clear Glass
- **PE**: Polyethylene
- **PP**: Polypropylene
- **S**: Silicone
- **T**: Teflon
- **O**: Other (Specify)

### MUSKOGEE COUNTY WELLS

<table>
<thead>
<tr>
<th>WELLS</th>
<th>ADDRESS</th>
<th>COUNTY</th>
<th>DEP.</th>
<th>ADDRESS 2</th>
<th>POSTAL CODE</th>
<th>ST.</th>
<th>LOCATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>BBS-CCR-BW-1</td>
<td>Apollo Beach, FL.</td>
<td>Muskogee</td>
<td>DEP.</td>
<td></td>
<td>72912</td>
<td>ST.</td>
<td>Big Bend</td>
</tr>
</tbody>
</table>

### NOTES:

1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)
   - pH: ± 0.2 units
   - Temperature: ± 0.2 ºC
   - Specific Conductance: ± 5%
   - Dissolved Oxygen: all readings ≤ 20% saturation (see Table FS 2200-2)
   - Optionally, ± 0.2 mg/L or ± 10% (whichever is greater)
   - Turbidity: all readings ≤ 20 NTU; optionally ± 5 NTU or 10% (whichever is greater)
<table>
<thead>
<tr>
<th>TIME</th>
<th>INITIAL PUMP OR TUBING DEPTH IN WELL (feet)</th>
<th>VOLUME PURGED (GALLONS)</th>
<th>DEPTH TO WATER (FEET)</th>
<th>pH (standard units)</th>
<th>TEMP. (ºC)</th>
<th>COND. (µmhos/cm or µS/cm)</th>
<th>DISSOLVED OXYGEN (% saturation)</th>
<th>TURBIDITY (NTUs)</th>
<th>COLOR (describe)</th>
<th>ODOR (describe)</th>
<th>PURGING INITIATED AT</th>
<th>PURGING ENDED AT</th>
<th>TOTAL VOLUME PURGED (gallons)</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:30</td>
<td>18.49</td>
<td>0.66</td>
<td>8.28</td>
<td>6.67</td>
<td>27.27</td>
<td>1346</td>
<td>0.19</td>
<td>5.36</td>
<td>LT. YELLOW</td>
<td>MILD</td>
<td>9:25</td>
<td>9:34</td>
<td>1.17</td>
</tr>
<tr>
<td>9:32</td>
<td>18.49</td>
<td>0.26</td>
<td>8.29</td>
<td>6.67</td>
<td>27.25</td>
<td>1346</td>
<td>0.17</td>
<td>4.39</td>
<td>LT. YELLOW</td>
<td>MILD</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9:34</td>
<td>18.49</td>
<td>0.25</td>
<td>8.29</td>
<td>6.67</td>
<td>27.22</td>
<td>1345</td>
<td>0.37</td>
<td>3.99</td>
<td>LT. YELLOW</td>
<td>MILD</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 6.88

TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.00006; 3/16" = 0.0014; 1/4" = 0.0026; 5/32" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

---

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

---

**SITE NAME:** Big Bend  
**SITE LOCATION:** Apollo Beach, FL.

---

**GROUNDWATER SAMPLING LOG**

---

**SAMPLING DATA**

---

**REMARKS:**
(1) Sample bottles pre-preserved at laboratory prior to sample collection.
ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Tampa
6712 Benjamin Road
Suite 100
Tampa, FL 33634
Tel: (813)885-7427

TestAmerica Job ID: 660-77026-1
Client Project/Site: L16J027

For:
Tampa Electric Company
5012 Causeway Boulevard
Tampa, Florida 33619

Attn: Ms. Peggy Penner

Authorized for release by:
11/8/2016 3:31:26 PM
Keaton Conner, Project Mgmt. Assistant
(813)885-7427
keaton.conner@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.
# Table of Contents

- **Cover Page** ................................................................. 1
- **Table of Contents** ....................................................... 2
- **Sample Summary** ........................................................... 3
- **Definitions** ................................................................. 4
- **Case Narrative** .............................................................. 5
- **Detection Summary** ....................................................... 6
- **Client Sample Results** .................................................. 7
- **QC Sample Results** ....................................................... 8
- **QC Association** ............................................................. 9
- **Chronicle** .................................................................... 10
- **Certification Summary** ................................................ 11
- **Method Summary** .......................................................... 12
- **Chain of Custody** .......................................................... 13
- **Receipt Checklists** ........................................................ 15
<table>
<thead>
<tr>
<th>Lab Sample ID</th>
<th>Client Sample ID</th>
<th>Matrix</th>
<th>Collected</th>
<th>Received</th>
</tr>
</thead>
<tbody>
<tr>
<td>660-77026-1</td>
<td>L16J027-01</td>
<td>Water</td>
<td>10/28/16 11:42</td>
<td>11/02/16 10:40</td>
</tr>
<tr>
<td>660-77026-2</td>
<td>L16J027-02</td>
<td>Water</td>
<td>10/28/16 11:15</td>
<td>11/02/16 10:40</td>
</tr>
<tr>
<td>660-77026-3</td>
<td>L16J027-03</td>
<td>Water</td>
<td>10/28/16 10:50</td>
<td>11/02/16 10:40</td>
</tr>
<tr>
<td>660-77026-4</td>
<td>L16J027-04</td>
<td>Water</td>
<td>10/28/16 10:14</td>
<td>11/02/16 10:40</td>
</tr>
<tr>
<td>660-77026-5</td>
<td>L16J027-05</td>
<td>Water</td>
<td>10/28/16 09:42</td>
<td>11/02/16 10:40</td>
</tr>
</tbody>
</table>
### Qualifiers

#### Metals

<table>
<thead>
<tr>
<th>Qualifier</th>
<th>Qualifier Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>T</td>
<td>The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.</td>
</tr>
<tr>
<td>U</td>
<td>Indicates that the compound was analyzed for but not detected.</td>
</tr>
</tbody>
</table>

### Glossary

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>These commonly used abbreviations may or may not be present in this report.</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>Listed under the &quot;D&quot; column to designate that the result is reported on a dry weight basis</td>
</tr>
<tr>
<td>%R</td>
<td>Percent Recovery</td>
</tr>
<tr>
<td>CFL</td>
<td>Contains Free Liquid</td>
</tr>
<tr>
<td>CNF</td>
<td>Contains no Free Liquid</td>
</tr>
<tr>
<td>DER</td>
<td>Duplicate error ratio (normalized absolute difference)</td>
</tr>
<tr>
<td>Dil Fac</td>
<td>Dilution Factor</td>
</tr>
<tr>
<td>DL, RA, RE, IN</td>
<td>Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample</td>
</tr>
<tr>
<td>DLC</td>
<td>Decision level concentration</td>
</tr>
<tr>
<td>MDA</td>
<td>Minimum detectable activity</td>
</tr>
<tr>
<td>EDL</td>
<td>Estimated Detection Limit</td>
</tr>
<tr>
<td>MDC</td>
<td>Minimum detectable concentration</td>
</tr>
<tr>
<td>MDL</td>
<td>Method Detection Limit</td>
</tr>
<tr>
<td>ML</td>
<td>Minimum Level (Dioxin)</td>
</tr>
<tr>
<td>NC</td>
<td>Not Calculated</td>
</tr>
<tr>
<td>ND</td>
<td>Not detected at the reporting limit (or MDL or EDL if shown)</td>
</tr>
<tr>
<td>PQL</td>
<td>Practical Quantitation Limit</td>
</tr>
<tr>
<td>QC</td>
<td>Quality Control</td>
</tr>
<tr>
<td>RER</td>
<td>Relative error ratio</td>
</tr>
<tr>
<td>RL</td>
<td>Reporting Limit or Requested Limit (Radiochemistry)</td>
</tr>
<tr>
<td>RPD</td>
<td>Relative Percent Difference, a measure of the relative difference between two points</td>
</tr>
<tr>
<td>TEF</td>
<td>Toxicity Equivalent Factor (Dioxin)</td>
</tr>
<tr>
<td>TEQ</td>
<td>Toxicity Equivalent Quotient (Dioxin)</td>
</tr>
</tbody>
</table>
Job ID: 660-77026-1

Laboratory: TestAmerica Tampa

Narrative

Job Narrative
660-77026-1

Receipt
The samples were received on 11/2/2016 10:40 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 0.4º C.

Metals
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.
### Client Sample ID: L16J027-01

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>Qualifier</th>
<th>PQL</th>
<th>MDL</th>
<th>Unit</th>
<th>Dil Fac</th>
<th>D</th>
<th>Method</th>
<th>Prep Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithium</td>
<td>0.012</td>
<td>1</td>
<td>0.050</td>
<td>0.0010</td>
<td>mg/L</td>
<td>1</td>
<td></td>
<td>200.7 Rev 4.4</td>
<td>Total/NA</td>
</tr>
</tbody>
</table>

### Client Sample ID: L16J027-02

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>Qualifier</th>
<th>PQL</th>
<th>MDL</th>
<th>Unit</th>
<th>Dil Fac</th>
<th>D</th>
<th>Method</th>
<th>Prep Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithium</td>
<td>0.014</td>
<td>1</td>
<td>0.050</td>
<td>0.0010</td>
<td>mg/L</td>
<td>1</td>
<td></td>
<td>200.7 Rev 4.4</td>
<td>Total/NA</td>
</tr>
</tbody>
</table>

### Client Sample ID: L16J027-03

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>Qualifier</th>
<th>PQL</th>
<th>MDL</th>
<th>Unit</th>
<th>Dil Fac</th>
<th>D</th>
<th>Method</th>
<th>Prep Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithium</td>
<td>0.0082</td>
<td>1</td>
<td>0.050</td>
<td>0.0010</td>
<td>mg/L</td>
<td>1</td>
<td></td>
<td>200.7 Rev 4.4</td>
<td>Total/NA</td>
</tr>
</tbody>
</table>

### Client Sample ID: L16J027-04

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>Qualifier</th>
<th>PQL</th>
<th>MDL</th>
<th>Unit</th>
<th>Dil Fac</th>
<th>D</th>
<th>Method</th>
<th>Prep Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithium</td>
<td>0.011</td>
<td>1</td>
<td>0.050</td>
<td>0.0010</td>
<td>mg/L</td>
<td>1</td>
<td></td>
<td>200.7 Rev 4.4</td>
<td>Total/NA</td>
</tr>
</tbody>
</table>

### Client Sample ID: L16J027-05

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>Qualifier</th>
<th>PQL</th>
<th>MDL</th>
<th>Unit</th>
<th>Dil Fac</th>
<th>D</th>
<th>Method</th>
<th>Prep Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithium</td>
<td>0.0038</td>
<td>1</td>
<td>0.050</td>
<td>0.0010</td>
<td>mg/L</td>
<td>1</td>
<td></td>
<td>200.7 Rev 4.4</td>
<td>Total/NA</td>
</tr>
</tbody>
</table>

This Detection Summary does not include radiochemical test results.
### Client Sample Results

**TestAmerica Job ID:** 660-77026-1

#### Client: Tampa Electric Company

**Project/Site:** L16J027

---

**Client Sample ID:** L16J027-01

**Date Collected:** 10/28/16 11:42

**Date Received:** 11/02/16 10:40

**Lab Sample ID:** 660-77026-1

**Matrix:** Water

**Method:** 200.7 Rev 4.4 - Metals (ICP)

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>Qualifier</th>
<th>PQL</th>
<th>MDL</th>
<th>Unit</th>
<th>D</th>
<th>Prepared</th>
<th>Analyzed</th>
<th>Dil Fac</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithium</td>
<td>0.012</td>
<td>I</td>
<td>0.050</td>
<td>0.0010</td>
<td>mg/L</td>
<td>11/05/16 10:24</td>
<td>11/06/16 18:37</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

---

**Client Sample ID:** L16J027-02

**Date Collected:** 10/28/16 11:15

**Date Received:** 11/02/16 10:40

**Lab Sample ID:** 660-77026-2

**Matrix:** Water

**Method:** 200.7 Rev 4.4 - Metals (ICP)

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>Qualifier</th>
<th>PQL</th>
<th>MDL</th>
<th>Unit</th>
<th>D</th>
<th>Prepared</th>
<th>Analyzed</th>
<th>Dil Fac</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithium</td>
<td>0.014</td>
<td>I</td>
<td>0.050</td>
<td>0.0010</td>
<td>mg/L</td>
<td>11/05/16 10:24</td>
<td>11/06/16 18:40</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

---

**Client Sample ID:** L16J027-03

**Date Collected:** 10/28/16 10:50

**Date Received:** 11/02/16 10:40

**Lab Sample ID:** 660-77026-3

**Matrix:** Water

**Method:** 200.7 Rev 4.4 - Metals (ICP)

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>Qualifier</th>
<th>PQL</th>
<th>MDL</th>
<th>Unit</th>
<th>D</th>
<th>Prepared</th>
<th>Analyzed</th>
<th>Dil Fac</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithium</td>
<td>0.0082</td>
<td>I</td>
<td>0.050</td>
<td>0.0010</td>
<td>mg/L</td>
<td>11/05/16 10:24</td>
<td>11/06/16 18:44</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

---

**Client Sample ID:** L16J027-04

**Date Collected:** 10/28/16 10:14

**Date Received:** 11/02/16 10:40

**Lab Sample ID:** 660-77026-4

**Matrix:** Water

**Method:** 200.7 Rev 4.4 - Metals (ICP)

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>Qualifier</th>
<th>PQL</th>
<th>MDL</th>
<th>Unit</th>
<th>D</th>
<th>Prepared</th>
<th>Analyzed</th>
<th>Dil Fac</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithium</td>
<td>0.011</td>
<td>I</td>
<td>0.050</td>
<td>0.0010</td>
<td>mg/L</td>
<td>11/05/16 10:24</td>
<td>11/06/16 18:47</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

---

**Client Sample ID:** L16J027-05

**Date Collected:** 10/28/16 09:42

**Date Received:** 11/02/16 10:40

**Lab Sample ID:** 660-77026-5

**Matrix:** Water

**Method:** 200.7 Rev 4.4 - Metals (ICP)

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>Qualifier</th>
<th>PQL</th>
<th>MDL</th>
<th>Unit</th>
<th>D</th>
<th>Prepared</th>
<th>Analyzed</th>
<th>Dil Fac</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithium</td>
<td>0.0038</td>
<td>I</td>
<td>0.050</td>
<td>0.0010</td>
<td>mg/L</td>
<td>11/05/16 10:24</td>
<td>11/06/16 18:51</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>
## QC Sample Results

Client: Tampa Electric Company  
Project/Site: L16J027

**Method: 200.7 Rev 4.4 - Metals (ICP)**

### Lab Sample ID: MB 400-329861/1-A  
Matrix: Water  
Analysis Batch: 329960

<table>
<thead>
<tr>
<th>Analyte</th>
<th>MB</th>
<th>MB</th>
<th>PQL</th>
<th>MDL</th>
<th>Unit</th>
<th>D Prepared</th>
<th>Analyzed</th>
<th>Dil Fac</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithium</td>
<td>0.0010</td>
<td>U</td>
<td>0.050</td>
<td>0.0010</td>
<td>mg/L</td>
<td>11/05/16 10:24</td>
<td>11/06/16 17:08</td>
<td>1</td>
</tr>
</tbody>
</table>

### Lab Sample ID: LCS 400-329861/2-A  
Matrix: Water  
Analysis Batch: 329960

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Spike Added</th>
<th>LCS Result</th>
<th>LCS Qualifier</th>
<th>Unit</th>
<th>D %Rec</th>
<th>Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithium</td>
<td>1.00</td>
<td>1.07</td>
<td></td>
<td>mg/L</td>
<td>107</td>
<td>85 - 115</td>
</tr>
</tbody>
</table>

### Lab Sample ID: 400-129289-A-3-B MS  
Matrix: Water  
Analysis Batch: 329960

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Sample Result</th>
<th>Sample Qualifier</th>
<th>Spike Added</th>
<th>MS Result</th>
<th>MS Qualifier</th>
<th>Unit</th>
<th>D %Rec</th>
<th>Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithium</td>
<td>0.020</td>
<td>I</td>
<td>1.00</td>
<td>1.12</td>
<td></td>
<td>mg/L</td>
<td>110</td>
<td>70 - 130</td>
</tr>
</tbody>
</table>

### Lab Sample ID: 400-129289-A-3-C MSD  
Matrix: Water  
Analysis Batch: 329960

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Sample Result</th>
<th>Sample Qualifier</th>
<th>Spike Added</th>
<th>MSD Result</th>
<th>MSD Qualifier</th>
<th>Unit</th>
<th>D %Rec</th>
<th>Limits</th>
<th>RPD</th>
<th>Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithium</td>
<td>0.020</td>
<td>I</td>
<td>1.00</td>
<td>1.13</td>
<td></td>
<td>mg/L</td>
<td>111</td>
<td>70 - 130</td>
<td>2</td>
<td>20</td>
</tr>
</tbody>
</table>
# QC Association Summary

Client: Tampa Electric Company  
Project/Site: L16J027  
TestAmerica Job ID: 660-77026-1

## Metals

### Prep Batch: 329861

<table>
<thead>
<tr>
<th>Lab Sample ID</th>
<th>Client Sample ID</th>
<th>Prep Type</th>
<th>Matrix</th>
<th>Method</th>
<th>Prep Batch</th>
</tr>
</thead>
<tbody>
<tr>
<td>660-77026-1</td>
<td>L16J027-01</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7</td>
<td></td>
</tr>
<tr>
<td>660-77026-2</td>
<td>L16J027-02</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7</td>
<td></td>
</tr>
<tr>
<td>660-77026-3</td>
<td>L16J027-03</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7</td>
<td></td>
</tr>
<tr>
<td>660-77026-4</td>
<td>L16J027-04</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7</td>
<td></td>
</tr>
<tr>
<td>660-77026-5</td>
<td>L16J027-05</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7</td>
<td></td>
</tr>
<tr>
<td>MB 400-329861/1-A</td>
<td>Method Blank</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7</td>
<td></td>
</tr>
<tr>
<td>LCS 400-329861/2-A</td>
<td>Lab Control Sample</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7</td>
<td></td>
</tr>
<tr>
<td>400-129289-A-3-B MS</td>
<td>Matrix Spike</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7</td>
<td></td>
</tr>
<tr>
<td>400-129289-A-3-C MSD</td>
<td>Matrix Spike Duplicate</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7</td>
<td></td>
</tr>
</tbody>
</table>

### Analysis Batch: 329960

<table>
<thead>
<tr>
<th>Lab Sample ID</th>
<th>Client Sample ID</th>
<th>Prep Type</th>
<th>Matrix</th>
<th>Method</th>
<th>Prep Batch</th>
</tr>
</thead>
<tbody>
<tr>
<td>660-77026-1</td>
<td>L16J027-01</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7 Rev 4.4</td>
<td>329861</td>
</tr>
<tr>
<td>660-77026-2</td>
<td>L16J027-02</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7 Rev 4.4</td>
<td>329861</td>
</tr>
<tr>
<td>660-77026-3</td>
<td>L16J027-03</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7 Rev 4.4</td>
<td>329861</td>
</tr>
<tr>
<td>660-77026-4</td>
<td>L16J027-04</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7 Rev 4.4</td>
<td>329861</td>
</tr>
<tr>
<td>660-77026-5</td>
<td>L16J027-05</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7 Rev 4.4</td>
<td>329861</td>
</tr>
<tr>
<td>MB 400-329861/1-A</td>
<td>Method Blank</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7 Rev 4.4</td>
<td>329861</td>
</tr>
<tr>
<td>LCS 400-329861/2-A</td>
<td>Lab Control Sample</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7 Rev 4.4</td>
<td>329861</td>
</tr>
<tr>
<td>400-129289-A-3-B MS</td>
<td>Matrix Spike</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7 Rev 4.4</td>
<td>329861</td>
</tr>
<tr>
<td>400-129289-A-3-C MSD</td>
<td>Matrix Spike Duplicate</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7 Rev 4.4</td>
<td>329861</td>
</tr>
</tbody>
</table>
### Client Sample ID: L16J027-01
**Date Collected:** 10/28/16 11:42  
**Date Received:** 11/02/16 10:40

<table>
<thead>
<tr>
<th>Prep Type</th>
<th>Batch Type</th>
<th>Batch Method</th>
<th>Run</th>
<th>Dil Factor</th>
<th>Initial Amount</th>
<th>Final Amount</th>
<th>Batch Number</th>
<th>Prepared or Analyzed</th>
<th>Analyst</th>
<th>Lab</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total/NA</td>
<td>Prep</td>
<td>200.7</td>
<td></td>
<td></td>
<td>50 mL</td>
<td>50 mL</td>
<td>329861</td>
<td>11/05/16 10:24</td>
<td>DN1</td>
<td>TAL PEN</td>
</tr>
<tr>
<td>Total/NA</td>
<td>Analysis</td>
<td>200.7 Rev 4.4</td>
<td>1</td>
<td></td>
<td>50 mL</td>
<td>50 mL</td>
<td>329960</td>
<td>11/06/16 18:37</td>
<td>GESP</td>
<td>TAL PEN</td>
</tr>
</tbody>
</table>

**Instrument ID:** 6500 ICP Duo

### Client Sample ID: L16J027-02
**Date Collected:** 10/28/16 11:15  
**Date Received:** 11/02/16 10:40

<table>
<thead>
<tr>
<th>Prep Type</th>
<th>Batch Type</th>
<th>Batch Method</th>
<th>Run</th>
<th>Dil Factor</th>
<th>Initial Amount</th>
<th>Final Amount</th>
<th>Batch Number</th>
<th>Prepared or Analyzed</th>
<th>Analyst</th>
<th>Lab</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total/NA</td>
<td>Prep</td>
<td>200.7</td>
<td></td>
<td></td>
<td>50 mL</td>
<td>50 mL</td>
<td>329861</td>
<td>11/05/16 10:24</td>
<td>DN1</td>
<td>TAL PEN</td>
</tr>
<tr>
<td>Total/NA</td>
<td>Analysis</td>
<td>200.7 Rev 4.4</td>
<td>1</td>
<td></td>
<td>50 mL</td>
<td>50 mL</td>
<td>329960</td>
<td>11/06/16 18:40</td>
<td>GESP</td>
<td>TAL PEN</td>
</tr>
</tbody>
</table>

**Instrument ID:** 6500 ICP Duo

### Client Sample ID: L16J027-03
**Date Collected:** 10/28/16 10:50  
**Date Received:** 11/02/16 10:40

<table>
<thead>
<tr>
<th>Prep Type</th>
<th>Batch Type</th>
<th>Batch Method</th>
<th>Run</th>
<th>Dil Factor</th>
<th>Initial Amount</th>
<th>Final Amount</th>
<th>Batch Number</th>
<th>Prepared or Analyzed</th>
<th>Analyst</th>
<th>Lab</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total/NA</td>
<td>Prep</td>
<td>200.7</td>
<td></td>
<td></td>
<td>50 mL</td>
<td>50 mL</td>
<td>329861</td>
<td>11/05/16 10:24</td>
<td>DN1</td>
<td>TAL PEN</td>
</tr>
<tr>
<td>Total/NA</td>
<td>Analysis</td>
<td>200.7 Rev 4.4</td>
<td>1</td>
<td></td>
<td>50 mL</td>
<td>50 mL</td>
<td>329960</td>
<td>11/06/16 18:44</td>
<td>GESP</td>
<td>TAL PEN</td>
</tr>
</tbody>
</table>

**Instrument ID:** 6500 ICP Duo

### Client Sample ID: L16J027-04
**Date Collected:** 10/28/16 10:14  
**Date Received:** 11/02/16 10:40

<table>
<thead>
<tr>
<th>Prep Type</th>
<th>Batch Type</th>
<th>Batch Method</th>
<th>Run</th>
<th>Dil Factor</th>
<th>Initial Amount</th>
<th>Final Amount</th>
<th>Batch Number</th>
<th>Prepared or Analyzed</th>
<th>Analyst</th>
<th>Lab</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total/NA</td>
<td>Prep</td>
<td>200.7</td>
<td></td>
<td></td>
<td>50 mL</td>
<td>50 mL</td>
<td>329861</td>
<td>11/05/16 10:24</td>
<td>DN1</td>
<td>TAL PEN</td>
</tr>
<tr>
<td>Total/NA</td>
<td>Analysis</td>
<td>200.7 Rev 4.4</td>
<td>1</td>
<td></td>
<td>50 mL</td>
<td>50 mL</td>
<td>329960</td>
<td>11/06/16 18:47</td>
<td>GESP</td>
<td>TAL PEN</td>
</tr>
</tbody>
</table>

**Instrument ID:** 6500 ICP Duo

### Client Sample ID: L16J027-05
**Date Collected:** 10/28/16 09:42  
**Date Received:** 11/02/16 10:40

<table>
<thead>
<tr>
<th>Prep Type</th>
<th>Batch Type</th>
<th>Batch Method</th>
<th>Run</th>
<th>Dil Factor</th>
<th>Initial Amount</th>
<th>Final Amount</th>
<th>Batch Number</th>
<th>Prepared or Analyzed</th>
<th>Analyst</th>
<th>Lab</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total/NA</td>
<td>Prep</td>
<td>200.7</td>
<td></td>
<td></td>
<td>50 mL</td>
<td>50 mL</td>
<td>329861</td>
<td>11/05/16 10:24</td>
<td>DN1</td>
<td>TAL PEN</td>
</tr>
<tr>
<td>Total/NA</td>
<td>Analysis</td>
<td>200.7 Rev 4.4</td>
<td>1</td>
<td></td>
<td>50 mL</td>
<td>50 mL</td>
<td>329960</td>
<td>11/06/16 18:51</td>
<td>GESP</td>
<td>TAL PEN</td>
</tr>
</tbody>
</table>

**Instrument ID:** 6500 ICP Duo

---

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

TestAmerica Tampa
### Laboratory: TestAmerica Tampa
The certifications listed below are applicable to this report.

<table>
<thead>
<tr>
<th>Authority</th>
<th>Program</th>
<th>EPA Region</th>
<th>Certification ID</th>
<th>Expiration Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Florida</td>
<td>NELAP</td>
<td>4</td>
<td>E84282</td>
<td>06-30-17</td>
</tr>
</tbody>
</table>

### Laboratory: TestAmerica Pensacola
The certifications listed below are applicable to this report.

<table>
<thead>
<tr>
<th>Authority</th>
<th>Program</th>
<th>EPA Region</th>
<th>Certification ID</th>
<th>Expiration Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Florida</td>
<td>NELAP</td>
<td>4</td>
<td>E81010</td>
<td>06-30-17</td>
</tr>
</tbody>
</table>
## Method Summary

Client: Tampa Electric Company  
Project/Site: L16J027  
TestAmerica Job ID: 660-77026-1

<table>
<thead>
<tr>
<th>Method</th>
<th>Method Description</th>
<th>Protocol</th>
<th>Laboratory</th>
</tr>
</thead>
<tbody>
<tr>
<td>EPA200.7 Rev 4.4</td>
<td>Metals (ICP)</td>
<td>EPA</td>
<td>TAL PEN</td>
</tr>
</tbody>
</table>

**Protocol References:**
- EPA = US Environmental Protection Agency

**Laboratory References:**
- TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001
**SUBCONTRACT ORDER**
Tampa Electric Company, Laboratory Services
L16J027

**SENDING LABORATORY:**
Tampa Electric Company, Laboratory Services
5012 Causeway Blvd
Tampa, FL 33619
Phone: (813) 630-7490
Fax: (813) 630-7360
Project Manager: Peggy Penner

**RECEIVING LABORATORY:**
TestAmerica Laboratories, Inc. - Tampa
6712 Benjamin Rd., Suite 100
Tampa, FL 33634
Phone: (813) 885-7427
Fax: -

**Due Date:** 11/11/16 16:00

<table>
<thead>
<tr>
<th>Analysis</th>
<th>Expires</th>
<th>Laboratory ID</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample ID: L16J027-01</td>
<td>BBS-CCR-1</td>
<td>Water</td>
<td></td>
</tr>
<tr>
<td>Sampled:</td>
<td>10/28/16 11:42</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lithium, Total EPA 6010</td>
<td>04/26/17 11:42</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Containers Supplied:</td>
<td>Poly HNO3 - 250mL (A)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sample ID: L16J027-02</td>
<td>BBS-CCR-2</td>
<td>Water</td>
<td></td>
</tr>
<tr>
<td>Sampled:</td>
<td>10/28/16 11:15</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lithium, Total EPA 6010</td>
<td>04/26/17 11:15</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Containers Supplied:</td>
<td>Poly HNO3 - 250mL (A)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sample ID: L16J027-03</td>
<td>BBS-CCR-3</td>
<td>Water</td>
<td></td>
</tr>
<tr>
<td>Sampled:</td>
<td>10/28/16 10:50</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lithium, Total EPA 6010</td>
<td>04/26/17 10:50</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Containers Supplied:</td>
<td>Poly HNO3 - 250mL (A)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sample ID: L16J027-04</td>
<td>BBS-CCR-BW-1</td>
<td>Water</td>
<td></td>
</tr>
<tr>
<td>Sampled:</td>
<td>10/28/16 10:14</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lithium, Total EPA 6010</td>
<td>04/26/17 10:14</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Containers Supplied:</td>
<td>Poly HNO3 - 250mL (A)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sample ID: L16J027-05</td>
<td>BBS-CCR-BW-2</td>
<td>Water</td>
<td></td>
</tr>
<tr>
<td>Sampled:</td>
<td>10/28/16 09:42</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lithium, Total EPA 6010</td>
<td>04/26/17 09:42</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Containers Supplied:</td>
<td>Poly HNO3 - 250mL (A)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Loc:** 660
**77026**

**Released By**

**Date & Time**

**Received By**

**Date & Time**

**Call 11-2-16 @ 1040**

Page 13 of 16
11/8/2016
# Chain of Custody Record

**Client Information (Sub Contract Lab)**
- **Client Name:** TestAmerica Laboratories, Inc.
- **Address:** 3355 McLemore Drive, Pensacola, FL 32514
- **Phone:** 850-474-1001 (Tel) 850-478-2671 (Fax)
- **PO #:** 69004821

**Analysis Requested**
- **Due Date Requested:** 11/9/2016
- **TAT Requested (days):**
- **Preservation Codes:** A - HCL, M - Hexane
B - NaOH, N - None
C - Zn Acetate, O - AgNO3
D - Nitric Acid, P - Na2SO4
E - NaHSO4, Q - Na2SO3
F - FeCl3, R - Na2SO3
G - Ammonium Tartrate, S - H2SO4
H - Analine Acid, T - TSP Dodecylbenzene
I - Acetone, U - Acetonitrile
J - DI Water, V - MCA
K - EDTA, W - pH 4-6
L - EDA, X - other (specify)

**Sample Identification - Client ID (Lab ID)**

<table>
<thead>
<tr>
<th>Sample Date</th>
<th>Time</th>
<th>Type</th>
<th>Matrix</th>
<th>Sample No.</th>
<th>Total Number of Containers</th>
</tr>
</thead>
<tbody>
<tr>
<td>10/28/16</td>
<td>11:42 Eastern</td>
<td>Water</td>
<td>X</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>10/28/16</td>
<td>11:15 Eastern</td>
<td>Water</td>
<td>X</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>10/28/16</td>
<td>10:50 Eastern</td>
<td>Water</td>
<td>X</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>10/28/16</td>
<td>10:14 Eastern</td>
<td>Water</td>
<td>X</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>10/28/16</td>
<td>08:42 Eastern</td>
<td>Water</td>
<td>X</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

**Possible Hazard Identification**
- **Unconfirmed**
- **Deliverable Requested:** I, II, III, IV, Other (specify)
- **Primary Deliverable Rank:** 2
- **Empty Kit Reimbursed by:**
  - **Date:** 11/2/16
  - **Time:** 1700
  - **Company:** TA TA

**Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)**
- **Return To Client:**
- **Disposal By Lab:**
- **Archive For:**

**Note:** Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analysis, and accreditation compliance upon our subcontract laboratories. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/matrix being analyzed, the samples must be shipped to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attaching a printout of this document to TestAmerica Laboratories, Inc.

**Sample Data**

<table>
<thead>
<tr>
<th>Sample ID</th>
<th>Date</th>
<th>Time</th>
<th>Type</th>
<th>Matrix</th>
<th>Sample No.</th>
<th>Total Number of Containers</th>
</tr>
</thead>
<tbody>
<tr>
<td>L16J027-01 (660-77026-1)</td>
<td>10/28/16</td>
<td>11:42 Eastern</td>
<td>Water</td>
<td>X</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>L16J027-02 (660-77026-2)</td>
<td>10/28/16</td>
<td>11:15 Eastern</td>
<td>Water</td>
<td>X</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>L16J027-03 (660-77026-3)</td>
<td>10/28/16</td>
<td>10:50 Eastern</td>
<td>Water</td>
<td>X</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>L16J027-04 (660-77026-4)</td>
<td>10/28/16</td>
<td>10:14 Eastern</td>
<td>Water</td>
<td>X</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>L16J027-05 (660-77026-5)</td>
<td>10/28/16</td>
<td>08:42 Eastern</td>
<td>Water</td>
<td>X</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>
## Login Sample Receipt Checklist

**Client:** Tampa Electric Company  
**Job Number:** 660-77026-1  
**Login Number:** 77026  
**List Number:** 1  
**Creator:** Southers, Kristin B  
**List Source:** TestAmerica Tampa

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

**Client:** Tampa Electric Company  
**Job Number:** 660-77026-1  
**Login Number:** 77026  
**List Number:** 2  
**Creator:** Franklin, Justin H  
**List Source:** TestAmerica Pensacola  
**List Creation:** 11/03/16 05:21 PM

<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Radioactivity wasn't checked or is ( \leq ) background as measured by a survey meter.</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>The cooler's custody seal, if present, is intact.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Sample custody seals, if present, are intact.</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>The cooler or samples do not appear to have been compromised or tampered with.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Samples were received on ice.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Cooler Temperature is acceptable.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Cooler Temperature is recorded.</td>
<td>True</td>
<td>4.2°C IR-5</td>
</tr>
<tr>
<td>COC is present.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>COC is filled out in ink and legible.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>COC is filled out with all pertinent information.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Is the Field Sampler's name present on COC?</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>There are no discrepancies between the containers received and the COC.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Samples are received within Holding Time (excluding tests with immediate HTs)</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Sample containers have legible labels.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Containers are not broken or leaking.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Sample collection date/times are provided.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Appropriate sample containers are used.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Sample bottles are completely filled.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Sample Preservation Verified.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Containers requiring zero headspace have no headspace or bubble is (&lt; 6\text{mm (1/4\text{&quot;)}}).</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Multiphasic samples are not present.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Samples do not require splitting or compositing.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Residual Chlorine Checked.</td>
<td>N/A</td>
<td></td>
</tr>
</tbody>
</table>
DOH Certification #E84025  
DEP COMPQAP # 870251  
Report Date: November 15, 2016  

TECO  
5012 Causeway Blvd.  
Tampa, FL 33619  
Attn: Peggy Penner  

Field Custody:  
Client  
Client/Field ID:  
L16J027-01  

Sample Collection:  
10-28-16/1142  
Lab ID No:  
16.12668  
Lab Custody Date:  
11-2-16/1610  
Sample description:  
Water  

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Units</th>
<th>Results</th>
<th>Analysis Date</th>
<th>Method</th>
<th>Detection Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Combined Radium (Radium-226 + Radium 228)</td>
<td>pCi/l</td>
<td>42.6 ± 2.3</td>
<td>Calc</td>
<td>Calc</td>
<td>0.7</td>
</tr>
<tr>
<td>Radium-226</td>
<td>pCi/l</td>
<td>40.5 ± 2.3</td>
<td>11-9-16/1420</td>
<td>EPA 903.0</td>
<td>0.5</td>
</tr>
<tr>
<td>Radium-228</td>
<td>pCi/l</td>
<td>2.1 ± 0.5</td>
<td>11-10-16/1714</td>
<td>EPA Ra-05</td>
<td>0.7</td>
</tr>
</tbody>
</table>

Alpha Standard: Th-230

James W. Hayes  
Laboratory Manager

Test results meet all requirements of the NELAC standards. Statement of estimated uncertainty available upon request. Test results refer only to sample(s) listed.  
Contact person: Jim Hayes (813) 229-2879.

Page 1 of 1
### CERTIFICATE OF ANALYSIS

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Units</th>
<th>Results</th>
<th>Analysis Date</th>
<th>Method</th>
<th>Detection Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Combined Radium (Radium-226 + Radium 228)</td>
<td>pCi/l</td>
<td>14.9 ± 1.3</td>
<td>Calc</td>
<td>Calc</td>
<td>0.7</td>
</tr>
<tr>
<td>Radium-226</td>
<td>pCi/l</td>
<td>13.8 ± 1.3</td>
<td>11-9-16/1420</td>
<td>EPA 903.0</td>
<td>0.5</td>
</tr>
<tr>
<td>Radium-228</td>
<td>pCi/l</td>
<td>1.1 ± 0.5</td>
<td>11-10-16/1714</td>
<td>EPA Ra-05</td>
<td>0.7</td>
</tr>
</tbody>
</table>

Alpha Standard: Th-230

---

Test results meet all requirements of the NELAC standards. Statement of estimated uncertainty available upon request. Test results refer only to sample(s) listed. Contact person: Jim Hayes (813) 229-2879.
## Certificate of Analysis

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Units</th>
<th>Results</th>
<th>Analysis Date</th>
<th>Method</th>
<th>Detection Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Combined Radium (Radium-226 + Radium 228)</td>
<td>pCi/l</td>
<td>18.1 ± 1.4</td>
<td>Calc</td>
<td>Calc</td>
<td>0.7</td>
</tr>
<tr>
<td>Radium-226</td>
<td>pCi/l</td>
<td>17.3 ± 1.4</td>
<td>11-9-16/1420</td>
<td>EPA 903.0</td>
<td>0.3</td>
</tr>
<tr>
<td>Radium-228</td>
<td>pCi/l</td>
<td>0.8 ± 0.5</td>
<td>11-10-16/1714</td>
<td>EPA Ra-05</td>
<td>0.7</td>
</tr>
</tbody>
</table>

**Alpha Standard:** Th-230

---

Test results meet all requirements of the NELAC standards. Statement of estimated uncertainty available upon request. Test results refer only to sample(s) listed.

Contact person: Jim Hayes (813) 229-2879.

---

James W. Hayes
Laboratory Manager
DOH Certification #E84025  
DEP COMPOAP # 870251

Report Date: November 15, 2016

TECO  
5012 Causeway Blvd.  
Tampa, FL 33619  
Attn: Peggy Penner

Field Custody: Client  
Client/Field ID: L16J027-04  
Sample Collection: 10-28-16/1014  
Lab ID No: 16.12671  
Lab Custody Date: 11-2-16/1610  
Sample description: Water

CERTIFICATE OF ANALYSIS

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Units</th>
<th>Results</th>
<th>Analysis Date</th>
<th>Method</th>
<th>Detection Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Combined Radium (Radium-226 + Radium 228)</td>
<td>pCi/l</td>
<td>32.3 ± 2.0</td>
<td>Calc</td>
<td>Calc</td>
<td>0.6</td>
</tr>
<tr>
<td>Radium-226</td>
<td>pCi/l</td>
<td>29.0 ± 2.0</td>
<td>11-9-16/1420</td>
<td>EPA 903.0</td>
<td>0.5</td>
</tr>
<tr>
<td>Radium-228</td>
<td>pCi/l</td>
<td>3.3 ± 0.6</td>
<td>11-11-16/1033</td>
<td>EPA Ra-05</td>
<td>0.6</td>
</tr>
</tbody>
</table>

Alpha Standard: Th-230

James W. Hayes  
Laboratory Manager

Test results meet all requirements of the NELAC standards. Statement of estimated uncertainty available upon request. Test results refer only to sample(s) listed. Contact person: Jim Hayes (813) 229-2879.

Page 1 of 1
SUBCONTRACT ORDER
Tampa Electric Company, Laboratory Services
L16J027

SENDING LABORATORY:
Tampa Electric Company, Laboratory Services
5012 Causeway Blvd
Tampa, FL 33619
Phone: (813) 630-7490
Fax: (813) 630-7360
Project Manager: Peggy Penner

RECEIVING LABORATORY:
KNL Laboratory Services
3202 N. Florida Ave.
Tampa, FL 33603
Phone: (813) 229-2879
Fax: -

Due Date: 11/11/16 16:00

<table>
<thead>
<tr>
<th>Analysis</th>
<th>Expires</th>
<th>Laboratory ID</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sample ID: L16J027-01</strong></td>
<td>BBS-CCR-1</td>
<td>Water</td>
<td>16.12668</td>
</tr>
<tr>
<td><strong>Sampled:</strong> 10/28/16 11:42</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Radium 226 EPA 903.0</td>
<td>04/26/17 11:42</td>
<td></td>
<td>Level 2 Data required</td>
</tr>
<tr>
<td>Radium 226+228, Total</td>
<td>04/26/17 11:42</td>
<td></td>
<td>Level 2 Data required</td>
</tr>
<tr>
<td>Radium 228 Ra-05</td>
<td>04/26/17 11:42</td>
<td></td>
<td>Level 2 Data required</td>
</tr>
<tr>
<td><strong>Containers Supplied:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RAD Poly HNO3 - 1000mL (C)</td>
<td>RAD Poly HNO3 - 1000mL (D)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| **Sample ID: L16J027-02** | BBS-CCR-2 | Water | 16.12669 |
| **Sampled:** 10/28/16 11:15 | | | |
| Radium 226 EPA 903.0 | 04/26/17 11:15 | | Level 2 Data required |
| Radium 226+228, Total | 04/26/17 11:15 | | Level 2 Data required |
| Radium 228 Ra-05 | 04/26/17 11:15 | | Level 2 Data required |
| **Containers Supplied:** | | | |
| RAD Poly HNO3 - 1000mL (C) | RAD Poly HNO3 - 1000mL (D) | | |

| **Sample ID: L16J027-03** | BBS-CCR-3 | Water | 16.12670 |
| **Sampled:** 10/28/16 10:50 | | | |
| Radium 226+228, Total | 04/26/17 10:50 | | Level 2 Data required |
| Radium 226 EPA 903.0 | 04/26/17 10:50 | | Level 2 Data required |
| Radium 228 Ra-05 | 04/26/17 10:50 | | Level 2 Data required |
| **Containers Supplied:** | | | |
| RAD Poly HNO3 - 1000mL (C) | RAD Poly HNO3 - 1000mL (D) | | |

| **Sample ID: L16J027-04** | BBS-CCR-BW-1 | Water | 16.12671 |
| **Sampled:** 10/28/16 10:14 | | | |
| Radium 226 EPA 903.0 | 04/26/17 10:14 | | Level 2 Data required |
| Radium 226+228, Total | 04/26/17 10:14 | | Level 2 Data required |
| Radium 228 Ra-05 | 04/26/17 10:14 | | Level 2 Data required |
| **Containers Supplied:** | | | |
| RAD Poly HNO3 - 1000mL (C) | RAD Poly HNO3 - 1000mL (D) | | |

Released By
10-25-16 (3:00)

Received By
Date & Time

Released By
Date & Time

Received By
Date & Time

Page 1 of 3
TECO  
5012 Causeway Blvd.  
Tampa, FL 33619  
Attn: Peggy Penner  

Field Custody:  
Client  
Client/Field ID:  
L16J027-05  
Sample Collection:  
10-28-16/0942  
Lab ID No:  
16.12672  
Lab Custody Date:  
11-2-16/1610  
Sample description:  
Water

**CERTIFICATE OF ANALYSIS**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Units</th>
<th>Results</th>
<th>Analysis Date</th>
<th>Method</th>
<th>Detection Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Combined Radium (Radium-226 + Radium 228)</td>
<td>pCi/l</td>
<td>4.8 ± 0.6</td>
<td>Calc</td>
<td>Calc</td>
<td>0.7</td>
</tr>
<tr>
<td>Radium-226</td>
<td>pCi/l</td>
<td>3.4 ± 0.6</td>
<td>11-9-16/1420</td>
<td>EPA 903.0</td>
<td>0.3</td>
</tr>
<tr>
<td>Radium-228</td>
<td>pCi/l</td>
<td>1.4 ± 0.5</td>
<td>11-10-16/1714</td>
<td>EPA Ra-05</td>
<td>0.7</td>
</tr>
</tbody>
</table>

Alpha Standard: Th-230  

James W. Hayes  
Laboratory Manager

Test results meet all requirements of the NELAC standards. Statement of estimated uncertainty available upon request. Test results refer only to sample(s) listed. Contact person: Jim Hayes (813) 229-2879.
## SUBCONTRACT ORDER
Tampa Electric Company, Laboratory Services
L16J027

<table>
<thead>
<tr>
<th>Analysis</th>
<th>Expires</th>
<th>Laboratory ID</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample ID: L16J027-05</td>
<td>BBS-CCR-BW-2</td>
<td>Water</td>
<td></td>
</tr>
<tr>
<td>Sampled: 10/28/16 09:42</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Radium 228 Ra-05</td>
<td>04/26/17 09:42</td>
<td></td>
<td>Level 2 Data required</td>
</tr>
<tr>
<td>Radium 226 EPA 903.0</td>
<td>04/26/17 09:42</td>
<td></td>
<td>Level 2 Data required</td>
</tr>
<tr>
<td>Radium 226+228, Total</td>
<td>04/26/17 09:42</td>
<td></td>
<td>Level 2 Data required</td>
</tr>
</tbody>
</table>

Containers Supplied:
- RAD Poly HNO3 - 1000mL (C)
- RAD Poly HNO3 - 1000mL (D)

Released By 10-28-16 1300
Date & Time
Received By
Date & Time

Released By
Date & Time
Received By
Date & Time

Page 2 of 3
FL DOH Certification # E84025

QC Summary: **Total Radium Analysis**

Client Project #: **2165027**

Analysis Completion Date: **11/9/16**

<table>
<thead>
<tr>
<th>Precision Data:</th>
<th>Sample #: <strong>14.12629</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample Analysis (pCi/l)</td>
<td>5.5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Spike Data:</th>
<th>Sample #: <strong>14.12429</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample Analysis (pCi/l)</td>
<td>0.7</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>LCS Data:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Analytical Result (pCi/l)</td>
</tr>
<tr>
<td>10.7</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Lab Blank:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lab Blank</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>
FL DOH Certification # E84025

QC Summary: **Radium 228 Analysis**

Client Project #: **E165027**

Analysis Completion Date: **11/10/16**

### Precision Data:

<table>
<thead>
<tr>
<th>Sample Analysis (pCi/l)</th>
<th>Duplicate Analysis (pCi/l)</th>
<th>Range (pCi/l)</th>
<th>RPD (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.2</td>
<td>3.8</td>
<td>0.9</td>
<td></td>
</tr>
</tbody>
</table>

### Spike Data:

<table>
<thead>
<tr>
<th>Sample Analysis (pCi/l)</th>
<th>Spike Added (pCi/l)</th>
<th>Analytical Result (pCi/l)</th>
<th>Spike Rec (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.4</td>
<td>3.37</td>
<td>4.2</td>
<td>90%</td>
</tr>
</tbody>
</table>

### LCS Data:

<table>
<thead>
<tr>
<th>Analytical Result (pCi/l)</th>
<th>True Value (pCi/l)</th>
<th>% Recovery</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.5</td>
<td>4.3</td>
<td>105%</td>
</tr>
</tbody>
</table>

### Lab Blank:

<table>
<thead>
<tr>
<th>Lab Blank</th>
<th>Analytical Result (pCi/l)</th>
<th>Analysis Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.1 +/- 0.2</td>
<td></td>
<td>11/10/16</td>
</tr>
</tbody>
</table>

KNL – Radium 228 Analysis- FL DOH Certification QC Data sheet – Form #139
Revised 6/30/16
NOVEMBER 2016
5 sample(s) were received on 11/10/16 13:32.

There were no issues noted with the sample(s) associated with this workorder unless noted below.

**SM 2540C**

A constant weight could not be achieved after three consecutive weighing and drying cycles for samples CCR-1, CCR-BW1 and CCR-BW2. The sample(s) are flagged with a J qualifier.
# Sample Information

- **Client:** Big Bend Power Station  
- **Lab Sample ID:** L16K034-01  
- **Sample Description:** BBS-CCR-1  
- **Sample Collection Method:** Grab  
- **Sampled By:** Robert Barthelette  
- **Date and Time Collected:** 11/10/16 11:53  
- **Date of Sample Receipt:** 11/10/16 13:32

# Laboratory Results

## Sample Qualifier:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier Code</th>
<th>Test Code</th>
<th>Analyst Code</th>
<th>Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chloride</td>
<td>817</td>
<td>mg/L</td>
<td>0.400</td>
<td>10.0</td>
<td>V</td>
<td>20</td>
<td>TMH</td>
<td>11/29/16 21:32</td>
</tr>
<tr>
<td>Specific Conductance</td>
<td>4290</td>
<td>umhos/cm</td>
<td>100</td>
<td>100</td>
<td>1</td>
<td>FDEP SOP FT 1200</td>
<td>RAB</td>
<td>11/10/16 11:53</td>
</tr>
<tr>
<td>Dissolved Oxygen</td>
<td>0.100</td>
<td>mg/L</td>
<td>0.100</td>
<td>0.100</td>
<td>U</td>
<td>1</td>
<td>RAB</td>
<td>11/10/16 11:53</td>
</tr>
<tr>
<td>Fluoride</td>
<td>0.0871</td>
<td>mg/L</td>
<td>0.0100</td>
<td>0.0500</td>
<td>1</td>
<td>EPA 300.0</td>
<td>TMH</td>
<td>11/29/16 21:21</td>
</tr>
<tr>
<td>pH</td>
<td>6.82</td>
<td>pH Units</td>
<td>1.00</td>
<td>1.00</td>
<td>1</td>
<td>FDEP SOP FT 1100</td>
<td>RAB</td>
<td>11/10/16 11:53</td>
</tr>
<tr>
<td>REDOX Potential</td>
<td>-136</td>
<td>mV</td>
<td>-999</td>
<td>-999</td>
<td>1</td>
<td>SM 2580B</td>
<td>RAB</td>
<td>11/10/16 11:53</td>
</tr>
<tr>
<td>Total Dissolved Solids</td>
<td>3470</td>
<td>mg/L</td>
<td>24.0</td>
<td>40.0</td>
<td>J</td>
<td>SM 2540C</td>
<td>RFL</td>
<td>11/14/16 13:20</td>
</tr>
<tr>
<td>Sulfate</td>
<td>1290</td>
<td>mg/L</td>
<td>10.0</td>
<td>40.0</td>
<td>20</td>
<td>EPA 300.0</td>
<td>TMH</td>
<td>11/29/16 21:32</td>
</tr>
<tr>
<td>Turbidity</td>
<td>0.890</td>
<td>NTU</td>
<td>0.100</td>
<td>0.100</td>
<td>1</td>
<td>FDEP SOP FT 1600</td>
<td>RAB</td>
<td>11/10/16 11:53</td>
</tr>
<tr>
<td>Total Mercury by SW846 Method 7470/7471</td>
<td>Mercury</td>
<td>0.0500</td>
<td>ug/L</td>
<td>0.0500</td>
<td>0.200</td>
<td>U</td>
<td>1</td>
<td>EPA 7470A</td>
</tr>
<tr>
<td>Total Recoverable Metals by 200 Series</td>
<td>Antimony</td>
<td>0.600</td>
<td>ug/L</td>
<td>0.600</td>
<td>2.00</td>
<td>U</td>
<td>1</td>
<td>EPA 200.8</td>
</tr>
<tr>
<td></td>
<td>Arsenic</td>
<td>8.93</td>
<td>ug/L</td>
<td>0.320</td>
<td>2.00</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RLC</td>
</tr>
<tr>
<td></td>
<td>Boron</td>
<td>16200</td>
<td>ug/L</td>
<td>10.0</td>
<td>50.0</td>
<td>1</td>
<td>EPA 200.7</td>
<td>MCR</td>
</tr>
<tr>
<td></td>
<td>Cadmium</td>
<td>0.100</td>
<td>ug/L</td>
<td>0.100</td>
<td>0.500</td>
<td>U</td>
<td>1</td>
<td>EPA 200.8</td>
</tr>
<tr>
<td></td>
<td>Cobalt</td>
<td>0.519</td>
<td>ug/L</td>
<td>0.0400</td>
<td>2.00</td>
<td>I</td>
<td>1</td>
<td>EPA 200.8</td>
</tr>
<tr>
<td></td>
<td>Lead</td>
<td>0.0800</td>
<td>ug/L</td>
<td>0.0800</td>
<td>2.00</td>
<td>U</td>
<td>1</td>
<td>EPA 200.8</td>
</tr>
<tr>
<td></td>
<td>Selenium</td>
<td>1.04</td>
<td>ug/L</td>
<td>0.200</td>
<td>2.00</td>
<td>I</td>
<td>1</td>
<td>EPA 200.8</td>
</tr>
<tr>
<td></td>
<td>Tellurium</td>
<td>0.100</td>
<td>ug/L</td>
<td>0.100</td>
<td>0.500</td>
<td>U</td>
<td>1</td>
<td>EPA 200.8</td>
</tr>
<tr>
<td>Total Recoverable Metals by SW846 Method 6010B</td>
<td>Barium</td>
<td>129</td>
<td>ug/L</td>
<td>0.500</td>
<td>20.0</td>
<td>U</td>
<td>1</td>
<td>EPA 6010B</td>
</tr>
<tr>
<td></td>
<td>Beryllium</td>
<td>0.200</td>
<td>ug/L</td>
<td>0.200</td>
<td>2.00</td>
<td>U</td>
<td>1</td>
<td>EPA 6010B</td>
</tr>
<tr>
<td></td>
<td>Calcium</td>
<td>606000</td>
<td>ug/L</td>
<td>30.0</td>
<td>1000</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
</tr>
<tr>
<td></td>
<td>Chromium</td>
<td>1.60</td>
<td>ug/L</td>
<td>1.60</td>
<td>12.0</td>
<td>U</td>
<td>1</td>
<td>EPA 6010B</td>
</tr>
<tr>
<td></td>
<td>Molybdenum</td>
<td>98.4</td>
<td>ug/L</td>
<td>1.00</td>
<td>20.0</td>
<td>U</td>
<td>1</td>
<td>EPA 6010B</td>
</tr>
</tbody>
</table>

---

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
Sample Information

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier Code</th>
<th>Dil</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sampled By: Robert Barthelette</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Date and Time Collected: 11/10/16 11:27</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Date of Sample Receipt: 11/10/16 13:32</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Laboratory Results

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier Code</th>
<th>Dil</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chloride</td>
<td>111</td>
<td>mg/L</td>
<td>0.200</td>
<td>5.00</td>
<td>V</td>
<td>10</td>
<td>EPA 300.0</td>
<td>TMH</td>
<td>11/29/16 21:52</td>
</tr>
<tr>
<td>Specific Conductance</td>
<td>1540</td>
<td>umhos/cm</td>
<td>100</td>
<td>100</td>
<td>1</td>
<td>FDEP SOP FT 1200</td>
<td>1</td>
<td>RAB</td>
<td>11/10/16 11:27</td>
</tr>
<tr>
<td>Dissolved Oxygen</td>
<td>0.130</td>
<td>mg/L</td>
<td>0.100</td>
<td>0.100</td>
<td>1</td>
<td>FDEP SOP FT 1500</td>
<td>1</td>
<td>RAB</td>
<td>11/10/16 11:27</td>
</tr>
<tr>
<td>Fluoride</td>
<td>0.168</td>
<td>mg/L</td>
<td>0.0100</td>
<td>0.0500</td>
<td>1</td>
<td>EPA 300.0</td>
<td>1</td>
<td>TMH</td>
<td>11/29/16 21:42</td>
</tr>
<tr>
<td>pH</td>
<td>6.89</td>
<td>pH Units</td>
<td>1.00</td>
<td>1.00</td>
<td>1</td>
<td>FDEP SOP FT 1100</td>
<td>1</td>
<td>RAB</td>
<td>11/10/16 11:27</td>
</tr>
<tr>
<td>REDOX Potential</td>
<td>-186</td>
<td>mV</td>
<td>-999</td>
<td>-999</td>
<td>1</td>
<td>SM 2580B</td>
<td>1</td>
<td>RAB</td>
<td>11/10/16 11:27</td>
</tr>
<tr>
<td>Total Dissolved Solids</td>
<td>1110</td>
<td>mg/L</td>
<td>24.0</td>
<td>40.0</td>
<td>2</td>
<td>SM 2540C</td>
<td>1</td>
<td>RFL</td>
<td>11/14/16 13:20</td>
</tr>
<tr>
<td>Sulfate</td>
<td>468</td>
<td>mg/L</td>
<td>5.00</td>
<td>20.0</td>
<td>10</td>
<td>EPA 300.0</td>
<td>1</td>
<td>TMH</td>
<td>11/29/16 21:52</td>
</tr>
<tr>
<td>Turbidity</td>
<td>7.10</td>
<td>NTU</td>
<td>0.100</td>
<td>0.100</td>
<td>1</td>
<td>FDEP SOP FT 1600</td>
<td>1</td>
<td>RAB</td>
<td>11/10/16 11:27</td>
</tr>
<tr>
<td>Total Mercury by SW846 Method 7470/7471</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mercury</td>
<td>0.0500</td>
<td>ug/L</td>
<td>0.0500</td>
<td>0.200</td>
<td>U</td>
<td>1</td>
<td>EPA 7470A</td>
<td>RLC</td>
<td>11/15/16 12:22</td>
</tr>
<tr>
<td>Total Recoverable Metals by 200 Series</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Antimony</td>
<td>0.600</td>
<td>ug/L</td>
<td>0.600</td>
<td>2.00</td>
<td>1</td>
<td>EPA 200.8</td>
<td>1</td>
<td>RLC</td>
<td>11/11/16 12:17</td>
</tr>
<tr>
<td>Arsenic</td>
<td>1.37</td>
<td>ug/L</td>
<td>0.320</td>
<td>2.00</td>
<td>1</td>
<td>EPA 200.8</td>
<td>1</td>
<td>RLC</td>
<td>11/11/16 12:17</td>
</tr>
<tr>
<td>Boron</td>
<td>2280</td>
<td>ug/L</td>
<td>10.0</td>
<td>50.0</td>
<td>1</td>
<td>EPA 200.7</td>
<td>1</td>
<td>MCR</td>
<td>11/14/16 10:36</td>
</tr>
<tr>
<td>Cadmium</td>
<td>0.100</td>
<td>ug/L</td>
<td>0.100</td>
<td>0.500</td>
<td>U</td>
<td>EPA 200.8</td>
<td>1</td>
<td>RLC</td>
<td>11/11/16 12:17</td>
</tr>
<tr>
<td>Cobalt</td>
<td>0.105</td>
<td>ug/L</td>
<td>0.0400</td>
<td>2.00</td>
<td>1</td>
<td>EPA 200.8</td>
<td>1</td>
<td>RLC</td>
<td>11/11/16 12:17</td>
</tr>
<tr>
<td>Lead</td>
<td>0.0955</td>
<td>ug/L</td>
<td>0.0800</td>
<td>2.00</td>
<td>1</td>
<td>EPA 200.8</td>
<td>1</td>
<td>RLC</td>
<td>11/11/16 12:17</td>
</tr>
<tr>
<td>Selenium</td>
<td>0.259</td>
<td>ug/L</td>
<td>0.200</td>
<td>2.00</td>
<td>1</td>
<td>EPA 200.8</td>
<td>1</td>
<td>RLC</td>
<td>11/11/16 12:17</td>
</tr>
<tr>
<td>Thallium</td>
<td>0.100</td>
<td>ug/L</td>
<td>0.100</td>
<td>0.500</td>
<td>U</td>
<td>EPA 200.8</td>
<td>1</td>
<td>RLC</td>
<td>11/11/16 12:17</td>
</tr>
<tr>
<td>Total Recoverable Metals by SW846 Method 6010B</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Barium</td>
<td>62.4</td>
<td>ug/L</td>
<td>0.500</td>
<td>20.0</td>
<td>1</td>
<td>EPA 6010B</td>
<td>1</td>
<td>MCR</td>
<td>11/14/16 10:36</td>
</tr>
<tr>
<td>Beryllium</td>
<td>0.200</td>
<td>ug/L</td>
<td>0.200</td>
<td>2.00</td>
<td>1</td>
<td>EPA 6010B</td>
<td>1</td>
<td>MCR</td>
<td>11/14/16 10:36</td>
</tr>
<tr>
<td>Calcium</td>
<td>181000</td>
<td>ug/L</td>
<td>30.0</td>
<td>1000</td>
<td>1</td>
<td>EPA 6010B</td>
<td>1</td>
<td>MCR</td>
<td>11/14/16 13:33</td>
</tr>
<tr>
<td>Chromium</td>
<td>1.60</td>
<td>ug/L</td>
<td>1.60</td>
<td>12.0</td>
<td>1</td>
<td>EPA 6010B</td>
<td>1</td>
<td>MCR</td>
<td>11/14/16 10:36</td>
</tr>
<tr>
<td>Molybdenum</td>
<td>1.43</td>
<td>ug/L</td>
<td>1.00</td>
<td>20.0</td>
<td>1</td>
<td>EPA 6010B</td>
<td>1</td>
<td>MCR</td>
<td>11/14/16 10:36</td>
</tr>
</tbody>
</table>

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
Sample Information

Laboratory Results

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier</th>
<th>Code</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>General Chemistry Parameters</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chloride</td>
<td>129</td>
<td>mg/L</td>
<td>0.200</td>
<td>5.00</td>
<td>V</td>
<td>10</td>
<td>EPA 300.0</td>
<td>TMH</td>
<td>11/29/16 22:12</td>
</tr>
<tr>
<td>Specific Conductance</td>
<td>1650</td>
<td>umhos/cm</td>
<td>100</td>
<td>100</td>
<td>1</td>
<td>FDEP SOP FT 1200</td>
<td>RAB</td>
<td>11/10/16 11:05</td>
<td></td>
</tr>
<tr>
<td>Dissolved Oxygen</td>
<td>0.100</td>
<td>mg/L</td>
<td>0.100</td>
<td>0.100</td>
<td>U</td>
<td>1</td>
<td>FDEP SOP FT 1500</td>
<td>RAB</td>
<td>11/10/16 11:05</td>
</tr>
<tr>
<td>Fluoride</td>
<td>0.331</td>
<td>mg/L</td>
<td>0.0100</td>
<td>0.0500</td>
<td>1</td>
<td>EPA 300.0</td>
<td>TMH</td>
<td>11/29/16 22:02</td>
<td></td>
</tr>
<tr>
<td>pH</td>
<td>6.46</td>
<td>pH Units</td>
<td>1.00</td>
<td>1.00</td>
<td>1</td>
<td>FDEP SOP FT 1100</td>
<td>RAB</td>
<td>11/10/16 11:05</td>
<td></td>
</tr>
<tr>
<td>REDOX Potential</td>
<td>-239</td>
<td>mV</td>
<td>-999</td>
<td>-999</td>
<td>1</td>
<td>SM 2580B</td>
<td>RAB</td>
<td>11/10/16 11:05</td>
<td></td>
</tr>
<tr>
<td>Total Dissolved Solids</td>
<td>1220</td>
<td>mg/L</td>
<td>24.0</td>
<td>40.0</td>
<td>2</td>
<td>SM 2540C</td>
<td>RFL</td>
<td>11/14/16 13:20</td>
<td></td>
</tr>
<tr>
<td>Sulfate</td>
<td>492</td>
<td>mg/L</td>
<td>5.00</td>
<td>20.0</td>
<td>10</td>
<td>EPA 300.0</td>
<td>TMH</td>
<td>11/29/16 22:12</td>
<td></td>
</tr>
<tr>
<td>Turbidity</td>
<td>1.18</td>
<td>NTU</td>
<td>0.100</td>
<td>0.100</td>
<td>1</td>
<td>FDEP SOP FT 1600</td>
<td>RAB</td>
<td>11/10/16 11:05</td>
<td></td>
</tr>
<tr>
<td><strong>Total Mercury by SW846 Method 7470/7471</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mercury</td>
<td>0.0500</td>
<td>ug/L</td>
<td>0.0500</td>
<td>0.200</td>
<td>U</td>
<td>1</td>
<td>EPA 7470A</td>
<td>RLC</td>
<td>11/15/16 12:26</td>
</tr>
<tr>
<td><strong>Total Recoverable Metals by 200 Series</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Antimony</td>
<td>0.600</td>
<td>ug/L</td>
<td>0.600</td>
<td>2.00</td>
<td>U</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RLC</td>
<td>11/11/16 12:20</td>
</tr>
<tr>
<td>Arsenic</td>
<td>0.765</td>
<td>ug/L</td>
<td>0.320</td>
<td>2.00</td>
<td>I</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RLC</td>
<td>11/11/16 12:20</td>
</tr>
<tr>
<td>Boron</td>
<td>502</td>
<td>ug/L</td>
<td>10.0</td>
<td>50.0</td>
<td>1</td>
<td>EPA 200.7</td>
<td>MCR</td>
<td>11/14/16 10:39</td>
<td></td>
</tr>
<tr>
<td>Cadmium</td>
<td>0.100</td>
<td>ug/L</td>
<td>0.100</td>
<td>0.500</td>
<td>U</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RLC</td>
<td>11/11/16 12:20</td>
</tr>
<tr>
<td>Cobalt</td>
<td>0.117</td>
<td>ug/L</td>
<td>0.0400</td>
<td>2.00</td>
<td>I</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RLC</td>
<td>11/11/16 12:20</td>
</tr>
<tr>
<td>Lead</td>
<td>0.0800</td>
<td>ug/L</td>
<td>0.0800</td>
<td>2.00</td>
<td>U</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RLC</td>
<td>11/11/16 12:20</td>
</tr>
<tr>
<td>Selenium</td>
<td>0.253</td>
<td>ug/L</td>
<td>0.200</td>
<td>2.00</td>
<td>I</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RLC</td>
<td>11/11/16 12:20</td>
</tr>
<tr>
<td>Thallium</td>
<td>0.100</td>
<td>ug/L</td>
<td>0.100</td>
<td>0.500</td>
<td>U</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RLC</td>
<td>11/11/16 12:20</td>
</tr>
<tr>
<td><strong>Total Recoverable Metals by SW846 Method 6010B</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Barium</td>
<td>63.0</td>
<td>ug/L</td>
<td>0.500</td>
<td>20.0</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>11/14/16 10:39</td>
<td></td>
</tr>
<tr>
<td>Beryllium</td>
<td>0.200</td>
<td>ug/L</td>
<td>0.200</td>
<td>2.00</td>
<td>U</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>11/14/16 10:39</td>
</tr>
<tr>
<td>Calcium</td>
<td>200000</td>
<td>ug/L</td>
<td>30.0</td>
<td>1000</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>11/14/16 13:35</td>
<td></td>
</tr>
<tr>
<td>Chromium</td>
<td>1.60</td>
<td>ug/L</td>
<td>1.60</td>
<td>12.0</td>
<td>U</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>11/14/16 10:39</td>
</tr>
<tr>
<td>Molybdenum</td>
<td>3.90</td>
<td>ug/L</td>
<td>1.00</td>
<td>20.0</td>
<td>I</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>11/14/16 10:39</td>
</tr>
</tbody>
</table>

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
## Sample Information

Client: Big Bend Power Station  
Lab Sample ID: L16K034-04  
Sample Description: BBS-CCR-BW1  
Sample Collection Method: Grab  
Sampled By: Robert Barthelette  
Date and Time Collected: 11/10/16 10:20  
Date of Sample Receipt: 11/10/16 13:32

## Laboratory Results

### Sample Qualifier:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Code</th>
<th>Dil</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>General Chemistry Parameters</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chloride</td>
<td>993</td>
<td>mg/L</td>
<td>0.400</td>
<td>10.0</td>
<td>V</td>
<td>20</td>
<td>EPA 300.0</td>
<td>TMH</td>
<td>11/29/16 22:32</td>
</tr>
<tr>
<td>Specific Conductance</td>
<td>5000</td>
<td>umhos/cm</td>
<td>100</td>
<td>100</td>
<td>1</td>
<td></td>
<td>FDEP SOP FT 1200</td>
<td>RAB</td>
<td>11/10/16 10:20</td>
</tr>
<tr>
<td>Dissolved Oxygen</td>
<td>0.130</td>
<td>mg/L</td>
<td>0.100</td>
<td>0.100</td>
<td>1</td>
<td></td>
<td>FDEP SOP FT 1500</td>
<td>RAB</td>
<td>11/10/16 10:20</td>
</tr>
<tr>
<td>Fluoride</td>
<td>0.261</td>
<td>mg/L</td>
<td>0.0100</td>
<td>0.0500</td>
<td>1</td>
<td></td>
<td>EPA 300.0</td>
<td>TMH</td>
<td>11/29/16 22:22</td>
</tr>
<tr>
<td>pH</td>
<td>6.52</td>
<td>pH Units</td>
<td>1.00</td>
<td>1.00</td>
<td>1</td>
<td></td>
<td>FDEP SOP FT 1100</td>
<td>RAB</td>
<td>11/10/16 10:20</td>
</tr>
<tr>
<td>REDOX Potential</td>
<td>-71.1</td>
<td>mV</td>
<td>-999</td>
<td>-999</td>
<td>1</td>
<td></td>
<td>SM 2580B</td>
<td>RAB</td>
<td>11/10/16 10:20</td>
</tr>
<tr>
<td>Total Dissolved Solids</td>
<td>4170</td>
<td>mg/L</td>
<td>24.0</td>
<td>40.0</td>
<td>J-</td>
<td>2</td>
<td>SM 2540C</td>
<td>RFL</td>
<td>11/14/16 13:20</td>
</tr>
<tr>
<td>Sulfate</td>
<td>1440</td>
<td>mg/L</td>
<td>10.0</td>
<td>40.0</td>
<td>20</td>
<td></td>
<td>EPA 300.0</td>
<td>TMH</td>
<td>11/29/16 22:32</td>
</tr>
<tr>
<td>Turbidity</td>
<td>1.77</td>
<td>NTU</td>
<td>0.100</td>
<td>0.100</td>
<td>1</td>
<td></td>
<td>FDEP SOP FT 1600</td>
<td>RAB</td>
<td>11/10/16 10:20</td>
</tr>
<tr>
<td><strong>Total Mercury by SW846 Method 7470/7471</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mercury</td>
<td>0.0500</td>
<td>ug/L</td>
<td>0.0500</td>
<td>0.200</td>
<td>U</td>
<td>1</td>
<td>EPA 7470A</td>
<td>RLC</td>
<td>11/15/16 12:29</td>
</tr>
<tr>
<td><strong>Total Recoverable Metals by 200 Series</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Antimony</td>
<td>0.600</td>
<td>ug/L</td>
<td>0.600</td>
<td>2.00</td>
<td>U</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RLC</td>
<td>11/11/16 12:51</td>
</tr>
<tr>
<td>Arsenic</td>
<td>8.49</td>
<td>ug/L</td>
<td>0.320</td>
<td>2.00</td>
<td>1</td>
<td></td>
<td>EPA 200.8</td>
<td>RLC</td>
<td>11/11/16 12:51</td>
</tr>
<tr>
<td>Boron</td>
<td>49700</td>
<td>ug/L</td>
<td>10.0</td>
<td>50.0</td>
<td>1</td>
<td></td>
<td>EPA 200.7</td>
<td>MCR</td>
<td>11/14/16 10:41</td>
</tr>
<tr>
<td>Cadmium</td>
<td>0.100</td>
<td>ug/L</td>
<td>0.100</td>
<td>0.500</td>
<td>U</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RLC</td>
<td>11/11/16 12:51</td>
</tr>
<tr>
<td>Cobalt</td>
<td>1.45</td>
<td>ug/L</td>
<td>0.0400</td>
<td>2.00</td>
<td>I</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RLC</td>
<td>11/11/16 12:51</td>
</tr>
<tr>
<td>Lead</td>
<td>0.102</td>
<td>ug/L</td>
<td>0.0800</td>
<td>2.00</td>
<td>I</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RLC</td>
<td>11/11/16 12:51</td>
</tr>
<tr>
<td>Selenium</td>
<td>2.51</td>
<td>ug/L</td>
<td>0.200</td>
<td>2.00</td>
<td>1</td>
<td></td>
<td>EPA 200.8</td>
<td>RLC</td>
<td>11/11/16 12:51</td>
</tr>
<tr>
<td>Thallium</td>
<td>0.100</td>
<td>ug/L</td>
<td>0.100</td>
<td>0.500</td>
<td>U</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RLC</td>
<td>11/11/16 12:51</td>
</tr>
<tr>
<td><strong>Total Recoverable Metals by SW846 Method 6010B</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Barium</td>
<td>61.2</td>
<td>ug/L</td>
<td>0.500</td>
<td>20.0</td>
<td>1</td>
<td></td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>11/14/16 10:41</td>
</tr>
<tr>
<td>Beryllium</td>
<td>0.200</td>
<td>ug/L</td>
<td>0.200</td>
<td>2.00</td>
<td>U</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>11/14/16 10:41</td>
</tr>
<tr>
<td>Calcium</td>
<td>692000</td>
<td>ug/L</td>
<td>30.0</td>
<td>1000</td>
<td>1</td>
<td></td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>11/14/16 13:38</td>
</tr>
<tr>
<td>Chromium</td>
<td>1.60</td>
<td>ug/L</td>
<td>1.60</td>
<td>12.0</td>
<td>U</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>11/14/16 10:41</td>
</tr>
<tr>
<td>Molybdenum</td>
<td>6.58</td>
<td>ug/L</td>
<td>1.00</td>
<td>20.0</td>
<td>I</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>11/14/16 10:41</td>
</tr>
</tbody>
</table>

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
Sample Information

<table>
<thead>
<tr>
<th>Sample Qualifier:</th>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier Code</th>
<th>Dil</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Chloride</td>
<td>129</td>
<td>mg/L</td>
<td>0.200</td>
<td>5.00</td>
<td>V</td>
<td>10</td>
<td>EPA 300.0</td>
<td>TMH</td>
<td>11/29/16 23:13</td>
</tr>
<tr>
<td></td>
<td>Specific Conductance</td>
<td>1400</td>
<td>umhos/cm</td>
<td>100</td>
<td>100</td>
<td>1</td>
<td>FDEP SOP FT 1200</td>
<td>RAB</td>
<td>11/10/16 9:49</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Dissolved Oxygen</td>
<td>0.200</td>
<td>mg/L</td>
<td>0.100</td>
<td>0.100</td>
<td>1</td>
<td>FDEP SOP FT 1500</td>
<td>RAB</td>
<td>11/10/16 9:49</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Fluoride</td>
<td>0.464</td>
<td>mg/L</td>
<td>0.00100</td>
<td>0.0500</td>
<td>1</td>
<td>EPA 300.0</td>
<td>TMH</td>
<td>11/29/16 22:42</td>
<td></td>
</tr>
<tr>
<td></td>
<td>pH</td>
<td>6.68</td>
<td>pH Units</td>
<td>1.00</td>
<td>1.00</td>
<td>1</td>
<td>FDEP SOP FT 1100</td>
<td>RAB</td>
<td>11/10/16 9:49</td>
<td></td>
</tr>
<tr>
<td></td>
<td>REDOX Potential</td>
<td>-73.8</td>
<td>mV</td>
<td>-999</td>
<td>-999</td>
<td>1</td>
<td>SM 2580B</td>
<td>RAB</td>
<td>11/10/16 9:49</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total Dissolved Solids</td>
<td>966</td>
<td>mg/L</td>
<td>24.0</td>
<td>40.0</td>
<td>J-</td>
<td>2</td>
<td>SM 2540C</td>
<td>RFL</td>
<td>11/14/16 13:20</td>
</tr>
<tr>
<td></td>
<td>Sulfate</td>
<td>255</td>
<td>mg/L</td>
<td>5.00</td>
<td>5.00</td>
<td>10</td>
<td>EPA 300.0</td>
<td>TMH</td>
<td>11/29/16 23:13</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Turbidity</td>
<td>5.86</td>
<td>NTU</td>
<td>0.100</td>
<td>0.100</td>
<td>1</td>
<td>FDEP SOP FT 1600</td>
<td>RAB</td>
<td>11/10/16 9:49</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total Mercury by SW846 Method 7470/7471</td>
<td>0.0500</td>
<td>ug/L</td>
<td>0.0500</td>
<td>0.200</td>
<td>U</td>
<td>1</td>
<td>EPA 7470A</td>
<td>RLC</td>
<td>11/15/16 12:33</td>
</tr>
<tr>
<td></td>
<td>Total Recoverable Metals by 200 Series</td>
<td>0.600</td>
<td>ug/L</td>
<td>0.600</td>
<td>2.00</td>
<td>U</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RLC</td>
<td>11/11/16 12:54</td>
</tr>
<tr>
<td></td>
<td>Antimony</td>
<td>2.59</td>
<td>ug/L</td>
<td>0.320</td>
<td>2.00</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RLC</td>
<td>11/11/16 12:54</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Arsenic</td>
<td>3750</td>
<td>ug/L</td>
<td>10.0</td>
<td>50.0</td>
<td>1</td>
<td>EPA 200.7</td>
<td>MCR</td>
<td>11/14/16 10:53</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Cobalt</td>
<td>0.157</td>
<td>ug/L</td>
<td>0.0400</td>
<td>2.00</td>
<td>I</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RLC</td>
<td>11/11/16 12:54</td>
</tr>
<tr>
<td></td>
<td>Lead</td>
<td>0.0800</td>
<td>ug/L</td>
<td>0.0800</td>
<td>2.00</td>
<td>U</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RLC</td>
<td>11/11/16 12:54</td>
</tr>
<tr>
<td></td>
<td>Selenium</td>
<td>0.485</td>
<td>ug/L</td>
<td>0.200</td>
<td>2.00</td>
<td>I</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RLC</td>
<td>11/11/16 12:54</td>
</tr>
<tr>
<td></td>
<td>Thallium</td>
<td>0.100</td>
<td>ug/L</td>
<td>0.100</td>
<td>0.500</td>
<td>U</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RLC</td>
<td>11/11/16 12:54</td>
</tr>
<tr>
<td></td>
<td>Total Recoverable Metals by SW846 Method 6010B</td>
<td>45.8</td>
<td>ug/L</td>
<td>0.500</td>
<td>20.0</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>11/14/16 10:53</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Barium</td>
<td>0.200</td>
<td>ug/L</td>
<td>0.200</td>
<td>2.00</td>
<td>U</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>11/14/16 10:53</td>
</tr>
<tr>
<td></td>
<td>Beryllium</td>
<td>243000</td>
<td>ug/L</td>
<td>30.0</td>
<td>1000</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>11/14/16 13:40</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Calcium</td>
<td>1.60</td>
<td>ug/L</td>
<td>1.60</td>
<td>12.0</td>
<td>U</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>11/14/16 10:53</td>
</tr>
<tr>
<td></td>
<td>Chromium</td>
<td>1.00</td>
<td>ug/L</td>
<td>1.00</td>
<td>20.0</td>
<td>U</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>11/14/16 10:53</td>
</tr>
</tbody>
</table>

**Comments**

U Indicates that the compound was analyzed for but not detected.
J- The reported value is an estimated value, see the case narrative for specifics.
I Estimated value
V Analyte detected in the method blank

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
## Total Recoverable Metals by SW846 Method 6010B - Quality Control

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>MDL</th>
<th>PQL</th>
<th>Units</th>
<th>Spike</th>
<th>Source</th>
<th>%Rec</th>
<th>%Rec Limits</th>
<th>RPD Limit</th>
<th>Qualifier</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Batch 16K0104 - EPA 6010B</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Blank (16K0104-BLK1)</strong></td>
<td>Prepared: 11/11/16  Analyzed: 11/14/16</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Barium</td>
<td>0.500</td>
<td>0.500</td>
<td>20.0</td>
<td>ug/L</td>
<td></td>
<td></td>
<td>U</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beryllium</td>
<td>0.200</td>
<td>0.200</td>
<td>2.00</td>
<td>ug/L</td>
<td></td>
<td></td>
<td>U</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Calcium</td>
<td>30.0</td>
<td>30.0</td>
<td>1000</td>
<td>ug/L</td>
<td></td>
<td></td>
<td>U</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chromium</td>
<td>1.60</td>
<td>1.60</td>
<td>12.0</td>
<td>ug/L</td>
<td></td>
<td></td>
<td>U</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Molybdenum</td>
<td>1.00</td>
<td>1.00</td>
<td>20.0</td>
<td>ug/L</td>
<td></td>
<td></td>
<td>U</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>LCS (16K0104-BS1)</strong></td>
<td>Prepared: 11/11/16  Analyzed: 11/14/16</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Barium</td>
<td>1050</td>
<td>0.500</td>
<td>20.0</td>
<td>ug/L</td>
<td>1000.0</td>
<td>105</td>
<td>80-120</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beryllium</td>
<td>1030</td>
<td>0.200</td>
<td>2.00</td>
<td>ug/L</td>
<td>1000.0</td>
<td>103</td>
<td>80-120</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chromium</td>
<td>1040</td>
<td>1.60</td>
<td>12.0</td>
<td>ug/L</td>
<td>1000.0</td>
<td>104</td>
<td>80-120</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Molybdenum</td>
<td>995</td>
<td>1.00</td>
<td>20.0</td>
<td>ug/L</td>
<td>1000.0</td>
<td>99.5</td>
<td>80-120</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Matrix Spike (16K0104-MS1)</strong></td>
<td>Source: L16K029-01</td>
<td>Prepared: 11/11/16  Analyzed: 11/14/16</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Barium</td>
<td>1100</td>
<td>0.500</td>
<td>20.0</td>
<td>ug/L</td>
<td>1000.0</td>
<td>7.45</td>
<td>75-125</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beryllium</td>
<td>1080</td>
<td>0.200</td>
<td>2.00</td>
<td>ug/L</td>
<td>1000.0</td>
<td>0.622</td>
<td>75-125</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chromium</td>
<td>1070</td>
<td>1.60</td>
<td>12.0</td>
<td>ug/L</td>
<td>1000.0</td>
<td>U</td>
<td>75-125</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Molybdenum</td>
<td>1610</td>
<td>1.00</td>
<td>20.0</td>
<td>ug/L</td>
<td>1000.0</td>
<td>567</td>
<td>75-125</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Matrix Spike Dup (16K0104-MSD1)</strong></td>
<td>Source: L16K029-01</td>
<td>Prepared: 11/11/16  Analyzed: 11/14/16</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Barium</td>
<td>1070</td>
<td>0.500</td>
<td>20.0</td>
<td>ug/L</td>
<td>1000.0</td>
<td>7.45</td>
<td>75-125</td>
<td></td>
<td>2.23</td>
<td>20</td>
</tr>
<tr>
<td>Beryllium</td>
<td>1050</td>
<td>0.200</td>
<td>2.00</td>
<td>ug/L</td>
<td>1000.0</td>
<td>0.622</td>
<td>75-125</td>
<td></td>
<td>2.88</td>
<td>20</td>
</tr>
<tr>
<td>Chromium</td>
<td>1040</td>
<td>1.60</td>
<td>12.0</td>
<td>ug/L</td>
<td>1000.0</td>
<td>U</td>
<td>75-125</td>
<td></td>
<td>2.94</td>
<td>20</td>
</tr>
<tr>
<td>Molybdenum</td>
<td>1550</td>
<td>1.00</td>
<td>20.0</td>
<td>ug/L</td>
<td>1000.0</td>
<td>567</td>
<td>75-125</td>
<td></td>
<td>3.82</td>
<td>20</td>
</tr>
</tbody>
</table>

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
### Total Mercury by SW846 Method 7470/7471 - Quality Control

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>MDL</th>
<th>PQL</th>
<th>Units</th>
<th>Spike Level</th>
<th>Source</th>
<th>%Rec</th>
<th>%Rec Limits</th>
<th>RPD Limit</th>
<th>Qualifier</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Batch 16K0106 - EPA 7470A</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blank (16K0106-BLK1)</td>
<td></td>
<td></td>
<td></td>
<td>ug/L</td>
<td></td>
<td>Prepared &amp; Analyzed: 11/15/16</td>
<td>U</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mercury</td>
<td>0.0500</td>
<td>0.0500</td>
<td>0.200</td>
<td>ug/L</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LCS (16K0106-BS1)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Prepared &amp; Analyzed: 11/15/16</td>
<td>U</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mercury</td>
<td>1.00</td>
<td>0.0500</td>
<td>0.200</td>
<td>ug/L</td>
<td>1.0000</td>
<td></td>
<td>100</td>
<td>80-120</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Matrix Spike (16K0106-MS1)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Source: L16K034-01</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mercury</td>
<td>0.799</td>
<td>0.0500</td>
<td>0.200</td>
<td>ug/L</td>
<td>1.0000</td>
<td></td>
<td>U</td>
<td>79.9</td>
<td>75-125</td>
<td></td>
</tr>
<tr>
<td>Matrix Spike Dup (16K0106-MSD1)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Source: L16K034-01</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mercury</td>
<td>0.808</td>
<td>0.0500</td>
<td>0.200</td>
<td>ug/L</td>
<td>1.0000</td>
<td></td>
<td>U</td>
<td>80.8</td>
<td>75-125</td>
<td>1.09</td>
</tr>
</tbody>
</table>

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
### Total Recoverable Metals by 200 Series - Quality Control

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>MDL</th>
<th>PQL</th>
<th>Units</th>
<th>Spike Result</th>
<th>Source Result</th>
<th>%Rec Limits</th>
<th>RPD Limit</th>
<th>Qualifier</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Batch 16K0095 - EPA 200.8</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Blank (16K0095-BLK1)</strong></td>
<td>Prepared: 11/10/16 Analyzed: 11/11/16</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Antimony</td>
<td>0.600</td>
<td>0.600</td>
<td>2.00</td>
<td>ug/L</td>
<td>U</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arsenic</td>
<td>0.320</td>
<td>0.320</td>
<td>2.00</td>
<td>ug/L</td>
<td>U</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cadmium</td>
<td>0.100</td>
<td>0.100</td>
<td>0.500</td>
<td>ug/L</td>
<td>U</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cobalt</td>
<td>0.0400</td>
<td>0.0400</td>
<td>2.00</td>
<td>ug/L</td>
<td>U</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lead</td>
<td>0.0800</td>
<td>0.0800</td>
<td>2.00</td>
<td>ug/L</td>
<td>U</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Selenium</td>
<td>0.200</td>
<td>0.200</td>
<td>2.00</td>
<td>ug/L</td>
<td>U</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thallium</td>
<td>0.100</td>
<td>0.100</td>
<td>0.500</td>
<td>ug/L</td>
<td>U</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>LCS (16K0095-BS1)</strong></td>
<td>Prepared: 11/10/16 Analyzed: 11/11/16</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Antimony</td>
<td>103</td>
<td>0.600</td>
<td>2.00</td>
<td>ug/L</td>
<td>100.00</td>
<td>103</td>
<td>85-115</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arsenic</td>
<td>103</td>
<td>0.320</td>
<td>2.00</td>
<td>ug/L</td>
<td>100.00</td>
<td>103</td>
<td>85-115</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cadmium</td>
<td>103</td>
<td>0.100</td>
<td>0.500</td>
<td>ug/L</td>
<td>100.00</td>
<td>103</td>
<td>85-115</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cobalt</td>
<td>102</td>
<td>0.0400</td>
<td>2.00</td>
<td>ug/L</td>
<td>100.00</td>
<td>102</td>
<td>85-115</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lead</td>
<td>104</td>
<td>0.0800</td>
<td>2.00</td>
<td>ug/L</td>
<td>100.00</td>
<td>104</td>
<td>85-115</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Selenium</td>
<td>101</td>
<td>0.200</td>
<td>2.00</td>
<td>ug/L</td>
<td>100.00</td>
<td>101</td>
<td>85-115</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thallium</td>
<td>105</td>
<td>0.100</td>
<td>0.500</td>
<td>ug/L</td>
<td>100.00</td>
<td>105</td>
<td>85-115</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Matrix Spike (16K0095-MS1)</strong></td>
<td>Source: L16K084-01</td>
<td>Prepared: 11/10/16 Analyzed: 11/11/16</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Antimony</td>
<td>118</td>
<td>6.00</td>
<td>20.0</td>
<td>ug/L</td>
<td>100.00</td>
<td>7.54</td>
<td>111</td>
<td>70-130</td>
<td></td>
</tr>
<tr>
<td>Arsenic</td>
<td>108</td>
<td>3.20</td>
<td>20.0</td>
<td>ug/L</td>
<td>100.00</td>
<td>U</td>
<td>108</td>
<td>70-130</td>
<td></td>
</tr>
<tr>
<td>Cadmium</td>
<td>99.3</td>
<td>1.00</td>
<td>5.00</td>
<td>ug/L</td>
<td>100.00</td>
<td>1.73</td>
<td>97.6</td>
<td>70-130</td>
<td></td>
</tr>
<tr>
<td>Cobalt</td>
<td>108</td>
<td>0.400</td>
<td>20.0</td>
<td>ug/L</td>
<td>100.00</td>
<td>18.3</td>
<td>89.9</td>
<td>70-130</td>
<td></td>
</tr>
<tr>
<td>Lead</td>
<td>95.7</td>
<td>0.800</td>
<td>20.0</td>
<td>ug/L</td>
<td>100.00</td>
<td>1.05</td>
<td>94.6</td>
<td>70-130</td>
<td></td>
</tr>
<tr>
<td>Selenium</td>
<td>159</td>
<td>2.00</td>
<td>20.0</td>
<td>ug/L</td>
<td>100.00</td>
<td>125</td>
<td>34.4</td>
<td>70-130</td>
<td>J-</td>
</tr>
<tr>
<td>Thallium</td>
<td>99.5</td>
<td>1.00</td>
<td>5.00</td>
<td>ug/L</td>
<td>100.00</td>
<td>2.59</td>
<td>96.9</td>
<td>70-130</td>
<td></td>
</tr>
<tr>
<td><strong>Matrix Spike Dup (16K0095-MSD1)</strong></td>
<td>Source: L16K084-01</td>
<td>Prepared: 11/10/16 Analyzed: 11/11/16</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Antimony</td>
<td>119</td>
<td>6.00</td>
<td>20.0</td>
<td>ug/L</td>
<td>100.00</td>
<td>7.54</td>
<td>111</td>
<td>70-130</td>
<td>0.290</td>
</tr>
<tr>
<td>Arsenic</td>
<td>110</td>
<td>3.20</td>
<td>20.0</td>
<td>ug/L</td>
<td>100.00</td>
<td>U</td>
<td>110</td>
<td>70-130</td>
<td>2.01</td>
</tr>
<tr>
<td>Cadmium</td>
<td>101</td>
<td>1.00</td>
<td>5.00</td>
<td>ug/L</td>
<td>100.00</td>
<td>1.73</td>
<td>98.8</td>
<td>70-130</td>
<td>1.19</td>
</tr>
<tr>
<td>Cobalt</td>
<td>111</td>
<td>0.400</td>
<td>20.0</td>
<td>ug/L</td>
<td>100.00</td>
<td>18.3</td>
<td>92.4</td>
<td>70-130</td>
<td>2.33</td>
</tr>
<tr>
<td>Lead</td>
<td>95.5</td>
<td>0.800</td>
<td>20.0</td>
<td>ug/L</td>
<td>100.00</td>
<td>1.05</td>
<td>94.5</td>
<td>70-130</td>
<td>0.172</td>
</tr>
<tr>
<td>Selenium</td>
<td>161</td>
<td>2.00</td>
<td>20.0</td>
<td>ug/L</td>
<td>100.00</td>
<td>125</td>
<td>35.7</td>
<td>70-130</td>
<td>0.829</td>
</tr>
<tr>
<td>Thallium</td>
<td>99.9</td>
<td>1.00</td>
<td>5.00</td>
<td>ug/L</td>
<td>100.00</td>
<td>2.59</td>
<td>97.4</td>
<td>70-130</td>
<td>0.409</td>
</tr>
</tbody>
</table>

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
### Total Recoverable Metals by 200 Series - Quality Control

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>MDL</th>
<th>PQL</th>
<th>Units</th>
<th>Spike</th>
<th>Source</th>
<th>%Rec</th>
<th>%Rec Limits</th>
<th>RPD</th>
<th>RPD Limit</th>
<th>Qualifier</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Batch 16K0104 - EPA 200.7</strong></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>Blank (16K0104-BLK1)</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>Boron</td>
<td>10.0</td>
<td>10.0</td>
<td>50.0</td>
<td>ug/L</td>
<td></td>
<td></td>
<td></td>
<td>U</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prepared: 11/11/16 Analyzed: 11/14/16</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>LCS (16K0104-BS1)</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>Boron</td>
<td>1040</td>
<td>10.0</td>
<td>50.0</td>
<td>ug/L</td>
<td>1000.0</td>
<td>104</td>
<td>85-115</td>
<td>U</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prepared: 11/11/16 Analyzed: 11/14/16</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>Matrix Spike (16K0104-MSI)</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>Source: L16K029-01</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>Boron</td>
<td>3950</td>
<td>10.0</td>
<td>50.0</td>
<td>ug/L</td>
<td>1000.0</td>
<td>129</td>
<td>70-130</td>
<td>U</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prepared: 11/11/16 Analyzed: 11/14/16</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>Matrix Spike Dup (16K0104-MSD1)</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>Source: L16K029-01</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>Boron</td>
<td>3820</td>
<td>10.0</td>
<td>50.0</td>
<td>ug/L</td>
<td>1000.0</td>
<td>116</td>
<td>70-130</td>
<td>U</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prepared: 11/11/16 Analyzed: 11/14/16</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
### General Chemistry Parameters - Quality Control

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>MDL</th>
<th>PQL</th>
<th>Units</th>
<th>Spike Level</th>
<th>Source</th>
<th>%Rec Limits</th>
<th>RPD Limit</th>
<th>Qualifier</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Batch 16K0112 - SM 2540C</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Prepared &amp; Analyzed: 11/14/16</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Dissolved Solids</td>
<td>12.0</td>
<td>12.0</td>
<td>20.0</td>
<td>mg/L</td>
<td></td>
<td></td>
<td>U</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>LCS (16K0112-BS1)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Prepared &amp; Analyzed: 11/14/16</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Dissolved Solids</td>
<td>1010</td>
<td>12.0</td>
<td>20.0</td>
<td>mg/L</td>
<td>1000.0</td>
<td></td>
<td>101</td>
<td>80-120</td>
<td></td>
</tr>
<tr>
<td><strong>Duplicate (16K0112-DUP1)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Source: L16K034-01</td>
<td>Prepared &amp; Analyzed: 11/14/16</td>
<td>1.71</td>
<td>10</td>
</tr>
<tr>
<td>Total Dissolved Solids</td>
<td>3530</td>
<td>24.0</td>
<td>40.0</td>
<td>mg/L</td>
<td>3470</td>
<td></td>
<td>101</td>
<td>J-</td>
<td></td>
</tr>
<tr>
<td><strong>Duplicate (16K0112-DUP2)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Source: L16K059-02</td>
<td>Prepared &amp; Analyzed: 11/14/16</td>
<td>9.05</td>
<td>10</td>
</tr>
<tr>
<td>Total Dissolved Solids</td>
<td>95.0</td>
<td>12.0</td>
<td>20.0</td>
<td>mg/L</td>
<td>104</td>
<td></td>
<td>9.05</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td><strong>Batch 16K0150 - EPA 300.0</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Prepared &amp; Analyzed: 11/29/16</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blank (16K0150-BLK1)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>I</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chloride</td>
<td>0.0961</td>
<td>0.0200</td>
<td>0.500</td>
<td>mg/L</td>
<td></td>
<td></td>
<td>I</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fluoride</td>
<td>0.0100</td>
<td>0.0100</td>
<td>0.0500</td>
<td>mg/L</td>
<td></td>
<td></td>
<td>U</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sulfate</td>
<td>0.500</td>
<td>0.500</td>
<td>2.00</td>
<td>mg/L</td>
<td></td>
<td></td>
<td>U</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>LCS (16K0150-BS1)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Prepared &amp; Analyzed: 11/29/16</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chloride</td>
<td>4.96</td>
<td>0.0200</td>
<td>0.500</td>
<td>mg/L</td>
<td>5.0000</td>
<td></td>
<td>99.2</td>
<td>90-110</td>
<td>V</td>
</tr>
<tr>
<td>Fluoride</td>
<td>4.93</td>
<td>0.0100</td>
<td>0.0500</td>
<td>mg/L</td>
<td>5.0000</td>
<td></td>
<td>98.6</td>
<td>90-110</td>
<td>V</td>
</tr>
<tr>
<td>Sulfate</td>
<td>4.99</td>
<td>0.500</td>
<td>2.00</td>
<td>mg/L</td>
<td>5.0000</td>
<td></td>
<td>99.8</td>
<td>90-110</td>
<td>V</td>
</tr>
<tr>
<td><strong>Matrix Spike (16K0150-MS1)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Source: L16K002-01</td>
<td>Prepared &amp; Analyzed: 11/29/16</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chloride</td>
<td>481</td>
<td>0.200</td>
<td>5.00</td>
<td>mg/L</td>
<td>50.000</td>
<td></td>
<td>430</td>
<td>101</td>
<td>90-110</td>
</tr>
<tr>
<td>Fluoride</td>
<td>53.2</td>
<td>0.100</td>
<td>0.500</td>
<td>mg/L</td>
<td>50.000</td>
<td></td>
<td>1.12</td>
<td>104</td>
<td>90-110</td>
</tr>
<tr>
<td>Sulfate</td>
<td>713</td>
<td>5.00</td>
<td>20.0</td>
<td>mg/L</td>
<td>50.000</td>
<td></td>
<td>672</td>
<td>82.7</td>
<td>90-110</td>
</tr>
</tbody>
</table>

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
### General Chemistry Parameters - Quality Control

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>MDL</th>
<th>PQL</th>
<th>Units</th>
<th>Spike Level</th>
<th>Source</th>
<th>%Rec</th>
<th>%Rec Limits</th>
<th>RPD Limit</th>
<th>Qualifier</th>
</tr>
</thead>
<tbody>
<tr>
<td>Batch 16K0150 - EPA 300.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chloride</td>
<td>165</td>
<td>0.200</td>
<td>5.00</td>
<td>mg/L</td>
<td>50.000</td>
<td>54.4</td>
<td>101</td>
<td>90-110</td>
<td>V</td>
<td></td>
</tr>
<tr>
<td>Fluoride</td>
<td>50.9</td>
<td>0.100</td>
<td>0.500</td>
<td>mg/L</td>
<td>50.000</td>
<td>U</td>
<td>102</td>
<td>90-110</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sulfate</td>
<td>122</td>
<td>5.00</td>
<td>20.0</td>
<td>mg/L</td>
<td>50.000</td>
<td>75.3</td>
<td>94.0</td>
<td>90-110</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Matrix Spike Dup (16K0150-MSD1)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chloride</td>
<td>478</td>
<td>0.200</td>
<td>5.00</td>
<td>mg/L</td>
<td>50.000</td>
<td>430</td>
<td>95.3</td>
<td>90-110</td>
<td>0.597</td>
<td>20</td>
</tr>
<tr>
<td>Fluoride</td>
<td>53.4</td>
<td>0.100</td>
<td>0.500</td>
<td>mg/L</td>
<td>50.000</td>
<td>1.12</td>
<td>105</td>
<td>90-110</td>
<td>0.336</td>
<td>20</td>
</tr>
<tr>
<td>Sulfate</td>
<td>709</td>
<td>5.00</td>
<td>20.0</td>
<td>mg/L</td>
<td>50.000</td>
<td>672</td>
<td>74.6</td>
<td>90-110</td>
<td>0.564</td>
<td>20</td>
</tr>
<tr>
<td>Matrix Spike Dup (16K0150-MSD2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chloride</td>
<td>106</td>
<td>0.200</td>
<td>5.00</td>
<td>mg/L</td>
<td>50.000</td>
<td>54.4</td>
<td>103</td>
<td>90-110</td>
<td>1.32</td>
<td>20</td>
</tr>
<tr>
<td>Fluoride</td>
<td>51.6</td>
<td>0.100</td>
<td>0.500</td>
<td>mg/L</td>
<td>50.000</td>
<td>U</td>
<td>103</td>
<td>90-110</td>
<td>1.39</td>
<td>20</td>
</tr>
<tr>
<td>Sulfate</td>
<td>123</td>
<td>5.00</td>
<td>20.0</td>
<td>mg/L</td>
<td>50.000</td>
<td>75.3</td>
<td>96.0</td>
<td>90-110</td>
<td>0.780</td>
<td>20</td>
</tr>
</tbody>
</table>

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Peggy Penner, Manager, Laboratory Services

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
<table>
<thead>
<tr>
<th>LIMS #</th>
<th>Location Code</th>
<th>Time</th>
<th>FE³</th>
<th>pH (SU)</th>
<th>Temp °C</th>
<th>Cond (µS/CM)</th>
<th>DO (mg/L)</th>
<th>Turbidity (NTU)</th>
<th>Redox (mv)</th>
<th>Sulfate (mg/L)</th>
<th>Color</th>
<th>Odor</th>
<th>RAB / TECO</th>
<th>Initials</th>
<th>NGVD</th>
</tr>
</thead>
<tbody>
<tr>
<td>L16K034-03</td>
<td>BBS-CCR-3</td>
<td>11:05</td>
<td>2</td>
<td>1646</td>
<td>26.10</td>
<td>0.05</td>
<td>1.18</td>
<td>-239.20</td>
<td>YELLOW</td>
<td>MODERATE</td>
<td>10:33</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>L16K034-03</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>
</tbody>
</table>

(1) 1 plastic (PP)  
(2) 50ml plastic (PP)  
(3) 250ml plastic (PP)  
(4) 100ml coliform bottle  
(5) 1L amber glass (AQ)  
(6) 40ml VOA vial (CG)  

**Samples On Ice**:  
**Samples Requested**:  

<table>
<thead>
<tr>
<th>Oxygen</th>
<th>Purge Meth:</th>
<th>Time</th>
<th>Rate (m/min)</th>
<th>Volume (gal)</th>
<th>Total Vol. (gal)</th>
<th>Water Depth (ft)</th>
<th>pH (SU)</th>
<th>Temp °C</th>
<th>Cond (µS/CM)</th>
<th>DO (mg/L)</th>
<th>Turbidity (NTU)</th>
<th>Redox (mv)</th>
<th>Purge Criteria</th>
<th>Status</th>
<th>Equipment ID</th>
<th>Expl. Table</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1A</td>
<td>10:45</td>
<td>260</td>
<td>0.76</td>
<td>7.08</td>
<td>6.43</td>
<td>26.04</td>
<td>1693</td>
<td>0.11</td>
<td>1.42</td>
<td>0.2</td>
<td></td>
<td>STABLE</td>
<td>Level Meter: wlm08</td>
<td>wlm08</td>
<td></td>
</tr>
<tr>
<td></td>
<td>10:34</td>
<td>260</td>
<td>0.14</td>
<td>7.08</td>
<td>6.43</td>
<td>26.10</td>
<td>1663</td>
<td>0.06</td>
<td>1.67</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Pump: PP</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>10:49</td>
<td>260</td>
<td>0.14</td>
<td>7.08</td>
<td>6.46</td>
<td>26.10</td>
<td>1646</td>
<td>0.05</td>
<td>1.18</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td>Tubing: PE/S</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>10:49</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>Turb. NTU = 20</td>
<td>STABLE</td>
<td></td>
</tr>
</tbody>
</table>

**Purge Complete At**:  

Gallons to Purge **0.12** Results:  
- Stability Values = 6.46  
- 26.10  
- 1646  
- 0.05  
- 1.18  

**Purge Meth: | Time | Rate (m/min) | Volume (gal) | Total Vol. (gal) | Water Depth (ft) | pH (SU) | Temp °C | Cond (µS/CM) | DO (mg/L) | Turbidity (NTU) | Redox (mv) | Purge Criteria | Status | Equipment ID | Expl. Table |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
<td>10</td>
<td>18</td>
<td>18.00</td>
<td>0.16</td>
<td>2.88</td>
<td>0.0026</td>
<td>100</td>
<td>0</td>
<td>0.06</td>
<td>0.32</td>
<td></td>
<td>Level Meter: wlm08</td>
<td>wlm08</td>
<td></td>
</tr>
<tr>
<td></td>
<td>10:36</td>
<td>260</td>
<td>0.76</td>
<td>7.08</td>
<td>6.43</td>
<td>26.04</td>
<td>1693</td>
<td>0.11</td>
<td>1.42</td>
<td>0.2</td>
<td></td>
<td>STABLE</td>
<td>Level Meter: wlm08</td>
<td>wlm08</td>
<td></td>
</tr>
<tr>
<td></td>
<td>10:49</td>
<td>260</td>
<td>0.14</td>
<td>7.08</td>
<td>6.43</td>
<td>26.10</td>
<td>1663</td>
<td>0.06</td>
<td>1.67</td>
<td>5</td>
<td>1.18</td>
<td></td>
<td>Pump: PP</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>10:49</td>
<td>260</td>
<td>0.14</td>
<td>7.08</td>
<td>6.46</td>
<td>26.10</td>
<td>1646</td>
<td>0.05</td>
<td>1.18</td>
<td></td>
<td></td>
<td></td>
<td>Tubing: PE/S</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>10:49</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Turb. NTU = 20</td>
<td>STABLE</td>
<td></td>
</tr>
</tbody>
</table>

**Purge Complete At**:  

Gallons to Purge **0.32** Results:  
- Stability Values =
### Site: Big Bend

<table>
<thead>
<tr>
<th>LIMS #</th>
<th>Location Code</th>
<th>Time</th>
<th>FE³</th>
<th>pH (SU)</th>
<th>Temp °C</th>
<th>Cond(uMH)⁴</th>
<th>DO mg/L</th>
<th>Turbidity(NTU)</th>
<th>Redox (mv)</th>
<th>Sulfate (mg/L)</th>
<th>Color</th>
<th>Odor</th>
<th>RAB / TECO</th>
<th>Initials</th>
<th>NGVD</th>
</tr>
</thead>
<tbody>
<tr>
<td>L16K034-04</td>
<td>BBS-CCR-BW-1</td>
<td>10:20</td>
<td>6.52</td>
<td>27.50</td>
<td>4996</td>
<td>0.13</td>
<td>1.77</td>
<td>-71.10</td>
<td>CLEAR</td>
<td>NONE</td>
<td>9.58</td>
<td>10</td>
<td>0.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>L16K034-05</td>
<td>BBS-CCR-BW-2</td>
<td>9:49</td>
<td>6.68</td>
<td>27.10</td>
<td>1397</td>
<td>0.20</td>
<td>5.86</td>
<td>-73.80</td>
<td>LT. YELLOW</td>
<td>NONE</td>
<td>9.28</td>
<td>0.00</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### LIMS # 250mil Cyn (3):

<table>
<thead>
<tr>
<th>Time</th>
<th>Pres ID</th>
<th>Preservation</th>
<th>Preservation</th>
<th>Preservation</th>
</tr>
</thead>
<tbody>
<tr>
<td>6:00</td>
<td>L</td>
<td>010686</td>
<td>015981A</td>
<td>Zobell Sol</td>
</tr>
<tr>
<td>10:21</td>
<td>L</td>
<td>015981A</td>
<td>015981A</td>
<td>LMP08</td>
</tr>
<tr>
<td>11:01</td>
<td>L</td>
<td>015981A</td>
<td>015981A</td>
<td>LMP08</td>
</tr>
</tbody>
</table>

**Note:** LMP08 = 500 ml bottles:nuts: 1 ml H2SO4 = pH < 2

### Purging Information

#### Well Capacities (gallons/ft²): 2 = 0.16  4 = 0.65

**Tubing Inside Diam., Capacities Gallons/ft:**

14" = 0.0026  38" = 0.006

| Well # | Diameter (in) | Screen Interval (ft) | Intake Depth (ft) | Well Diameter - Depth to Water (ft) | Water Column (ft) | Well Capacity (gal) | 1 Well Volume (gal) | Tubing Capacity (gal) | 1 Tubing Length (ft) | Purge Criteria | Status | Equipment ID | Equipment Table |
|--------|---------------|----------------------|------------------|--------------------------------------|------------------|-------------------|-------------------|----------------------|-------------------|---------------|-------|-------------|----------------|---|
| BBS-CCR-BW-1 | 2 | 10 | 44.3 | 29.84 | 14.46 | 0.16 | 2.31 | 0.0026 | 100 | 0.06 | 0.32 |

**Purge Meth:** Purge Meth: Time | Rate (ml/min) | Volume (gal) | Total Vol. (gal) | Water Depth (ft) | pH (SU) | Cond (uMHOS) | DO mg/L | Turbidity (NTU) | Purge Criteria | Status | Equipment ID | Equipment Table |
| 1A | 10:13 | 2300 | 7.90 | 31.02 | 6.25 | 27.50 | 4927 | 0.14 | 6.86 | pH++ | STABLE | Level Meter: wlm08 |
| 10:00 | 10:17 | 2200 | 1.16 | 30.99 | 6.52 | 27.50 | 4927 | 0.13 | 2.66 | Cond % + | STABLE | Tubing: PE |

**Purge Complete At:** Gallons to Purge 0.32

Stability Values = 6.25  27.50  4996  0.13  1.77

**Purge Meth:** Time | Rate (ml/min) | Volume (gal) | Total Vol. (gal) | Water Depth (ft) | pH (SU) | Cond (uMHOS) | DO mg/L | Turbidity (NTU) | Purge Criteria | Status | Equipment ID | Equipment Table |
| 1A | 9:36 | 700 | 1.29 | 8.76 | 6.68 | 27.04 | 1397 | 0.33 | 2.96 | pH+ | STABLE | Level Meter: wlm08 |
| 0.90 | 9:36 | 700 | 0.37 | 8.76 | 6.68 | 27.08 | 1396 | 0.22 | 3.45 | Cond % - | STABLE | Tubing: PE |
| 5.80 | 9:40 | 700 | 0.37 | 8.76 | 6.68 | 27.10 | 1397 | 0.20 | 5.86 | STABLE | Tubing: PE |

**Purge Complete At:** Gallons to Purge 0.12

Stability Values = 6.68  27.10  1397  0.20  5.86

**Comments:**

**Total Time:** 13:32

**Total Miles:**
### GROUNDWATER SAMPLING LOG

**WELL NO.** BBS-CCR-1  
**SAMPLE ID:** L16K034-01  
**DATE:** 11/10/16

### PURGING DATA

<table>
<thead>
<tr>
<th>TIME</th>
<th>VOLUME PURGED (GALLONS)</th>
<th>DEPTH TO WATER (FEET)</th>
<th>pH (standard units)</th>
<th>TEMP. (ºC)</th>
<th>COND. (µmhos/cm OR µS/cm)</th>
<th>DISSOLVED OXYGEN (circled % saturation)</th>
<th>TURBIDITY (NTUs)</th>
<th>COLOR (describe)</th>
<th>ODOR (describe)</th>
</tr>
</thead>
<tbody>
<tr>
<td>11:40</td>
<td>0.92</td>
<td>7.50</td>
<td>6.82</td>
<td>25.71</td>
<td>4286</td>
<td>0.08</td>
<td>1.13</td>
<td>LT. YELLOW</td>
<td>NONE</td>
</tr>
<tr>
<td>11:42</td>
<td>0.25</td>
<td>7.50</td>
<td>6.83</td>
<td>25.74</td>
<td>4290</td>
<td>0.07</td>
<td>0.75</td>
<td>LT. YELLOW</td>
<td>NONE</td>
</tr>
<tr>
<td>11:44</td>
<td>0.25</td>
<td>7.50</td>
<td>6.82</td>
<td>25.70</td>
<td>4290</td>
<td>0.08</td>
<td>0.89</td>
<td>LT. YELLOW</td>
<td>NONE</td>
</tr>
</tbody>
</table>

#### WELL CAPACITY (Gallons Per Foot):
- 0.75" = 0.02
- 1" = 0.04
- 1.25" = 0.06
- 2" = 0.16
- 3" = 0.37
- 4" = 0.65
- 5" = 1.02
- 6" = 1.47
- 12" = 5.88

#### TUBING INSIDE DIA. CAPACITY (Gal./Ft.):
- 1/8" = 0.00006
- 3/16" = 0.0014
- 1/4" = 0.0026
- 5/32" = 0.0034
- 3/16" = 0.004
- 1/2" = 0.010
- 5/8" = 0.016

### SAMPLING DATA

**SAMPLED BY (PRINT) / AFFILIATION:**
- **RAB**
- **TECO**

**SAMPLE PUMP FLOW RATE (ML per minute):** 487

**PUMP OR TUBING DEPTH IN WELL (feet):** 17.3

**SAMPLE PUMP MATERIAL CODE:** PE/S

**FIELD DECONTAMINATION:**
- Y = Yes
- N = No

**FIELD FILTERED:**
- Y = Yes
- N = No

**FILTER SIZE:** µm

**DUPLICATE:**
- Y = Yes
- N = No

**SAMPLE CONTAINER SPECIFICATION**

<table>
<thead>
<tr>
<th>SAMPLE ID CODE</th>
<th>CONTAINERS</th>
<th>MATERIAL CODE</th>
<th>VOLUME</th>
<th>PRESERVATIVE USED</th>
<th>TOTAL VOL ADDED IN FIELD (ML)</th>
<th>pH</th>
<th>INTENDED ANALYSIS AND/OR METHOD</th>
<th>SAMPLING EQUIPMENT CODE</th>
</tr>
</thead>
<tbody>
<tr>
<td>@Ino-500</td>
<td>1</td>
<td>PE</td>
<td>500ml</td>
<td>NONE</td>
<td>NONE</td>
<td>N/A</td>
<td>Inorganics</td>
<td>PP</td>
</tr>
<tr>
<td>@Met-250</td>
<td>2</td>
<td>PE</td>
<td>250ml</td>
<td>HNO3</td>
<td>1ml</td>
<td>&lt;2</td>
<td>Metals</td>
<td>PP</td>
</tr>
<tr>
<td>@Rad-1L</td>
<td>2</td>
<td>PE</td>
<td>1L</td>
<td>HNO3</td>
<td>5ml</td>
<td>&lt;2</td>
<td>Radiologicals</td>
<td>PP</td>
</tr>
</tbody>
</table>

**NOTES:**
1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

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

### SITE:
- **Name:** Big Bend
- **Location:** Apollo Beach, FL.

### WELL:
- **No.:** BBS-CCR-2

### SAMPLE ID:
- **L16K034-02**

### DATE:
- **11/10/16**

### PURGING DATA

<table>
<thead>
<tr>
<th>TIME</th>
<th>VOLUME PURGED (GALLONS)</th>
<th>pH (standard units)</th>
<th>TEMP. (ºC)</th>
<th>COND. (µmhos/cm or µS/cm)</th>
<th>DISSOLVED OXYGEN (circle mg/l or % saturation)</th>
<th>TURBIDITY (NTUs)</th>
<th>COLOR (describe)</th>
<th>ODOR (describe)</th>
</tr>
</thead>
<tbody>
<tr>
<td>11:17</td>
<td>0.70</td>
<td>6.89</td>
<td>25.64</td>
<td>1515</td>
<td>0.20</td>
<td>5.92</td>
<td>LT. YELLOW</td>
<td>NONE</td>
</tr>
<tr>
<td>11:19</td>
<td>1.05</td>
<td>6.89</td>
<td>25.61</td>
<td>1540</td>
<td>0.15</td>
<td>6.92</td>
<td>LT. YELLOW</td>
<td>NONE</td>
</tr>
<tr>
<td>11:21</td>
<td>1.40</td>
<td>6.89</td>
<td>25.66</td>
<td>1542</td>
<td>0.13</td>
<td>7.10</td>
<td>LT. YELLOW</td>
<td>NONE</td>
</tr>
</tbody>
</table>

### EQUIPMENT VOLUME PURGE:
- 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY x TUBING LENGTH) + FLOW CELL VOLUME

### WELL VOLUME PURGE:
- 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) x WELL CAPACITY

### SAMPLING DATA

<table>
<thead>
<tr>
<th>SAMPLED BY (PRINT)/AFFILIATION</th>
<th>RAB</th>
<th>TECO</th>
<th>SAMPLER (S) SIGNATURES</th>
<th>SAMPLING INITIATED AT: 11:21</th>
<th>SAMPLING ENDED AT: 11:27</th>
</tr>
</thead>
</table>

### PURGING INITIATED AT: 11:13

### TOTAL VOLUME PURGED (gallons): 1.40

### FIELD DECONTAMINATION:
- Y N

### FILTER SIZE:
- µm

### Duplicates:
- Y N

### TUBING INSIDE DIAM. CAPACITY (Gal./Ft.):
- 1/8" = 0.00006
- 3/16" = 0.0014
- 1/4" = 0.0026
- 5/32" = 0.004
- 3/8" = 0.006
- 1/2" = 0.010
- 5/8" = 0.016

### WELL CAPACITY (Gallons Per Foot):
- 0.75" = 0.02
- 1" = 0.04
- 1.25" = 0.06
- 2" = 0.16
- 3" = 0.37
- 4" = 0.65
- 5" = 1.02
- 6" = 1.47
- 12" = 5.88

### TUBING INSIDE DIAM. CAPACITY (Gal./Ft.)
- Diameter = 0.00006
- Diameter = 0.0014
- Diameter = 0.0026
- Diameter = 0.004
- Diameter = 0.006
- Diameter = 0.010
- Diameter = 0.016

### REMARKS:
- (1) Sample bottles pre-preserved at laboratory prior to sample collection.

### MATERIAL CODES:
- AG = Amber Glass
- CG = Clear Glass
- PE = Polyethylene
- PP = Polypropylene
- S = Silicone
- T = Teflon
- O = Other (Specify)

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

**SITE NAME:** Big Bend  
**SITE LOCATION:** Apollo Beach, FL.

**WELL NO:** BBS-CCR-3  
**SAMPLE ID:** L16K034-03  
**DATE:** 11/10/16

### PURGING DATA

| TIME      | VOLUME PURGED (GALLONS) | CUMUL. VOLUME PURGED (GALLONS) | PURGE RATE (GPM) | DEPTH TO WATER (FEET) | pH (standard units) | TEMP. (ºC) | COND. (µmhos/cm OR µS/cm) | DISSOLVED OXYGEN (circles mg/l OR % saturation) | TURBIDITY (NTUs) | COLOR (describe) | ODOR (describe) |
|-----------|-------------------------|---------------------------------|------------------|-----------------------|---------------------|------------|--------------------------|-----------------------------------------------|----------------|----------------|----------------|---|
| 10:45     | 0.76                    | 0.76                            | 0.07             | 7.08                  | 6.43                | 26.04      | 1693                     | 0.11                                          | 1.42           | YELLOW         | MODERATE       |   |
| 10:47     | 0.14                    | 0.90                            | 0.07             | 7.10                  | 6.45                | 26.10      | 1663                     | 0.06                                          | 1.67           | YELLOW         | MODERATE       |   |
| 10:49     | 0.14                    | 1.04                            | 0.07             | 7.08                  | 6.46                | 26.10      | 1646                     | 0.05                                          | 1.18           | YELLOW         | MODERATE       |   |

### SAMPLING DATA

**SAMPLED BY (PRINT) / AFFILIATION:** RAB  
**TECO:**

**SAMPLER (S) SIGNATURES:**

**SAMPLING INITIATED AT:** 10:49  
**SAMPLING ENDED AT:** 11:05

**PUMP OR TUBING DEPTH IN WELL (feet):** 18.2

**SAMPLED PUMP FLOW RATE (mL per minute):** 260

**TUBING MATERIAL CODE:** PE/S

**FIELD DECONTAMINATION:** Y □ N ☑

**FIELD-FILTERED:** N □ Y ☑  
**FILTER SIZE:** µm  
**DUPLICATE:** Y □ N ☑

**SAMPLE CONTAINER SPECIFICATION**

<table>
<thead>
<tr>
<th>SAMPLE ID CODE</th>
<th>CONTAINERS</th>
<th>MATERIAL CODE</th>
<th>VOLUME</th>
<th>PRESERVATIVE USED</th>
<th>TOTAL VOL. ADDED IN FIELD (ml)</th>
<th>FINAL pH</th>
</tr>
</thead>
<tbody>
<tr>
<td>@Ino-500</td>
<td>1</td>
<td>PE</td>
<td>500ml</td>
<td>NONE</td>
<td>NONE</td>
<td>N/A</td>
</tr>
<tr>
<td>@Met-250</td>
<td>2</td>
<td>PE</td>
<td>250ml</td>
<td>HNO3</td>
<td>1ml</td>
<td>&lt;2</td>
</tr>
<tr>
<td>@Rad-1L</td>
<td>2</td>
<td>PE</td>
<td>1L</td>
<td>HNO3</td>
<td>5ml</td>
<td>&lt;2</td>
</tr>
</tbody>
</table>

**REMARKS:**

1. Sample bottles pre-preserved at laboratory prior to sample collection.

**NOTES:**

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

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

   - pH: ± 0.2 units
   - Temperature: ± 0.2 ºC
   - Specific Conductance: ± 5%
   - Dissolved Oxygen: all readings ± 20% saturation (see Table FS 2200-2)

   Optionally, ± 0.2 mg/L or ± 10% (whichever is greater)

   - Turbidity: all readings ≤ 20 NTU; optionally ≤ 5 NTU or 10% (whichever is greater)
## GROUNDWATER SAMPLING LOG

### SITE NAME:
Big Bend Apollo Beach, FL.

### SAMPLE ID:
L16K034-04

### DATE:
11/10/16

### PURGING DATA

<table>
<thead>
<tr>
<th>TIME</th>
<th>VOLUME PURGED (GALLONS)</th>
<th>COND. VOLUME PURGED (GALLONS)</th>
<th>PURGE RATE (GPM)</th>
<th>DEPTH TO WATER (FEET)</th>
<th>pH (standard units)</th>
<th>TEMP. (ºC)</th>
<th>COND. (µmhos/cm OR µS/cm)</th>
<th>DISSOLVED OXYGEN (conc. % saturation)</th>
<th>TURBIDITY (NTUs)</th>
<th>COLOR (describe)</th>
<th>ODOR (describe)</th>
</tr>
</thead>
<tbody>
<tr>
<td>10:13</td>
<td>7.90</td>
<td>0</td>
<td>7.90</td>
<td>0.61</td>
<td>31.02</td>
<td>6.52</td>
<td>27.50</td>
<td>4927</td>
<td>0.14</td>
<td>6.86</td>
<td>CLEAR</td>
</tr>
<tr>
<td>10:15</td>
<td>1.16</td>
<td>9.06</td>
<td>0.58</td>
<td>30.99</td>
<td>6.52</td>
<td>27.42</td>
<td>4962</td>
<td>0.13</td>
<td>2.66</td>
<td>CLEAR</td>
<td>NONE</td>
</tr>
<tr>
<td>10:17</td>
<td>1.16</td>
<td>10.22</td>
<td>0.58</td>
<td>30.96</td>
<td>6.52</td>
<td>27.50</td>
<td>4996</td>
<td>0.13</td>
<td>1.77</td>
<td>CLEAR</td>
<td>NONE</td>
</tr>
</tbody>
</table>

### WELL VOLUME PURGE:
1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) x WELL CAPACITY

### EQUIPMENT VOLUME PURGE:
1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY x TUBING LENGTH) + FLOW CELL VOLUME

### INITIAL PUMP OR TUBING DEPTH IN WELL (feet):
39.30

### FINAL PUMP OR TUBING DEPTH IN WELL (feet):
39.30

### EQUIPMENT VOLUME PURGE:
1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY x TUBING LENGTH) + FLOW CELL VOLUME

### SAMPLING DATA

<table>
<thead>
<tr>
<th>SAMPLED BY (PRINT) / AFFILIATION</th>
<th>RAB</th>
<th>TECO</th>
<th>SAMPLER (S) SIGNATURES</th>
<th>SAMPLING INITIATED AT: 10:17</th>
<th>SAMPLING ENDED AT: 10:20</th>
<th>PUMP OR TUBING DEPTH IN WELL (feet): 39.3</th>
</tr>
</thead>
<tbody>
<tr>
<td>PUMP PUMP FLOW RATE (mL per minute):</td>
<td>2233</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TUBING MATERIAL CODE: PE</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FIELD DECONTAMINATION: N FILTERED Equipment Type:</td>
<td>Y</td>
<td>N</td>
<td>FILTER SIZE: µm</td>
<td>DUPLICATE: Y</td>
<td>N</td>
<td></td>
</tr>
<tr>
<td>SAMPLE CONTAINER SPECIFICATION</td>
<td>@Ino-500</td>
<td>1</td>
<td>PE</td>
<td>500ml</td>
<td>NONE</td>
<td>NONE</td>
</tr>
<tr>
<td>@Met-250</td>
<td>2</td>
<td>PE</td>
<td>250ml</td>
<td>HNO3</td>
<td>1ml</td>
<td>&lt;2</td>
</tr>
<tr>
<td>@Rad-1L</td>
<td>2</td>
<td>PE</td>
<td>1L</td>
<td>HNO3</td>
<td>5ml</td>
<td>&lt;2</td>
</tr>
</tbody>
</table>

### WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 6.88

### TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.00006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

### REMARKS:
1. Sample bottles pre-preserved at laboratory prior to sample collection.

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

**SITE NAME:** Big Bend  
**SITE LOCATION:** Apollo Beach, FL.

**WELL NO:** BBS-CCR-BW-2  
**SAMPLE ID:** L16K034-05  
**DATE:** 11/10/16  

#### PURGING DATA

<table>
<thead>
<tr>
<th>TIME</th>
<th>VOLUME PURGED (GALLONS)</th>
<th>PURGE RATE (GPM)</th>
<th>DEPTH TO WATER (FEET)</th>
<th>pH (standard units)</th>
<th>TEMP. (ºC)</th>
<th>COND. (µmhos/cm or µS/cm)</th>
<th>DISSOLVED OXYGEN (circle mg/L or % saturation)</th>
<th>TURBIDITY (NTUs)</th>
<th>COLOR (describe)</th>
<th>ODOR (describe)</th>
<th>PURGE PUMP TYPE OR BAILER</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:36</td>
<td>1.29</td>
<td>0.18</td>
<td>8.76</td>
<td>6.68</td>
<td>27.04</td>
<td>1397</td>
<td>0.33</td>
<td>2.96</td>
<td>LT. YELLOW</td>
<td>NONE</td>
<td>PP</td>
</tr>
<tr>
<td>9:38</td>
<td>0.37</td>
<td>0.19</td>
<td>8.76</td>
<td>6.68</td>
<td>27.08</td>
<td>1396</td>
<td>0.22</td>
<td>3.45</td>
<td>LT. YELLOW</td>
<td>NONE</td>
<td>PP</td>
</tr>
<tr>
<td>9:40</td>
<td>0.37</td>
<td>2.03</td>
<td>8.76</td>
<td>6.68</td>
<td>27.10</td>
<td>1397</td>
<td>0.20</td>
<td>5.86</td>
<td>LT. YELLOW</td>
<td>NONE</td>
<td>PP</td>
</tr>
</tbody>
</table>

**WELL CAPACITY** (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

**TUBING INSIDE DIAM. CAPACITY** (Gal./Ft): 1/8" = 0.00006; 3/16" = 0.00014; 1/4" = 0.00026; 5/16" = 0.0004; 3/8" = 0.0006; 1/2" = 0.0010; 5/8" = 0.0016

#### SAMPLING DATA

**SAMPLED BY (PRINT)/AFFILIATION:** RAB TECO  
**SAMPLER (S) SIGNATURES:**  
**SAMPLING INITIATED AT:** 9:40  
**SAMPLING ENDED AT:** 9:49  
**PUMP OR TUBING DEPTH IN WELL (feet):** 18.5

**SAMPLE PUMP FLOW RATE (mL per minute):** 700  
**TUBING MATERIAL CODE:** PE/S  
**FIELD DECONTAMINATION:** Y N  
**FIELD FILTERED:** N  
**FILTER SIZE:** µm  
**DUPLICATE:** Y N  
**SAMPLE CONTAINER SPECIFICATION:**  
**SAMPLE PRESCRIPTION:**  
**INTENDED ANALYSIS AND/OR METHOD:**  
**SAMPLING EQUIPMENT CODE:**  

<table>
<thead>
<tr>
<th>SAMPLE ID CODE</th>
<th># CONTAINERS</th>
<th>MATERIAL CODE</th>
<th>VOLUME</th>
<th>PRESERVATIVE USED</th>
<th>TOTAL VOL ADDED IN FIELD (mL)</th>
<th>FINAL pH</th>
<th>INTENDED ANALYSIS AND/OR METHOD</th>
<th>SAMPLING EQUIPMENT CODE</th>
</tr>
</thead>
<tbody>
<tr>
<td>@Ino-500</td>
<td>1</td>
<td>PE</td>
<td>500ml</td>
<td>NONE</td>
<td>NONE</td>
<td>N/A</td>
<td>Inorganics</td>
<td>PP</td>
</tr>
<tr>
<td>@Met-250</td>
<td>2</td>
<td>PE</td>
<td>250ml</td>
<td>HNO3</td>
<td>1ml</td>
<td>&lt;2</td>
<td>Metals</td>
<td>PP</td>
</tr>
<tr>
<td>@Rad-1L</td>
<td>2</td>
<td>PE</td>
<td>1L</td>
<td>HNO3</td>
<td>5ml</td>
<td>&lt;2</td>
<td>Radiologicals</td>
<td>PP</td>
</tr>
</tbody>
</table>

**REMARKS:**
(1) Sample bottles pre-preserved at laboratory prior to sample collection.

**MATERIAL CODES:**  
- AG = Amber Glass;  
- CG = Clear Glass;  
- PE = Polyethylene;  
- PP = Polypropylene;  
- S = Silicone;  
- T = Teflon;  
- O = Other (Specify)

**SAMPLING/PURGING EQUIPMENT CODES:**  
- APP = After Peristaltic Pump;  
- B = Bailer;  
- BP = Bladder Pump;  
- ESP = Electric Submersible Pump;  
- PP = Peristaltic Pump

**EQUIPMENT VOLUME PURGE:** (only if applicable)

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

---

Page 32 of 32  
Revision Date: February 1, 2004
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.
# Table of Contents

- Cover Page ................................................................. 1
- Table of Contents ......................................................... 2
- Sample Summary ............................................................ 3
- Definitions ................................................................. 4
- Case Narrative ............................................................ 5
- Detection Summary ......................................................... 6
- Client Sample Results ...................................................... 7
- QC Sample Results .......................................................... 8
- QC Association ............................................................. 9
- Chronicle ................................................................. 10
- Certification Summary ..................................................... 11
- Method Summary ........................................................... 12
- Chain of Custody ......................................................... 13
- Receipt Checklists ......................................................... 15
<table>
<thead>
<tr>
<th>Lab Sample ID</th>
<th>Client Sample ID</th>
<th>Matrix</th>
<th>Collected</th>
<th>Received</th>
</tr>
</thead>
<tbody>
<tr>
<td>660-77306-3</td>
<td>L16K034-03</td>
<td>Water</td>
<td>11/10/16 11:05</td>
<td>11/15/16 13:55</td>
</tr>
<tr>
<td>660-77306-5</td>
<td>L16K034-05</td>
<td>Water</td>
<td>11/10/16 09:49</td>
<td>11/15/16 13:55</td>
</tr>
</tbody>
</table>
## Qualifiers

### Metals

<table>
<thead>
<tr>
<th>Qualifier</th>
<th>Qualifier Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.</td>
</tr>
<tr>
<td>U</td>
<td>Indicates that the compound was analyzed for but not detected.</td>
</tr>
</tbody>
</table>

## Glossary

These commonly used abbreviations may or may not be present in this report.

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>Listed under the “D” column to designate that the result is reported on a dry weight basis</td>
</tr>
<tr>
<td>%R</td>
<td>Percent Recovery</td>
</tr>
<tr>
<td>CFL</td>
<td>Contains Free Liquid</td>
</tr>
<tr>
<td>CNF</td>
<td>Contains no Free Liquid</td>
</tr>
<tr>
<td>DER</td>
<td>Duplicate error ratio (normalized absolute difference)</td>
</tr>
<tr>
<td>Dil Fac</td>
<td>Dilution Factor</td>
</tr>
<tr>
<td>DL, RA, RE, IN</td>
<td>Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample</td>
</tr>
<tr>
<td>DLC</td>
<td>Decision level concentration</td>
</tr>
<tr>
<td>MDA</td>
<td>Minimum detectable activity</td>
</tr>
<tr>
<td>EDL</td>
<td>Estimated Detection Limit</td>
</tr>
<tr>
<td>MDC</td>
<td>Minimum detectable concentration</td>
</tr>
<tr>
<td>MDL</td>
<td>Method Detection Limit</td>
</tr>
<tr>
<td>ML</td>
<td>Minimum Level (Dioxin)</td>
</tr>
<tr>
<td>NC</td>
<td>Not Calculated</td>
</tr>
<tr>
<td>ND</td>
<td>Not detected at the reporting limit (or MDL or EDL if shown)</td>
</tr>
<tr>
<td>PQL</td>
<td>Practical Quantitation Limit</td>
</tr>
<tr>
<td>QC</td>
<td>Quality Control</td>
</tr>
<tr>
<td>RER</td>
<td>Relative error ratio</td>
</tr>
<tr>
<td>RL</td>
<td>Reporting Limit or Requested Limit (Radiochemistry)</td>
</tr>
<tr>
<td>RPD</td>
<td>Relative Percent Difference, a measure of the relative difference between two points</td>
</tr>
<tr>
<td>TEF</td>
<td>Toxicity Equivalent Factor (Dioxin)</td>
</tr>
<tr>
<td>TEQ</td>
<td>Toxicity Equivalent Quotient (Dioxin)</td>
</tr>
</tbody>
</table>
Job ID: 660-77306-1
Laboratory: TestAmerica Tampa

Narrative

Receipt
The samples were received on 11/15/2016 1:55 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.0º C.

Metals
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.
## Detection Summary

**Client:** Tampa Electric Company  
**Project/Site:** L16K034  
**TestAmerica Job ID:** 660-77306-1

### Client Sample ID: L16K034-01  
**Lab Sample ID:** 660-77306-1

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>Qualifier</th>
<th>PQL</th>
<th>MDL</th>
<th>Unit</th>
<th>Dil Fac.</th>
<th>D</th>
<th>Method</th>
<th>Prep Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithium</td>
<td>0.0084</td>
<td>1</td>
<td>0.050</td>
<td>0.0010</td>
<td>mg/L</td>
<td>1</td>
<td>Rev 4.4</td>
<td>Total/NA</td>
<td></td>
</tr>
</tbody>
</table>

### Client Sample ID: L16K034-02  
**Lab Sample ID:** 660-77306-2

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>Qualifier</th>
<th>PQL</th>
<th>MDL</th>
<th>Unit</th>
<th>Dil Fac.</th>
<th>D</th>
<th>Method</th>
<th>Prep Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithium</td>
<td>0.011</td>
<td>1</td>
<td>0.050</td>
<td>0.0010</td>
<td>mg/L</td>
<td>1</td>
<td>Rev 4.4</td>
<td>Total/NA</td>
<td></td>
</tr>
</tbody>
</table>

### Client Sample ID: L16K034-03  
**Lab Sample ID:** 660-77306-3

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>Qualifier</th>
<th>PQL</th>
<th>MDL</th>
<th>Unit</th>
<th>Dil Fac.</th>
<th>D</th>
<th>Method</th>
<th>Prep Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithium</td>
<td>0.0061</td>
<td>1</td>
<td>0.050</td>
<td>0.0010</td>
<td>mg/L</td>
<td>1</td>
<td>Rev 4.4</td>
<td>Total/NA</td>
<td></td>
</tr>
</tbody>
</table>

### Client Sample ID: L16K034-04  
**Lab Sample ID:** 660-77306-4

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>Qualifier</th>
<th>PQL</th>
<th>MDL</th>
<th>Unit</th>
<th>Dil Fac.</th>
<th>D</th>
<th>Method</th>
<th>Prep Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithium</td>
<td>0.010</td>
<td>1</td>
<td>0.050</td>
<td>0.0010</td>
<td>mg/L</td>
<td>1</td>
<td>Rev 4.4</td>
<td>Total/NA</td>
<td></td>
</tr>
</tbody>
</table>

### Client Sample ID: L16K034-05  
**Lab Sample ID:** 660-77306-5

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>Qualifier</th>
<th>PQL</th>
<th>MDL</th>
<th>Unit</th>
<th>Dil Fac.</th>
<th>D</th>
<th>Method</th>
<th>Prep Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithium</td>
<td>0.0017</td>
<td>1</td>
<td>0.050</td>
<td>0.0010</td>
<td>mg/L</td>
<td>1</td>
<td>Rev 4.4</td>
<td>Total/NA</td>
<td></td>
</tr>
</tbody>
</table>

---

This Detection Summary does not include radiochemical test results.
# Client Sample Results

**Client:** Tampa Electric Company  
**Project/Site:** L16K034  
**TestAmerica Job ID:** 660-77306-1

## Client Sample ID: L16K034-01
**Date Collected:** 11/10/16 11:53  
**Date Received:** 11/15/16 13:55

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>Qualifier</th>
<th>PQL</th>
<th>MDL</th>
<th>Unit</th>
<th>D Prepared</th>
<th>Analyzed</th>
<th>Dil Fac</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithium</td>
<td>0.0084</td>
<td>I</td>
<td>0.050</td>
<td>0.0010 mg/L</td>
<td>11/18/16 11:14</td>
<td>11/19/16 15:54</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

## Client Sample ID: L16K034-02
**Date Collected:** 11/10/16 11:27  
**Date Received:** 11/15/16 13:55

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>Qualifier</th>
<th>PQL</th>
<th>MDL</th>
<th>Unit</th>
<th>D Prepared</th>
<th>Analyzed</th>
<th>Dil Fac</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithium</td>
<td>0.011</td>
<td>I</td>
<td>0.050</td>
<td>0.0010 mg/L</td>
<td>11/18/16 11:14</td>
<td>11/19/16 15:58</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

## Client Sample ID: L16K034-03
**Date Collected:** 11/10/16 11:05  
**Date Received:** 11/15/16 13:55

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>Qualifier</th>
<th>PQL</th>
<th>MDL</th>
<th>Unit</th>
<th>D Prepared</th>
<th>Analyzed</th>
<th>Dil Fac</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithium</td>
<td>0.0061</td>
<td>I</td>
<td>0.050</td>
<td>0.0010 mg/L</td>
<td>11/18/16 11:14</td>
<td>11/19/16 16:01</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

## Client Sample ID: L16K034-04
**Date Collected:** 11/10/16 10:20  
**Date Received:** 11/15/16 13:55

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>Qualifier</th>
<th>PQL</th>
<th>MDL</th>
<th>Unit</th>
<th>D Prepared</th>
<th>Analyzed</th>
<th>Dil Fac</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithium</td>
<td>0.010</td>
<td>I</td>
<td>0.050</td>
<td>0.0010 mg/L</td>
<td>11/18/16 11:14</td>
<td>11/19/16 16:05</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

## Client Sample ID: L16K034-05
**Date Collected:** 11/10/16 09:49  
**Date Received:** 11/15/16 13:55

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>Qualifier</th>
<th>PQL</th>
<th>MDL</th>
<th>Unit</th>
<th>D Prepared</th>
<th>Analyzed</th>
<th>Dil Fac</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithium</td>
<td>0.0017</td>
<td>I</td>
<td>0.050</td>
<td>0.0010 mg/L</td>
<td>11/18/16 11:14</td>
<td>11/19/16 16:08</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>
# QC Sample Results

**TestAmerica Job ID:** 660-77306-1  
**Client:** Tampa Electric Company  
**Project/Site:** L16K034

**Method:** 200.7 Rev 4.4 - Metals (ICP)

## Lab Sample ID: MB 400-331677/1-A

<table>
<thead>
<tr>
<th>Analyte</th>
<th>MB</th>
<th>Result</th>
<th>Qualifier</th>
<th>PQL</th>
<th>MDL</th>
<th>Unit</th>
<th>11/19/16 11:14</th>
<th>11/19/16 14:33</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithium</td>
<td>MB</td>
<td>0.0010</td>
<td>U</td>
<td>0.050</td>
<td>0.0010</td>
<td>mg/L</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## Lab Sample ID: LCS 400-331677/2-A

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Spike</th>
<th>Added</th>
<th>LCS</th>
<th>Result</th>
<th>LCS</th>
<th>Qualifier</th>
<th>Unit</th>
<th>%Rec</th>
<th>Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithium</td>
<td>1.00</td>
<td>1.11</td>
<td>LCS</td>
<td>1.11</td>
<td>LCS</td>
<td></td>
<td>mg/L</td>
<td>111</td>
<td>85-115</td>
</tr>
</tbody>
</table>

## Lab Sample ID: 400-129934-G-4-B MS

| Analyte  | Sample | Result | Qualifier | Spike | Added | MS | Result | MS | Qualifier | Unit | D | %Rec | Limits |
|----------|--------|--------|-----------|-------|-------|MS |        | MS |          |      |   |      |        |
| Lithium  | 0.014  | I      | 1.00      | 1.14  | 1.14  |    |        |    |          | mg/L |   | 112  | 70-130 |

## Lab Sample ID: 400-129934-G-4-C MSD

| Analyte  | Sample | Result | Qualifier | Spike | Added | MSD | Result | MSD | Qualifier | Unit | D | %Rec | Limits | RPD | Limit |
|----------|--------|--------|-----------|-------|-------|MSD |        | MSD |          |      |   |      |        |     |       |
| Lithium  | 0.014  | I      | 1.00      | 1.20  | 1.20  |    |        |    |          | mg/L |   | 118  | 70-130 | 5   | 20    |
### Metals

#### Prep Batch: 331677

<table>
<thead>
<tr>
<th>Lab Sample ID</th>
<th>Client Sample ID</th>
<th>Prep Type</th>
<th>Matrix</th>
<th>Method</th>
<th>Prep Batch</th>
</tr>
</thead>
<tbody>
<tr>
<td>660-77306-1</td>
<td>L16K034-01</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7</td>
<td></td>
</tr>
<tr>
<td>660-77306-2</td>
<td>L16K034-02</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7</td>
<td></td>
</tr>
<tr>
<td>660-77306-3</td>
<td>L16K034-03</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7</td>
<td></td>
</tr>
<tr>
<td>660-77306-4</td>
<td>L16K034-04</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7</td>
<td></td>
</tr>
<tr>
<td>660-77306-5</td>
<td>L16K034-05</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7</td>
<td></td>
</tr>
<tr>
<td>MB 400-331677/1-A</td>
<td>Method Blank</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7</td>
<td></td>
</tr>
<tr>
<td>LCS 400-331677/2-A</td>
<td>Lab Control Sample</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7</td>
<td></td>
</tr>
<tr>
<td>400-129934-G-4-B MS</td>
<td>Matrix Spike</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7</td>
<td></td>
</tr>
<tr>
<td>400-129934-G-4-C MSD</td>
<td>Matrix Spike Duplicate</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7</td>
<td></td>
</tr>
</tbody>
</table>

#### Analysis Batch: 331888

<table>
<thead>
<tr>
<th>Lab Sample ID</th>
<th>Client Sample ID</th>
<th>Prep Type</th>
<th>Matrix</th>
<th>Method</th>
<th>Prep Batch</th>
</tr>
</thead>
<tbody>
<tr>
<td>660-77306-1</td>
<td>L16K034-01</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7 Rev 4.4</td>
<td>331677</td>
</tr>
<tr>
<td>660-77306-2</td>
<td>L16K034-02</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7 Rev 4.4</td>
<td>331677</td>
</tr>
<tr>
<td>660-77306-3</td>
<td>L16K034-03</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7 Rev 4.4</td>
<td>331677</td>
</tr>
<tr>
<td>660-77306-4</td>
<td>L16K034-04</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7 Rev 4.4</td>
<td>331677</td>
</tr>
<tr>
<td>660-77306-5</td>
<td>L16K034-05</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7 Rev 4.4</td>
<td>331677</td>
</tr>
<tr>
<td>MB 400-331677/1-A</td>
<td>Method Blank</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7 Rev 4.4</td>
<td>331677</td>
</tr>
<tr>
<td>LCS 400-331677/2-A</td>
<td>Lab Control Sample</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7 Rev 4.4</td>
<td>331677</td>
</tr>
<tr>
<td>400-129934-G-4-B MS</td>
<td>Matrix Spike</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7 Rev 4.4</td>
<td>331677</td>
</tr>
<tr>
<td>400-129934-G-4-C MSD</td>
<td>Matrix Spike Duplicate</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7 Rev 4.4</td>
<td>331677</td>
</tr>
</tbody>
</table>
### Lab Sample ID: 660-77306-1
**Client Sample ID:** L16K034-01  
**Date Collected:** 11/10/16 11:53  
**Date Received:** 11/15/16 13:55  
**Prep Type:** Batch  
**Batch Type:** 200.7  
**Method:** Rev 4.4  
**Run:** 1  
**Dil Factor:** 1  
**Initial Amount:** 50 mL  
**Final Amount:** 50 mL  
**Batch Number:** 331677  
**Prepared or Analyzed:** 11/18/16 11:14  
**Prepared by:** KWN  
**Analyst:** TAL PEN  
**Matrix:** Water  
**Instrument ID:** 6500 ICP Duo

### Lab Sample ID: 660-77306-2
**Client Sample ID:** L16K034-02  
**Date Collected:** 11/10/16 11:27  
**Date Received:** 11/15/16 13:55  
**Prep Type:** Batch  
**Batch Type:** 200.7  
**Method:** Rev 4.4  
**Run:** 1  
**Dil Factor:** 1  
**Initial Amount:** 50 mL  
**Final Amount:** 50 mL  
**Batch Number:** 331888  
**Prepared or Analyzed:** 11/19/16 15:54  
**Prepared by:** GESP  
**Analyst:** TAL PEN  
**Matrix:** Water  
**Instrument ID:** 6500 ICP Duo

### Lab Sample ID: 660-77306-3
**Client Sample ID:** L16K034-03  
**Date Collected:** 11/10/16 11:05  
**Date Received:** 11/15/16 13:55  
**Prep Type:** Batch  
**Batch Type:** 200.7  
**Method:** Rev 4.4  
**Run:** 1  
**Dil Factor:** 1  
**Initial Amount:** 50 mL  
**Final Amount:** 50 mL  
**Batch Number:** 331888  
**Prepared or Analyzed:** 11/19/16 15:58  
**Prepared by:** GESP  
**Analyst:** TAL PEN  
**Matrix:** Water  
**Instrument ID:** 6500 ICP Duo

### Lab Sample ID: 660-77306-4
**Client Sample ID:** L16K034-04  
**Date Collected:** 11/10/16 10:20  
**Date Received:** 11/15/16 13:55  
**Prep Type:** Batch  
**Batch Type:** 200.7  
**Method:** Rev 4.4  
**Run:** 1  
**Dil Factor:** 1  
**Initial Amount:** 50 mL  
**Final Amount:** 50 mL  
**Batch Number:** 331888  
**Prepared or Analyzed:** 11/19/16 16:01  
**Prepared by:** GESP  
**Analyst:** TAL PEN  
**Matrix:** Water  
**Instrument ID:** 6500 ICP Duo

### Lab Sample ID: 660-77306-5
**Client Sample ID:** L16K034-05  
**Date Collected:** 11/10/16 09:49  
**Date Received:** 11/15/16 13:55  
**Prep Type:** Batch  
**Batch Type:** 200.7  
**Method:** Rev 4.4  
**Run:** 1  
**Dil Factor:** 1  
**Initial Amount:** 50 mL  
**Final Amount:** 50 mL  
**Batch Number:** 331888  
**Prepared or Analyzed:** 11/19/16 16:08  
**Prepared by:** GESP  
**Analyst:** TAL PEN  
**Matrix:** Water  
**Instrument ID:** 6500 ICP Duo

---

**Laboratory References:**

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

---

TestAmerica Tampa
Certification Summary

Client: Tampa Electric Company
Project/Site: L16K034

Laboratory: TestAmerica Tampa
The certifications listed below are applicable to this report.

<table>
<thead>
<tr>
<th>Authority</th>
<th>Program</th>
<th>EPA Region</th>
<th>Certification ID</th>
<th>Expiration Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Florida</td>
<td>NELAP</td>
<td>4</td>
<td>E84282</td>
<td>06-30-17</td>
</tr>
</tbody>
</table>

Laboratory: TestAmerica Pensacola
The certifications listed below are applicable to this report.

<table>
<thead>
<tr>
<th>Authority</th>
<th>Program</th>
<th>EPA Region</th>
<th>Certification ID</th>
<th>Expiration Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Florida</td>
<td>NELAP</td>
<td>4</td>
<td>E81010</td>
<td>06-30-17</td>
</tr>
</tbody>
</table>
## Method Summary

**TestAmerica Job ID:** 660-77306-1  
**Client:** Tampa Electric Company  
**Project/Site:** L16K034

<table>
<thead>
<tr>
<th>Method</th>
<th>Method Description</th>
<th>Protocol</th>
<th>Laboratory</th>
</tr>
</thead>
<tbody>
<tr>
<td>200.7 Rev 4.4</td>
<td>Metals (ICP)</td>
<td>EPA</td>
<td>TAL PEN</td>
</tr>
</tbody>
</table>

**Protocol References:**

- EPA = US Environmental Protection Agency

**Laboratory References:**

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

Tampa Electric Company, Laboratory Services

L16K034

**SENDING LABORATORY:**

Tampa Electric Company, Laboratory Services
5012 Causeway Blvd
Tampa, FL 33619
Phone: (813) 630-7490
Fax: (813) 630-7360
Project Manager: Peggy Pomer

**RECEIVING LABORATORY:**

TestAmerica Laboratories, Inc. - Tampa
6712 Benjamin Rd., Suite 100
Tampa, FL 33634
Phone: (813) 885-7427
Fax: -

Due Date: 11/28/16 16:00

<table>
<thead>
<tr>
<th>Analysis</th>
<th>Expires</th>
<th>Laboratory ID</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sample ID: L16K034-01</strong></td>
<td>BBS-CCR-1</td>
<td>Water</td>
<td></td>
</tr>
<tr>
<td><strong>Sampled:</strong> 11/10/16 11:53</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lithium, Total EPA 6010</td>
<td>05/09/17 11:53</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Containers Supplied:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poly HNO3 - 250mL (B)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Sample ID: L16K034-02</strong></td>
<td>BBS-CCR-2</td>
<td>Water</td>
<td></td>
</tr>
<tr>
<td><strong>Sampled:</strong> 11/10/16 11:27</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lithium, Total EPA 6010</td>
<td>05/09/17 11:27</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Containers Supplied:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poly HNO3 - 250mL (B)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Sample ID: L16K034-03</strong></td>
<td>BBS-CCR-3</td>
<td>Water</td>
<td></td>
</tr>
<tr>
<td><strong>Sampled:</strong> 11/10/16 11:05</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lithium, Total EPA 6010</td>
<td>05/09/17 11:05</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Containers Supplied:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poly HNO3 - 250mL (B)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Sample ID: L16K034-04</strong></td>
<td>BBS-CCR-BW1</td>
<td>Water</td>
<td></td>
</tr>
<tr>
<td><strong>Sampled:</strong> 11/10/16 10:20</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lithium, Total EPA 6010</td>
<td>05/09/17 10:20</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Containers Supplied:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poly HNO3 - 250mL (B)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Sample ID: L16K034-05</strong></td>
<td>BBS-CCR-BW2</td>
<td>Water</td>
<td></td>
</tr>
<tr>
<td><strong>Sampled:</strong> 11/10/16 09:49</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lithium, Total EPA 6010</td>
<td>05/09/17 09:49</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Containers Supplied:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poly HNO3 - 250mL (B)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Loc: 660
77306

**Received By**

11-15-16 14:35

**Released By**

11-10-16 14:12

**Date & Time**

Page 3 of 3
Page 13 of 16

11/21/2016
## Chain of Custody Record

### Client Information
- **Client:** TestAmerica Laboratories, Inc.
- **Address:** 3355 McLemore Drive, Pensacola, FL 32514
- **Phone:** 850-474-1001(Tel) 850-478-2671(Fax)
- **Project Name:** L16K034
- **Sample ID (Lab ID):** L16K034-01 (860-77306-1)
- **Sample ID:** L16K034-02 (860-77306-2)
- **Sample ID:** L16K034-03 (860-77306-3)
- **Sample ID:** L16K034-04 (860-77306-4)
- **Sample ID:** L16K034-05 (860-77306-5)

### Analysis Requested

<table>
<thead>
<tr>
<th>Sample ID</th>
<th>Sample Type</th>
<th>Matrix</th>
</tr>
</thead>
<tbody>
<tr>
<td>L16K034-01 (860-77306-1)</td>
<td>Water</td>
<td>X</td>
</tr>
<tr>
<td>L16K034-02 (860-77306-2)</td>
<td>Water</td>
<td>X</td>
</tr>
<tr>
<td>L16K034-03 (860-77306-3)</td>
<td>Water</td>
<td>X</td>
</tr>
<tr>
<td>L16K034-04 (860-77306-4)</td>
<td>Water</td>
<td>X</td>
</tr>
<tr>
<td>L16K034-05 (860-77306-5)</td>
<td>Water</td>
<td>X</td>
</tr>
</tbody>
</table>

### Special Instructions/Note:
- **Sample Disposal (A fee may be assessed if samples are retained longer than 1 month):**
- **Return To Client:** X
- **Disposal By Lab:** X
- **Archive For Months:**

### Possible Hazard Identification
- **Unconfirmed:**
- **Deliverable Requested:** I, II, III, IV, Other (specify)
- **Primary Deliverable Rank:** 2

### Requisitioned by:
- **Date/Time:** 1/15/16 17:00
- **Company:** TestAmerica Laboratories, Inc.
- **Requisitioned by:** Miguel Ruiz

### Custody Seal No.: 0.08/16
- **Date:** 0.08/16
- **Company:** TestAmerica Laboratories, Inc.
<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>The cooler's custody seal, if present, is intact.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Sample custody seals, if present, are intact.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>The cooler or samples do not appear to have been compromised or tampered with.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Samples were received on ice.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Cooler Temperature is acceptable.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Cooler Temperature is recorded.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>COC is present.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>COC is filled out in ink and legible.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>COC is filled out with all pertinent information.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Is the Field Sampler's name present on COC?</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>There are no discrepancies between the containers received and the COC.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Samples are received within Holding Time (excluding tests with immediate HTs)</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Sample containers have legible labels.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Containers are not broken or leaking.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Sample collection date/times are provided.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Appropriate sample containers are used.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Sample bottles are completely filled.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Sample Preservation Verified.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Containers requiring zero headspace have no headspace or bubble is $&lt;$6mm (1/4&quot;).</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Multiphasic samples are not present.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Samples do not require splitting or compositing.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Residual Chlorine Checked.</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Question</td>
<td>Answer</td>
<td>Comment</td>
</tr>
<tr>
<td>-------------------------------------------------------------------------</td>
<td>--------</td>
<td>---------</td>
</tr>
<tr>
<td>Radioactivity wasn't checked or is ( \leq ) background as measured by a survey meter.</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>The cooler's custody seal, if present, is intact.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Sample custody seals, if present, are intact.</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>The cooler or samples do not appear to have been compromised or tampered with.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Samples were received on ice.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Cooler Temperature is acceptable.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Cooler Temperature is recorded.</td>
<td>True</td>
<td>0.0°C IR5</td>
</tr>
<tr>
<td>COC is present.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>COC is filled out in ink and legible.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>COC is filled out with all pertinent information.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Is the Field Sampler's name present on COC?</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>There are no discrepancies between the containers received and the COC.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Samples are received within Holding Time (excluding tests with immediate HTs)</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Sample containers have legible labels.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Containers are not broken or leaking.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Sample collection date/times are provided.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Appropriate sample containers are used.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Sample bottles are completely filled.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Sample Preservation Verified.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Containers requiring zero headspace have no headspace or bubble is ( &lt;6\text{mm} (\frac{1}{4}\text{&quot;)}. )</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Multiphasic samples are not present.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Samples do not require splitting or compositing.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Residual Chlorine Checked.</td>
<td>N/A</td>
<td></td>
</tr>
</tbody>
</table>
DOH Certification #E84025
DEP COMPOAP # 870251

Report Date: December 8, 2016

TECO
5012 Causeway Blvd.
Tampa, FL 33619
Attn: Peggy Penner

Field Custody: Client
Client/Field ID: L16K034-01
Sample Collection: 11-10-16/1153
Lab ID No: 16.13251
Lab Custody Date: 11-14-16/1510
Sample description: Water

CERTIFICATE OF ANALYSIS

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Units</th>
<th>Results</th>
<th>Analysis Date</th>
<th>Method</th>
<th>Detection Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Combined Radium (Radium-226 +</td>
<td>pCi/l</td>
<td>37.3 ± 1.8</td>
<td>Calc</td>
<td>Calc</td>
<td>0.9</td>
</tr>
<tr>
<td>(Radium 228)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Radium-226</td>
<td>pCi/l</td>
<td>35.0 ± 1.8</td>
<td>11-28-16/1317</td>
<td>EPA</td>
<td>0.4</td>
</tr>
<tr>
<td>Radium-228</td>
<td>pCi/l</td>
<td>2.3 ± 0.7</td>
<td>11-21-16/1207</td>
<td>EPA Ra-05</td>
<td>0.9</td>
</tr>
</tbody>
</table>

Alpha Standard: Th-230

James W. Hayes
Laboratory Manager

Test results meet all requirements of the NELAC standards. Statement of estimated uncertainty available upon request. Test results refer only to sample(s) listed. Contact person: Jim Hayes (813) 229-2879.
TECO
5012 Causeway Blvd.
Tampa, FL 33619
Attn: Peggy Penner

Field Custody: Client
Client/Field ID: L16K034-02
Sample Collection: 11-10-16/1127
Lab ID No: 16.13252
Lab Custody Date: 11-14-16/1510
Sample description: Water

CERTIFICATE OF ANALYSIS

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Units</th>
<th>Results</th>
<th>Analysis Date</th>
<th>Method</th>
<th>Detection Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Combined Radium (Radium-226 + Radium 228)</td>
<td>pCi/l</td>
<td>14.8 ± 1.1</td>
<td>Calc</td>
<td>Calc</td>
<td>0.8</td>
</tr>
<tr>
<td>Radium-226</td>
<td>pCi/l</td>
<td>13.9 ± 1.1</td>
<td>11-28-16/1213</td>
<td>EPA 903.0</td>
<td>0.3</td>
</tr>
<tr>
<td>Radium-228</td>
<td>pCi/l</td>
<td>0.9 ± 0.6</td>
<td>11-21-16/1207</td>
<td>EPA Ra-05</td>
<td>0.8</td>
</tr>
</tbody>
</table>

Alpha Standard: Th-230

James W. Hayes
Laboratory Manager

Test results meet all requirements of the NELAC standards. Statement of estimated uncertainty available upon request. Test results refer only to sample(s) listed. Contact person: Jim Hayes (813) 229-2879.
TECO
5012 Causeway Blvd.
Tampa, FL 33619
Attn:  Peggy Penner

FIELD CUSTODY:
CLIENT/FIELD ID:
SAMPLE COLLECTION:
LAB ID NO:
LAB CUSTODY DATE:
SAMPLE DESCRIPTION:

CLIENT:
L16K034-03
11-10-16/1105
16.13253
11-14-16/1510
Water

CERTIFICATE OF ANALYSIS

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Units</th>
<th>Results ±</th>
<th>Analysis Date</th>
<th>Method</th>
<th>Detection Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Combined Radium (Radium-226 + Radium 228)</td>
<td>pCi/l</td>
<td>17.5 ± 1.2</td>
<td>Calc</td>
<td>Calc</td>
<td>0.8</td>
</tr>
<tr>
<td>Radium-226</td>
<td>pCi/l</td>
<td>15.6 ± 1.2</td>
<td>11-28-16/1317</td>
<td>EPA 903.0</td>
<td>0.4</td>
</tr>
<tr>
<td>Radium-228</td>
<td>pCi/l</td>
<td>1.9 ± 0.6</td>
<td>11-21-16/1207</td>
<td>EPA Ra-05</td>
<td>0.8</td>
</tr>
</tbody>
</table>

Test results meet all requirements of the NELAC standards. Statement of estimated uncertainty available upon request. Test results refer only to sample(s) listed.
Contact person:  Jim Hayes (813) 229-2879.
DOH Certification #E84025
DEP COMPQAP # 870251

Report Date: December 8, 2016

TECO
5012 Causeway Blvd.
Tampa, FL 33619
Attn: Peggy Penner

Field Custody: Client
Client/Field ID: L16K034-04
Sample Collection: 11-10-16/1020
Lab ID No: 16.13254
Lab Custody Date: 11-14-16/1510
Sample description: Water

CERTIFICATE OF ANALYSIS

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Units</th>
<th>Results</th>
<th>Analysis Date</th>
<th>Method</th>
<th>Detection Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Combined Radium (Radium-226 + Radium 228)</td>
<td>pCi/l</td>
<td>29.9 ± 1.6</td>
<td>Calc</td>
<td>Calc</td>
<td>0.9</td>
</tr>
<tr>
<td>Radium-226</td>
<td>pCi/l</td>
<td>26.3 ± 1.6</td>
<td>11-28-16/1317</td>
<td>EPA 903.0</td>
<td>0.3</td>
</tr>
<tr>
<td>Radium-228</td>
<td>pCi/l</td>
<td>3.6 ± 0.8</td>
<td>11-21-16/1207</td>
<td>EPA Ra-05</td>
<td>0.9</td>
</tr>
</tbody>
</table>

Alpha Standard: Th-230

James W. Hayes
Laboratory Manager

Test results meet all requirements of the NELAC standards. Statement of estimated uncertainty available upon request. Test results refer only to sample(s) listed. Contact person: Jim Hayes (813) 229-2879.

Page 1 of 1
TECO
5012 Causeway Blvd.
Tampa, FL 33619
Attn: Peggy Penner

Field Custody: Client
Client/Field ID: L16K034-05
Sample Collection: 11-10-16/0949
Lab ID No: 16.13255
Lab Custody Date: 11-14-16/1510
Sample description: Water

### CERTIFICATE OF ANALYSIS

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Units</th>
<th>Results</th>
<th>Analysis Date</th>
<th>Method</th>
<th>Detection Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Combined Radium (Radium-226 + Radium 228)</td>
<td>pCi/l</td>
<td>8.0 ± 0.8</td>
<td>Calc</td>
<td>Calc</td>
<td>0.8</td>
</tr>
<tr>
<td>Radium-226</td>
<td>pCi/l</td>
<td>3.5 ± 0.6</td>
<td>11-28-16/1317</td>
<td>EPA 903.0</td>
<td>0.4</td>
</tr>
<tr>
<td>Radium-228</td>
<td>pCi/l</td>
<td>4.5 ± 0.8</td>
<td>11-21-16/1207</td>
<td>EPA Ra-05</td>
<td>0.8</td>
</tr>
</tbody>
</table>

Alpha Standard: Th-230

---

J. W. Hayes  
Laboratory Manager

Test results meet all requirements of the NELAC standards. Statement of estimated uncertainty available upon request. Test results refer only to sample(s) listed. Contact person: Jim Hayes (813) 229-2879.
### SUBCONTRACT ORDER

**Tampa Electric Company, Laboratory Services**

**L16K034**

#### SENDING LABORATORY:

Tampa Electric Company, Laboratory Services  
5012 Causeway Blvd  
Tampa, FL 33619  
Phone: (813) 630-7490  
Fax: (813) 630-7360  
Project Manager: Peggy Penner

#### RECEIVING LABORATORY:

KNL Laboratory Services  
3202 N. Florida Ave.  
Tampa, FL 33603  
Phone: (813) 229-2879  
Fax: -

---

**Due Date:** 11/28/16 16:00

<table>
<thead>
<tr>
<th>Analysis</th>
<th>Expires</th>
<th>Laboratory ID</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sample ID:</strong> L16K034-01</td>
<td><strong>BBS-CCR-1</strong></td>
<td>Water</td>
<td><img src="1613251" alt="image" /></td>
</tr>
<tr>
<td>Sampled:</td>
<td>11/10/16 11:53</td>
<td></td>
<td>Level 2 Data required</td>
</tr>
<tr>
<td>Radium 226 EPA 903.0</td>
<td>05/09/17 11:53</td>
<td></td>
<td>Level 2 Data required</td>
</tr>
<tr>
<td>Radium 226+228, Total</td>
<td>05/09/17 11:53</td>
<td></td>
<td>Level 2 Data required</td>
</tr>
<tr>
<td>Radium 228 Ra-05</td>
<td>05/09/17 11:53</td>
<td></td>
<td>Level 2 Data required</td>
</tr>
<tr>
<td>Containers Supplied:</td>
<td>RAD Poly HNO3 - 1000mL (C)</td>
<td>RAD Poly HNO3 - 1000mL (D)</td>
<td><img src="1613251" alt="image" /></td>
</tr>
<tr>
<td><strong>Sample ID:</strong> L16K034-02</td>
<td><strong>BBS-CCR-2</strong></td>
<td>Water</td>
<td><img src="1613252" alt="image" /></td>
</tr>
<tr>
<td>Sampled:</td>
<td>11/10/16 11:27</td>
<td></td>
<td>Level 2 Data required</td>
</tr>
<tr>
<td>Radium 226 EPA 903.0</td>
<td>05/09/17 11:27</td>
<td></td>
<td>Level 2 Data required</td>
</tr>
<tr>
<td>Radium 226+228, Total</td>
<td>05/09/17 11:27</td>
<td></td>
<td>Level 2 Data required</td>
</tr>
<tr>
<td>Radium 228 Ra-05</td>
<td>05/09/17 11:27</td>
<td></td>
<td>Level 2 Data required</td>
</tr>
<tr>
<td>Containers Supplied:</td>
<td>RAD Poly HNO3 - 1000mL (C)</td>
<td>RAD Poly HNO3 - 1000mL (D)</td>
<td><img src="1613252" alt="image" /></td>
</tr>
<tr>
<td><strong>Sample ID:</strong> L16K034-03</td>
<td><strong>BBS-CCR-3</strong></td>
<td>Water</td>
<td><img src="1613253" alt="image" /></td>
</tr>
<tr>
<td>Sampled:</td>
<td>11/10/16 11:05</td>
<td></td>
<td>Level 2 Data required</td>
</tr>
<tr>
<td>Radium 226+228, Total</td>
<td>05/09/17 11:05</td>
<td></td>
<td>Level 2 Data required</td>
</tr>
<tr>
<td>Radium 226 EPA 903.0</td>
<td>05/09/17 11:05</td>
<td></td>
<td>Level 2 Data required</td>
</tr>
<tr>
<td>Radium 228 Ra-05</td>
<td>05/09/17 11:05</td>
<td></td>
<td>Level 2 Data required</td>
</tr>
<tr>
<td>Containers Supplied:</td>
<td>RAD Poly HNO3 - 1000mL (C)</td>
<td>RAD Poly HNO3 - 1000mL (D)</td>
<td><img src="1613253" alt="image" /></td>
</tr>
<tr>
<td><strong>Sample ID:</strong> L16K034-04</td>
<td><strong>BBS-CCR-BWI</strong></td>
<td>Water</td>
<td><img src="1613254" alt="image" /></td>
</tr>
<tr>
<td>Sampled:</td>
<td>11/10/16 10:20</td>
<td></td>
<td>Level 2 Data required</td>
</tr>
<tr>
<td>Radium 226 EPA 903.0</td>
<td>05/09/17 10:20</td>
<td></td>
<td>Level 2 Data required</td>
</tr>
<tr>
<td>Radium 226+228, Total</td>
<td>05/09/17 10:20</td>
<td></td>
<td>Level 2 Data required</td>
</tr>
<tr>
<td>Radium 228 Ra-05</td>
<td>05/09/17 10:20</td>
<td></td>
<td>Level 2 Data required</td>
</tr>
<tr>
<td>Containers Supplied:</td>
<td>RAD Poly HNO3 - 1000mL (C)</td>
<td>RAD Poly HNO3 - 1000mL (D)</td>
<td><img src="1613254" alt="image" /></td>
</tr>
</tbody>
</table>

---

**Released By:** [Signature] 11-10-16 14:12  
**Date & Time:**  
**Received By:**  
**Date & Time:**

---

**Released By:**  
**Date & Time:**  
**Received By:**  
**Date & Time:**

---

Page 1 of 3
<table>
<thead>
<tr>
<th>Analysis</th>
<th>Expires</th>
<th>Laboratory ID</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample ID: L16K034-05</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BBS-CCR-BW2</td>
<td></td>
<td>Water</td>
<td></td>
</tr>
<tr>
<td>Sampled: 11/10/16 09:49</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Radium 228 Ra-05</td>
<td>05/09/17 09:49</td>
<td></td>
<td>Level 2 Data required</td>
</tr>
<tr>
<td>Radium 226 EPA 903.0</td>
<td>05/09/17 09:49</td>
<td></td>
<td>Level 2 Data required</td>
</tr>
<tr>
<td>Radium 226+228, Total</td>
<td>05/09/17 09:49</td>
<td></td>
<td>Level 2 Data required</td>
</tr>
</tbody>
</table>

 Containers Supplied:  
 RAD Poly HNO3 - 1000mL (C)   RAD Poly HNO3 - 1000mL (D)
FL DOH Certification # E84025

QC Summary: **Radium 228 Analysis**

Client Project #: **116K034**

Analysis Completion Date: **11/21/14**

<table>
<thead>
<tr>
<th>Precision Data:</th>
<th>Sample #: <strong>16, 137, 54</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample Analysis (pCi/l)</td>
<td>11.2</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Spike Data:</th>
<th>Sample #: <strong>16, 13254</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample Analysis (pCi/l)</td>
<td>3.4</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>LCS Data:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Analytical Result (pCi/l)</td>
</tr>
<tr>
<td>3.7</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Lab Blank:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Analytical Result (pCi/l)</td>
</tr>
<tr>
<td><strong>0.4 +/- 0.3</strong></td>
</tr>
<tr>
<td><strong>11/21/14</strong></td>
</tr>
</tbody>
</table>
FL DOH Certification # E84025

QC Summary: **Total Radium Analysis**

Client Project #: **16K034**

Analysis Completion Date: **11/28/16**

<table>
<thead>
<tr>
<th>Precision Data:</th>
<th>Sample #: <strong>16,13174</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample Analysis (pCi/l)</td>
<td>Duplicate Analysis (pCi/l)</td>
</tr>
<tr>
<td>6.1</td>
<td>5.5</td>
</tr>
</tbody>
</table>

---

<table>
<thead>
<tr>
<th>Spike Data:</th>
<th>Sample #: <strong>16,13174</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample Analysis (pCi/l)</td>
<td>Spike Added (pCi/l)</td>
</tr>
<tr>
<td>1.4</td>
<td>4.5</td>
</tr>
</tbody>
</table>

---

<table>
<thead>
<tr>
<th>LCS Data:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Analytical Result (pCi/l)</td>
<td>True Value (pCi/l)</td>
</tr>
<tr>
<td>8.4</td>
<td>10.1</td>
</tr>
</tbody>
</table>

---

<table>
<thead>
<tr>
<th>Lab Blank:</th>
<th>Analytical Result (pCi/l)</th>
<th>Analysis Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lab Blank</td>
<td>0.3 +/- 0.2</td>
<td>11/28/16</td>
</tr>
</tbody>
</table>
REPORT REVISED 4/25/2017 to add Beryllium to sample CCR -1

5 sample(s) were received on 01/26/17 14:15.

There were no issues noted with the sample(s) associated with this workorder unless noted below.

Lithium was subcontracted to TestAmerica Labs. The report is attached.

Rad 226/228 was subcontracted to KNL Laboratory. The report is attached.

**SM 2540C**

A constant weight could not be acheived after three consectutive weighing and drying cycles for samples CCR1 and CCR-BW-1. The sample(s) are flagged with a J qualifier.

**EPA 300.0**

The recovery of the matrix spike and spike duplicate for Chloride, Fluoride and Sulfate were above the control limits due to matrix interference. The parent sample is flagged with a J qualifier.

**EPA 6010**

The recovery of the matrix spike and spike duplicate for Calcium and Boron could not be accurately determined due to the amount of target analyte in the sample matrix. The parent sample is flagged with a J qualifier.
Laboratory Results

**Sample Information**

- **Client:** Big Bend Power Station
- **Sample ID:** L17A041-01
- **Sample Description:** BBS-CCR-1
- **Sample Collection Method:** Grab
- **Sampled By:** Robert Barthelette
- **Date and Time Collected:** 1/26/17 12:02
- **Date of Sample Receipt:** 1/26/17 14:15

**Laboratory Results**

**Sample Qualifier:**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier Code</th>
<th>Dil</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chloride</td>
<td>820</td>
<td>mg/L</td>
<td>2.00</td>
<td>50.0</td>
<td>V</td>
<td>100</td>
<td>EPA 300.0</td>
<td>RFL</td>
<td>1/27/17 16:05</td>
</tr>
<tr>
<td>Specific Conductance</td>
<td>4320</td>
<td>umhos/cm</td>
<td>100</td>
<td>100</td>
<td>1</td>
<td>FDEP SOP FT 1200</td>
<td>RAB</td>
<td>1/26/17 12:02</td>
<td></td>
</tr>
<tr>
<td>Dissolved Oxygen</td>
<td>0.100</td>
<td>mg/L</td>
<td>0.100</td>
<td>0.100</td>
<td>U</td>
<td>1</td>
<td>FDEP SOP FT 1500</td>
<td>RAB</td>
<td>1/26/17 12:02</td>
</tr>
<tr>
<td>Fluoride</td>
<td>0.184</td>
<td>mg/L</td>
<td>0.0100</td>
<td>0.0500</td>
<td>1</td>
<td>EPA 300.0</td>
<td>RFL</td>
<td>1/27/17 15:55</td>
<td></td>
</tr>
<tr>
<td>pH</td>
<td>6.79</td>
<td>pH Units</td>
<td>1.00</td>
<td>1.00</td>
<td>1</td>
<td>FDEP SOP FT 1100</td>
<td>RAB</td>
<td>1/26/17 12:02</td>
<td></td>
</tr>
<tr>
<td>REDOX Potential</td>
<td>-110</td>
<td>mV</td>
<td>-999</td>
<td>-999</td>
<td>1</td>
<td>SM 2580B</td>
<td>RAB</td>
<td>1/26/17 12:02</td>
<td></td>
</tr>
<tr>
<td>Total Dissolved Solids</td>
<td>3670</td>
<td>mg/L</td>
<td>24.0</td>
<td>40.0</td>
<td>J-</td>
<td>2</td>
<td>SM 2540C</td>
<td>TMH</td>
<td>1/31/17 15:45</td>
</tr>
<tr>
<td>Sulfate</td>
<td>1350</td>
<td>mg/L</td>
<td>50.0</td>
<td>200</td>
<td>100</td>
<td>EPA 300.0</td>
<td>RFL</td>
<td>1/27/17 16:05</td>
<td></td>
</tr>
<tr>
<td>Turbidity</td>
<td>1.99</td>
<td>NTU</td>
<td>0.100</td>
<td>0.100</td>
<td>1</td>
<td>FDEP SOP FT 1600</td>
<td>RAB</td>
<td>1/26/17 12:02</td>
<td></td>
</tr>
</tbody>
</table>

**Total Mercury by SW846 Method 7470/7471**

- **Mercury**
  - Result: 0.0500 ug/L
  - Units: 0.0500
  - MDL: 0.200
  - PQL: 0.100
  - Qualifier Code: U
  - Dil: 1
  - Test Method: EPA 7470A
  - Analyst: RLC
  - Analysis Date & Time: 1/31/17 14:15

**Total Recoverable Metals by 200 Series**

- **Antimony**
  - Result: 0.602 ug/L
  - Units: 0.600
  - MDL: 2.00
  - PQL: 1
  - Qualifier Code: I
  - Dil: 1
  - Test Method: EPA 200.8
  - Analyst: RLC
  - Analysis Date & Time: 1/27/17 12:04

- **Arsenic**
  - Result: 9.04 ug/L
  - Units: 0.320
  - MDL: 2.00
  - PQL: 1
  - Qualifier Code: I
  - Dil: 1
  - Test Method: EPA 200.8
  - Analyst: RLC
  - Analysis Date & Time: 1/27/17 12:04

- **Cadmium**
  - Result: 0.100 ug/L
  - Units: 0.100
  - MDL: 0.500
  - PQL: U
  - Qualifier Code: 1
  - Dil: 1
  - Test Method: EPA 200.8
  - Analyst: RLC
  - Analysis Date & Time: 1/27/17 12:04

- **Cobalt**
  - Result: 0.489 ug/L
  - Units: 0.0400
  - MDL: 2.00
  - PQL: 1
  - Qualifier Code: I
  - Dil: 1
  - Test Method: EPA 200.8
  - Analyst: RLC
  - Analysis Date & Time: 1/27/17 12:04

- **Lead**
  - Result: 8.00E-5 mg/L
  - Units: 8.00E-5
  - MDL: 0.00200
  - PQL: U
  - Qualifier Code: 1
  - Dil: 1
  - Test Method: EPA 200.8
  - Analyst: RLC
  - Analysis Date & Time: 1/27/17 12:04

- **Selenium**
  - Result: 0.653 ug/L
  - Units: 0.200
  - MDL: 2.00
  - PQL: I
  - Qualifier Code: 1
  - Dil: 1
  - Test Method: EPA 200.8
  - Analyst: RLC
  - Analysis Date & Time: 1/27/17 12:04

- **Thallium**
  - Result: 0.100 ug/L
  - Units: 0.100
  - MDL: 0.500
  - PQL: U
  - Qualifier Code: 1
  - Dil: 1
  - Test Method: EPA 200.8
  - Analyst: RLC
  - Analysis Date & Time: 1/27/17 12:04

**Total Recoverable Metals by SW846 Method 6010B**

- **Barium**
  - Result: 0.115 mg/L
  - Units: 0.000500
  - MDL: 0.0200
  - PQL: 1
  - Qualifier Code: E
  - Dil: 1
  - Test Method: EPA 6010B
  - Analyst: MCR
  - Analysis Date & Time: 1/31/17 9:56

- **Beryllium**
  - Result: 0.200 ug/L
  - Units: 0.200
  - MDL: 2.00
  - PQL: U
  - Qualifier Code: 1
  - Dil: 1
  - Test Method: EPA 6010B
  - Analyst: MCR
  - Analysis Date & Time: 1/31/17 9:56

- **Boron**
  - Result: 15.5 mg/L
  - Units: 0.0100
  - MDL: 0.0500
  - PQL: J-
  - Qualifier Code: 1
  - Dil: 1
  - Test Method: EPA 6010B
  - Analyst: MCR
  - Analysis Date & Time: 1/31/17 9:56

- **Calcium**
  - Result: 579000 ug/L
  - Units: 30.0
  - MDL: 1000
  - PQL: J-
  - Qualifier Code: 1
  - Dil: 1
  - Test Method: EPA 6010B
  - Analyst: MCR
  - Analysis Date & Time: 1/31/17 11:14

- **Chromium**
  - Result: 1.60 ug/L
  - Units: 1.60
  - MDL: 12.0
  - PQL: U
  - Qualifier Code: 1
  - Dil: 1
  - Test Method: EPA 6010B
  - Analyst: MCR
  - Analysis Date & Time: 1/31/17 9:56

- **Molybdenum**
  - Result: 92.4 ug/L
  - Units: 1.00
  - MDL: 20.0
  - PQL: 1
  - Qualifier Code: 1
  - Dil: 1
  - Test Method: EPA 6010B
  - Analyst: MCR
  - Analysis Date & Time: 1/31/17 9:56

Tampa Electric Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
# Tampa Electric Laboratory Services

Client: Big Bend Power Station

| Lab Sample ID: | L17A041-02 |
| Sample Description: | BBS-CCR-2 |
| Sample Collection Method: | Grab |

<table>
<thead>
<tr>
<th>Sample Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample Description:</td>
</tr>
<tr>
<td>Sampled By:</td>
</tr>
<tr>
<td>Date and Time Collected:</td>
</tr>
<tr>
<td>Date of Sample Receipt:</td>
</tr>
</tbody>
</table>

## Laboratory Results

### Sample Qualifier:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier Code</th>
<th>Dil</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
</table>

### General Chemistry Parameters

- **Chloride**: 115 mg/L  0.200  5.00  J-,V  10  EPA 300.0  RFL  1/27/17 16:25
- **Specific Conductance**: 1560 umhos/cm  100  100  1  FDEP SOP FT 1200  RAB  1/26/17 11:35
- **Dissolved Oxygen**: 0.100 mg/L  0.100  0.100  U  1  FDEP SOP FT 1500  RAB  1/26/17 11:35
- **Fluoride**: 0.248 mg/L  0.0100  0.0500  J-  1  EPA 300.0  RFL  1/27/17 16:15
- **pH**: 6.89 pH Units  1.00  1.00  1  FDEP SOP FT 1100  RAB  1/26/17 11:35
- **REDox Potential**: -182 mV  -999  -999  1  SM 2580B  RAB  1/26/17 11:35
- **Total Dissolved Solids**: 1140 mg/L  12.0  20.0  1  SM 2540C  TMH  1/31/17 15:45
- **Sulfate**: 490 mg/L  5.00  20.0  J-  10  EPA 300.0  RFL  1/27/17 16:25
- **Turbidity**: 4.93 NTU  0.100  0.100  J-  1  FDEP SOP FT 1600  RAB  1/26/17 11:35

### Total Mercury by SW846 Method 7470/7471

- **Mercury**: 0.0500 ug/L  0.0500  0.200  U  1  EPA 7470A  RLC  1/31/17 14:19

### Total Recoverable Metals by 200 Series

- **Antimony**: 0.600 ug/L  0.600  2.00  U  1  EPA 200.8  RLC  1/27/17 12:08
- **Arsenic**: 1.09 ug/L  0.320  2.00  I  1  EPA 200.8  RLC  1/27/17 12:08
- **Cadmium**: 0.100 ug/L  0.100  0.500  U  1  EPA 200.8  RLC  1/27/17 12:08
- **Cobalt**: 0.0902 ug/L  0.0400  2.00  I  1  EPA 200.8  RLC  1/27/17 12:08
- **Lead**: 8.00E-5 mg/L  8.00E-5  0.00200  U  1  EPA 200.8  RLC  1/27/17 12:08
- **Selenium**: 0.200 ug/L  0.200  2.00  U  1  EPA 200.8  RLC  1/27/17 12:08
- **Thallium**: 0.100 ug/L  0.100  0.500  U  1  EPA 200.8  RLC  1/27/17 12:08

### Total Recoverable Metals by SW846 Method 6010B

- **Barium**: 0.0546 mg/L  0.000500  0.0200  1  EPA 6010B  MCR  1/31/17 9:59
- **Beryllium**: 0.200 ug/L  0.200  2.00  U  1  EPA 6010B  MCR  1/31/17 9:59
- **Boron**: 3.86 mg/L  0.0100  0.0500  1  EPA 6010B  MCR  1/31/17 9:59
- **Calcium**: 172000 ug/L  30.0  1000  1  EPA 6010B  MCR  1/31/17 11:17
- **Chromium**: 1.60 ug/L  1.60  12.0  U  1  EPA 6010B  MCR  1/31/17 9:59
- **Molybdenum**: 2.52 ug/L  1.00  20.0  I  1  EPA 6010B  MCR  1/31/17 9:59

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
Sample Information

Client: Big Bend Power Station
Lab Sample ID: L17A041-03
Sample Description: BBS-CCR-3
Sample Collection Method: Grab
Sampled By: Robert Barthelette
Date and Time Collected: 1/26/17 11:04
Date of Sample Receipt: 1/26/17 14:15

Laboratory Results

Sample Qualifier:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier Code</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>General Chemistry Parameters</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chloride</td>
<td>129</td>
<td>mg/L</td>
<td>0.200</td>
<td>5.00</td>
<td>V</td>
<td>EPA 300.0</td>
<td>RFL</td>
<td>1/27/17 17:06</td>
</tr>
<tr>
<td>Specific Conductance</td>
<td>1510</td>
<td>umhos/cm</td>
<td>100</td>
<td>100</td>
<td>1</td>
<td>FDEP SOP FT 1200</td>
<td>RAB</td>
<td>1/26/17 11:04</td>
</tr>
<tr>
<td>Dissolved Oxygen</td>
<td>0.110</td>
<td>mg/L</td>
<td>0.100</td>
<td>0.100</td>
<td>1</td>
<td>FDEP SOP FT 1500</td>
<td>RAB</td>
<td>1/26/17 11:04</td>
</tr>
<tr>
<td>Fluoride</td>
<td>0.391</td>
<td>mg/L</td>
<td>0.0100</td>
<td>0.0500</td>
<td>1</td>
<td>EPA 300.0</td>
<td>RFL</td>
<td>1/27/17 16:56</td>
</tr>
<tr>
<td>pH</td>
<td>6.42</td>
<td>pH Units</td>
<td>1.00</td>
<td>1.00</td>
<td>1</td>
<td>FDEP SOP FT 1100</td>
<td>RAB</td>
<td>1/26/17 11:04</td>
</tr>
<tr>
<td>REDOX Potential</td>
<td>-168</td>
<td>mV</td>
<td>-999</td>
<td>-999</td>
<td>1</td>
<td>SM 2580B</td>
<td>RAB</td>
<td>1/26/17 11:04</td>
</tr>
<tr>
<td>Total Dissolved Solids</td>
<td>1200</td>
<td>mg/L</td>
<td>12.0</td>
<td>20.0</td>
<td>1</td>
<td>SM 2540C</td>
<td>TMH</td>
<td>1/31/17 15:45</td>
</tr>
<tr>
<td>Sulfate</td>
<td>454</td>
<td>mg/L</td>
<td>5.00</td>
<td>20.0</td>
<td>10</td>
<td>EPA 300.0</td>
<td>RFL</td>
<td>1/27/17 17:06</td>
</tr>
<tr>
<td>Turbidity</td>
<td>1.79</td>
<td>NTU</td>
<td>0.100</td>
<td>0.100</td>
<td>1</td>
<td>FDEP SOP FT 1600</td>
<td>RAB</td>
<td>1/26/17 11:04</td>
</tr>
<tr>
<td><strong>Total Mercury by SW846 Method 7470/7471</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mercury</td>
<td>0.0500</td>
<td>ug/L</td>
<td>0.0500</td>
<td>0.200</td>
<td>U</td>
<td>EPA 7470A</td>
<td>RLC</td>
<td>1/31/17 14:23</td>
</tr>
<tr>
<td><strong>Total Recoverable Metals by 200 Series</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Antimony</td>
<td>0.600</td>
<td>ug/L</td>
<td>0.600</td>
<td>2.00</td>
<td>U</td>
<td>EPA 200.8</td>
<td>RLC</td>
<td>1/27/17 12:11</td>
</tr>
<tr>
<td>Arsenic</td>
<td>0.320</td>
<td>ug/L</td>
<td>0.320</td>
<td>2.00</td>
<td>U</td>
<td>EPA 200.8</td>
<td>RLC</td>
<td>1/27/17 12:11</td>
</tr>
<tr>
<td>Cadmium</td>
<td>0.100</td>
<td>ug/L</td>
<td>0.100</td>
<td>0.500</td>
<td>U</td>
<td>EPA 200.8</td>
<td>RLC</td>
<td>1/27/17 12:11</td>
</tr>
<tr>
<td>Cobalt</td>
<td>0.0989</td>
<td>ug/L</td>
<td>0.0400</td>
<td>2.00</td>
<td>I</td>
<td>EPA 200.8</td>
<td>RLC</td>
<td>1/27/17 12:11</td>
</tr>
<tr>
<td>Lead</td>
<td>8.00E-5</td>
<td>mg/L</td>
<td>8.00E-5</td>
<td>0.0200</td>
<td>U</td>
<td>EPA 200.8</td>
<td>RLC</td>
<td>1/27/17 12:11</td>
</tr>
<tr>
<td>Selenium</td>
<td>0.200</td>
<td>ug/L</td>
<td>0.200</td>
<td>2.00</td>
<td>U</td>
<td>EPA 200.8</td>
<td>RLC</td>
<td>1/27/17 12:11</td>
</tr>
<tr>
<td>Thallium</td>
<td>0.100</td>
<td>ug/L</td>
<td>0.100</td>
<td>0.500</td>
<td>U</td>
<td>EPA 200.8</td>
<td>RLC</td>
<td>1/27/17 12:11</td>
</tr>
<tr>
<td><strong>Total Recoverable Metals by SW846 Method 6010B</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Barium</td>
<td>0.0562</td>
<td>mg/L</td>
<td>0.00500</td>
<td>0.0200</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>1/31/17 10:01</td>
</tr>
<tr>
<td>Beryllium</td>
<td>0.200</td>
<td>ug/L</td>
<td>0.200</td>
<td>2.00</td>
<td>U</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>1/31/17 10:01</td>
</tr>
<tr>
<td>Boron</td>
<td>0.381</td>
<td>mg/L</td>
<td>0.0100</td>
<td>0.0500</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>1/31/17 10:01</td>
</tr>
<tr>
<td>Calcium</td>
<td>176000</td>
<td>ug/L</td>
<td>30.0</td>
<td>1000</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>1/31/17 11:19</td>
</tr>
<tr>
<td>Chromium</td>
<td>1.60</td>
<td>ug/L</td>
<td>1.60</td>
<td>12.0</td>
<td>U</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>1/31/17 10:01</td>
</tr>
<tr>
<td>Molybdenum</td>
<td>5.42</td>
<td>ug/L</td>
<td>1.00</td>
<td>20.0</td>
<td>I</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>1/31/17 10:01</td>
</tr>
</tbody>
</table>

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
Laboratory Results

Sample Qualifier:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Code</th>
<th>Dil</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>General Chemistry Parameters</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chloride</td>
<td>942</td>
<td>mg/L</td>
<td>2.00</td>
<td>50.0</td>
<td>V</td>
<td>100</td>
<td>EPA 300.0</td>
<td>RFL</td>
<td>1/27/17 17:46</td>
</tr>
<tr>
<td>Specific Conductance</td>
<td>4940</td>
<td>umhos/cm</td>
<td>100</td>
<td>100</td>
<td>1</td>
<td></td>
<td>FDEP SOP FT 1200</td>
<td>RAB</td>
<td>1/26/17 10:32</td>
</tr>
<tr>
<td>Dissolved Oxygen</td>
<td>0.200</td>
<td>mg/L</td>
<td>0.100</td>
<td>0.100</td>
<td>1</td>
<td></td>
<td>FDEP SOP FT 1500</td>
<td>RAB</td>
<td>1/26/17 10:32</td>
</tr>
<tr>
<td>Fluoride</td>
<td>0.315</td>
<td>mg/L</td>
<td>0.0100</td>
<td>0.0500</td>
<td>1</td>
<td></td>
<td>EPA 300.0</td>
<td>RFL</td>
<td>1/27/17 17:16</td>
</tr>
<tr>
<td>pH</td>
<td>6.46</td>
<td>pH Units</td>
<td>1.00</td>
<td>1.00</td>
<td>1</td>
<td></td>
<td>FDEP SOP FT 1100</td>
<td>RAB</td>
<td>1/26/17 10:32</td>
</tr>
<tr>
<td>REDOX Potential</td>
<td>-20.2</td>
<td>mV</td>
<td>-999</td>
<td>-999</td>
<td>1</td>
<td></td>
<td>SM 2580B</td>
<td>RAB</td>
<td>1/26/17 10:32</td>
</tr>
<tr>
<td>Total Dissolved Solids</td>
<td>4510</td>
<td>mg/L</td>
<td>48.0</td>
<td>80.0</td>
<td>J</td>
<td>4</td>
<td>SM 2540C</td>
<td>TMH</td>
<td>1/31/17 15:45</td>
</tr>
<tr>
<td>Sulfate</td>
<td>1520</td>
<td>mg/L</td>
<td>50.0</td>
<td>200</td>
<td>100</td>
<td></td>
<td>EPA 300.0</td>
<td>RFL</td>
<td>1/27/17 17:46</td>
</tr>
<tr>
<td>Turbidity</td>
<td>2.04</td>
<td>NTU</td>
<td>0.100</td>
<td>0.100</td>
<td>1</td>
<td></td>
<td>FDEP SOP FT 1600</td>
<td>RAB</td>
<td>1/26/17 10:32</td>
</tr>
<tr>
<td><strong>Total Mercury by SW846 Method 7470/7471</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mercury</td>
<td>0.0500</td>
<td>ug/L</td>
<td>0.0500</td>
<td>0.200</td>
<td>U</td>
<td>1</td>
<td>EPA 7470A</td>
<td>RLC</td>
<td>1/31/17 14:27</td>
</tr>
<tr>
<td><strong>Total Recoverable Metals by 200 Series</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Antimony</td>
<td>0.600</td>
<td>ug/L</td>
<td>0.600</td>
<td>2.00</td>
<td>U</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RLC</td>
<td>1/27/17 12:15</td>
</tr>
<tr>
<td>Arsenic</td>
<td>0.320</td>
<td>ug/L</td>
<td>0.320</td>
<td>2.00</td>
<td>U</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RLC</td>
<td>1/27/17 12:15</td>
</tr>
<tr>
<td>Cadmium</td>
<td>0.100</td>
<td>ug/L</td>
<td>0.100</td>
<td>0.500</td>
<td>U</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RLC</td>
<td>1/27/17 12:15</td>
</tr>
<tr>
<td>Cobalt</td>
<td>1.50</td>
<td>ug/L</td>
<td>0.0400</td>
<td>2.00</td>
<td>I</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RLC</td>
<td>1/27/17 12:15</td>
</tr>
<tr>
<td>Lead</td>
<td>0.000113</td>
<td>mg/L</td>
<td>8.00E-5</td>
<td>0.00200</td>
<td>I</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RLC</td>
<td>1/27/17 12:15</td>
</tr>
<tr>
<td>Selenium</td>
<td>0.200</td>
<td>ug/L</td>
<td>0.200</td>
<td>2.00</td>
<td>U</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RLC</td>
<td>1/27/17 12:15</td>
</tr>
<tr>
<td>Thallium</td>
<td>0.100</td>
<td>ug/L</td>
<td>0.100</td>
<td>0.500</td>
<td>U</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RLC</td>
<td>1/27/17 12:15</td>
</tr>
<tr>
<td><strong>Total Recoverable Metals by SW846 Method 6010B</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Barium</td>
<td>0.0546</td>
<td>mg/L</td>
<td>0.000500</td>
<td>0.0200</td>
<td>1</td>
<td></td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>1/31/17 10:04</td>
</tr>
<tr>
<td>Beryllium</td>
<td>0.200</td>
<td>ug/L</td>
<td>0.200</td>
<td>2.00</td>
<td>U</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>1/31/17 10:04</td>
</tr>
<tr>
<td>Boron</td>
<td>45.9</td>
<td>mg/L</td>
<td>0.0100</td>
<td>0.0500</td>
<td>1</td>
<td></td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>1/31/17 10:04</td>
</tr>
<tr>
<td>Calcium</td>
<td>728000</td>
<td>ug/L</td>
<td>30.0</td>
<td>1000</td>
<td>1</td>
<td></td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>1/31/17 11:22</td>
</tr>
<tr>
<td>Chromium</td>
<td>1.60</td>
<td>ug/L</td>
<td>1.60</td>
<td>12.0</td>
<td>U</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>1/31/17 10:04</td>
</tr>
<tr>
<td>Molybdenum</td>
<td>7.16</td>
<td>ug/L</td>
<td>1.00</td>
<td>20.0</td>
<td>I</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>1/31/17 10:04</td>
</tr>
</tbody>
</table>

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
### Sample Information

<table>
<thead>
<tr>
<th>Client:</th>
<th>Big Bend Power Station</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lab Sample ID:</td>
<td>L17A041-05</td>
</tr>
<tr>
<td>Sample Description:</td>
<td>BBS-CCR-BW2</td>
</tr>
<tr>
<td>Sample Collection Method:</td>
<td>Grab</td>
</tr>
<tr>
<td>Sampled By:</td>
<td>Robert Barthelette</td>
</tr>
<tr>
<td>Date and Time Collected:</td>
<td>1/26/17 10:02</td>
</tr>
<tr>
<td>Date of Sample Receipt:</td>
<td>1/26/17 14:15</td>
</tr>
</tbody>
</table>

### Laboratory Results

#### Sample Qualifier:

#### General Chemistry Parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chloride</td>
<td>145 mg/L</td>
<td>0.200</td>
<td>5.00</td>
<td>V</td>
<td>10</td>
<td>EPA 300.0</td>
<td>RFL</td>
<td>1/27/17 18:06</td>
</tr>
<tr>
<td>Specific Conductance</td>
<td>1460 umhos/cm</td>
<td>100</td>
<td>100</td>
<td>1</td>
<td>FDEP SOP FT 1200</td>
<td>RAB</td>
<td>1/26/17 11:22</td>
<td></td>
</tr>
<tr>
<td>Dissolved Oxygen</td>
<td>0.300 mg/L</td>
<td>0.100</td>
<td>0.100</td>
<td>1</td>
<td>FDEP SOP FT 1500</td>
<td>RAB</td>
<td>1/26/17 11:22</td>
<td></td>
</tr>
<tr>
<td>Fluoride</td>
<td>0.472 mg/L</td>
<td>0.0100</td>
<td>0.0500</td>
<td>1</td>
<td>EPA 300.0</td>
<td>RFL</td>
<td>1/27/17 17:56</td>
<td></td>
</tr>
<tr>
<td>pH</td>
<td>6.62 pH Units</td>
<td>1.00</td>
<td>1.00</td>
<td>1</td>
<td>FDEP SOP FT 1100</td>
<td>RAB</td>
<td>1/26/17 11:22</td>
<td></td>
</tr>
<tr>
<td>REDOX Potential</td>
<td>-74.1 mV</td>
<td>-999</td>
<td>-999</td>
<td>1</td>
<td>SM 2580B</td>
<td>RAB</td>
<td>1/26/17 11:22</td>
<td></td>
</tr>
<tr>
<td>Total Dissolved Solids</td>
<td>1140 mg/L</td>
<td>12.0</td>
<td>20.0</td>
<td>10</td>
<td>EPA 300.0</td>
<td>RFL</td>
<td>1/27/17 18:06</td>
<td></td>
</tr>
<tr>
<td>Sulfate</td>
<td>255 mg/L</td>
<td>5.00</td>
<td>20.0</td>
<td>10</td>
<td>EPA 300.0</td>
<td>RFL</td>
<td>1/27/17 18:06</td>
<td></td>
</tr>
<tr>
<td>Turbidity</td>
<td>16.4 NTU</td>
<td>0.100</td>
<td>0.100</td>
<td>1</td>
<td>FDEP SOP FT 1600</td>
<td>RAB</td>
<td>1/26/17 11:22</td>
<td></td>
</tr>
</tbody>
</table>

#### Total Mercury by SW846 Method 7470/7471

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mercury</td>
<td>0.0500 ug/L</td>
<td>0.0500</td>
<td>0.200</td>
<td>U</td>
<td>1</td>
<td>EPA 7470A</td>
<td>RLC</td>
<td>1/31/17 14:30</td>
</tr>
</tbody>
</table>

#### Total Recoverable Metals by 200 Series

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antimony</td>
<td>0.600 ug/L</td>
<td>0.600</td>
<td>2.00</td>
<td>U</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RLC</td>
<td>1/27/17 12:19</td>
</tr>
<tr>
<td>Arsenic</td>
<td>0.709 ug/L</td>
<td>0.320</td>
<td>2.00</td>
<td>I</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RLC</td>
<td>1/27/17 12:19</td>
</tr>
<tr>
<td>Cadmium</td>
<td>0.100 ug/L</td>
<td>0.100</td>
<td>0.500</td>
<td>U</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RLC</td>
<td>1/27/17 12:19</td>
</tr>
<tr>
<td>Cobalt</td>
<td>0.136 ug/L</td>
<td>0.0400</td>
<td>2.00</td>
<td>I</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RLC</td>
<td>1/27/17 12:19</td>
</tr>
<tr>
<td>Lead</td>
<td>8.00E-5 mg/L</td>
<td>8.00E-5</td>
<td>0.00200</td>
<td>U</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RLC</td>
<td>1/27/17 12:19</td>
</tr>
<tr>
<td>Selenium</td>
<td>0.260 ug/L</td>
<td>0.200</td>
<td>2.00</td>
<td>I</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RLC</td>
<td>1/27/17 12:19</td>
</tr>
<tr>
<td>Thallium</td>
<td>0.100 ug/L</td>
<td>0.100</td>
<td>0.500</td>
<td>U</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RLC</td>
<td>1/27/17 12:19</td>
</tr>
</tbody>
</table>

#### Total Recoverable Metals by SW846 Method 6010B

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barium</td>
<td>0.0388 mg/L</td>
<td>0.000500</td>
<td>0.0200</td>
<td>I</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>1/31/17 10:06</td>
</tr>
<tr>
<td>Beryllium</td>
<td>0.200 ug/L</td>
<td>0.200</td>
<td>2.00</td>
<td>U</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>1/31/17 10:06</td>
</tr>
<tr>
<td>Boron</td>
<td>3.27 mg/L</td>
<td>0.0100</td>
<td>0.0500</td>
<td>I</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>1/31/17 10:06</td>
</tr>
<tr>
<td>Calcium</td>
<td>240000 ug/L</td>
<td>30.0</td>
<td>1000</td>
<td>1</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>1/31/17 11:24</td>
</tr>
<tr>
<td>Chromium</td>
<td>1.60 ug/L</td>
<td>1.60</td>
<td>12.0</td>
<td>U</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>1/31/17 10:06</td>
</tr>
<tr>
<td>Molybdenum</td>
<td>2.56 ug/L</td>
<td>1.00</td>
<td>20.0</td>
<td>I</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>1/31/17 10:06</td>
</tr>
</tbody>
</table>

### Comments

- **U**: Indicates that the compound was analyzed for but not detected.
- **J-**: The reported value is an estimated value, see the case narrative for specifics.
- **I**: Estimated value
- **V**: Analyte detected in the method blank

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
**Total Recoverable Metals by SW846 Method 6010B - Quality Control**

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>MDL</th>
<th>PQL</th>
<th>Units</th>
<th>Spike Level</th>
<th>Source Result</th>
<th>%Rec Limits</th>
<th>RPD Limit Qualifier</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Batch 17A0279 - EPA 6010B</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Blank (17A0279-BLK1)**
- Prepared: 01/30/17
- Analyzed: 01/31/17

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>MDL</th>
<th>PQL</th>
<th>Units</th>
<th>Spike Level</th>
<th>Source Result</th>
<th>%Rec Limits</th>
<th>RPD Limit Qualifier</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barium</td>
<td>0.000500</td>
<td>0.000500</td>
<td>0.0200</td>
<td>mg/L</td>
<td></td>
<td></td>
<td></td>
<td>U</td>
</tr>
<tr>
<td>Beryllium</td>
<td>0.200</td>
<td>0.200</td>
<td>2.00</td>
<td>ug/L</td>
<td></td>
<td></td>
<td></td>
<td>U</td>
</tr>
<tr>
<td>Beryllium</td>
<td>0.0100</td>
<td>0.0100</td>
<td>0.0500</td>
<td>mg/L</td>
<td></td>
<td></td>
<td></td>
<td>U</td>
</tr>
<tr>
<td>Calcium</td>
<td>30.0</td>
<td>30.0</td>
<td>1000</td>
<td>ug/L</td>
<td></td>
<td></td>
<td></td>
<td>U</td>
</tr>
<tr>
<td>Chromium</td>
<td>1.60</td>
<td>1.60</td>
<td>12.0</td>
<td>ug/L</td>
<td></td>
<td></td>
<td></td>
<td>U</td>
</tr>
<tr>
<td>Molybdenum</td>
<td>1.00</td>
<td>1.00</td>
<td>20.0</td>
<td>ug/L</td>
<td></td>
<td></td>
<td></td>
<td>U</td>
</tr>
</tbody>
</table>

**LCS (17A0279-BS1)**
- Prepared: 01/30/17
- Analyzed: 01/31/17

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>MDL</th>
<th>PQL</th>
<th>Units</th>
<th>Spike Level</th>
<th>Source Result</th>
<th>%Rec Limits</th>
<th>RPD Limit Qualifier</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barium</td>
<td>0.922</td>
<td>0.000500</td>
<td>0.0200</td>
<td>mg/L</td>
<td>1.0000</td>
<td>92.2</td>
<td>80-120</td>
<td></td>
</tr>
<tr>
<td>Beryllium</td>
<td>961</td>
<td>0.200</td>
<td>2.00</td>
<td>ug/L</td>
<td>1000.0</td>
<td>96.1</td>
<td>80-120</td>
<td></td>
</tr>
<tr>
<td>Beryllium</td>
<td>0.948</td>
<td>0.0100</td>
<td>0.0500</td>
<td>mg/L</td>
<td>1.0000</td>
<td>94.8</td>
<td>80-120</td>
<td></td>
</tr>
<tr>
<td>Chromium</td>
<td>925</td>
<td>1.60</td>
<td>12.0</td>
<td>ug/L</td>
<td>1000.0</td>
<td>92.5</td>
<td>80-120</td>
<td></td>
</tr>
<tr>
<td>Molybdenum</td>
<td>934</td>
<td>1.00</td>
<td>20.0</td>
<td>ug/L</td>
<td>1000.0</td>
<td>93.4</td>
<td>80-120</td>
<td></td>
</tr>
</tbody>
</table>

**Matrix Spike (17A0279-MS1)**
- Source: L17A041-01
- Prepared: 01/30/17
- Analyzed: 01/31/17

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>MDL</th>
<th>PQL</th>
<th>Units</th>
<th>Spike Level</th>
<th>Source Result</th>
<th>%Rec Limits</th>
<th>RPD Limit Qualifier</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barium</td>
<td>0.986</td>
<td>0.000500</td>
<td>0.0200</td>
<td>mg/L</td>
<td>1.0000</td>
<td>98.6</td>
<td>75-125</td>
<td></td>
</tr>
<tr>
<td>Beryllium</td>
<td>908</td>
<td>0.200</td>
<td>2.00</td>
<td>ug/L</td>
<td>1000.0</td>
<td>U</td>
<td>90.8</td>
<td>75-125</td>
</tr>
<tr>
<td>Beryllium</td>
<td>16.4</td>
<td>0.0100</td>
<td>0.0500</td>
<td>mg/L</td>
<td>1.0000</td>
<td>16.4</td>
<td>75-125</td>
<td></td>
</tr>
<tr>
<td>Chromium</td>
<td>885</td>
<td>1.60</td>
<td>12.0</td>
<td>ug/L</td>
<td>1000.0</td>
<td>U</td>
<td>88.5</td>
<td>75-125</td>
</tr>
<tr>
<td>Molybdenum</td>
<td>1010</td>
<td>1.00</td>
<td>20.0</td>
<td>ug/L</td>
<td>1000.0</td>
<td>1010</td>
<td>92.4</td>
<td>75-125</td>
</tr>
</tbody>
</table>

**Matrix Spike Dup (17A0279-MSD1)**
- Source: L17A041-01
- Prepared: 01/30/17
- Analyzed: 01/31/17

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>MDL</th>
<th>PQL</th>
<th>Units</th>
<th>Spike Level</th>
<th>Source Result</th>
<th>%Rec Limits</th>
<th>RPD Limit Qualifier</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barium</td>
<td>1.14</td>
<td>0.000500</td>
<td>0.0200</td>
<td>mg/L</td>
<td>1.0000</td>
<td>103</td>
<td>75-125</td>
<td></td>
</tr>
<tr>
<td>Beryllium</td>
<td>1080</td>
<td>0.200</td>
<td>2.00</td>
<td>ug/L</td>
<td>1000.0</td>
<td>U</td>
<td>108</td>
<td>75-125</td>
</tr>
<tr>
<td>Beryllium</td>
<td>16.9</td>
<td>0.0100</td>
<td>0.0500</td>
<td>mg/L</td>
<td>1.0000</td>
<td>16.9</td>
<td>75-125</td>
<td></td>
</tr>
<tr>
<td>Chromium</td>
<td>1050</td>
<td>1.60</td>
<td>12.0</td>
<td>ug/L</td>
<td>1000.0</td>
<td>U</td>
<td>105</td>
<td>75-125</td>
</tr>
<tr>
<td>Molybdenum</td>
<td>1030</td>
<td>1.00</td>
<td>20.0</td>
<td>ug/L</td>
<td>1000.0</td>
<td>1030</td>
<td>93.9</td>
<td>75-125</td>
</tr>
</tbody>
</table>

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>MDL</th>
<th>PQL</th>
<th>Units</th>
<th>Spike</th>
<th>Source</th>
<th>%Rec</th>
<th>%Rec Limits</th>
<th>RPD Limit</th>
<th>RPD</th>
<th>Qualifier</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blank (17A0273-BLK1)</td>
<td>0.0500</td>
<td>0.0500</td>
<td>0.200</td>
<td>ug/L</td>
<td>U</td>
<td>Prepared &amp; Analyzed: 01/31/17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LCS (17A0273-BS1)</td>
<td>Mercury</td>
<td>1.02</td>
<td>0.0500</td>
<td>0.200</td>
<td>ug/L</td>
<td>1.0000</td>
<td>102</td>
<td>80-120</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Source: L17A041-02</td>
<td>Prepared &amp; Analyzed: 01/31/17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Matrix Spike (17A0273-MS1)</td>
<td>Mercury</td>
<td>1.01</td>
<td>0.0500</td>
<td>0.200</td>
<td>ug/L</td>
<td>1.0000</td>
<td>U</td>
<td>101</td>
<td>75-125</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Source: L17A041-02</td>
<td>Prepared &amp; Analyzed: 01/31/17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Matrix Spike Dup (17A0273-MSD1)</td>
<td>Mercury</td>
<td>1.01</td>
<td>0.0500</td>
<td>0.200</td>
<td>ug/L</td>
<td>1.0000</td>
<td>U</td>
<td>101</td>
<td>75-125</td>
<td>0.0476</td>
<td>20</td>
</tr>
</tbody>
</table>

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>MDL</th>
<th>PQL</th>
<th>Units</th>
<th>Spike Level</th>
<th>Source</th>
<th>%Rec Limits</th>
<th>RPD Limit</th>
<th>Qualifier</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chloride</td>
<td>0.123</td>
<td>0.020</td>
<td>0.500</td>
<td>mg/L</td>
<td>Prepared &amp; Analyzed: 01/27/17</td>
<td>I</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fluoride</td>
<td>0.0100</td>
<td>0.010</td>
<td>0.050</td>
<td>mg/L</td>
<td></td>
<td>U</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sulfate</td>
<td>0.500</td>
<td>0.500</td>
<td>2.000</td>
<td>mg/L</td>
<td></td>
<td>U</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LCS (17A0275-BSI)</td>
<td>4.82</td>
<td>0.020</td>
<td>0.500</td>
<td>mg/L</td>
<td>Prepared &amp; Analyzed: 01/27/17</td>
<td>V</td>
<td>96.4</td>
<td>90-110</td>
<td></td>
</tr>
<tr>
<td>Chloride</td>
<td>4.73</td>
<td>0.010</td>
<td>0.050</td>
<td>mg/L</td>
<td></td>
<td>U</td>
<td>94.7</td>
<td>90-110</td>
<td></td>
</tr>
<tr>
<td>Sulfate</td>
<td>4.91</td>
<td>0.500</td>
<td>2.000</td>
<td>mg/L</td>
<td></td>
<td>U</td>
<td>98.3</td>
<td>90-110</td>
<td></td>
</tr>
<tr>
<td>Matrix Spike (17A0275-MS1)</td>
<td>189</td>
<td>0.200</td>
<td>5.000</td>
<td>mg/L</td>
<td>Source: L17A041-02</td>
<td>J-,V</td>
<td>118</td>
<td>90-110</td>
<td></td>
</tr>
<tr>
<td>Chloride</td>
<td>77.9</td>
<td>0.100</td>
<td>0.500</td>
<td>mg/L</td>
<td></td>
<td>J-</td>
<td>155</td>
<td>90-110</td>
<td></td>
</tr>
<tr>
<td>Sulfate</td>
<td>557</td>
<td>5.000</td>
<td>20.00</td>
<td>mg/L</td>
<td></td>
<td>J-</td>
<td>133</td>
<td>90-110</td>
<td></td>
</tr>
<tr>
<td>Matrix Spike Dup (17A0275-MSD1)</td>
<td>189</td>
<td>0.200</td>
<td>5.000</td>
<td>mg/L</td>
<td>Source: L17A041-02</td>
<td>J-,V</td>
<td>118</td>
<td>90-110</td>
<td>0.147</td>
</tr>
<tr>
<td>Chloride</td>
<td>78.2</td>
<td>0.100</td>
<td>0.500</td>
<td>mg/L</td>
<td></td>
<td>J-</td>
<td>156</td>
<td>90-110</td>
<td>0.295</td>
</tr>
<tr>
<td>Sulfate</td>
<td>556</td>
<td>5.000</td>
<td>20.00</td>
<td>mg/L</td>
<td></td>
<td>J-</td>
<td>132</td>
<td>90-110</td>
<td>0.0667</td>
</tr>
<tr>
<td>Batch 17A0291 - SM 2540C</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blank (17A0291-BLK1)</td>
<td>12.0</td>
<td>12.0</td>
<td>20.0</td>
<td>mg/L</td>
<td>Prepared &amp; Analyzed: 01/31/17</td>
<td>U</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LCS (17A0291-BSI)</td>
<td>1030</td>
<td>12.0</td>
<td>20.0</td>
<td>mg/L</td>
<td>Prepared &amp; Analyzed: 01/31/17</td>
<td>103</td>
<td>80-120</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
Tampa Electric Laboratory Services
5012 Causeway Blvd Tampa Fl. 33619 * Ph (813)630-7490 * Fax (813)630-7360 * DOH #E54272

General Chemistry Parameters - Quality Control

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>MDL</th>
<th>PQL</th>
<th>Units</th>
<th>Spike Level</th>
<th>Source Result</th>
<th>%Rec Limits</th>
<th>RPD Limit</th>
<th>Qualifier</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Batch 17A0291 - SM 2540C</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Duplicate (17A0291-DUP1)</td>
<td>Source: L17A041-01</td>
<td>Prepared &amp; Analyzed: 01/31/17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Dissolved Solids</td>
<td>3480</td>
<td>24.0</td>
<td>40.0</td>
<td>mg/L</td>
<td>3670</td>
<td>5.43</td>
<td>10</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
### Purging Data

<table>
<thead>
<tr>
<th>Time</th>
<th>Volume Purged (Gallons)</th>
<th>Cumul. Volume Purged (Gallons)</th>
<th>Purge Rate (GPM)</th>
<th>Depth to Water (Feet)</th>
<th>Temp. (°C)</th>
<th>pH (Standard Units)</th>
<th>Cond. (µhos/cm or µS/cm)</th>
<th>Dissolved Oxygen (circle % saturation)</th>
<th>Turbidity (NTUs)</th>
<th>Color (describe)</th>
<th>Odor (describe)</th>
</tr>
</thead>
<tbody>
<tr>
<td>11:52</td>
<td>2.22</td>
<td>2.22</td>
<td>0.22</td>
<td>7.69</td>
<td>24.06</td>
<td>4319</td>
<td>0.07</td>
<td>2.63</td>
<td>0.07</td>
<td>CLEAR</td>
<td>NONE</td>
</tr>
<tr>
<td>11:54</td>
<td>0.44</td>
<td>2.66</td>
<td>0.22</td>
<td>7.68</td>
<td>24.05</td>
<td>4324</td>
<td>0.07</td>
<td>1.09</td>
<td>0.07</td>
<td>CLEAR</td>
<td>NONE</td>
</tr>
<tr>
<td>11:56</td>
<td>0.44</td>
<td>3.10</td>
<td>0.22</td>
<td>7.68</td>
<td>24.03</td>
<td>4324</td>
<td>0.07</td>
<td>1.99</td>
<td>0.07</td>
<td>CLEAR</td>
<td>NONE</td>
</tr>
</tbody>
</table>

### Sampling Data

<table>
<thead>
<tr>
<th>Sampled By (Print) / Affiliation</th>
<th>RAB</th>
<th>TECO</th>
<th>Sampler (S) Signatures</th>
<th>Sampling Initiated At:</th>
<th>Sampling Ended At:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>11:56</td>
<td>12:02</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Pump or Tubing Depth in Well (Feet):</th>
<th>17.3</th>
<th>Sample Pump Flow Rate (mL per minute):</th>
<th>840</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Field Decontamination:</th>
<th>Y N</th>
<th>N</th>
<th>N</th>
<th>N</th>
<th>N</th>
<th>Y N</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Field-Filtered:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Filtration Equipment Type:</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>Filter Size:</td>
<td>µm</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Duplicate:</td>
<td>Y N</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sample Container Specification</th>
<th>Sample Preservation</th>
<th>Intended Analysis and/or Method</th>
<th>Sampling Equipment Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample ID Code</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>@Ino-500</td>
<td>1</td>
<td>PE</td>
<td>N/A</td>
</tr>
<tr>
<td>@Met-250</td>
<td>2</td>
<td>PE</td>
<td>1ml</td>
</tr>
<tr>
<td>@Rad-1L</td>
<td>2</td>
<td>PE</td>
<td>5ml</td>
</tr>
</tbody>
</table>

### Remarks:

1. Sample bottles pre-preserved at laboratory prior to sample collection.

### Notes:

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

2. Stabilization criteria for range of variation of last three consecutive readings (see FS 2212, Section 3):
   - pH: ± 0.2 units
   - Temperature: ± 0.2 °C
   - Specific Conductance: ± 5%
   - Dissolved Oxygen: all readings ≤ 20% saturation (see Table FS 2200-2);
     optionally, ± 0.2 mg/L or ± 10% (whichever is greater)
   - Turbidity: all readings ≤ 20 NTU; optionally ± 5 NTU or 10% (whichever is greater)
### PURGING DATA

<table>
<thead>
<tr>
<th>TIME</th>
<th>VOLUME PURGED (GALLONS)</th>
<th>COMPL. VOLUME PURGED (GALLONS)</th>
<th>PURGE RATE (GPM)</th>
<th>DEPTH TO WATER (FEET)</th>
<th>pH (standard units)</th>
<th>TEMP. (ºC)</th>
<th>TEMP. (% saturation)</th>
<th>COND. (µmhos/cm OR µS/cm)</th>
<th>DISSOLVED OXYGEN [% saturation]</th>
<th>TURBIDITY (NTUs)</th>
<th>COLOR (describe)</th>
<th>ODOR (describe)</th>
</tr>
</thead>
<tbody>
<tr>
<td>11:27</td>
<td>3.33</td>
<td>3.33</td>
<td>0.22</td>
<td>7.12</td>
<td>6.89</td>
<td>24.26</td>
<td>1549</td>
<td>&lt;2</td>
<td>0.09</td>
<td>4.51</td>
<td>LT. YELLOW</td>
<td>MILD</td>
</tr>
<tr>
<td>11:29</td>
<td>0.45</td>
<td>3.78</td>
<td>0.23</td>
<td>7.13</td>
<td>6.89</td>
<td>24.17</td>
<td>1551</td>
<td>&lt;2</td>
<td>0.08</td>
<td>3.98</td>
<td>LT. YELLOW</td>
<td>MILD</td>
</tr>
<tr>
<td>11:31</td>
<td>0.45</td>
<td>4.23</td>
<td>0.23</td>
<td>7.13</td>
<td>6.89</td>
<td>24.27</td>
<td>1556</td>
<td>&lt;2</td>
<td>0.08</td>
<td>4.93</td>
<td>LT. YELLOW</td>
<td>MILD</td>
</tr>
</tbody>
</table>

### SAMPLING DATA

<table>
<thead>
<tr>
<th>Sampled by (Print)</th>
<th>Affiliation</th>
<th>Sampler(s) Signature(s)</th>
<th>Sampling Initiated At</th>
<th>Sampling Ended At</th>
</tr>
</thead>
<tbody>
<tr>
<td>RAB</td>
<td>TECO</td>
<td></td>
<td>11:31</td>
<td>11:35</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Pump or Tubing Depth in Well (feet):</th>
<th>Sampled Pump Flow Rate (mL per minute)</th>
<th>TUBING MATERIAL CODE:</th>
</tr>
</thead>
<tbody>
<tr>
<td>16.8</td>
<td>847</td>
<td>PE/S</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Field Decontamination:</th>
<th>Field Filtered:</th>
<th>Filtration Equipment Type:</th>
<th>Filter Size (µm):</th>
<th>Duplicate:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Y</td>
<td>N</td>
<td></td>
<td></td>
<td>Y</td>
</tr>
</tbody>
</table>

| Sample Container Specification | Sampled Container | Material Code | Volume | Preservation Used | Total Vol. Added in Field (mL): | Final pH | INTENDED ANALYSIS AND/OR METHOD | SAMPLING EQUIPMENT CODE:
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>@Ino-500</td>
<td>1</td>
<td>PE</td>
<td>500ml</td>
<td>NONE</td>
<td>N/A</td>
<td></td>
<td>Inorganics</td>
<td>PP</td>
</tr>
<tr>
<td>@Met-250</td>
<td>2</td>
<td>PE</td>
<td>250ml</td>
<td>HNO3</td>
<td>1ml</td>
<td>&lt;2</td>
<td>Metals</td>
<td>PP</td>
</tr>
<tr>
<td>@Rad-1L</td>
<td>2</td>
<td>PE</td>
<td>1L</td>
<td>HNO3</td>
<td>5ml</td>
<td>&lt;2</td>
<td>Radiologics</td>
<td>PP</td>
</tr>
</tbody>
</table>

### REMARKS:

1. Sample bottles pre-preserved at laboratory prior to sample collection.

### NOTES:

1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)
   - pH: ± 0.2 units
   - Temperature: ± 0.2 ºC
   - Specific Conductance: ± 5%
   - Dissolved Oxygen: all readings ± 20% saturation (see Table FS 2200-2)
   - optionally, ± 0.2 mg/L or ± 10% (whichever is greater)
   - Turbidity: all readings ≤ 20 NTU; optionally ± 5 NTU or 10% (whichever is greater)
**DEP-SOP-001/01**

**FS 2200 Groundwater Sampling**

**Form FD 9000-24**

**GROUNDWATER SAMPLING LOG**

<table>
<thead>
<tr>
<th>SITE NAME:</th>
<th>Big Bend</th>
<th>SITE LOCATION:</th>
<th>Apollo Beach, FL.</th>
</tr>
</thead>
<tbody>
<tr>
<td>WELL NO:</td>
<td>BBS-CCR-3</td>
<td>SAMPLE ID:</td>
<td>L17A041-03</td>
</tr>
<tr>
<td>DATE:</td>
<td>1/16/17</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### PURGING DATA

<table>
<thead>
<tr>
<th>WELD DIAMETER (inches)</th>
<th>TUBING DIAMETER (inches)</th>
<th>1/4 WELL SCREEN INTERVAL FEET TO STATIC DEPTH TO WATER (feet)</th>
<th>STATIC DEPTH TO WATER (feet): 6.81</th>
<th>PURGE PUMP TYPE OR BAILER: PP</th>
</tr>
</thead>
</table>

**WELL VOLUME PURGE:**

(only fillout if applicable)

1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY

**EQUIPMENT VOLUME PURGE:**

(only fillout if applicable)

1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME

### TIME ACTUAL

<table>
<thead>
<tr>
<th>TIME</th>
<th>VOLUME PURGED (GALLONS)</th>
<th>VOLUME PURGED (GALLONS)</th>
<th>DEPTH TO WATER (FEET)</th>
<th>TEMPERATURE (°C)</th>
<th>CONDUCTIVITY (µH/m OR µS/cm)</th>
<th>DISSOLVED OXYGEN (WATER SATURATED) ppm</th>
<th>TURBIDITY (NTU)</th>
<th>COLOR (describe)</th>
<th>ODOR (describe)</th>
</tr>
</thead>
<tbody>
<tr>
<td>10:51</td>
<td>0.95</td>
<td>0.95</td>
<td>7.32</td>
<td>24.20</td>
<td>1629</td>
<td>0.13</td>
<td>1.85</td>
<td>YELLOW</td>
<td>MILD</td>
</tr>
<tr>
<td>10:53</td>
<td>0.21</td>
<td>1.16</td>
<td>7.31</td>
<td>24.21</td>
<td>1620</td>
<td>0.12</td>
<td>1.89</td>
<td>YELLOW</td>
<td>MILD</td>
</tr>
<tr>
<td>10:55</td>
<td>0.21</td>
<td>1.37</td>
<td>7.32</td>
<td>24.25</td>
<td>1512</td>
<td>0.11</td>
<td>1.79</td>
<td>YELLOW</td>
<td>MILD</td>
</tr>
</tbody>
</table>

### WELL CAPACITY (Gallons Per Foot):

<table>
<thead>
<tr>
<th>WELL CAPACITY</th>
<th>Well Diameter (inches)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.75 - 0.02</td>
<td>1/8&quot;</td>
</tr>
<tr>
<td>1&quot;</td>
<td>0.04</td>
</tr>
<tr>
<td>1.25&quot;</td>
<td>0.06</td>
</tr>
<tr>
<td>2&quot;</td>
<td>0.16</td>
</tr>
<tr>
<td>3&quot;</td>
<td>0.37</td>
</tr>
<tr>
<td>4&quot;</td>
<td>0.65</td>
</tr>
<tr>
<td>5&quot;</td>
<td>1.02</td>
</tr>
<tr>
<td>6&quot;</td>
<td>1.47</td>
</tr>
<tr>
<td>12&quot;</td>
<td>5.88</td>
</tr>
</tbody>
</table>

### TUBING INSIDE DIAMETER CAPACITY:

<table>
<thead>
<tr>
<th>TUBING INSIDE DIAMETER</th>
<th>CAPACITY (Gal./Ft.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/8&quot;</td>
<td>0.00006</td>
</tr>
<tr>
<td>3/16&quot;</td>
<td>0.0014</td>
</tr>
<tr>
<td>1/4&quot;</td>
<td>0.0026</td>
</tr>
<tr>
<td>5/16&quot;</td>
<td>0.004</td>
</tr>
<tr>
<td>3/8&quot;</td>
<td>0.006</td>
</tr>
<tr>
<td>1/2&quot;</td>
<td>0.010</td>
</tr>
<tr>
<td>5/8&quot;</td>
<td>0.016</td>
</tr>
</tbody>
</table>

### SAMPLING DATA

<table>
<thead>
<tr>
<th>SAMPLED BY (PRINT) / AFFILIATION</th>
<th>RAB</th>
<th>TECO</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAMPLE PUMP FLOW RATE (mL per minute):</td>
<td>400</td>
<td></td>
</tr>
<tr>
<td>TUBING MATERIAL CODE:</td>
<td>PE/S</td>
<td></td>
</tr>
<tr>
<td>FIELD DECONTAMINATION:</td>
<td>Y</td>
<td>N</td>
</tr>
<tr>
<td>FIELD-FILTERED:</td>
<td>T</td>
<td>N</td>
</tr>
<tr>
<td>FILTER SIZE:</td>
<td>µm</td>
<td></td>
</tr>
<tr>
<td>DUPLICATE:</td>
<td>Y</td>
<td>N</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SAMPLE CONTAINER SPECIFICATION</th>
<th># CONTAINERS</th>
<th>MATERIAL CODE</th>
<th>VOLUME</th>
<th>PRESERVATIVE USED</th>
<th>TOTAL VOLUME ADDED IN FIELD (ml)</th>
<th>FINAL pH</th>
<th>INTENDED ANALYSIS AND/OR METHOD</th>
<th>SAMPLING EQUIPMENT CODE</th>
</tr>
</thead>
<tbody>
<tr>
<td>@Ino-500</td>
<td>1</td>
<td>PE</td>
<td>500ml</td>
<td>NONE</td>
<td>NONE</td>
<td>N/A</td>
<td>Inorganics</td>
<td>PP</td>
</tr>
<tr>
<td>@Met-250</td>
<td>2</td>
<td>PE</td>
<td>250ml</td>
<td>HNO3</td>
<td>1ml</td>
<td>&lt;2</td>
<td>Metals</td>
<td>PP</td>
</tr>
<tr>
<td>@Rad-1L</td>
<td>2</td>
<td>PE</td>
<td>1L</td>
<td>HNO3</td>
<td>5ml</td>
<td>&lt;2</td>
<td>Radiologicals</td>
<td>PP</td>
</tr>
</tbody>
</table>

### REMARKS:

1. Sample bottles pre-preserved at laboratory prior to sample collection.

### MATERIAL CODES:

- AG = Amber Glass
- CG = Clear Glass
- PE = Polyethylene
- PP = Polypropylene
- S = Silicone
- T = Teflon
- O = Other (Specify)

### NOTES:

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

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

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

   Optionally, ± 0.2 mg/L or ± 10% (whichever is greater)
DEP-SOP-001/01
FS 2200 Groundwater Sampling
Form FD 9000-24
GROUNDWATER SAMPLING LOG

<table>
<thead>
<tr>
<th>WELL NO:</th>
<th>SAMPLE ID:</th>
<th>DATE: 1/16/17</th>
</tr>
</thead>
</table>

PURGING DATA

<table>
<thead>
<tr>
<th>WELL DIAMETER (inches)</th>
<th>TUBING DIAMETER (inches)</th>
<th>WELL SCREEN INTERVAL</th>
<th>DEPTH (feet)</th>
<th>STATIC DEPTH TO WATER (feet)</th>
<th>PURGE PUMP TYPE OR BAILER</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>1/4</td>
<td>8.00</td>
<td>18.00</td>
<td></td>
</tr>
</tbody>
</table>

WELL VOLUME PURGE:

1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) x WELL CAPACITY

EQUIPMENT VOLUME PURGE:

1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY x TUBING LENGTH) + FLOW CELL VOLUME

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 14.00

FINAL PUMP OR TUBING DEPTH IN WELL (feet): 14.00

PURGING INITIATED AT: 

PURGED (gallons): 

TOTAL VOLUME PURGED (gallons): 

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 8" = 2.88

TUBING INSIDE DIAM. CAPACITY (Gal./Ft.): 1/8" = 0.00026; 1/4" = 0.00064; 3/16" = 0.0014; 1/4" = 0.00096; 5/32" = 0.0020; 1/2" = 0.010; 9/32" = 0.016

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: RAB TECO

PUMP OR TUBING DEPTH IN WELL (feet): 

SAMPLE PUMP FLOW RATE (mL per minute): 

TUBING MATERIAL CODE: PE/S

FIELD DECONTAMINATION: Y ☐ N ☑

FIELD-FILTERED: 

FILTER SIZE: µm

DUPLICATE: Y ☐ N ☑

INTENDED ANALYSIS AND/OR METHOD

SAMPLING EQUIPMENT CODE

<table>
<thead>
<tr>
<th>SAMPLE ID CODE</th>
<th>CONTAINERS</th>
<th>MATERIAL CODE</th>
<th>VOLUME</th>
<th>PRESERVATIVE USED</th>
<th>TOTAL VOL. ADDED IN FIELD (mL)</th>
<th>FINAL pH</th>
<th>INTENDED ANALYSIS AND/OR METHOD</th>
</tr>
</thead>
<tbody>
<tr>
<td>@Ino-500</td>
<td>1</td>
<td>PE</td>
<td>500ml</td>
<td>NONE</td>
<td>NONE</td>
<td>N/A</td>
<td>Inorganics</td>
</tr>
<tr>
<td>@Met-250</td>
<td>2</td>
<td>PE</td>
<td>250ml</td>
<td>HNO3</td>
<td>1ml</td>
<td>&lt;2</td>
<td>Metals</td>
</tr>
<tr>
<td>@Rad-1L</td>
<td>2</td>
<td>PE</td>
<td>1L</td>
<td>HNO3</td>
<td>5ml</td>
<td>&lt;2</td>
<td>Radiologicals</td>
</tr>
</tbody>
</table>

REMARKS:
(1) Sample bottles pre-preserved at laboratory prior to sample collection.

NOTES:
1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)
   - pH: ± 0.2 units
   - Temperature: ± 0.2 °C
   - Specific Conductance: ± 5%
   - Dissolved Oxygen: all readings ± 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 1% (whichever is greater)
   - Turbidity: all readings ≤ 20 NTU; optionally ≤ 5 NTU or 10% (whichever is greater)
<table>
<thead>
<tr>
<th>TIME</th>
<th>VOLUME PURGED (GALLONS)</th>
<th>ph</th>
<th>TEMPERATURE (ºC)</th>
<th>pH UNITS</th>
<th>TEMPERATURE (ºC)</th>
<th>pH UNITS</th>
<th>TEMPERATURE (ºC)</th>
<th>pH UNITS</th>
<th>TEMPERATURE (ºC)</th>
<th>pH UNITS</th>
<th>TEMPERATURE (ºC)</th>
<th>pH UNITS</th>
<th>TEMPERATURE (ºC)</th>
<th>pH UNITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>10:25</td>
<td>4.39</td>
<td></td>
<td>26.99</td>
<td></td>
<td>4897</td>
<td></td>
<td>7.46</td>
<td></td>
<td>CLEAR</td>
<td></td>
<td>NONE</td>
<td></td>
<td>NONE</td>
<td></td>
</tr>
<tr>
<td>10:27</td>
<td>0.85</td>
<td></td>
<td>26.99</td>
<td></td>
<td>4999</td>
<td></td>
<td>2.79</td>
<td></td>
<td>CLEAR</td>
<td></td>
<td>NONE</td>
<td></td>
<td>NONE</td>
<td></td>
</tr>
<tr>
<td>10:29</td>
<td>0.85</td>
<td></td>
<td>26.98</td>
<td></td>
<td>4944</td>
<td></td>
<td>2.04</td>
<td></td>
<td>CLEAR</td>
<td></td>
<td>NONE</td>
<td></td>
<td>NONE</td>
<td></td>
</tr>
</tbody>
</table>

**WELL CAPACITY (Gallons Per Foot):**

- 0.75” = 0.02
- 1” = 0.04
- 1.25” = 0.06
- 2” = 0.16
- 3” = 0.37
- 4” = 0.65
- 5” = 1.02
- 6” = 1.47
- 12” = 6.88

**TUBING INSIDE DIA. CAPACITY (Gallon/Feet):**

- 1/8” = 0.00006
- 3/16” = 0.0014
- 1/4” = 0.0026
- 5/32” = 0.004
- 3/8” = 0.006
- 1/2” = 0.010
- 5/8” = 0.016

---

**SAMPLING DATA:**

- **RAB**
- **TECO**

**SAMPLED BY (PRINT)/AFFILIATION:**

**SAMPLER (S) SIGNATURES:**

**SAMPLING INITIATED AT:**

**SAMPLING ENDED AT:**

**PUMP OR TUBING DEPTH IN WELL (feet):**

- 39.3

**SAMPLE PUMP FLOW RATE (mL per minute):**

- 1620 ml

**TUBING MATERIAL CODE:**

- PE

**FIELD DECONTAMINATION:**

- Y

**FILTERED:**

- Y

**FILTER SIZE:**

- µm

**DUPLICATE:**

- Y

**FILTERED Equipment Type:**

- ESP

**SAMPLE CONTAINER SPECIFICATION:**

- # CONTAINERS
- MATERIAL CODE
- VOLUME
- PRESERVATIVE USED
- TOTAL VOL ADDED IN FIELD (mL)

**SAMPLE PRESERVATION:**

- INTENDED ANALYSIS AND/OR METHOD
- SAMPLING EQUIPMENT CODE

**SAMPLE ID CODE**

- @ino-500
- @met-250
- @rad-1L

**MATERIAL CODES:**

- AG = Amber Glass
- CG = Clear Glass
- PE = Polyethylene
- PP = Polypropylene
- S = Silicone
- T = Teflon
- O = Other (Specify)

**SAMPLING/PURGING EQUIPMENT CODES:**

- APP = After Peristaltic Pump
- B = Bailer
- BP = Bladder Pump
- ESP = Electric Submersible Pump
- PP = Peristaltic Pump
- RFPP = Reverse Flow Peristaltic Pump
- SM = Straw Method (tubing Gravity Drain)
- VT = Vacuum Trap
- O = Other (Specify)

**NOTES:**

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

---

**REMARKS:**

(1) Sample bottles pre-preserved at laboratory prior to sample collection.
<table>
<thead>
<tr>
<th>TIME</th>
<th>VOLUME PURGED</th>
<th>CONC. VOLUME PURGED</th>
<th>PURGE RATE (GPM)</th>
<th>DEPTH TO WATER (FEET)</th>
<th>pH (Standard units)</th>
<th>TEMP. (ºC)</th>
<th>COND. (µmhos/cm OR µS/cm)</th>
<th>DISSOLVED OXYGEN (corrected % saturation)</th>
<th>TURBIDITY (NTUs)</th>
<th>COLOR (describe)</th>
<th>ODOR (describe)</th>
<th>TOTAL VOLUME PURGED (gallons):</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:53</td>
<td>2.38</td>
<td>2.38</td>
<td>0.16</td>
<td>9.40</td>
<td>6.62</td>
<td>25.22</td>
<td>1455</td>
<td>0.46</td>
<td>14.80</td>
<td>CLEAR</td>
<td>NONE</td>
<td>2.38</td>
</tr>
<tr>
<td>9:55</td>
<td>0.30</td>
<td>2.68</td>
<td>0.15</td>
<td>9.39</td>
<td>6.62</td>
<td>25.29</td>
<td>1456</td>
<td>0.33</td>
<td>13.60</td>
<td>CLEAR</td>
<td>NONE</td>
<td>0.30</td>
</tr>
<tr>
<td>9:57</td>
<td>0.30</td>
<td>2.98</td>
<td>0.15</td>
<td>9.40</td>
<td>6.62</td>
<td>25.25</td>
<td>1457</td>
<td>0.30</td>
<td>16.40</td>
<td>CLEAR</td>
<td>NONE</td>
<td>0.30</td>
</tr>
</tbody>
</table>

**WELL CAPACITY** (Gallons Per Foot): 0.75” = 0.01; 1” = 0.04; 1.25” = 0.06; 2” = 0.16; 3” = 0.37; 4” = 0.65; 5” = 1.02; 6” = 1.47; 12” = 6.88

**TUBING INSIDE DIA. CAPACITY** (Gal./Ft.): 1/8” = 0.0006; 3/16” = 0.0014; 1/4” = 0.0026; 5/16” = 0.004; 3/8” = 0.006; 1/2” = 0.010; 5/8” = 0.016

---

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

<table>
<thead>
<tr>
<th>LIMS #</th>
<th>Location Code</th>
<th>Time</th>
<th>FE</th>
<th>pH (SU)</th>
<th>Temp °C</th>
<th>Cond(μH/OS)</th>
<th>DO (mg/L)</th>
<th>Turbidity(TU)</th>
<th>Redox (mv)</th>
<th>Sulfite (mg/L)</th>
<th>Color</th>
<th>Odor</th>
<th>Initials</th>
<th>NGVD</th>
</tr>
</thead>
<tbody>
<tr>
<td>L1T0A01-01</td>
<td>BBS-CCR-1</td>
<td>12:02</td>
<td>6.79</td>
<td>24.03</td>
<td>4324</td>
<td>0.07</td>
<td>1.99</td>
<td>-110.4</td>
<td>SO4-3TR</td>
<td>CLEAR</td>
<td>NONE</td>
<td>11:42</td>
<td></td>
<td></td>
</tr>
<tr>
<td>L1T0A01-02</td>
<td>BBS-CCR-2</td>
<td>11:35</td>
<td>6.89</td>
<td>24.27</td>
<td>1556</td>
<td>0.87</td>
<td>4.93</td>
<td>-182.0</td>
<td></td>
<td></td>
<td>LT, YELLOW</td>
<td>MILD</td>
<td>11:12</td>
<td></td>
</tr>
</tbody>
</table>

### Preservation

<table>
<thead>
<tr>
<th>Pres ID</th>
<th>Preservation</th>
<th>Pres ID</th>
<th>Preservation</th>
</tr>
</thead>
<tbody>
<tr>
<td>LT</td>
<td>1L, Bottles (rads): 5 ml HNO3 to &lt;2 pH</td>
<td>LT</td>
<td>500 ml bottles (sulfide): 2 ml NAOH/25c Acet. to pH &gt;12</td>
</tr>
<tr>
<td>L012554</td>
<td></td>
<td>L012554</td>
<td></td>
</tr>
</tbody>
</table>

### pH Meter Calibration

<table>
<thead>
<tr>
<th>Buffer ID</th>
<th>Buffer Value</th>
<th>Cal</th>
<th>Time</th>
<th>ICC</th>
<th>Time</th>
<th>CCV</th>
<th>Time</th>
<th>Redox Cal</th>
<th>pH</th>
<th>Temp</th>
<th>Reading mv</th>
<th>Theo Value mv</th>
</tr>
</thead>
<tbody>
<tr>
<td>MPM08</td>
<td>016776B</td>
<td>10</td>
<td>10.05</td>
<td>8.40</td>
<td>QC: (pH &lt; 2)</td>
<td>9.06</td>
<td>4.77</td>
<td>8.05</td>
<td>23.4</td>
<td>232.1</td>
<td>232.3</td>
<td></td>
</tr>
</tbody>
</table>

### Conductivity Meter Calibration

<table>
<thead>
<tr>
<th>Conductivity Meter Calibration</th>
<th>Standard</th>
<th>ID</th>
<th>Cal</th>
<th>Time</th>
<th>ICC</th>
<th>Time</th>
<th>CCV</th>
<th>Time</th>
<th>MPM08</th>
</tr>
</thead>
<tbody>
<tr>
<td>MPM08</td>
<td>015881D</td>
<td>1000</td>
<td>1000</td>
<td>9.00</td>
<td>DO Meter Cal</td>
<td>8.30</td>
<td>21.9</td>
<td>8.73</td>
<td>8.77</td>
</tr>
</tbody>
</table>

### Turbidity Meter Calibration

<table>
<thead>
<tr>
<th>Turbidity Meter Calibration</th>
<th>Standard</th>
<th>ID</th>
<th>Acceptability Range</th>
<th>ICC</th>
<th>Time</th>
<th>CCV</th>
<th>Time</th>
<th>MPM08</th>
</tr>
</thead>
<tbody>
<tr>
<td>MPM08</td>
<td>016239A</td>
<td>10000</td>
<td>9889</td>
<td>9.05</td>
<td>9886</td>
<td>14.03</td>
<td>Meter ID:</td>
<td>8.85</td>
</tr>
</tbody>
</table>

### Purging Information

<table>
<thead>
<tr>
<th>Purge Method</th>
<th>Well #</th>
<th>Diam/Comp</th>
<th>Screen Interval (ft)</th>
<th>Intake Depth (ft)</th>
<th>Intake Depth (gal)</th>
<th>Water Depth (ft)</th>
<th>pH (SU)</th>
<th>Temp °C</th>
<th>Cond(μH/OS)</th>
<th>DO (mg/L)</th>
<th>Turbidity(TU)</th>
<th>Redox (mv)</th>
<th>Purge Criteria</th>
<th>Status</th>
<th>Equipment ID</th>
<th>Expd Table</th>
</tr>
</thead>
<tbody>
<tr>
<td>BBS-CCR-1</td>
<td>2</td>
<td>10</td>
<td>17.32</td>
<td>22.32</td>
<td>7.46</td>
<td>14.86</td>
<td>0.16</td>
<td>2.38</td>
<td>0.0022</td>
<td>23.3</td>
<td>0.06</td>
<td>0.12</td>
<td></td>
<td></td>
<td></td>
<td>Expd Table</td>
</tr>
</tbody>
</table>

### Purge Complete At

**11:43 Gallons to Purge: 0.12**

### Comments:

- Time: Total Time
- Total Miles
### Purging Information

| Well # | Diam/ Comp | Screen Interval (ft) | Intake Depth (ft) | Water Depth (ft) | Depth to Water (ft) | Water Column (gal) | Well Capacity (gal) | X | 1 Well Volume (gal) | X | Tubing Capacity (gal) | X | Tubing Length (ft) | X | Pump Volume (gal) | X | Cal Volume (gal) | X | 1 Eqpt. Volume (gal) | X |
|--------|------------|---------------------|------------------|------------------|-------------------|-------------------|--------------------|---|-------------------|---|-------------------|---|-------------------|---|-------------------|---|-------------------|---|
| BBS-CCR-3 | 2         | [interval]         | [depth]         | [water]          | [depth]          | [column]         | [capacity]         |   |                  |   |                   |   |                  |   |                  |   |                   |   |

#### Purge Meth.

- **1A**
  - Time: 10:51
  - Rate (ml/min): 400
  - Volume (gal): Total Vol. (gal)
  - pH (SU)
  - Temp °C
  - Cond (μHOS): DO mg/L
  - Turbidity (NTU)

#### Purge Complete At

**10:43**

- Stability Values: 0.12

### Purging Efficiency

| Well # | Diam/ Comp | Screen Interval (ft) | Intake Depth (ft) | Water Depth (ft) | Depth to Water (ft) | Water Column (gal) | Well Capacity (gal) | X | 1 Well Volume (gal) | X | Tubing Capacity (gal) | X | Tubing Length (ft) | X | Pump Volume (gal) | X | Cal Volume (gal) | X | 1 Eqpt. Volume (gal) | X |
|--------|------------|---------------------|------------------|------------------|-------------------|-------------------|--------------------|---|-------------------|---|-------------------|---|-------------------|---|-------------------|---|-------------------|---|
| BBS-CCR-3 | 2         | [interval]         | [depth]         | [water]          | [depth]          | [column]         | [capacity]         |   |                  |   |                   |   |                  |   |                  |   |                   |   |

#### Purge Meth.

- **1A**
  - Time: 10:51
  - Rate (ml/min): 400
  - Volume (gal): Total Vol. (gal)
  - pH (SU)
  - Temp °C
  - Cond (μHOS): DO mg/L
  - Turbidity (NTU)

#### Purge Complete At

**10:43**

- Stability Values: 0.12

### Purging Efficiency

| Well # | Diam/ Comp | Screen Interval (ft) | Intake Depth (ft) | Water Depth (ft) | Depth to Water (ft) | Water Column (gal) | Well Capacity (gal) | X | 1 Well Volume (gal) | X | Tubing Capacity (gal) | X | Tubing Length (ft) | X | Pump Volume (gal) | X | Cal Volume (gal) | X | 1 Eqpt. Volume (gal) | X |
|--------|------------|---------------------|------------------|------------------|-------------------|-------------------|--------------------|---|-------------------|---|-------------------|---|-------------------|---|-------------------|---|-------------------|---|
| BBS-CCR-3 | 2         | [interval]         | [depth]         | [water]          | [depth]          | [column]         | [capacity]         |   |                  |   |                   |   |                  |   |                  |   |                   |   |

#### Purge Meth.

- **1A**
  - Time: 10:51
  - Rate (ml/min): 400
  - Volume (gal): Total Vol. (gal)
  - pH (SU)
  - Temp °C
  - Cond (μHOS): DO mg/L
  - Turbidity (NTU)
### Big Bend

**Site:** 01/16/17  
**File Name:** 011617 Wells RAB  
**Weather:** OVERCAST & MILD  
**Sample(s) / Initials:** RAB / TECO  
**NGVD:**

<table>
<thead>
<tr>
<th>LIMS #</th>
<th>Location Code</th>
<th>Date</th>
<th>Time</th>
<th>FE+</th>
<th>pH (SU)</th>
<th>Temp °C</th>
<th>Cond(uMHOS)</th>
<th>DO mg/L</th>
<th>Turbidity(mTU)</th>
<th>Redox (mv)</th>
<th>Sulfite (mg/L)</th>
<th>Color</th>
<th>Odor</th>
<th>Remarks</th>
<th>Time</th>
<th>Total Vol. (gal)</th>
<th>Pressure (psig)</th>
<th>Flow Rate (gallons/min)</th>
</tr>
</thead>
<tbody>
<tr>
<td>L17A041-04</td>
<td>BBS-CCR-BW-1</td>
<td>10:32</td>
<td>6.46</td>
<td>28.96</td>
<td>4944</td>
<td>0.20</td>
<td>2.04</td>
<td>-20.2</td>
<td>1457</td>
<td>30.33</td>
<td>1457</td>
<td>CLEAR</td>
<td>NONE</td>
<td>TIME LEVEL</td>
<td></td>
<td>20</td>
<td>12</td>
<td>2522</td>
</tr>
<tr>
<td>L17A041-05</td>
<td>BBS-CCR-BW-2</td>
<td>10:02</td>
<td>6.62</td>
<td>25.25</td>
<td>1457</td>
<td>0.30</td>
<td>16.40</td>
<td>-74.2</td>
<td>250 ml Sulfate (3)</td>
<td>4894</td>
<td>4894</td>
<td>CLEAR</td>
<td>NONE</td>
<td>TIME LEVEL</td>
<td></td>
<td>20</td>
<td>12</td>
<td>2522</td>
</tr>
</tbody>
</table>

**LIMS #** 250 ml Cyan (3)  
**DO Meter Cal**  
**ICV**  
**CCV**  
**Redox Cal**  
**Flow Rate (gallons/min)**  
**Total Vol. (gal)**  
**Pressure (psig)**  
**Flow Rate (gallons/min)**  

**Comments:**

---

<table>
<thead>
<tr>
<th>Sample(s) / Initials</th>
<th>Water Depth (ft)</th>
<th>Well Capacities (gallons/ft): 2&quot; = 0.16    4&quot; = 0.65</th>
</tr>
</thead>
<tbody>
<tr>
<td>RAB / TECO</td>
<td></td>
<td>4999</td>
</tr>
</tbody>
</table>

---

**Well Information**

<table>
<thead>
<tr>
<th>Well #</th>
<th>Diam/ Comp</th>
<th>Screen Interval (ft)</th>
<th>Intake Depth (ft)</th>
<th>Well Depth (ft)</th>
<th>Depth to Water (ft)</th>
<th>Well Capacity (gal)</th>
<th>Volume (gal)</th>
<th>Well Volume (gal)</th>
<th>Tubing Capacity (gal)</th>
<th>Tubing Length (ft)</th>
<th>Pump Volume (gal)</th>
<th>Cell Volume (gal)</th>
<th>1 Eqpt. Volume (gal)</th>
<th>Purge Criteria</th>
<th>Status</th>
<th>Equipment ID</th>
<th>Equil Table</th>
</tr>
</thead>
<tbody>
<tr>
<td>BBS-CCR-BW-1</td>
<td>2</td>
<td>40</td>
<td>30 50</td>
<td>18.49</td>
<td>9.13</td>
<td>14.71</td>
<td>0.16</td>
<td>2.35</td>
<td>0.0026</td>
<td>24.64</td>
<td>0.06</td>
<td>0.12</td>
<td>0.12</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

**Flow Rate (gallons/min):**

<table>
<thead>
<tr>
<th>Flow Rate (gallons/min)</th>
<th>250 ml Cyan (3)</th>
<th>250 ml Sulfate (3)</th>
<th>4894</th>
<th>4894</th>
<th>30.33</th>
<th>1457</th>
<th>CLEAR</th>
<th>NONE</th>
<th>TIME LEVEL</th>
<th></th>
<th>20</th>
<th>12</th>
<th>2522</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>250 ml Cyan (3)</td>
<td>250 ml Sulfate (3)</td>
<td>4894</td>
<td>4894</td>
<td>30.33</td>
<td>1457</td>
<td>CLEAR</td>
<td>NONE</td>
<td>TIME LEVEL</td>
<td></td>
<td>20</td>
<td>12</td>
<td>2522</td>
</tr>
</tbody>
</table>

---

**Total Time:**

| Purge Complete At | Gallons to Purge | Stability Values | 6.62 | 26.98 | 4944       | 0.20 | 2.04 |                      |      | 1457           | CLEAR | NONE | TIME LEVEL     |      | 20               | 12               | 2522                 |
|-------------------|------------------|------------------|-------|-------|------------|------|------|----------------------|------|-----------------|-----------------|----------------------|

---

**Total Miles:**
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.
Table of Contents

Cover Page ................................................................. 1
Table of Contents ......................................................... 2
Sample Summary .......................................................... 3
Definitions ................................................................. 4
Case Narrative ............................................................. 5
Detection Summary ......................................................... 6
Client Sample Results ..................................................... 7
QC Sample Results ........................................................ 8
QC Association ............................................................ 9
Chronicle ................................................................. 10
Certification Summary ................................................... 11
Method Summary .......................................................... 12
Chain of Custody .......................................................... 13
Receipt Checklists .......................................................... 15
Sample Summary

Client: Tampa Electric Company
Project/Site: L17A041

<table>
<thead>
<tr>
<th>Lab Sample ID</th>
<th>Client Sample ID</th>
<th>Matrix</th>
<th>Collected</th>
<th>Received</th>
</tr>
</thead>
<tbody>
<tr>
<td>660-78617-1</td>
<td>L17A041-01</td>
<td>Water</td>
<td>01/25/17 12:02</td>
<td>01/27/17 09:02</td>
</tr>
<tr>
<td>660-78617-2</td>
<td>L17A041-02</td>
<td>Water</td>
<td>01/25/17 11:35</td>
<td>01/27/17 09:02</td>
</tr>
<tr>
<td>660-78617-3</td>
<td>L17A041-03</td>
<td>Water</td>
<td>01/25/17 11:04</td>
<td>01/27/17 09:02</td>
</tr>
<tr>
<td>660-78617-4</td>
<td>L17A041-04</td>
<td>Water</td>
<td>01/25/17 10:32</td>
<td>01/27/17 09:02</td>
</tr>
<tr>
<td>660-78617-5</td>
<td>L17A041-05</td>
<td>Water</td>
<td>01/25/17 10:02</td>
<td>01/27/17 09:02</td>
</tr>
</tbody>
</table>
## Qualifiers

### Metals

<table>
<thead>
<tr>
<th>Qualifier</th>
<th>Qualifier Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.</td>
</tr>
<tr>
<td>U</td>
<td>Indicates that the compound was analyzed for but not detected.</td>
</tr>
</tbody>
</table>

## Glossary

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>These commonly used abbreviations may or may not be present in this report.</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>Listed under the “D” column to designate that the result is reported on a dry weight basis</td>
</tr>
<tr>
<td>%R</td>
<td>Percent Recovery</td>
</tr>
<tr>
<td>CFL</td>
<td>Contains Free Liquid</td>
</tr>
<tr>
<td>CNF</td>
<td>Contains no Free Liquid</td>
</tr>
<tr>
<td>DER</td>
<td>Duplicate error ratio (normalized absolute difference)</td>
</tr>
<tr>
<td>Dil Fac</td>
<td>Dilution Factor</td>
</tr>
<tr>
<td>DL, RA, RE, IN</td>
<td>Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample</td>
</tr>
<tr>
<td>DLC</td>
<td>Decision level concentration</td>
</tr>
<tr>
<td>MDA</td>
<td>Minimum detectable activity</td>
</tr>
<tr>
<td>EDL</td>
<td>Estimated Detection Limit</td>
</tr>
<tr>
<td>MDC</td>
<td>Minimum detectable concentration</td>
</tr>
<tr>
<td>MDL</td>
<td>Method Detection Limit</td>
</tr>
<tr>
<td>ML</td>
<td>Minimum Level (Dioxin)</td>
</tr>
<tr>
<td>NC</td>
<td>Not Calculated</td>
</tr>
<tr>
<td>ND</td>
<td>Not detected at the reporting limit (or MDL or EDL if shown)</td>
</tr>
<tr>
<td>PQL</td>
<td>Practical Quantitation Limit</td>
</tr>
<tr>
<td>QC</td>
<td>Quality Control</td>
</tr>
<tr>
<td>RER</td>
<td>Relative error ratio</td>
</tr>
<tr>
<td>RL</td>
<td>Reporting Limit or Requested Limit (Radiochemistry)</td>
</tr>
<tr>
<td>RPD</td>
<td>Relative Percent Difference, a measure of the relative difference between two points</td>
</tr>
<tr>
<td>TEF</td>
<td>Toxicity Equivalent Factor (Dioxin)</td>
</tr>
<tr>
<td>TEQ</td>
<td>Toxicity Equivalent Quotient (Dioxin)</td>
</tr>
</tbody>
</table>
Job ID: 660-78617-1

Laboratory: TestAmerica Tampa

Narrative

Job Narrative
660-78617-1

Comments
No additional comments.

Receipt
The samples were received on 1/27/2017 9:02 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 15.0º C.

Metals
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.
### Client Sample ID: L17A041-01  
Lab Sample ID: 660-78617-1

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>Qualifier</th>
<th>PQL</th>
<th>MDL</th>
<th>Unit</th>
<th>Dil Fac</th>
<th>D</th>
<th>Method</th>
<th>Prep Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithium</td>
<td>0.014</td>
<td>I</td>
<td>0.050</td>
<td>0.0010</td>
<td>mg/L</td>
<td></td>
<td></td>
<td>200.7 Rev 4.4</td>
<td>Total/NA</td>
</tr>
</tbody>
</table>

### Client Sample ID: L17A041-02  
Lab Sample ID: 660-78617-2

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>Qualifier</th>
<th>PQL</th>
<th>MDL</th>
<th>Unit</th>
<th>Dil Fac</th>
<th>D</th>
<th>Method</th>
<th>Prep Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithium</td>
<td>0.013</td>
<td>I</td>
<td>0.050</td>
<td>0.0010</td>
<td>mg/L</td>
<td></td>
<td></td>
<td>200.7 Rev 4.4</td>
<td>Total/NA</td>
</tr>
</tbody>
</table>

### Client Sample ID: L17A041-03  
Lab Sample ID: 660-78617-3

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>Qualifier</th>
<th>PQL</th>
<th>MDL</th>
<th>Unit</th>
<th>Dil Fac</th>
<th>D</th>
<th>Method</th>
<th>Prep Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithium</td>
<td>0.0077</td>
<td>I</td>
<td>0.050</td>
<td>0.0010</td>
<td>mg/L</td>
<td></td>
<td></td>
<td>200.7 Rev 4.4</td>
<td>Total/NA</td>
</tr>
</tbody>
</table>

### Client Sample ID: L17A041-04  
Lab Sample ID: 660-78617-4

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>Qualifier</th>
<th>PQL</th>
<th>MDL</th>
<th>Unit</th>
<th>Dil Fac</th>
<th>D</th>
<th>Method</th>
<th>Prep Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithium</td>
<td>0.018</td>
<td>I</td>
<td>0.050</td>
<td>0.0010</td>
<td>mg/L</td>
<td></td>
<td></td>
<td>200.7 Rev 4.4</td>
<td>Total/NA</td>
</tr>
</tbody>
</table>

### Client Sample ID: L17A041-05  
Lab Sample ID: 660-78617-5

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>Qualifier</th>
<th>PQL</th>
<th>MDL</th>
<th>Unit</th>
<th>Dil Fac</th>
<th>D</th>
<th>Method</th>
<th>Prep Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithium</td>
<td>0.0052</td>
<td>I</td>
<td>0.050</td>
<td>0.0010</td>
<td>mg/L</td>
<td></td>
<td></td>
<td>200.7 Rev 4.4</td>
<td>Total/NA</td>
</tr>
</tbody>
</table>

This Detection Summary does not include radiochemical test results.
## Client Sample Results

**Client Sample ID: L17A041-01**
- **Date Collected:** 01/25/17 12:02
- **Date Received:** 01/27/17 09:02
- **Method:** 200.7 Rev 4.4 - Metals (ICP)
  - **Analyte:** Lithium
  - **Result:** 0.014 mg/L
  - **Qualifier:** I
  - **PQL:** 0.050 mg/L
  - **MDL:** 0.0010 mg/L
  - **Unit:** mg/L
  - **D:** 01/29/17 10:39
  - **Prepared:** 01/30/17 20:11
  - **Analyzed:** 01/30/17 20:11
  - **Dil Fac:** 1

**Client Sample ID: L17A041-02**
- **Date Collected:** 01/25/17 11:35
- **Date Received:** 01/27/17 09:02
- **Method:** 200.7 Rev 4.4 - Metals (ICP)
  - **Analyte:** Lithium
  - **Result:** 0.013 mg/L
  - **Qualifier:** I
  - **PQL:** 0.050 mg/L
  - **MDL:** 0.0010 mg/L
  - **Unit:** mg/L
  - **D:** 01/29/17 10:39
  - **Prepared:** 01/30/17 20:14
  - **Analyzed:** 01/30/17 20:14
  - **Dil Fac:** 1

**Client Sample ID: L17A041-03**
- **Date Collected:** 01/25/17 11:04
- **Date Received:** 01/27/17 09:02
- **Method:** 200.7 Rev 4.4 - Metals (ICP)
  - **Analyte:** Lithium
  - **Result:** 0.0077 mg/L
  - **Qualifier:** I
  - **PQL:** 0.050 mg/L
  - **MDL:** 0.0010 mg/L
  - **Unit:** mg/L
  - **D:** 01/29/17 10:39
  - **Prepared:** 01/30/17 20:18
  - **Analyzed:** 01/30/17 20:18
  - **Dil Fac:** 1

**Client Sample ID: L17A041-04**
- **Date Collected:** 01/25/17 10:32
- **Date Received:** 01/27/17 09:02
- **Method:** 200.7 Rev 4.4 - Metals (ICP)
  - **Analyte:** Lithium
  - **Result:** 0.018 mg/L
  - **Qualifier:** I
  - **PQL:** 0.050 mg/L
  - **MDL:** 0.0010 mg/L
  - **Unit:** mg/L
  - **D:** 01/29/17 10:39
  - **Prepared:** 01/30/17 20:31
  - **Analyzed:** 01/30/17 20:31
  - **Dil Fac:** 1

**Client Sample ID: L17A041-05**
- **Date Collected:** 01/25/17 10:02
- **Date Received:** 01/27/17 09:02
- **Method:** 200.7 Rev 4.4 - Metals (ICP)
  - **Analyte:** Lithium
  - **Result:** 0.0052 mg/L
  - **Qualifier:** I
  - **PQL:** 0.050 mg/L
  - **MDL:** 0.0010 mg/L
  - **Unit:** mg/L
  - **D:** 01/29/17 10:39
  - **Prepared:** 01/30/17 20:34
  - **Analyzed:** 01/30/17 20:34
  - **Dil Fac:** 1
## QC Sample Results

**Client:** Tampa Electric Company  
**Project/Site:** L17A041

### Method: 200.7 Rev 4.4 - Metals (ICP)

<table>
<thead>
<tr>
<th>Lab Sample ID: MB 400-340211/1-A</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Matrix:</strong> Water</td>
</tr>
<tr>
<td><strong>Analysis Batch:</strong> 340400</td>
</tr>
<tr>
<td><strong>Analyte</strong></td>
</tr>
<tr>
<td>Lithium</td>
</tr>
<tr>
<td><strong>Result</strong></td>
</tr>
<tr>
<td><strong>Qualifier</strong></td>
</tr>
<tr>
<td><strong>PQL</strong></td>
</tr>
<tr>
<td><strong>MDL</strong></td>
</tr>
<tr>
<td><strong>Unit</strong></td>
</tr>
<tr>
<td><strong>D</strong></td>
</tr>
<tr>
<td><strong>Prepared</strong></td>
</tr>
<tr>
<td><strong>Prepared</strong></td>
</tr>
<tr>
<td><strong>Prepared</strong></td>
</tr>
<tr>
<td><strong>Prepared</strong></td>
</tr>
</tbody>
</table>

### Client Sample ID: Method Blank

| **Matrix:** Water |
| **Prep Batch:** 340211 |

### Lab Sample ID: LCS 400-340211/2-A

| **Matrix:** Water |
| **Analysis Batch:** 340400 |
| **Analyte**                     |
| Lithium                         |
| **Result**                      | **MB** |
| **Qualifier**                   | **MB** |
| **Spike**                       | 1.00   |
| **Added**                       | 1.00   |
| **LCS**                         | 1.06   |
| **Qualifier**                   | **LCS** |
| **Unit**                        | mg/L   |
| **D**                           | 106    |
| **%Rec.**                       | 85.1   |
| **Limits**                      | 115    |

### Client Sample ID: Lab Control Sample

| **Matrix:** Water |
| **Prep Batch:** 340211 |

### Lab Sample ID: 400-133205-A-1-B MS

| **Matrix:** Water |
| **Analysis Batch:** 340400 |
| **Analyte**                     |
| Lithium                         |
| **Sample**                      | **MS** |
| **Result**                      | **MS** |
| **Qualifier**                   | **MS** |
| **Spike**                       | 1.00   |
| **Added**                       | 1.00   |
| **MS**                          | 1.10   |
| **Qualifier**                   | **MS** |
| **Unit**                        | mg/L   |
| **D**                           | 110    |
| **%Rec.**                       | 70.0   |
| **Limits**                      | 130    |

### Client Sample ID: Matrix Spike

| **Matrix:** Water |
| **Prep Batch:** 340211 |

### Lab Sample ID: 400-133205-A-1-C MSD

| **Matrix:** Water |
| **Analysis Batch:** 340400 |
| **Analyte**                     |
| Lithium                         |
| **Sample**                      | **MSD** |
| **Result**                      | **MSD** |
| **Qualifier**                   | **MSD** |
| **Spike**                       | 1.00   |
| **Added**                       | 1.00   |
| **MSD**                         | 1.09   |
| **Qualifier**                   | **MSD** |
| **Unit**                        | mg/L   |
| **D**                           | 109    |
| **%Rec.**                       | 70.0   |
| **Limits**                      | 130    |
| **RPD**                         | 1      |
| **Limit**                       | 25     |

### Client Sample ID: Matrix Spike Duplicate

| **Matrix:** Water |
| **Prep Batch:** 340211 |

---

TestAmerica Tampa
## Metals

### Prep Batch: 340211

<table>
<thead>
<tr>
<th>Lab Sample ID</th>
<th>Client Sample ID</th>
<th>Prep Type</th>
<th>Matrix</th>
<th>Method</th>
<th>Prep Batch</th>
</tr>
</thead>
<tbody>
<tr>
<td>660-78617-1</td>
<td>L17A041-01</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7</td>
<td></td>
</tr>
<tr>
<td>660-78617-2</td>
<td>L17A041-02</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7</td>
<td></td>
</tr>
<tr>
<td>660-78617-3</td>
<td>L17A041-03</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7</td>
<td></td>
</tr>
<tr>
<td>660-78617-4</td>
<td>L17A041-04</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7</td>
<td></td>
</tr>
<tr>
<td>660-78617-5</td>
<td>L17A041-05</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7</td>
<td></td>
</tr>
<tr>
<td>MB 400-340211/1-A</td>
<td>Method Blank</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7</td>
<td></td>
</tr>
<tr>
<td>LCS 400-340211/2-A</td>
<td>Lab Control Sample</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7</td>
<td></td>
</tr>
<tr>
<td>400-133205-A-1-B MS</td>
<td>Matrix Spike</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7</td>
<td></td>
</tr>
<tr>
<td>400-133205-A-1-C MSD</td>
<td>Matrix Spike Duplicate</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7</td>
<td></td>
</tr>
</tbody>
</table>

### Analysis Batch: 340400

<table>
<thead>
<tr>
<th>Lab Sample ID</th>
<th>Client Sample ID</th>
<th>Prep Type</th>
<th>Matrix</th>
<th>Method</th>
<th>Prep Batch</th>
</tr>
</thead>
<tbody>
<tr>
<td>660-78617-1</td>
<td>L17A041-01</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7 Rev 4.4</td>
<td>340211</td>
</tr>
<tr>
<td>660-78617-2</td>
<td>L17A041-02</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7 Rev 4.4</td>
<td>340211</td>
</tr>
<tr>
<td>660-78617-3</td>
<td>L17A041-03</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7 Rev 4.4</td>
<td>340211</td>
</tr>
<tr>
<td>660-78617-4</td>
<td>L17A041-04</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7 Rev 4.4</td>
<td>340211</td>
</tr>
<tr>
<td>660-78617-5</td>
<td>L17A041-05</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7 Rev 4.4</td>
<td>340211</td>
</tr>
<tr>
<td>MB 400-340211/1-A</td>
<td>Method Blank</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7 Rev 4.4</td>
<td>340211</td>
</tr>
<tr>
<td>LCS 400-340211/2-A</td>
<td>Lab Control Sample</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7 Rev 4.4</td>
<td>340211</td>
</tr>
<tr>
<td>400-133205-A-1-B MS</td>
<td>Matrix Spike</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7 Rev 4.4</td>
<td>340211</td>
</tr>
<tr>
<td>400-133205-A-1-C MSD</td>
<td>Matrix Spike Duplicate</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7 Rev 4.4</td>
<td>340211</td>
</tr>
</tbody>
</table>
### Client Sample ID: L17A041-01

**Date Collected:** 01/25/17 12:02  
**Date Received:** 01/27/17 09:02

<table>
<thead>
<tr>
<th>Prep Type</th>
<th>Batch Type</th>
<th>Batch Method</th>
<th>Run</th>
<th>Dil Factor</th>
<th>Initial Amount</th>
<th>Final Amount</th>
<th>Batch Number</th>
<th>Prepared or Analyzed</th>
<th>Analyst</th>
<th>Lab</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total/NA</td>
<td>Prep</td>
<td>200.7</td>
<td></td>
<td></td>
<td>50 mL</td>
<td>50 mL</td>
<td>340211</td>
<td>01/29/17 10:39</td>
<td>DN1</td>
<td>TAL PEN</td>
</tr>
<tr>
<td>Total/NA</td>
<td>Analysis</td>
<td>200.7 Rev 4.4</td>
<td></td>
<td>1</td>
<td>50 mL</td>
<td>50 mL</td>
<td>340400</td>
<td>01/30/17 20:11</td>
<td>SEH</td>
<td>TAL PEN</td>
</tr>
</tbody>
</table>

**Instrument ID:** 6500 ICP Duo

### Client Sample ID: L17A041-02

**Date Collected:** 01/25/17 11:35  
**Date Received:** 01/27/17 09:02

<table>
<thead>
<tr>
<th>Prep Type</th>
<th>Batch Type</th>
<th>Batch Method</th>
<th>Run</th>
<th>Dil Factor</th>
<th>Initial Amount</th>
<th>Final Amount</th>
<th>Batch Number</th>
<th>Prepared or Analyzed</th>
<th>Analyst</th>
<th>Lab</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total/NA</td>
<td>Prep</td>
<td>200.7</td>
<td></td>
<td></td>
<td>50 mL</td>
<td>50 mL</td>
<td>340211</td>
<td>01/29/17 10:39</td>
<td>DN1</td>
<td>TAL PEN</td>
</tr>
<tr>
<td>Total/NA</td>
<td>Analysis</td>
<td>200.7 Rev 4.4</td>
<td></td>
<td>1</td>
<td>50 mL</td>
<td>50 mL</td>
<td>340400</td>
<td>01/30/17 20:14</td>
<td>SEH</td>
<td>TAL PEN</td>
</tr>
</tbody>
</table>

**Instrument ID:** 6500 ICP Duo

### Client Sample ID: L17A041-03

**Date Collected:** 01/25/17 11:04  
**Date Received:** 01/27/17 09:02

<table>
<thead>
<tr>
<th>Prep Type</th>
<th>Batch Type</th>
<th>Batch Method</th>
<th>Run</th>
<th>Dil Factor</th>
<th>Initial Amount</th>
<th>Final Amount</th>
<th>Batch Number</th>
<th>Prepared or Analyzed</th>
<th>Analyst</th>
<th>Lab</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total/NA</td>
<td>Prep</td>
<td>200.7</td>
<td></td>
<td></td>
<td>50 mL</td>
<td>50 mL</td>
<td>340211</td>
<td>01/29/17 10:39</td>
<td>DN1</td>
<td>TAL PEN</td>
</tr>
<tr>
<td>Total/NA</td>
<td>Analysis</td>
<td>200.7 Rev 4.4</td>
<td></td>
<td>1</td>
<td>50 mL</td>
<td>50 mL</td>
<td>340400</td>
<td>01/30/17 20:18</td>
<td>SEH</td>
<td>TAL PEN</td>
</tr>
</tbody>
</table>

**Instrument ID:** 6500 ICP Duo

### Client Sample ID: L17A041-04

**Date Collected:** 01/25/17 10:32  
**Date Received:** 01/27/17 09:02

<table>
<thead>
<tr>
<th>Prep Type</th>
<th>Batch Type</th>
<th>Batch Method</th>
<th>Run</th>
<th>Dil Factor</th>
<th>Initial Amount</th>
<th>Final Amount</th>
<th>Batch Number</th>
<th>Prepared or Analyzed</th>
<th>Analyst</th>
<th>Lab</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total/NA</td>
<td>Prep</td>
<td>200.7</td>
<td></td>
<td></td>
<td>50 mL</td>
<td>50 mL</td>
<td>340211</td>
<td>01/29/17 10:39</td>
<td>DN1</td>
<td>TAL PEN</td>
</tr>
<tr>
<td>Total/NA</td>
<td>Analysis</td>
<td>200.7 Rev 4.4</td>
<td></td>
<td>1</td>
<td>50 mL</td>
<td>50 mL</td>
<td>340400</td>
<td>01/30/17 20:31</td>
<td>SEH</td>
<td>TAL PEN</td>
</tr>
</tbody>
</table>

**Instrument ID:** 6500 ICP Duo

### Client Sample ID: L17A041-05

**Date Collected:** 01/25/17 10:02  
**Date Received:** 01/27/17 09:02

<table>
<thead>
<tr>
<th>Prep Type</th>
<th>Batch Type</th>
<th>Batch Method</th>
<th>Run</th>
<th>Dil Factor</th>
<th>Initial Amount</th>
<th>Final Amount</th>
<th>Batch Number</th>
<th>Prepared or Analyzed</th>
<th>Analyst</th>
<th>Lab</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total/NA</td>
<td>Prep</td>
<td>200.7</td>
<td></td>
<td></td>
<td>50 mL</td>
<td>50 mL</td>
<td>340211</td>
<td>01/29/17 10:39</td>
<td>DN1</td>
<td>TAL PEN</td>
</tr>
<tr>
<td>Total/NA</td>
<td>Analysis</td>
<td>200.7 Rev 4.4</td>
<td></td>
<td>1</td>
<td>50 mL</td>
<td>50 mL</td>
<td>340400</td>
<td>01/30/17 20:34</td>
<td>SEH</td>
<td>TAL PEN</td>
</tr>
</tbody>
</table>

**Instrument ID:** 6500 ICP Duo

---

**Laboratory References:**

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

Client: Tampa Electric Company  \hspace{3cm} TestAmerica Job ID: 660-78617-1

**Laboratory: TestAmerica Tampa**
The certifications listed below are applicable to this report.

<table>
<thead>
<tr>
<th>Authority</th>
<th>Program</th>
<th>EPA Region</th>
<th>Certification ID</th>
<th>Expiration Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Florida</td>
<td>NELAP</td>
<td>4</td>
<td>E84282</td>
<td>06-30-17</td>
</tr>
</tbody>
</table>

**Laboratory: TestAmerica Pensacola**
The certifications listed below are applicable to this report.

<table>
<thead>
<tr>
<th>Authority</th>
<th>Program</th>
<th>EPA Region</th>
<th>Certification ID</th>
<th>Expiration Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Florida</td>
<td>NELAP</td>
<td>4</td>
<td>E81010</td>
<td>06-30-17</td>
</tr>
</tbody>
</table>
### Method Summary

Client: Tampa Electric Company  
Project/Site: L17A041  
TestAmerica Job ID: 660-78617-1

<table>
<thead>
<tr>
<th>Method</th>
<th>Method Description</th>
<th>Protocol</th>
<th>Laboratory</th>
</tr>
</thead>
<tbody>
<tr>
<td>200.7 Rev 4.4</td>
<td>Metals (ICP)</td>
<td>EPA</td>
<td>TAL PEN</td>
</tr>
</tbody>
</table>

**Protocol References:**  
EPA = US Environmental Protection Agency

**Laboratory References:**  
TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001
SUBCONTRACT ORDER
Tampa Electric Company, Laboratory Services
L17A041

SENDING LABORATORY:
Tampa Electric Company, Laboratory Services
5012 Causeway Blvd
Tampa, FL 33619
Phone: (813) 630-7490
Fax: (813) 630-7360
Project Manager: Peggy Penner

RECEIVING LABORATORY:
TestAmerica Laboratories, Inc. - Tampa
6712 Benjamin Rd., Suite 100
Tampa, FL 33634
Phone: (813) 885-7427
Fax: -

Due Date: 02/09/17 16:00

<table>
<thead>
<tr>
<th>Analysis</th>
<th>Expires</th>
<th>Laboratory ID</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample ID: L17A041-01</td>
<td>BBS-CCR-1</td>
<td>Water</td>
<td></td>
</tr>
<tr>
<td>Sampled: 01/26/17 12:02</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lithium, Total EPA 6010</td>
<td>07/25/17 12:02</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Containers Supplied:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poly HNO3 - 250mL (B)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sample ID: L17A041-02</td>
<td>BBS-CCR-2</td>
<td>Water</td>
<td></td>
</tr>
<tr>
<td>Sampled: 01/26/17 11:35</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lithium, Total EPA 6010</td>
<td>07/25/17 11:35</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Containers Supplied:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poly HNO3 - 250mL (B)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sample ID: L17A041-03</td>
<td>BBS-CCR-3</td>
<td>Water</td>
<td></td>
</tr>
<tr>
<td>Sampled: 01/26/17 11:04</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lithium, Total EPA 6010</td>
<td>07/25/17 11:04</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Containers Supplied:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poly HNO3 - 250mL (B)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sample ID: L17A041-04</td>
<td>BBS-CCR-BWI</td>
<td>Water</td>
<td></td>
</tr>
<tr>
<td>Sampled: 01/26/17 10:32</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lithium, Total EPA 6010</td>
<td>07/25/17 10:32</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Containers Supplied:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poly HNO3 - 250mL (B)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sample ID: L17A041-05</td>
<td>BBS-CCR-BW2</td>
<td>Water</td>
<td></td>
</tr>
<tr>
<td>Sampled: 01/26/17 10:02</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lithium, Total EPA 6010</td>
<td>07/25/17 10:02</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Containers Supplied:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poly HNO3 - 250mL (B)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Loc: 860
78617

660-78617 Chain of Custody

Released By 12/17 1530
Date & Time Received By Date & Time
1-27-16 7:02

Page 3 of 3
Page 13 of 16
1/31/2017
### Chain of Custody Record

**Client Information** (Sub Contract Lab)
- **Client Contact:** [Redacted]
- **Company:** TestAmerica Laboratories, Inc.
- **Address:** 3355 McLemore Drive
- **City:** Jacksonville
- **State:** FL
- **Phone:** 850-478-1001 (Tel) 850-478-2671 (Fax)
- **EMail:** [Redacted]
- **PO #:** [Redacted]
- **Project #:** L17A041
- **Site:** [Redacted]

**Sample Identification - Client ID (Lab ID)**

<table>
<thead>
<tr>
<th>Sample ID</th>
<th>Sample Date</th>
<th>Sample Type</th>
<th>Matrix</th>
<th>Preservation Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>L17A041-01 (660-78617-1)</td>
<td>1/25/17</td>
<td>Water</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>L17A041-02 (660-78617-2)</td>
<td>1/25/17</td>
<td>Water</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>L17A041-03 (660-78617-3)</td>
<td>1/25/17</td>
<td>Water</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>L17A041-04 (660-78617-4)</td>
<td>1/25/17</td>
<td>Water</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>L17A041-05 (660-78617-5)</td>
<td>1/25/17</td>
<td>Water</td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

### Analysis Requested

- **Preservation Codes:**
  - A - HCL
  - B - NaOH
  - C - Zn Acetate
  - D - Nitric Acid
  - E - NaHSO4
  - F - Methanol
  - G - Ammonia
  - H - Acetic Acid
  - I - KI
  - J - DI Water
  - K - EDTA
  - L - EDA

### Possible Hazard Identification

- **Sample Disposal:** A fee may be assessed if samples are retained longer than 1 month

### Special Instructions/Note

**Note:** Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/matrix being analyzed, the samples must be shipped back to TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If requested accreditations are current to date, return the signed Chain of Custody working to said compliance to TestAmerica Laboratories, Inc.
Login Sample Receipt Checklist

Client: Tampa Electric Company
Job Number: 660-78617-1

Login Number: 78617
List Number: 1
Creator: Moccia, Vanessa M
List Source: TestAmerica Tampa

<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Radioactivity wasn't checked or is ( \leq ) background as measured by a survey meter.</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>The cooler's custody seal, if present, is intact.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Sample custody seals, if present, are intact.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>The cooler or samples do not appear to have been compromised or tampered with.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Samples were received on ice.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Cooler Temperature is acceptable.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Cooler Temperature is recorded.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>COC is present.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>COC is filled out in ink and legible.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>COC is filled out with all pertinent information.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Is the Field Sampler's name present on COC?</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>There are no discrepancies between the containers received and the COC.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Samples are received within Holding Time (excluding tests with immediate HTs)</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Sample containers have legible labels.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Containers are not broken or leaking.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Sample collection date/times are provided.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Appropriate sample containers are used.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Sample bottles are completely filled.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Sample Preservation Verified.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Containers requiring zero headspace have no headspace or bubble is ( &lt;6\text{mm (1/4&quot;)}. )</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Multiphasic samples are not present.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Samples do not require splitting or compositing.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Residual Chlorine Checked.</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Question</td>
<td>Answer</td>
<td>Comment</td>
</tr>
<tr>
<td>-------------------------------------------------------------------------</td>
<td>--------</td>
<td>---------------</td>
</tr>
<tr>
<td>Radioactivity wasn't checked or is &lt;= background as measured by a survey meter.</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>The cooler's custody seal, if present, is intact.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Sample custody seals, if present, are intact.</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>The cooler or samples do not appear to have been compromised or tampered with.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Samples were received on ice.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Cooler Temperature is acceptable.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Cooler Temperature is recorded.</td>
<td>True</td>
<td>0.0°C IR-2</td>
</tr>
<tr>
<td>COC is present.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>COC is filled out in ink and legible.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>COC is filled out with all pertinent information.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Is the Field Sampler's name present on COC?</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>There are no discrepancies between the containers received and the COC.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Samples are received within Holding Time (excluding tests with immediate HTs)</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Sample containers have legible labels.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Containers are not broken or leaking.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Sample collection date/times are provided.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Appropriate sample containers are used.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Sample bottles are completely filled.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Sample Preservation Verified.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Containers requiring zero headspace have no headspace or bubble is &lt;6mm (1/4&quot;).</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Multiphasic samples are not present.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Samples do not require splitting or compositing.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Residual Chlorine Checked.</td>
<td>N/A</td>
<td></td>
</tr>
</tbody>
</table>
TECO
5012 Causeway Blvd.
Tampa, FL 33619
Attn: Peggy Penner

Field Custody: Client
Client/Field ID: L17A041-01
Sample Collection: 1-26-17/1202
Lab ID No: 17.1131
Lab Custody Date: 2-1-17/1130
Sample description: Water

CERTIFICATE OF ANALYSIS

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Units</th>
<th>Results</th>
<th>Analysis Date</th>
<th>Method</th>
<th>Detection Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Combined Radium (Radium-226 + Radium 228)</td>
<td>pCi/l</td>
<td>32.5 ± 1.6</td>
<td>Calc</td>
<td>Calc</td>
<td>0.6</td>
</tr>
<tr>
<td>Radium-226</td>
<td>pCi/l</td>
<td>30.5 ± 1.6</td>
<td>2-6-17/1114</td>
<td>EPA 903.0</td>
<td>0.3</td>
</tr>
<tr>
<td>Radium-228</td>
<td>pCi/l</td>
<td>2.0 ± 0.7</td>
<td>2-9-17/1408</td>
<td>EPA Ra-05</td>
<td>0.6</td>
</tr>
</tbody>
</table>

Alpha Standard: Th-230

J = The reported value failed to meet the established quality control criteria for either precision or accuracy. Sample matrix interference.

James W. Hayes
Laboratory Manager

Test results meet all requirements of the NELAC standards. Statement of estimated uncertainty available upon request. Test results refer only to sample(s) listed. Contact person: Jim Hayes (813) 229-2879.
TECO
5012 Causeway Blvd.
Tampa, FL 33619
Attn: Peggy Penner

Field Custody: 
Client
Client/Field ID: L17A041-02
Sample Collection: 1-26-17/1135
Lab ID No: 17.1132
Lab Custody Date: 2-1-17/1130
Sample description: Water

CERTIFICATE OF ANALYSIS

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Units</th>
<th>Results</th>
<th>Analysis Date</th>
<th>Method</th>
<th>Detection Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Combined Radium</td>
<td>pCi/l</td>
<td>13.9 ± 1.0</td>
<td>Calc</td>
<td>Calc</td>
<td>0.6</td>
</tr>
<tr>
<td>(Radium-226 +</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Radium-228)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Radium-226</td>
<td>pCi/l</td>
<td>13.0 ± 1.0</td>
<td>2-6-17/1114</td>
<td>EPA 903.0</td>
<td>0.4</td>
</tr>
<tr>
<td>Radium-228</td>
<td>pCi/l</td>
<td>0.9 ± 0.6</td>
<td>2-9-17/1408</td>
<td>EPA Ra-05</td>
<td>0.6</td>
</tr>
</tbody>
</table>

Alpha Standard: Th-230

J = The reported value failed to meet the established quality control criteria for either precision or accuracy. Sample matrix interference.

James W. Hayes
Laboratory Manager

Test results meet all requirements of the NELAC standards. Statement of estimated uncertainty available upon request. Test results refer only to sample(s) listed. Contact person: Jim Hayes (813) 229-2879.
DOH Certification #E84025
DEP COMPOP # 870251

Report Date: February 14, 2017

TECO
5012 Causeway Blvd.
Tampa, FL 33619
Attn: Peggy Penner

Field Custody: Client
Client/Field ID: L17A041-03
Sample Collection: 1-26-17/1104
Lab ID No: 17.1133
Lab Custody Date: 2-1-17/1130
Sample description: Water

CERTIFICATE OF ANALYSIS

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Units</th>
<th>Results</th>
<th>Analysis Date</th>
<th>Method</th>
<th>Detection Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Combined Radium</td>
<td>pCi/l</td>
<td>15.0 ± 1.1</td>
<td>Calc</td>
<td>Calc</td>
<td>0.6</td>
</tr>
<tr>
<td>(Radium-226 + Radium 228)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Radium-226</td>
<td>pCi/l</td>
<td>13.8 ± 1.1</td>
<td>2-6-17/1114</td>
<td>EPA 903.0</td>
<td>0.3</td>
</tr>
<tr>
<td>Radium-228</td>
<td>pCi/l</td>
<td>1.2 ± 0.6</td>
<td>2-9-17/1408</td>
<td>EPA Ra-05</td>
<td>0.6</td>
</tr>
</tbody>
</table>

Alpha Standard: Th-230

J = The reported value failed to meet the established quality control criteria for either precision or accuracy. Sample matrix interference.

[Signature]
James W. Hayes
Laboratory Manager

Test results meet all requirements of the NELAC standards. Statement of estimated uncertainty available upon request. Test results refer only to sample(s) listed. Contact person: Jim Hayes (813) 229-2879.

Page 1 of 1
DOH Certification #E84025  
DEP COMPQAP # 870251

Report Date: February 14, 2017

TECO  
5012 Causeway Blvd.  
Tampa, FL 33619  
Attn: Peggy Penner

Field Custody:  
Client:  
Client/Field ID: L17A041-04

Sample Collection: 1-26-17/1032

Lab ID No: 17.1134
Lab Custody Date: 2-1-17/1130
Sample description: Water

CERTIFICATE OF ANALYSIS

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Units</th>
<th>Results</th>
<th>Analysis Date</th>
<th>Method</th>
<th>Detection Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Combined Radium (Radium-226 + Radium 228)</td>
<td>pCi/l</td>
<td>32.5 ± 1.5</td>
<td>Calc</td>
<td>Calc</td>
<td>0.6</td>
</tr>
<tr>
<td>Radium-226</td>
<td>pCi/l</td>
<td>28.4 ± 1.5</td>
<td>2-6-17/1114</td>
<td>EPA 903.0</td>
<td>0.3</td>
</tr>
<tr>
<td>Radium-228</td>
<td>pCi/l</td>
<td>4.1 ± 0.8</td>
<td>2-9-17/1408</td>
<td>EPA Ra-05</td>
<td>0.6</td>
</tr>
</tbody>
</table>

Alpha Standard: Th-230

J = The reported value failed to meet the established quality control criteria for either precision or accuracy. Sample matrix interference.

James W. Hayes  
Laboratory Manager

Test results meet all requirements of the NELAC standards. Statement of estimated uncertainty available upon request. Test results refer only to sample(s) listed. Contact person: Jim Hayes (813) 229-2879.
DOH Certification #E84025  
DEP COMPOAP # 870251

Report Date: February 14, 2017

TECO  
5012 Causeway Blvd.  
Tampa, FL 33619  
Attn: Peggy Penner

Field Custody: Client  
Client/Field ID: L17A041-05  
Sample Collection: 1-26-17/1002  
Lab ID No: 17.1135  
Lab Custody Date: 2-1-17/1130  
Sample description: Water

CERTIFICATE OF ANALYSIS

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Units</th>
<th>Results</th>
<th>Analysis Date</th>
<th>Method</th>
<th>Detection Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Combined Radium (Radium-226 + Radium 228)</td>
<td>pCi/l</td>
<td>4.8 ± 0.6</td>
<td>Calc</td>
<td>Calc</td>
<td>0.6</td>
</tr>
<tr>
<td>Radium-226</td>
<td>pCi/l</td>
<td>3.7 ± 0.6</td>
<td>2-6-17/1114</td>
<td>EPA 903.0</td>
<td>0.4</td>
</tr>
<tr>
<td>Radium-228</td>
<td>pCi/l</td>
<td>1.1 ± 0.6</td>
<td>2-9-17/1408</td>
<td>EPA Ra-05</td>
<td>0.6</td>
</tr>
</tbody>
</table>

Alpha Standard: Th-230

J = The reported value failed to meet the established quality control criteria for either precision or accuracy. Sample matrix interference.

James W. Hayes  
Laboratory Manager

Test results meet all requirements of the NELAC standards. Statement of estimated uncertainty available upon request. Test results refer only to sample(s) listed. Contact person: Jim Hayes (813) 229-2079.
**SUBCONTRACT ORDER**

**Tampa Electric Company, Laboratory Services**

**L17A041**

**SENDING LABORATORY:**

Tampa Electric Company, Laboratory Services  
5012 Causeway Blvd  
Tampa, FL 33619  
Phone: (813) 630-7490  
Fax: (813) 630-7360  
Project Manager: Peggy Penner

**RECEIVING LABORATORY:**

KNL Laboratory Services  
3202 N. Florida Ave.  
Tampa, FL 33603  
Phone: (813) 229-2879  
Fax: -

**Due Date:** 02/09/17 16:00

<table>
<thead>
<tr>
<th>Analysis</th>
<th>Expires</th>
<th>Laboratory ID</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample ID: L17A041-01</td>
<td>BBS-CCR-1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sampled: 01/26/17 12:02</td>
<td></td>
<td>17.1131</td>
<td></td>
</tr>
<tr>
<td>Radium 226 EPA 903.0</td>
<td>07/25/17 12:02</td>
<td>Level 2 Data required</td>
<td></td>
</tr>
<tr>
<td>Radium 226+228, Total</td>
<td>07/25/17 12:02</td>
<td>Level 2 Data required</td>
<td></td>
</tr>
<tr>
<td>Radium 228 Ra-05</td>
<td>07/25/17 12:02</td>
<td>Level 2 Data required</td>
<td></td>
</tr>
</tbody>
</table>

**Containers Supplied:**

RAD Poly HNO3 - 1000mL (C)  
RAD Poly HNO3 - 1000mL (D)

---

<table>
<thead>
<tr>
<th>Analysis</th>
<th>Expires</th>
<th>Laboratory ID</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample ID: L17A041-02</td>
<td>BBS-CCR-2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sampled: 01/26/17 11:35</td>
<td></td>
<td>17.1132</td>
<td></td>
</tr>
<tr>
<td>Radium 226 EPA 903.0</td>
<td>07/25/17 11:35</td>
<td>Level 2 Data required</td>
<td></td>
</tr>
<tr>
<td>Radium 226+228, Total</td>
<td>07/25/17 11:35</td>
<td>Level 2 Data required</td>
<td></td>
</tr>
<tr>
<td>Radium 228 Ra-05</td>
<td>07/25/17 11:35</td>
<td>Level 2 Data required</td>
<td></td>
</tr>
</tbody>
</table>

**Containers Supplied:**

RAD Poly HNO3 - 1000mL (C)  
RAD Poly HNO3 - 1000mL (D)

---

<table>
<thead>
<tr>
<th>Analysis</th>
<th>Expires</th>
<th>Laboratory ID</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample ID: L17A041-03</td>
<td>BBS-CCR-3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sampled: 01/26/17 11:04</td>
<td></td>
<td>17.1133</td>
<td></td>
</tr>
<tr>
<td>Radium 226+228, Total</td>
<td>07/25/17 11:04</td>
<td>Level 2 Data required</td>
<td></td>
</tr>
<tr>
<td>Radium 226 EPA 903.0</td>
<td>07/25/17 11:04</td>
<td>Level 2 Data required</td>
<td></td>
</tr>
<tr>
<td>Radium 228 Ra-05</td>
<td>07/25/17 11:04</td>
<td>Level 2 Data required</td>
<td></td>
</tr>
</tbody>
</table>

**Containers Supplied:**

RAD Poly HNO3 - 1000mL (C)  
RAD Poly HNO3 - 1000mL (D)

---

<table>
<thead>
<tr>
<th>Analysis</th>
<th>Expires</th>
<th>Laboratory ID</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample ID: L17A041-04</td>
<td>BBS-CCR-BW1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sampled: 01/26/17 10:32</td>
<td></td>
<td>17.1134</td>
<td></td>
</tr>
<tr>
<td>Radium 226 EPA 903.0</td>
<td>07/25/17 10:32</td>
<td>Level 2 Data required</td>
<td></td>
</tr>
<tr>
<td>Radium 226+228, Total</td>
<td>07/25/17 10:32</td>
<td>Level 2 Data required</td>
<td></td>
</tr>
<tr>
<td>Radium 228 Ra-05</td>
<td>07/25/17 10:32</td>
<td>Level 2 Data required</td>
<td></td>
</tr>
</tbody>
</table>

**Containers Supplied:**

RAD Poly HNO3 - 1000mL (C)  
RAD Poly HNO3 - 1000mL (D)
<table>
<thead>
<tr>
<th>Analysis</th>
<th>Expires</th>
<th>Laboratory ID</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample ID: L17A041-05</td>
<td></td>
<td>BBS-CCR-BW2</td>
<td>Water</td>
</tr>
<tr>
<td>Sampled: 01/26/17 10:02</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Radium 228 Ra-05</td>
<td>07/25/17 10:02</td>
<td></td>
<td>Level 2 Data required</td>
</tr>
<tr>
<td>Radium 226 EPA 903.0</td>
<td>07/25/17 10:02</td>
<td></td>
<td>Level 2 Data required</td>
</tr>
<tr>
<td>Radium 226+228, Total</td>
<td>07/25/17 10:02</td>
<td></td>
<td>Level 2 Data required</td>
</tr>
<tr>
<td>Containers Supplied:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RAD Poly HNO3 - 1000mL (C)</td>
<td>RAD Poly HNO3 - 1000mL (D)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
FL DOH Certification # E84025

QC Summary: **Radium 228 Analysis**

Client Project #: **174041**

Analysis Completion Date: **2/9/17**

<table>
<thead>
<tr>
<th>Precision Data:</th>
<th>Sample #: <strong>17,1134</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample Analysis (pCi/l)</td>
<td>Duplicate Analysis (pCi/l)</td>
</tr>
<tr>
<td>7.9</td>
<td>8.2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Spike Data:</th>
<th>Sample #: <strong>17,1134</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample Analysis (pCi/l)</td>
<td>Spike Added (pCi/l)</td>
</tr>
<tr>
<td>4.1</td>
<td>3.89</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>LCS Data:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Analytical Result (pCi/l)</td>
</tr>
<tr>
<td>5.2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Lab Blank:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lab Blank</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

KNL – Radium 228 Analysis- FL DOH Certification QC Data sheet – Form #139
Revised 6/30/16
FL DOH Certification # E84025

QC Summary: **Total Radium Analysis**

Client Project #: **l17A041**

Analysis Completion Date: **2/6/17**

<table>
<thead>
<tr>
<th>Precision Data:</th>
<th>Sample #: <strong>17,1213</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample Analysis (pCi/l)</td>
<td>Duplicate Analysis (pCi/l)</td>
</tr>
<tr>
<td>5.0</td>
<td>5.6</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Spike Data:</th>
<th>Sample #: <strong>17,1213</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample Analysis (pCi/l)</td>
<td>Spike Added (pCi/l)</td>
</tr>
<tr>
<td>0.8</td>
<td>4.5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>LCS Data:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Analytical Result (pCi/l)</td>
</tr>
<tr>
<td>11.2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Lab Blank:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Analytical Result (pCi/l)</td>
</tr>
<tr>
<td>Lab Blank: 0.5 +/- 0.2</td>
</tr>
</tbody>
</table>

KNL – Total Radium Analysis - FL DOH Certification QC Data sheet – Form #140
Revised 6/30/16
Big Bend Power Station
Terry Eastley
13031 Wyandott Rd
Apollo Beach, FL 33572
tleastley@tecoenergy.com

Work Order - L17D013

Project - CCR Wells Economizer Ash Pond

Case Narrative

5 sample(s) were received on 04/13/17 13:42.

There were no issues noted with the sample(s) associated with this workorder unless noted below.

Lithium analysis was subcontracted to TestAmerica. The report is attached.

Radiologicals (Rad 226-228) were subcontracted to KNL Laboratories. The report is attached.

SM 2540C

A constant weight could not be achieved after three consecutive weighing and drying cycles for samples BBS-CCR-1 and BBS-CCR-BW. The sample(s) are flagged with a J qualifier.

EPA 300.0

The recovery of the matrix spike and spike duplicate was below the control limits for Sulfate due to matrix interference. The parent sample is flagged with a J qualifier.

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
### Sample Information

- **Client:** Big Bend Power Station
- **Lab Sample ID:** L17D013-01
- **Sample Description:** BBS-CCR-1
- **Sample Collection Method:** Grab
- **Sampled By:** Robert Barthelette
- **Date and Time Collected:** 4/13/17 12:05
- **Date of Sample Receipt:** 4/13/17 13:42

### Laboratory Results

#### Sample Qualifier:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier Code</th>
<th>Dil</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>General Chemistry Parameters</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chloride</td>
<td>124</td>
<td>mg/L</td>
<td>0.200</td>
<td>5.00</td>
<td>10</td>
<td>EPA 300.0</td>
<td>RFL</td>
<td>4/17/17</td>
<td>11:40</td>
</tr>
<tr>
<td>Specific Conductance</td>
<td>4170</td>
<td>umhos/cm</td>
<td>100</td>
<td>100</td>
<td>1</td>
<td>FDEP SOP FT 1200</td>
<td>RAB</td>
<td>4/13/17</td>
<td>12:05</td>
</tr>
<tr>
<td>Dissolved Oxygen</td>
<td>0.100</td>
<td>mg/L</td>
<td>0.100</td>
<td>0.100</td>
<td>U</td>
<td>1</td>
<td>FDEP SOP FT 1500</td>
<td>RAB</td>
<td>4/13/17</td>
</tr>
<tr>
<td>Fluoride</td>
<td>0.171</td>
<td>mg/L</td>
<td>0.0100</td>
<td>0.0500</td>
<td>1</td>
<td>EPA 300.0</td>
<td>RFL</td>
<td>4/17/17</td>
<td>10:30</td>
</tr>
<tr>
<td>pH</td>
<td>6.84</td>
<td>pH Units</td>
<td>1.00</td>
<td>1.00</td>
<td>1</td>
<td>FDEP SOP FT 1100</td>
<td>RAB</td>
<td>4/13/17</td>
<td>12:05</td>
</tr>
<tr>
<td>REDOX Potential</td>
<td>-80.4</td>
<td>mV</td>
<td>-999</td>
<td>-999</td>
<td>1</td>
<td>SM 2580B</td>
<td>RAB</td>
<td>4/13/17</td>
<td>12:05</td>
</tr>
<tr>
<td>Total Dissolved Solids</td>
<td>3110</td>
<td>mg/L</td>
<td>24.0</td>
<td>40.0</td>
<td>J-</td>
<td>2</td>
<td>SM 2540C</td>
<td>TMH</td>
<td>4/18/17</td>
</tr>
<tr>
<td>Sulfate</td>
<td>443</td>
<td>mg/L</td>
<td>5.00</td>
<td>20.0</td>
<td>10</td>
<td>EPA 300.0</td>
<td>RFL</td>
<td>4/17/17</td>
<td>11:40</td>
</tr>
<tr>
<td>Turbidity</td>
<td>4.12</td>
<td>NTU</td>
<td>0.100</td>
<td>0.100</td>
<td>1</td>
<td>FDEP SOP FT 1600</td>
<td>RAB</td>
<td>4/13/17</td>
<td>12:05</td>
</tr>
<tr>
<td><strong>Total Mercury by SW846 Method 7470/7471</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mercury</td>
<td>0.0500</td>
<td>ug/L</td>
<td>0.0500</td>
<td>0.200</td>
<td>U</td>
<td>1</td>
<td>EPA 7470A</td>
<td>MCR</td>
<td>4/18/17</td>
</tr>
<tr>
<td><strong>Total Recoverable Metals by 200 Series</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Antimony</td>
<td>0.600</td>
<td>ug/L</td>
<td>0.600</td>
<td>2.00</td>
<td>U</td>
<td>1</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>4/18/17</td>
</tr>
<tr>
<td>Arsenic</td>
<td>10.5</td>
<td>ug/L</td>
<td>0.320</td>
<td>2.00</td>
<td>1</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>4/18/17</td>
<td>15:17</td>
</tr>
<tr>
<td>Cadmium</td>
<td>0.100</td>
<td>ug/L</td>
<td>0.100</td>
<td>0.500</td>
<td>U</td>
<td>1</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>4/18/17</td>
</tr>
<tr>
<td>Cobalt</td>
<td>0.505</td>
<td>ug/L</td>
<td>0.0400</td>
<td>2.00</td>
<td>I,V</td>
<td>1</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>4/18/17</td>
</tr>
<tr>
<td>Lead</td>
<td>9.79E-5</td>
<td>mg/L</td>
<td>8.00E-5</td>
<td>0.00200</td>
<td>I</td>
<td>1</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>4/18/17</td>
</tr>
<tr>
<td>Selenium</td>
<td>0.937</td>
<td>ug/L</td>
<td>0.200</td>
<td>2.00</td>
<td>1</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>4/18/17</td>
<td>15:17</td>
</tr>
<tr>
<td>Thallium</td>
<td>0.100</td>
<td>ug/L</td>
<td>0.100</td>
<td>0.500</td>
<td>U</td>
<td>1</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>4/18/17</td>
</tr>
<tr>
<td><strong>Total Recoverable Metals by SW846 Method 6010B</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Barium</td>
<td>0.116</td>
<td>mg/L</td>
<td>0.00500</td>
<td>0.200</td>
<td>I</td>
<td>10</td>
<td>EPA 6010B</td>
<td>RLC</td>
<td>4/19/17</td>
</tr>
<tr>
<td>Beryllium</td>
<td>2.00</td>
<td>ug/L</td>
<td>2.00</td>
<td>20.0</td>
<td>U</td>
<td>10</td>
<td>EPA 6010B</td>
<td>RLC</td>
<td>4/19/17</td>
</tr>
<tr>
<td>Boron</td>
<td>16.4</td>
<td>mg/L</td>
<td>0.100</td>
<td>0.500</td>
<td>10</td>
<td>EPA 6010B</td>
<td>RLC</td>
<td>4/19/17</td>
<td>9:31</td>
</tr>
<tr>
<td>Calcium</td>
<td>555000</td>
<td>ug/L</td>
<td>30.0</td>
<td>1000</td>
<td>1</td>
<td>EPA 6010B</td>
<td>RLC</td>
<td>4/20/17</td>
<td>10:19</td>
</tr>
<tr>
<td>Chromium</td>
<td>16.0</td>
<td>ug/L</td>
<td>16.0</td>
<td>120</td>
<td>U</td>
<td>10</td>
<td>EPA 6010B</td>
<td>RLC</td>
<td>4/19/17</td>
</tr>
<tr>
<td>Molybdenum</td>
<td>124</td>
<td>ug/L</td>
<td>10.0</td>
<td>200</td>
<td>I</td>
<td>10</td>
<td>EPA 6010B</td>
<td>RLC</td>
<td>4/19/17</td>
</tr>
</tbody>
</table>

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
# Laboratory Results

## Sample Information

**Client:** Big Bend Power Station  
**Lab Sample ID:** L17D013-02  
**Sample Description:** BBS-CCR-2  
**Sample Collection Method:** Grab  
**Sampled By:** Robert Barthelette  
**Date and Time Collected:** 4/13/17 11:33  
**Date of Sample Receipt:** 4/13/17 13:42  

## General Chemistry Parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier Code</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chloride</td>
<td>119</td>
<td>mg/L</td>
<td>0.200</td>
<td>5.00</td>
<td>10</td>
<td>EPA 300.0</td>
<td>RFL</td>
<td>4/17/17 11:00</td>
</tr>
<tr>
<td>Specific Conductance</td>
<td>1540</td>
<td>umhos/cm</td>
<td>100</td>
<td>100</td>
<td>1</td>
<td>FDEP SOP FT 1200</td>
<td>RAB</td>
<td>4/13/17 11:33</td>
</tr>
<tr>
<td>Dissolved Oxygen</td>
<td>0.100</td>
<td>mg/L</td>
<td>0.100</td>
<td>0.100</td>
<td>U</td>
<td>FDEP SOP FT 1500</td>
<td>RAB</td>
<td>4/13/17 11:33</td>
</tr>
<tr>
<td>Fluoride</td>
<td>0.237</td>
<td>mg/L</td>
<td>0.0100</td>
<td>0.0500</td>
<td>1</td>
<td>EPA 300.0</td>
<td>RFL</td>
<td>4/17/17 10:50</td>
</tr>
<tr>
<td>pH</td>
<td>6.93</td>
<td>pH Units</td>
<td>1.00</td>
<td>1.00</td>
<td>1</td>
<td>FDEP SOP FT 1100</td>
<td>RAB</td>
<td>4/13/17 11:33</td>
</tr>
<tr>
<td>REDOX Potential</td>
<td>-138</td>
<td>mV</td>
<td>-999</td>
<td>-999</td>
<td>1</td>
<td>SM 2580B</td>
<td>RAB</td>
<td>4/13/17 11:33</td>
</tr>
<tr>
<td>Total Dissolved Solids</td>
<td>1150</td>
<td>mg/L</td>
<td>12.0</td>
<td>20.0</td>
<td>1</td>
<td>SM 2540C</td>
<td>TMH</td>
<td>4/18/17 14:10</td>
</tr>
<tr>
<td>Sulfate</td>
<td>485</td>
<td>mg/L</td>
<td>5.00</td>
<td>20.0</td>
<td>J</td>
<td>EPA 300.0</td>
<td>RFL</td>
<td>4/17/17 11:00</td>
</tr>
<tr>
<td>Turbidity</td>
<td>3.43</td>
<td>NTU</td>
<td>0.100</td>
<td>0.100</td>
<td>1</td>
<td>FDEP SOP FT 1600</td>
<td>RAB</td>
<td>4/13/17 11:33</td>
</tr>
</tbody>
</table>

## Total Mercury by SW846 Method 7470/7471

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier Code</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mercury</td>
<td>0.0500</td>
<td>ug/L</td>
<td>0.0500</td>
<td>0.200</td>
<td>U</td>
<td>EPA 7470A</td>
<td>MCR</td>
<td>4/18/17 11:28</td>
</tr>
</tbody>
</table>

## Total Recoverable Metals by 200 Series

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier Code</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antimony</td>
<td>0.600</td>
<td>ug/L</td>
<td>0.600</td>
<td>2.00</td>
<td>U</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>4/18/17 15:21</td>
</tr>
<tr>
<td>Arsenic</td>
<td>2.64</td>
<td>ug/L</td>
<td>0.320</td>
<td>2.00</td>
<td>1</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>4/18/17 15:21</td>
</tr>
<tr>
<td>Cadmium</td>
<td>0.100</td>
<td>ug/L</td>
<td>0.100</td>
<td>0.500</td>
<td>U</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>4/18/17 15:21</td>
</tr>
<tr>
<td>Cobalt</td>
<td>0.114</td>
<td>ug/L</td>
<td>0.0400</td>
<td>2.00</td>
<td>I,V</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>4/18/17 15:21</td>
</tr>
<tr>
<td>Lead</td>
<td>0.000176</td>
<td>mg/L</td>
<td>8.00E-5</td>
<td>0.00200</td>
<td>I</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>4/18/17 15:21</td>
</tr>
<tr>
<td>Selenium</td>
<td>0.200</td>
<td>ug/L</td>
<td>0.200</td>
<td>2.00</td>
<td>U</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>4/18/17 15:21</td>
</tr>
<tr>
<td>Thallium</td>
<td>0.100</td>
<td>ug/L</td>
<td>0.100</td>
<td>0.500</td>
<td>U</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>4/18/17 15:21</td>
</tr>
</tbody>
</table>

## Total Recoverable Metals by SW846 Method 6010B

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier Code</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barium</td>
<td>0.0558</td>
<td>mg/L</td>
<td>0.00500</td>
<td>0.0200</td>
<td>1</td>
<td>EPA 6010B</td>
<td>RLC</td>
<td>4/19/17 9:41</td>
</tr>
<tr>
<td>Beryllium</td>
<td>0.200</td>
<td>ug/L</td>
<td>0.200</td>
<td>2.00</td>
<td>U</td>
<td>EPA 6010B</td>
<td>RLC</td>
<td>4/19/17 9:41</td>
</tr>
<tr>
<td>Boron</td>
<td>5.01</td>
<td>mg/L</td>
<td>0.0100</td>
<td>0.0500</td>
<td>1</td>
<td>EPA 6010B</td>
<td>RLC</td>
<td>4/19/17 9:41</td>
</tr>
<tr>
<td>Calcium</td>
<td>163000</td>
<td>ug/L</td>
<td>30.0</td>
<td>1000</td>
<td>1</td>
<td>EPA 6010B</td>
<td>RLC</td>
<td>4/20/17 10:21</td>
</tr>
<tr>
<td>Chromium</td>
<td>2.29</td>
<td>ug/L</td>
<td>1.60</td>
<td>12.0</td>
<td>I</td>
<td>EPA 6010B</td>
<td>RLC</td>
<td>4/19/17 9:41</td>
</tr>
<tr>
<td>Molybdenium</td>
<td>9.82</td>
<td>ug/L</td>
<td>1.00</td>
<td>20.0</td>
<td>I</td>
<td>EPA 6010B</td>
<td>RLC</td>
<td>4/19/17 9:41</td>
</tr>
</tbody>
</table>

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
**Laboratory Results**

**Sample Information**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier Code</th>
<th>Dil</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>General Chemistry Parameters</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chloride</td>
<td>124</td>
<td>mg/L</td>
<td>0.200</td>
<td>5.00</td>
<td>10</td>
<td>EPA 300.0</td>
<td>RFL</td>
<td>4/17/17 11:30</td>
<td></td>
</tr>
<tr>
<td>Specific Conductance</td>
<td>1580</td>
<td>umhos/cm</td>
<td>100</td>
<td>100</td>
<td>1</td>
<td>FDEP SOP FT 1200</td>
<td>RAB</td>
<td>4/13/17 11:11</td>
<td></td>
</tr>
<tr>
<td>Dissolved Oxygen</td>
<td>0.140</td>
<td>mg/L</td>
<td>0.100</td>
<td>0.100</td>
<td>1</td>
<td>FDEP SOP FT 1500</td>
<td>RAB</td>
<td>4/13/17 11:11</td>
<td></td>
</tr>
<tr>
<td>Fluoride</td>
<td>0.415</td>
<td>mg/L</td>
<td>0.0100</td>
<td>0.0500</td>
<td>1</td>
<td>EPA 300.0</td>
<td>RFL</td>
<td>4/17/17 11:30</td>
<td></td>
</tr>
<tr>
<td>pH</td>
<td>6.49</td>
<td>pH Units</td>
<td>1.00</td>
<td>1.00</td>
<td>1</td>
<td>FDEP SOP FT 1100</td>
<td>RAB</td>
<td>4/13/17 11:11</td>
<td></td>
</tr>
<tr>
<td>REDOX Potential</td>
<td>-114</td>
<td>mV</td>
<td>-999</td>
<td>-999</td>
<td>1</td>
<td>SM 2580B</td>
<td>RAB</td>
<td>4/13/17 11:11</td>
<td></td>
</tr>
<tr>
<td>Total Dissolved Solids</td>
<td>1120</td>
<td>mg/L</td>
<td>12.0</td>
<td>20.0</td>
<td>1</td>
<td>SM 2540C</td>
<td>TMH</td>
<td>4/18/17 14:10</td>
<td></td>
</tr>
<tr>
<td>Sulfate</td>
<td>443</td>
<td>mg/L</td>
<td>5.00</td>
<td>20.0</td>
<td>10</td>
<td>EPA 300.0</td>
<td>RFL</td>
<td>4/17/17 11:30</td>
<td></td>
</tr>
<tr>
<td>Turbidity</td>
<td>4.22</td>
<td>NTU</td>
<td>0.100</td>
<td>0.100</td>
<td>1</td>
<td>FDEP SOP FT 1600</td>
<td>RAB</td>
<td>4/13/17 11:11</td>
<td></td>
</tr>
</tbody>
</table>

**Total Mercury by SW846 Method 7470/7471**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier Code</th>
<th>Dil</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mercury</td>
<td>0.0500</td>
<td>ug/L</td>
<td>0.0500</td>
<td>0.200</td>
<td>U</td>
<td>1</td>
<td>EPA 7470A</td>
<td>MCR</td>
<td>4/18/17 11:32</td>
</tr>
</tbody>
</table>

**Total Recoverable Metals by 200 Series**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier Code</th>
<th>Dil</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antimony</td>
<td>0.600</td>
<td>ug/L</td>
<td>0.600</td>
<td>2.00</td>
<td>U</td>
<td>1</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>4/18/17 15:24</td>
</tr>
<tr>
<td>Arsenic</td>
<td>0.320</td>
<td>ug/L</td>
<td>0.320</td>
<td>2.00</td>
<td>U</td>
<td>1</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>4/18/17 15:24</td>
</tr>
<tr>
<td>Cadmium</td>
<td>0.100</td>
<td>ug/L</td>
<td>0.100</td>
<td>0.500</td>
<td>U</td>
<td>1</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>4/18/17 15:24</td>
</tr>
<tr>
<td>Cobalt</td>
<td>0.110</td>
<td>ug/L</td>
<td>0.0400</td>
<td>2.00</td>
<td>I,V</td>
<td>1</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>4/18/17 15:24</td>
</tr>
<tr>
<td>Lead</td>
<td>8.00E-5</td>
<td>mg/L</td>
<td>8.00E-5</td>
<td>0.00200</td>
<td>U</td>
<td>1</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>4/18/17 15:24</td>
</tr>
<tr>
<td>Selenium</td>
<td>0.200</td>
<td>ug/L</td>
<td>0.200</td>
<td>2.00</td>
<td>U</td>
<td>1</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>4/18/17 15:24</td>
</tr>
<tr>
<td>Thallium</td>
<td>0.100</td>
<td>ug/L</td>
<td>0.100</td>
<td>0.500</td>
<td>U</td>
<td>1</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>4/18/17 15:24</td>
</tr>
</tbody>
</table>

**Total Recoverable Metals by SW846 Method 6010B**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier Code</th>
<th>Dil</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barium</td>
<td>0.0586</td>
<td>mg/L</td>
<td>0.000500</td>
<td>0.0200</td>
<td>U</td>
<td>1</td>
<td>EPA 6010B</td>
<td>RLC</td>
<td>4/19/17 9:44</td>
</tr>
<tr>
<td>Beryllium</td>
<td>0.200</td>
<td>ug/L</td>
<td>0.200</td>
<td>2.00</td>
<td>U</td>
<td>1</td>
<td>EPA 6010B</td>
<td>RLC</td>
<td>4/19/17 9:44</td>
</tr>
<tr>
<td>Boron</td>
<td>0.385</td>
<td>mg/L</td>
<td>0.0100</td>
<td>0.0500</td>
<td>1</td>
<td>EPA 6010B</td>
<td>RLC</td>
<td>4/19/17 9:44</td>
<td></td>
</tr>
<tr>
<td>Calcium</td>
<td>176000</td>
<td>ug/L</td>
<td>30.0</td>
<td>1000</td>
<td>1</td>
<td>EPA 6010B</td>
<td>RLC</td>
<td>4/20/17 10:24</td>
<td></td>
</tr>
<tr>
<td>Chromium</td>
<td>1.60</td>
<td>ug/L</td>
<td>1.60</td>
<td>12.0</td>
<td>U</td>
<td>1</td>
<td>EPA 6010B</td>
<td>RLC</td>
<td>4/19/17 9:44</td>
</tr>
<tr>
<td>Molybdenum</td>
<td>11.7</td>
<td>ug/L</td>
<td>1.00</td>
<td>20.0</td>
<td>U</td>
<td>1</td>
<td>EPA 6010B</td>
<td>RLC</td>
<td>4/19/17 9:44</td>
</tr>
</tbody>
</table>
## Sample Information

<table>
<thead>
<tr>
<th>Client:</th>
<th>Big Bend Power Station</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lab Sample ID:</td>
<td>L17D013-04</td>
</tr>
<tr>
<td>Sample Description:</td>
<td>BBS-CCR-BW1</td>
</tr>
<tr>
<td>Sample Collection Method:</td>
<td>Grab</td>
</tr>
</tbody>
</table>

- **Sampled By:** Robert Barthelette
- **Date and Time Collected:** 4/13/17 10:32
- **Date of Sample Receipt:** 4/13/17 13:42

## Laboratory Results

### Sample Qualifier:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier Code</th>
<th>Dil</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>General Chemistry Parameters</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chloride</td>
<td>934</td>
<td>mg/L</td>
<td>2.00</td>
<td>50.0</td>
<td>100</td>
<td>EPA 300.0</td>
<td>RFL</td>
<td>4/17/17 12:21</td>
<td></td>
</tr>
<tr>
<td>Specific Conductance</td>
<td>5000</td>
<td>umhos/cm</td>
<td>100</td>
<td>100</td>
<td>1</td>
<td>FDEP SOP FT 1200</td>
<td>RAB</td>
<td>4/13/17 10:32</td>
<td></td>
</tr>
<tr>
<td>Dissolved Oxygen</td>
<td>0.410</td>
<td>mg/L</td>
<td>0.100</td>
<td>0.100</td>
<td>1</td>
<td>FDEP SOP FT 1500</td>
<td>RAB</td>
<td>4/13/17 10:32</td>
<td></td>
</tr>
<tr>
<td>Fluoride</td>
<td>0.256</td>
<td>mg/L</td>
<td>0.0100</td>
<td>0.0500</td>
<td>1</td>
<td>EPA 300.0</td>
<td>RFL</td>
<td>4/17/17 11:50</td>
<td></td>
</tr>
<tr>
<td>pH</td>
<td>6.50</td>
<td>pH Units</td>
<td>1.00</td>
<td>1.00</td>
<td>1</td>
<td>FDEP SOP FT 1100</td>
<td>RAB</td>
<td>4/13/17 10:32</td>
<td></td>
</tr>
<tr>
<td>REDOX Potential</td>
<td>9.00</td>
<td>mV</td>
<td>-999</td>
<td>-999</td>
<td>1</td>
<td>SM 2580B</td>
<td>RAB</td>
<td>4/13/17 10:32</td>
<td></td>
</tr>
<tr>
<td>Total Dissolved Solids</td>
<td>4060</td>
<td>mg/L</td>
<td>48.0</td>
<td>80.0</td>
<td>J-</td>
<td>4</td>
<td>SM 2540C</td>
<td>TMH</td>
<td>4/18/17 14:10</td>
</tr>
<tr>
<td>Sulfate</td>
<td>1550</td>
<td>mg/L</td>
<td>50.0</td>
<td>200</td>
<td>100</td>
<td>EPA 300.0</td>
<td>RFL</td>
<td>4/17/17 12:21</td>
<td></td>
</tr>
<tr>
<td>Turbidity</td>
<td>3.60</td>
<td>NTU</td>
<td>0.100</td>
<td>0.100</td>
<td>1</td>
<td>FDEP SOP FT 1600</td>
<td>RAB</td>
<td>4/13/17 10:32</td>
<td></td>
</tr>
<tr>
<td><strong>Total Mercury by SW846 Method 7470/7471</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mercury</td>
<td>0.0500</td>
<td>ug/L</td>
<td>0.0500</td>
<td>0.200</td>
<td>U</td>
<td>1</td>
<td>EPA 7470A</td>
<td>MCR</td>
<td>4/18/17 11:35</td>
</tr>
<tr>
<td><strong>Total Recoverable Metals by 200 Series</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Antimony</td>
<td>0.600</td>
<td>ug/L</td>
<td>0.600</td>
<td>2.00</td>
<td>U</td>
<td>1</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>4/18/17 15:28</td>
</tr>
<tr>
<td>Arsenic</td>
<td>8.61</td>
<td>ug/L</td>
<td>0.320</td>
<td>2.00</td>
<td>1</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>4/18/17 15:28</td>
<td></td>
</tr>
<tr>
<td>Cadmium</td>
<td>0.108</td>
<td>ug/L</td>
<td>0.100</td>
<td>0.500</td>
<td>1</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>4/18/17 15:28</td>
<td></td>
</tr>
<tr>
<td>Cobalt</td>
<td>1.69</td>
<td>ug/L</td>
<td>0.0400</td>
<td>2.00</td>
<td>I, V</td>
<td>1</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>4/18/17 15:28</td>
</tr>
<tr>
<td>Lead</td>
<td>0.000129</td>
<td>mg/L</td>
<td>8.00E-5</td>
<td>0.00200</td>
<td>I</td>
<td>1</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>4/18/17 15:28</td>
</tr>
<tr>
<td>Selenium</td>
<td>1.62</td>
<td>ug/L</td>
<td>0.200</td>
<td>2.00</td>
<td>I</td>
<td>1</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>4/18/17 15:28</td>
</tr>
<tr>
<td>Thallium</td>
<td>0.100</td>
<td>ug/L</td>
<td>0.100</td>
<td>0.500</td>
<td>U</td>
<td>1</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>4/18/17 15:28</td>
</tr>
<tr>
<td><strong>Total Recoverable Metals by SW846 Method 6010B</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Barium</td>
<td>0.0536</td>
<td>mg/L</td>
<td>0.000500</td>
<td>0.0200</td>
<td>1</td>
<td>EPA 6010B</td>
<td>RLC</td>
<td>4/19/17 9:25</td>
<td></td>
</tr>
<tr>
<td>Beryllium</td>
<td>0.200</td>
<td>ug/L</td>
<td>0.200</td>
<td>2.00</td>
<td>U</td>
<td>1</td>
<td>EPA 6010B</td>
<td>RLC</td>
<td>4/19/17 9:25</td>
</tr>
<tr>
<td>Boron</td>
<td>49.0</td>
<td>mg/L</td>
<td>0.0100</td>
<td>0.0500</td>
<td>1</td>
<td>EPA 6010B</td>
<td>RLC</td>
<td>4/19/17 9:25</td>
<td></td>
</tr>
<tr>
<td>Calcium</td>
<td>693000</td>
<td>ug/L</td>
<td>30.0</td>
<td>1000</td>
<td>1</td>
<td>EPA 6010B</td>
<td>RLC</td>
<td>4/20/17 10:27</td>
<td></td>
</tr>
<tr>
<td>Chromium</td>
<td>3.23</td>
<td>ug/L</td>
<td>1.60</td>
<td>12.0</td>
<td>I</td>
<td>1</td>
<td>EPA 6010B</td>
<td>RLC</td>
<td>4/19/17 9:25</td>
</tr>
<tr>
<td>Molybdenum</td>
<td>15.6</td>
<td>ug/L</td>
<td>1.00</td>
<td>20.0</td>
<td>I</td>
<td>1</td>
<td>EPA 6010B</td>
<td>RLC</td>
<td>4/19/17 9:25</td>
</tr>
</tbody>
</table>

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
**Sample Information**

- **Client:** Big Bend Power Station
- **Lab Sample ID:** L17D013-05
- **Sample Description:** BBS-CCR-BW2
- **Sample Collection Method:** Grab
- **Sampled By:** Robert Barthelette
- **Date and Time Collected:** 4/13/17 10:06
- **Date of Sample Receipt:** 4/13/17 13:42

---

**Laboratory Results**

### Sample Qualifier:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier Code</th>
<th>Dil</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>General Chemistry Parameters</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chloride</td>
<td>140 mg/L</td>
<td>0.200</td>
<td>5.00</td>
<td>10</td>
<td>EPA 300.0</td>
<td>RFL</td>
<td>4/17/17 12:41</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Specific Conductance</td>
<td>1480 umhos/cm</td>
<td>100</td>
<td>100</td>
<td>1</td>
<td>FDEP SOP FT 1200</td>
<td>RAB</td>
<td>4/13/17 10:06</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dissolved Oxygen</td>
<td>1.32 mg/L</td>
<td>0.100</td>
<td>0.100</td>
<td>1</td>
<td>FDEP SOP FT 1500</td>
<td>RAB</td>
<td>4/13/17 10:06</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fluoride</td>
<td>0.478 mg/L</td>
<td>0.0100</td>
<td>0.0500</td>
<td>1</td>
<td>EPA 300.0</td>
<td>RFL</td>
<td>4/17/17 12:31</td>
<td></td>
<td></td>
</tr>
<tr>
<td>pH</td>
<td>6.67 pH Units</td>
<td>1.00</td>
<td>1.00</td>
<td>1</td>
<td>FDEP SOP FT 1100</td>
<td>RAB</td>
<td>4/13/17 10:06</td>
<td></td>
<td></td>
</tr>
<tr>
<td>REDOX Potential</td>
<td>-42.0 mV</td>
<td>-999</td>
<td>-999</td>
<td>1</td>
<td>SM 2580B</td>
<td>RAB</td>
<td>4/13/17 10:06</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Dissolved Solids</td>
<td>1120 mg/L</td>
<td>12.0</td>
<td>20.0</td>
<td>10</td>
<td>EPA 300.0</td>
<td>RFL</td>
<td>4/17/17 12:41</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sulfate</td>
<td>323 mg/L</td>
<td>5.00</td>
<td>20.0</td>
<td>10</td>
<td>EPA 300.0</td>
<td>RFL</td>
<td>4/17/17 12:41</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Turbidity</td>
<td>19.0 NTU</td>
<td>0.100</td>
<td>0.100</td>
<td>1</td>
<td>FDEP SOP FT 1600</td>
<td>RAB</td>
<td>4/13/17 10:06</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total Mercury by SW846 Method 7470/7471</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mercury</td>
<td>0.0500 ug/L</td>
<td>0.0500</td>
<td>0.200</td>
<td>U</td>
<td>EPA 7470A</td>
<td>MCR</td>
<td>4/18/17 11:39</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total Recoverable Metals by 200 Series</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Antimony</td>
<td>0.600 ug/L</td>
<td>0.600</td>
<td>2.00</td>
<td>U</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>4/18/17 15:32</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arsenic</td>
<td>1.45 ug/L</td>
<td>0.320</td>
<td>2.00</td>
<td>I</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>4/18/17 15:32</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cadmium</td>
<td>0.100 ug/L</td>
<td>0.100</td>
<td>0.500</td>
<td>U</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>4/18/17 15:32</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cobalt</td>
<td>0.129 ug/L</td>
<td>0.0400</td>
<td>2.00</td>
<td>I,V</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>4/18/17 15:32</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lead</td>
<td>8.000E-5 mg/L</td>
<td>0.000E-5</td>
<td>0.00200</td>
<td>U</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>4/18/17 15:32</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Selenium</td>
<td>0.539 ug/L</td>
<td>0.200</td>
<td>2.00</td>
<td>I</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>4/18/17 15:32</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thallium</td>
<td>0.100 ug/L</td>
<td>0.100</td>
<td>0.500</td>
<td>U</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>4/18/17 15:32</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total Recoverable Metals by SW846 Method 6010B</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Barium</td>
<td>0.0427 mg/L</td>
<td>0.000500</td>
<td>0.0200</td>
<td>1</td>
<td>EPA 6010B</td>
<td>RLC</td>
<td>4/19/17 9:28</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beryllium</td>
<td>0.200 ug/L</td>
<td>0.200</td>
<td>2.00</td>
<td>U</td>
<td>EPA 6010B</td>
<td>RLC</td>
<td>4/19/17 9:28</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Boron</td>
<td>4.08 mg/L</td>
<td>0.0100</td>
<td>0.0500</td>
<td>1</td>
<td>EPA 6010B</td>
<td>RLC</td>
<td>4/19/17 9:28</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Calcium</td>
<td>260000 ug/L</td>
<td>30.0</td>
<td>1000</td>
<td>1</td>
<td>EPA 6010B</td>
<td>RLC</td>
<td>4/20/17 10:29</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chromium</td>
<td>1.60 ug/L</td>
<td>1.60</td>
<td>12.0</td>
<td>U</td>
<td>EPA 6010B</td>
<td>RLC</td>
<td>4/19/17 9:28</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Molybdenum</td>
<td>9.65 ug/L</td>
<td>1.00</td>
<td>20.0</td>
<td>I</td>
<td>EPA 6010B</td>
<td>RLC</td>
<td>4/19/17 9:28</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Comments**

- **U** Indicates that the compound was analyzed for but not detected.
- **J-** The reported value is an estimated value, see the case narrative for specifics.
- **I** Estimated value
- **V** Analyte detected in the method blank

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
## Total Recoverable Metals by SW846 Method 6010B - Quality Control

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>MDL</th>
<th>PQL</th>
<th>Units</th>
<th>Spike</th>
<th>Source</th>
<th>%Rec</th>
<th>%Rec</th>
<th>Limits</th>
<th>RPD</th>
<th>RPD Limit</th>
<th>Qualifier</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Batch 17D0115 - EPA 6010B</strong></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><strong>Blank (17D0115-BLK1)</strong></td>
<td>Prepared: 04/17/17</td>
<td>Analyzed: 04/19/17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Barium</td>
<td>0.000500</td>
<td>0.000500</td>
<td>0.0200</td>
<td>mg/L</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>U</td>
</tr>
<tr>
<td>Beryllium</td>
<td>0.200</td>
<td>0.200</td>
<td>2.00</td>
<td>ug/L</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>U</td>
</tr>
<tr>
<td>Boron</td>
<td>0.0100</td>
<td>0.0100</td>
<td>0.0500</td>
<td>mg/L</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>U</td>
</tr>
<tr>
<td>Calcium</td>
<td>30.0</td>
<td>30.0</td>
<td>1000</td>
<td>ug/L</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>U</td>
</tr>
<tr>
<td>Chromium</td>
<td>1.60</td>
<td>1.60</td>
<td>12.0</td>
<td>ug/L</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>U</td>
</tr>
<tr>
<td>Molybdenum</td>
<td>1.00</td>
<td>1.00</td>
<td>20.0</td>
<td>ug/L</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>U</td>
</tr>
</tbody>
</table>

| **LCS (17D0115-BS1)** | Prepared: 04/17/17 | Analyzed: 04/19/17 |       |       |       |        |      |      |        |     |           |           |
| Barium           | 0.944     | 0.000500  | 0.0200  | mg/L  | 1.0000 |        | 94.4 | 80-120|        |     |           |           |
| Beryllium        | 968       | 0.200    | 2.00    | ug/L  | 1000.0 |        | 96.8 | 80-120|        |     |           |           |
| Boron            | 1.02      | 0.0100   | 0.0500  | mg/L  | 1.0000 |        | 102  | 80-120|        |     |           |           |
| Chromium         | 987       | 1.60     | 12.0    | ug/L  | 1000.0 |        | 98.7 | 80-120|        |     |           |           |
| Molybdenum       | 957       | 1.00     | 20.0    | ug/L  | 1000.0 |        | 95.7 | 80-120|        |     |           |           |

| **Matrix Spike (17D0115-MS1)** | Source: L17D085-03 |       |       |       |       |        |      |      |        |     |           |           |
| Barium           | 0.928     | 0.000500  | 0.0200  | mg/L  | 1.0000 | 0.0146 | 91.4 | 75-125|        |     |           |           |
| Beryllium        | 942       | 0.200    | 2.00    | ug/L  | 1000.0 | U      | 94.2 | 75-125|        |     |           |           |
| Boron            | 4.88      | 0.0100   | 0.0500  | mg/L  | 1.0000 | 4.05   | 83.0 | 75-125|        |     |           |           |
| Chromium         | 972       | 1.60     | 12.0    | ug/L  | 1000.0 | 4.76   | 96.7 | 75-125|        |     |           |           |
| Molybdenum       | 988       | 1.00     | 20.0    | ug/L  | 1000.0 | 24.4   | 96.4 | 75-125|        |     |           |           |

| **Matrix Spike Dup (17D0115-MSD1)** | Source: L17D085-03 |       |       |       |       |        |      |      |        |     |           |           |
| Barium           | 0.882     | 0.000500  | 0.0200  | mg/L  | 1.0000 | 0.0146 | 86.8 | 75-125|        |     |           |           |
| Beryllium        | 891       | 0.200    | 2.00    | ug/L  | 1000.0 | U      | 89.1 | 75-125|        |     |           |           |
| Boron            | 4.69      | 0.0100   | 0.0500  | mg/L  | 1.0000 | 4.05   | 63.8 | 75-125|        |     |           |           |
| Chromium         | 920       | 1.60     | 12.0    | ug/L  | 1000.0 | 4.76   | 91.6 | 75-125|        |     |           |           |
| Molybdenum       | 937       | 1.00     | 20.0    | ug/L  | 1000.0 | 24.4   | 91.3 | 75-125|        |     |           |           |

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
## Total Mercury by SW846 Method 7470/7471 - Quality Control

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>MDL</th>
<th>PQL</th>
<th>Units</th>
<th>Spike Level</th>
<th>Source</th>
<th>%Rec Limits</th>
<th>RPD Limit</th>
<th>Qualifier</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Batch 17D0122 - EPA 7470A</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blank (17D0122-BLK1)</td>
<td></td>
<td></td>
<td></td>
<td>ug/L</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mercury</td>
<td>0.0500</td>
<td>0.0500</td>
<td>0.200</td>
<td>ug/L</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>U</td>
</tr>
<tr>
<td>Prepared: 04/17/17</td>
<td>Analyzed: 04/18/17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LCS (17D0122-BS1)</td>
<td></td>
<td></td>
<td></td>
<td>ug/L</td>
<td>1.01</td>
<td>0.0500</td>
<td>0.200</td>
<td>1.0000</td>
<td>101</td>
</tr>
<tr>
<td>Mercury</td>
<td>1.01</td>
<td>0.0500</td>
<td>0.200</td>
<td>ug/L</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Source: L17D013-01</td>
<td></td>
<td></td>
<td></td>
<td>ug/L</td>
<td></td>
<td>1.0000</td>
<td>0.000</td>
<td>1.0000</td>
<td>92.8</td>
</tr>
<tr>
<td>Prepared: 04/17/17</td>
<td>Analyzed: 04/18/17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Post Spike (17D0122-PS1)</td>
<td>Source: L17D013-01</td>
<td></td>
<td></td>
<td>ug/L</td>
<td>0.928</td>
<td>1.0000</td>
<td>-0.134</td>
<td>0.949</td>
<td>94.9</td>
</tr>
<tr>
<td>Mercury</td>
<td>0.928</td>
<td>1.0000</td>
<td></td>
<td>ug/L</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prepared: 04/17/17</td>
<td>Analyzed: 04/18/17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Post Spike (17D0122-PS2)</td>
<td>Source: L17D013-01</td>
<td></td>
<td></td>
<td>ug/L</td>
<td>0.949</td>
<td>1.0000</td>
<td>-0.134</td>
<td>0.928</td>
<td>92.8</td>
</tr>
<tr>
<td>Mercury</td>
<td>0.949</td>
<td>1.0000</td>
<td></td>
<td>ug/L</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>MDL</th>
<th>PQL</th>
<th>Units</th>
<th>Spike</th>
<th>Source</th>
<th>%Rec</th>
<th>%Rec Limits</th>
<th>RPD Limit</th>
<th>RPD Qualifier</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Batch 17D0123 - EPA 200.8</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Blank (17D0123-BLK1)</strong></td>
<td>Prepared &amp; Analyzed: 04/18/17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Antimony</td>
<td>0.600</td>
<td>0.600</td>
<td>2.00</td>
<td>ug/L</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>U</td>
</tr>
<tr>
<td>Arsenic</td>
<td>0.320</td>
<td>0.320</td>
<td>2.00</td>
<td>ug/L</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>U</td>
</tr>
<tr>
<td>Cadmium</td>
<td>0.100</td>
<td>0.100</td>
<td>0.500</td>
<td>ug/L</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>U</td>
</tr>
<tr>
<td>Cobalt</td>
<td>0.269</td>
<td>0.0400</td>
<td>2.00</td>
<td>ug/L</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>I</td>
</tr>
<tr>
<td>Lead</td>
<td>8.00E-5</td>
<td>8.00E-5</td>
<td>0.00200</td>
<td>mg/L</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>U</td>
</tr>
<tr>
<td>Selenium</td>
<td>0.200</td>
<td>0.200</td>
<td>2.00</td>
<td>ug/L</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>U</td>
</tr>
<tr>
<td>Thallium</td>
<td>0.100</td>
<td>0.100</td>
<td>0.500</td>
<td>ug/L</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>U</td>
</tr>
<tr>
<td><strong>LCS (17D0123-BS1)</strong></td>
<td>Prepared &amp; Analyzed: 04/18/17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Antimony</td>
<td>102</td>
<td>0.600</td>
<td>2.00</td>
<td>ug/L</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>U</td>
</tr>
<tr>
<td>Arsenic</td>
<td>99.6</td>
<td>0.320</td>
<td>2.00</td>
<td>ug/L</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>U</td>
</tr>
<tr>
<td>Cadmium</td>
<td>100</td>
<td>0.100</td>
<td>0.500</td>
<td>ug/L</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>U</td>
</tr>
<tr>
<td>Cobalt</td>
<td>102</td>
<td>0.0400</td>
<td>2.00</td>
<td>ug/L</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>V</td>
</tr>
<tr>
<td>Lead</td>
<td>0.0997</td>
<td>8.00E-5</td>
<td>0.00200</td>
<td>mg/L</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>U</td>
</tr>
<tr>
<td>Selenium</td>
<td>99.5</td>
<td>0.200</td>
<td>2.00</td>
<td>ug/L</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>U</td>
</tr>
<tr>
<td>Thallium</td>
<td>100</td>
<td>0.100</td>
<td>0.500</td>
<td>ug/L</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>U</td>
</tr>
<tr>
<td><strong>Matrix Spike (17D0123-MS1)</strong></td>
<td>Source: L17D013-05</td>
<td>Prepared &amp; Analyzed: 04/18/17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Antimony</td>
<td>103</td>
<td>0.600</td>
<td>2.00</td>
<td>ug/L</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>U</td>
</tr>
<tr>
<td>Arsenic</td>
<td>101</td>
<td>0.320</td>
<td>2.00</td>
<td>ug/L</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>99.2</td>
</tr>
<tr>
<td>Cadmium</td>
<td>90.9</td>
<td>0.100</td>
<td>0.500</td>
<td>ug/L</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>90.9</td>
</tr>
<tr>
<td>Cobalt</td>
<td>93.2</td>
<td>0.0400</td>
<td>2.00</td>
<td>ug/L</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>93.1</td>
</tr>
<tr>
<td>Lead</td>
<td>0.0942</td>
<td>8.00E-5</td>
<td>0.00200</td>
<td>mg/L</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>U</td>
</tr>
<tr>
<td>Selenium</td>
<td>89.3</td>
<td>0.200</td>
<td>2.00</td>
<td>ug/L</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>U</td>
</tr>
<tr>
<td>Thallium</td>
<td>96.5</td>
<td>0.100</td>
<td>0.500</td>
<td>ug/L</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>U</td>
</tr>
<tr>
<td><strong>Matrix Spike Dup (17D0123-MSD1)</strong></td>
<td>Source: L17D013-05</td>
<td>Prepared &amp; Analyzed: 04/18/17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Antimony</td>
<td>100</td>
<td>0.600</td>
<td>2.00</td>
<td>ug/L</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>U</td>
</tr>
<tr>
<td>Arsenic</td>
<td>97.5</td>
<td>0.320</td>
<td>2.00</td>
<td>ug/L</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>U</td>
</tr>
<tr>
<td>Cadmium</td>
<td>87.6</td>
<td>0.100</td>
<td>0.500</td>
<td>ug/L</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>U</td>
</tr>
<tr>
<td>Cobalt</td>
<td>92.5</td>
<td>0.0400</td>
<td>2.00</td>
<td>ug/L</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>U</td>
</tr>
<tr>
<td>Lead</td>
<td>0.0910</td>
<td>8.00E-5</td>
<td>0.00200</td>
<td>mg/L</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>U</td>
</tr>
<tr>
<td>Selenium</td>
<td>86.8</td>
<td>0.200</td>
<td>2.00</td>
<td>ug/L</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>U</td>
</tr>
<tr>
<td>Thallium</td>
<td>92.4</td>
<td>0.100</td>
<td>0.500</td>
<td>ug/L</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>U</td>
</tr>
</tbody>
</table>

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>MDL</th>
<th>PQL</th>
<th>Units</th>
<th>Spike Level</th>
<th>Source</th>
<th>%Rec</th>
<th>%Rec Limits</th>
<th>RPD Limit</th>
<th>Qualifier</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chloride</td>
<td>0.0200</td>
<td>0.0200</td>
<td>0.500</td>
<td>mg/L</td>
<td>Prepared &amp; Analyzed: 04/17/17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>U</td>
</tr>
<tr>
<td>Fluoride</td>
<td>0.0100</td>
<td>0.0100</td>
<td>0.0500</td>
<td>mg/L</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>U</td>
</tr>
<tr>
<td>Sulfate</td>
<td>0.500</td>
<td>0.500</td>
<td>2.00</td>
<td>mg/L</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>U</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>LCS (17D0124-BS1)</th>
<th>Prepared &amp; Analyzed: 04/17/17</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Chloride</td>
<td>5.08</td>
<td>0.0200</td>
<td>0.500</td>
<td>mg/L</td>
<td>5.0000</td>
<td>102</td>
<td>90-110</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fluoride</td>
<td>4.98</td>
<td>0.0100</td>
<td>0.0500</td>
<td>mg/L</td>
<td>5.0000</td>
<td>99.5</td>
<td>90-110</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sulfate</td>
<td>5.04</td>
<td>0.500</td>
<td>2.00</td>
<td>mg/L</td>
<td>5.0000</td>
<td>101</td>
<td>90-110</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| Matrix Spike (17D0124-MS1) | Source: L17D013-02 | Prepared & Analyzed: 04/17/17 | | | | | | | | |
|-----------------------------|---------------------|--------------------------------|-------|-----|-------|-------------|--------|------|-------------|-----------|-----------|
| Chloride | 168 | 0.200 | 5.00 | mg/L | 50.000 | 119 | 98.5 | 90-110 |
| Fluoride | 51.5 | 0.100 | 0.500 | mg/L | 50.000 | 237 | 103 | 90-110 |
| Sulfate | 527 | 5.00 | 20.0 | mg/L | 50.000 | 485 | 83.7 | 90-110 |

| Matrix Spike Dup (17D0124-MSD1) | Source: L17D013-02 | Prepared & Analyzed: 04/17/17 | | | | | | | | |
|--------------------------------|---------------------|--------------------------------|-------|-----|-------|-------------|--------|------|-------------|-----------|-----------|
| Chloride | 167 | 0.200 | 5.00 | mg/L | 50.000 | 119 | 96.3 | 90-110 | 0.655 | 20 |
| Fluoride | 51.4 | 0.100 | 0.500 | mg/L | 50.000 | 237 | 102 | 90-110 | 0.150 | 20 |
| Sulfate | 525 | 5.00 | 20.0 | mg/L | 50.000 | 485 | 80.4 | 90-110 | 0.307 | 20 |

| Batch 17D0140 - SM 2540C | | |
|------------------------|----------------|------|-------|-------|--------|-------------|--------|------|-------------|-----------|-----------|
| Blank (17D0140-BLK1) | Prepared & Analyzed: 04/18/17 | | | | | | | | | |
| Total Dissolved Solids | 12.0 | 12.0 | 20.0 | mg/L | | | | | | U |

<table>
<thead>
<tr>
<th>LCS (17D0140-BS1)</th>
<th>Prepared &amp; Analyzed: 04/18/17</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Dissolved Solids</td>
<td>1020</td>
<td>12.0</td>
<td>20.0</td>
<td>mg/L</td>
<td>1000.0</td>
<td>102</td>
<td>80-120</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>MDL</th>
<th>PQL</th>
<th>Units</th>
<th>Spike Level</th>
<th>Source Result</th>
<th>%Rec Limits</th>
<th>RPD Limit</th>
<th>RPD Qualifier</th>
</tr>
</thead>
<tbody>
<tr>
<td>Batch 17D0140 - SM 2540C</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>L17D013-01</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Duplicate (17D0140-DUP1)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Prepared &amp; Analyzed: 04/18/17</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Dissolved Solids</td>
<td>3090</td>
<td>24.0</td>
<td>40.0</td>
<td>mg/L</td>
<td>3110</td>
<td></td>
<td>0.709</td>
<td>10</td>
<td>J-</td>
</tr>
</tbody>
</table>

Tampa Electric Company, Laboratory Services

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Peggy Penner, Manager, Laboratory Services

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Location Code</th>
<th>Time</th>
<th>Location Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>04/13/11</td>
<td>PM</td>
<td>5:45</td>
<td>04/13/11</td>
<td>PM</td>
</tr>
</tbody>
</table>

**Big Bend**

**Pryor County, WY**

**RBD RECO**

**Sampled (s)**
<table>
<thead>
<tr>
<th>Date:</th>
<th>04/13/17</th>
<th>Sampled/Read</th>
<th>Groundwater Well Sampling Equipment Calibration</th>
</tr>
</thead>
</table>

The table above contains data related to groundwater well sampling equipment calibration. The table includes columns for Date, Sampled/Read, and Groundwater Well Sampling Equipment Calibration.
**GROUNDWATER SAMPLING LOG**

**FACILITY NAME:** Big Bend  
**WELL NO:** BBS-CCR-1  
**SAMPLE ID:** L17D013-01  
**DATE:** 4/13/17

### PURGING DATA

**WELL DIAMETER (inches):**  
**TUBING DIAMETER (inches):**  
**DEPTH:** 12.32 feet to 22.52 feet  
**STATIC DEPTH TO WATER:** 7.64 ft  
**PURGE PUMP TYPE OR BALLER:** PP  
**WELL VOLUME PURGE:**  

### EQUIPMENT VOLUME PURGE:

**EQUIPMENT VOL:** PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME  
**INITIAL PUMP OR TUBING DEPTH IN WELL (feet):** 17.32  
**FINAL PUMP OR TUBING DEPTH IN WELL (feet):** 17.32  
**PURGING INITIATED AT:** 11:47  
**PURGING ENDED AT:** 11:55  
**TOTAL VOLUME PURGED (gallons):** 2.11

### SAMPLING DATA

**SAMPLED BY (PRINT)/AFFILIATION:**  
**TECO:**  
**SAMPLER/S SIGNATURES:**  
**SAMPLING INITIATED AT:** 11:58  
**SAMPLING ENDED AT:** 12:05  
**PUMP OR TUBING DEPTH IN WELL (feet):** 17.3  
**PUMP OR TUBING FLOW RATE (ml per minute):** 727

### FIELD DECONTAMINATION:

**FIELD FILTERED:** N  
**FILTER SIZE:** µm  
**DUPLICATE:** Y  

### SAMPLE CONTAINER SPECIFICATION

<table>
<thead>
<tr>
<th>SAMPLE ID CODE</th>
<th># CONTAINERS</th>
<th>MATERIAL CODE</th>
<th>VOLUME</th>
<th>PRESERVATIVE USED</th>
<th>TOTAL VOL ADDED IN FIELD (ml)</th>
<th>FINAL pH</th>
<th>INTENDED ANALYSIS AND/OR METHOD</th>
<th>SAMPLE PRESERVATION</th>
<th>SAMPLING EQUIPMENT CODE</th>
</tr>
</thead>
<tbody>
<tr>
<td>@Ino-500</td>
<td>1</td>
<td>PE</td>
<td>500ml</td>
<td>NONE</td>
<td>NONE</td>
<td>N/A</td>
<td>Inorganics</td>
<td>PP</td>
<td></td>
</tr>
<tr>
<td>@Met-250</td>
<td>2</td>
<td>PE</td>
<td>250ml</td>
<td>HNO3</td>
<td>1ml</td>
<td>&lt;2</td>
<td>Metals</td>
<td>PP</td>
<td></td>
</tr>
<tr>
<td>@Rad-1L</td>
<td>2</td>
<td>PE</td>
<td>1L</td>
<td>HNO3</td>
<td>5ml</td>
<td>&lt;2</td>
<td>Radiologics</td>
<td>PP</td>
<td></td>
</tr>
</tbody>
</table>

### REMARKS:

1. Sample bottles pre-preserved at laboratory prior to sample collection.

### NOTES:

1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2201, SECTION 3)  
   * pH: ± 0.2 units  
   * Temperature: ± 0.2°C  
   * Specific Conductance: ±1%  
   * Dissolved Oxygen: ±0.02 mg/L  
   * Turbidity: ≤ 2 NTU  
   * Odor: None

**Revision Date:** February 1, 2004
### GROUNDWATER SAMPLING LOG

**SITE NAME:** Big Bend  
**SITE LOCATION:** Apollo Beach, FL.  
**WELL NO:** BBS-CCR-2  
**SAMPLE ID:** L1TD013-02  
**DATE:** 4/13/17

#### PURGING DATA

**WELL VOLUME PURGE:** (only if fluid is applicable)

\[
\text{WELL VOLUME} = \frac{\text{TOTAL WELL DEPTH} \times \text{STATIC DEPTH TO WATER}}{\text{WELL CAPACITY}}
\]

**EQUIPMENT VOLUME PURGE:** (only if fluid is applicable)

\[
\text{EQUIPMENT VOLUME} = \frac{\text{PUMP VOLUME} \times (\text{TUBING CAPACITY} \times \text{TUBING LENGTH}) + \text{FLOW CELL VOLUME}}{\text{gallons}}
\]

**INITIAL PUMP OR TUBING DEPTH IN WELL (feet):** 16.84  
**FINAL PUMP OR TUBING DEPTH IN WELL (feet):** 16.84

<table>
<thead>
<tr>
<th>TIME</th>
<th>VOLUME PURGED (GALLONS)</th>
<th>CONTROL VOLUME PURGED (GALLONS)</th>
<th>PURGE RATE (GPM)</th>
<th>DEPTH TO WATER (FEET)</th>
<th>pH (Standard units)</th>
<th>TEMP. (°C)</th>
<th>COND. (µhos/cm OR µS/cm)</th>
<th>TURBIDITY (NTU)</th>
<th>COLOR (Describe)</th>
<th>ODOR (Describe)</th>
</tr>
</thead>
<tbody>
<tr>
<td>11:23</td>
<td>0.95</td>
<td>0.95</td>
<td>0.16</td>
<td>7.28</td>
<td>6.92</td>
<td>23.89</td>
<td>1514</td>
<td>0.10</td>
<td>2.52</td>
<td>YELLOW</td>
</tr>
<tr>
<td>11:26</td>
<td>0.31</td>
<td>1.26</td>
<td>0.16</td>
<td>7.39</td>
<td>6.94</td>
<td>23.96</td>
<td>1531</td>
<td>0.08</td>
<td>3.08</td>
<td>YELLOW</td>
</tr>
<tr>
<td>11:27</td>
<td>0.32</td>
<td>1.58</td>
<td>0.16</td>
<td>7.30</td>
<td>6.93</td>
<td>23.95</td>
<td>1543</td>
<td>0.04</td>
<td>3.43</td>
<td>YELLOW</td>
</tr>
</tbody>
</table>

**WELL CAPACITY (Gallons Per Foot):** 0.35 ± 0.24  
**TUBING SIZE DIA. CAPACITY:** (Gal/ft): 0.54 ± 0.0006

#### SAMPLING DATA

**SAMPLED BY (PRINT)/AFFILIATION:** RAB  
**TECO**  
**SAMPLER TO SIGNATURES:**  
**SAMPLES INITIATED AT:** 11:27  
**SAMPLES ENDED AT:** 11:33

**PUMP OR TUBING DEPTH IN WELL (feet):** 16.8  
**FIELD DECONTAMINATION:** Y ☐ N ☑  
**FIELD-FILTERED:** ☑  
**FILTER SIZE:** µm  
**DUPLICATE:** Y ☐ N ☑

<table>
<thead>
<tr>
<th>SAMPLE CONTAINER SPECIFICATION</th>
<th>SAMPLE COLLECTION METHOD</th>
<th>SAMPLING EQUIPMENT CODE</th>
</tr>
</thead>
<tbody>
<tr>
<td>@Ino-500 1 PE 500ml NONE NONE N/A Inorganics PP</td>
<td></td>
<td></td>
</tr>
<tr>
<td>@Mel-250 2 PE 250ml HNO3 1mL &lt;2 Metals PP</td>
<td></td>
<td></td>
</tr>
<tr>
<td>@Rad-1L 2 PE 1L HNO3 5mL &lt;2 Radiologicals PP</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**REMARKS:** (1) Sample bottles pre-preserved at laboratory prior to sample collection.

**MATERIAL CODES:** AG = Amber Glass; CC = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

**SAMPLING/EQUIPMENT CODES:** APP = After Peristaltic Pump; BP = Ball Pump; BP = Blass Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; PFPE = Reverse Flow Pedistal Pump; SM = Straw Method (using Gravity Drain); VT = Vacuum Trap; O = Other (Specify)

**NOTES:**  
1. The above do not constitute all of the information required by Chapter 62-166, F.A.C.
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212. SECTION 3)  
   - pH ± 0.2 units  
   - Temperature ± 0.2 °C  
   - Specific Conductance ± 5%  
   - Dissolved Oxygen: all readings ± 20% saturation (see Table FS 2209-2).
   - Turbidity: all readings ± 10 NTU.

Revision Date: February 1, 2004
### DEP-SOP-001/01

**FS 2200 Groundwater Sampling**

**Form FD 9000-24**

**GROUNDWATER SAMPLING LOG**

<table>
<thead>
<tr>
<th>SITE NAME:</th>
<th>Big Bend</th>
</tr>
</thead>
<tbody>
<tr>
<td>WELL NO:</td>
<td>BBS-CCR-3</td>
</tr>
<tr>
<td>LOCATION:</td>
<td>Apollo Beach, FL</td>
</tr>
<tr>
<td>SAMPLE ID:</td>
<td>L17D013-03</td>
</tr>
<tr>
<td>DATE:</td>
<td>4/13/17</td>
</tr>
</tbody>
</table>

#### PURGING DATA

- **WELL VOLUME PURGE (gallons)**
  - 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY
  - = ft. x ft. x ft. / gallons = gallons

- **EQUIPMENT VOLUME PURGE**
  - 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
  - = 0 gallons + (0.0026 gallon/foot X 24.23 feet) + 0.06 gallons = 0.12 gallons

<table>
<thead>
<tr>
<th>TIME</th>
<th>VOLUME PURGED (GALLONS)</th>
<th>VOLUME PURGED (GALLONS)</th>
<th>PURGE RATE (GPM)</th>
<th>DEPTH TO WATER (FEET)</th>
<th>pH (standard units)</th>
<th>TEMP. (°C)</th>
<th>COND. (μS/cm or μS/sq cm)</th>
<th>DISSOLVED OXYGEN (ppm or % saturation)</th>
<th>TURBIDITY (NTU)</th>
<th>COLOR (describe)</th>
<th>ODOR (describe)</th>
</tr>
</thead>
<tbody>
<tr>
<td>10:54</td>
<td>0.85</td>
<td>0.85</td>
<td>0.11</td>
<td>7.82</td>
<td>6.48</td>
<td>24.31</td>
<td>1632</td>
<td>0.11</td>
<td>LT. YELLOW</td>
<td>MODERATE</td>
<td></td>
</tr>
<tr>
<td>10:56</td>
<td>0.21</td>
<td>1.06</td>
<td>0.11</td>
<td>7.51</td>
<td>6.46</td>
<td>24.34</td>
<td>1622</td>
<td>0.13</td>
<td>LT. YELLOW</td>
<td>MODERATE</td>
<td></td>
</tr>
<tr>
<td>11:00</td>
<td>0.41</td>
<td>1.47</td>
<td>0.10</td>
<td>7.61</td>
<td>6.49</td>
<td>24.27</td>
<td>1585</td>
<td>0.14</td>
<td>LT. YELLOW</td>
<td>MODERATE</td>
<td></td>
</tr>
</tbody>
</table>

#### WELL CAPACITY (Gallons Per Foot) (36.5° F):
- 0.395±0.01

#### TUBING INSIDE DIAMETR:
- 0.395±0.009

#### SAMPLING DATA

- **SAMPLED BY (PRINT):**
- **AFFILIATION:** TECO

<table>
<thead>
<tr>
<th>SAMPLER (S) SIGNATURES:</th>
<th>RAB</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SAMPLING INITIATED AT:</th>
<th>11:00</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAMPLING ENDED AT:</td>
<td>11:11</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PUMP OR TUBING DEPTH IN WELL (feet): 15.2</th>
</tr>
</thead>
<tbody>
<tr>
<td>PUMP FLOW RATE (ml per minute): 397</td>
</tr>
<tr>
<td>TUBING MATERIAL CODE: PE/S</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>FIELD DECONTAMINATION:</th>
<th>Y</th>
<th>N</th>
<th>☑</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIELD FILTERED:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FILTER SIZE:</td>
<td>μm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DUPLICATE:</td>
<td>Y</td>
<td>N</td>
<td>☑</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SAMPLE CONTAINER SPECIFICATION:</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAMPLE ID CODE</td>
</tr>
<tr>
<td>CONTAINERS</td>
</tr>
<tr>
<td>MATERIAL CODE</td>
</tr>
<tr>
<td>VOLUME</td>
</tr>
<tr>
<td>PRESERVATIVE USED</td>
</tr>
<tr>
<td>TOTAL VOL. ADDOED IN FIELD (ml)</td>
</tr>
<tr>
<td>FINAL pH</td>
</tr>
<tr>
<td>INTENDED ANALYSIS AND/OR METHOD</td>
</tr>
<tr>
<td>SAMPLING EQUIPMENT CODE</td>
</tr>
</tbody>
</table>

| @lmo-500  | 1 | PE | 500ml | NONE | NONE | N/A | Inorganics | PP |
| @met-250  | 2 | PE | 250ml | HNO3 | 1ml  | <2  | Metals      | PP |
| @rad-1L   | 2 | PE | 1L    | HNO3 | 5ml  | <2  | Radiologicals | PP |

#### REMARKS

1. Sample bottles pre-preserved at laboratory prior to sample collection.

#### MATERIAL CODES:
- AG = Amber Glass
- CG = Clear Glass
- PE = Polyethylene
- PP = Polysproylene
- S = Silicone
- T = Teflon
- O = Other (Specify)

#### SAMPLING/PURGING CODES:
- APP = After Peristaltic Pump
- B = Bottle
- BP = Bladder Pump
- ESP = Electric Submersible Pump
- PP = Peristaltic Pump
- RPP = Reverse Flow Peristaltic Pump
- SV = Swirl Method (tubing Gravity Drain)
- VT = Vacuum Trap

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

Page 32 of 32  
Revision Date: February 1, 2004
## GROUNDWATER SAMPLING LOG

**SITE NAME:** Big Bend  
**WELL NO.:** BBS-CCR-BW-1  
**SITE LOCATION:** Apollo Beach, FL.

### PURGING DATA

<table>
<thead>
<tr>
<th>WELL VOLUME PURGED</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY</td>
</tr>
</tbody>
</table>

### EQUIPMENT VOLUME PURGED:

<table>
<thead>
<tr>
<th>EQUIPMENT VOLUME PURGED</th>
</tr>
</thead>
<tbody>
<tr>
<td>PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME</td>
</tr>
</tbody>
</table>

### INITIAL PUMP OR TUBING DEPTH IN WELL (feet):

<table>
<thead>
<tr>
<th>TIME</th>
<th>VOLUME PURGED (GALLONS)</th>
<th>VOLUME PURGED (GALLONS)</th>
<th>PURGE RATE (GPM)</th>
<th>DEPTH TO WATER (FEET)</th>
<th>pH (standard units)</th>
<th>TEMP. (°C)</th>
<th>COND. (μmhos/cm OR μA/cm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>10:25</td>
<td>6.06</td>
<td>6.06</td>
<td>0.67</td>
<td>31.68</td>
<td>6.50</td>
<td>27.27</td>
<td>4967</td>
</tr>
<tr>
<td>10:27</td>
<td>1.32</td>
<td>7.38</td>
<td>0.66</td>
<td>31.69</td>
<td>6.50</td>
<td>27.21</td>
<td>4989</td>
</tr>
<tr>
<td>10:29</td>
<td>1.32</td>
<td>8.70</td>
<td>0.66</td>
<td>31.70</td>
<td>6.50</td>
<td>27.20</td>
<td>5005</td>
</tr>
</tbody>
</table>

### SAMPLING DATA

<table>
<thead>
<tr>
<th>SAMPLED BY (PRINT)</th>
<th>AFFILIATION</th>
<th>SAMPLED DATED</th>
</tr>
</thead>
<tbody>
<tr>
<td>RAB</td>
<td>TECO</td>
<td>10:29</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PUMP OR TUBING DEPTH IN WELL (feet):</th>
</tr>
</thead>
<tbody>
<tr>
<td>39.3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>FIELD DECONTAMINATION</th>
<th>FIELD FILTERED</th>
<th>FILTER SIZE</th>
<th>Duplicated</th>
<th>ANALYSIS AND/or METHOD</th>
<th>SAMPLE CODE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Y</td>
<td>N</td>
<td>μm</td>
<td>Y</td>
<td>None Inorganics</td>
<td>ESP</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SAMPLE DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>@ino-500 1 PE 500ml</td>
</tr>
<tr>
<td>@Mat-250 2 PE 250ml</td>
</tr>
<tr>
<td>@Rad-1L 2 PE 1L</td>
</tr>
</tbody>
</table>

### REMARKS:

1. Sample bottles pre-preserved at laboratory prior to sample collection.

### NOTES:

1. The above do not constitute all the information required by Chapter 62-160, F.A.C.
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3).
   - pH: ± 0.2 units, Temperature: ± 0.2 °C
   - Specific Conductance: ± 5% Dissolved Oxygen: all readings ± 20% saturation
   - Turbidity: all readings ± 2 NTU, optionally ± 2 NTU or 10% (whichever is greater)
<table>
<thead>
<tr>
<th>TIME</th>
<th>VOLUME PURGED (GALLONS)</th>
<th>VOLUME PURGED (GALLONS)</th>
<th>PURGE RATE (GPM)</th>
<th>DEPTH TO WATER (FEET)</th>
<th>pH (standard units)</th>
<th>TEMP. (°C)</th>
<th>COND. (μmhos/cm OR μS/cm)</th>
<th>DISSOLVED OXYGEN (percent saturation)</th>
<th>TURBIDITY (NTU)</th>
<th>COLOR (describe)</th>
<th>ODOR (describe)</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:53</td>
<td>2.01</td>
<td>2.01</td>
<td>0.11</td>
<td>9.40</td>
<td>6.67</td>
<td>24.83</td>
<td>1475</td>
<td>1.41</td>
<td>14.70</td>
<td>LT. YELLOW</td>
<td>NONE</td>
</tr>
<tr>
<td>9:55</td>
<td>0.21</td>
<td>2.22</td>
<td>0.11</td>
<td>9.41</td>
<td>6.67</td>
<td>24.88</td>
<td>1475</td>
<td>1.57</td>
<td>12.70</td>
<td>LT. YELLOW</td>
<td>NONE</td>
</tr>
<tr>
<td>9:57</td>
<td>0.22</td>
<td>2.44</td>
<td>0.11</td>
<td>9.42</td>
<td>6.67</td>
<td>24.81</td>
<td>1476</td>
<td>1.32</td>
<td>19.00</td>
<td>LT. YELLOW</td>
<td>NONE</td>
</tr>
</tbody>
</table>

**WELL CAPACITY (Gallons Per Foot):** 0.75" = 0.52; 1" = 0.64; 1.25" = 0.94; 2" = 1.06; 2.5" = 1.27; 4" = 0.55; 5" = 1.25; 6" = 1.47; 12" = 6.68

**TURBIDITY INSIDE WELL CAPACITY (Cal/Ft):** 180° = 0.000005; 360° = 0.00014; 450° = 0.0026; 540° = 0.004; 360° = 0.008; 92° = 0.010; 58° = 0.015

**SAMPLING DATA**

- **SAMPLED BY (PRINT)/ AFFILIATION:** RAB TECO
- **SAMPLER-SIGNATURES:**
- **SAMPLING INITIATED AT:** 9:57
- **SAMPLING ENDED AT:** 10:06
- **PUMP OR TUBING DEPTH IN WELL (feet):** 18.5
- **FIELD DECONTAMINATION:** Y N
- **FIELD-FILTERED:**
- **FILTER SIZE:** μm
- **DUPLICATE:** Y N
- **SAMPLE CONTAINER SPECIFICATION:**
- **SAMPLE CODE**
- **# CONTAINERS**
- **MATERIAL CODE**
- **VOLUME**
- **PRESERVATIVE USED**
- **TOTAL VOL. ADDED IN FIELD (ml)**
- **pH**
- **INTENDED ANALYSIS AND/OR METHOD**
- **SAMPLING CODE**

**REMARKS:**
(1) Sample bottles pre-processed at laboratory prior to sample collection.

**MATERIAL CODES:**
- AG = Amber Glass
- CG = Clear Glass
- PC = Polyethylene
- PP = Polypropylene
- S = Silicone
- T = Teflon
- O = Other (Specify)

**SAMPLING EQUIPMENT CODES:**
- APP = Air Peristaltic Pump
- B = Bladder Pump
- ESP = Electric Submersible Pump
- FP = Peristaltic Pump
- RFPF = Reverse Flow Peristaltic Pump
- SM = Stew Method (tubing gravity drain)
- TF = Vacuum Trap

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

Page 32 of 32
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.
# Table of Contents

- Cover Page .................................................. 1
- Table of Contents ........................................... 2
- Sample Summary .............................................. 3
- Definitions ................................................... 4
- Case Narrative ................................................. 5
- Detection Summary ........................................... 6
- Client Sample Results ....................................... 7
- QC Sample Results ........................................... 8
- QC Association ............................................... 9
- Chronicle ..................................................... 10
- Certification Summary ..................................... 11
- Method Summary ............................................. 12
- Chain of Custody ............................................ 13
- Receipt Checklists .......................................... 15
## Sample Summary

Client: Tampa Electric Company  
Project/Site: L17D013  
TestAmerica Job ID: 660-80222-1

<table>
<thead>
<tr>
<th>Lab Sample ID</th>
<th>Client Sample ID</th>
<th>Matrix</th>
<th>Collected</th>
<th>Received</th>
</tr>
</thead>
<tbody>
<tr>
<td>660-80222-1</td>
<td>L17D013-01</td>
<td>Water</td>
<td>04/13/17 12:05</td>
<td>04/19/17 13:30</td>
</tr>
<tr>
<td>660-80222-2</td>
<td>L17D013-02</td>
<td>Water</td>
<td>04/13/17 11:33</td>
<td>04/19/17 13:30</td>
</tr>
<tr>
<td>660-80222-3</td>
<td>L17D013-03</td>
<td>Water</td>
<td>04/13/17 11:11</td>
<td>04/19/17 13:30</td>
</tr>
<tr>
<td>660-80222-4</td>
<td>L17D013-04</td>
<td>Water</td>
<td>04/13/17 10:32</td>
<td>04/19/17 13:30</td>
</tr>
<tr>
<td>660-80222-5</td>
<td>L17D013-05</td>
<td>Water</td>
<td>04/13/17 10:06</td>
<td>04/19/17 13:30</td>
</tr>
</tbody>
</table>

TestAmerica Tampa
# Definitions/Glossary

**Client:** Tampa Electric Company  
**Project/Site:** L17D013

## Qualifiers

### Metals

<table>
<thead>
<tr>
<th>Qualifier</th>
<th>Qualifier Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.</td>
</tr>
<tr>
<td>U</td>
<td>Indicates that the compound was analyzed for but not detected.</td>
</tr>
</tbody>
</table>

## Glossary

These commonly used abbreviations may or may not be present in this report.

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>%R</td>
<td>Percent Recovery</td>
</tr>
<tr>
<td>CFL</td>
<td>Contains Free Liquid</td>
</tr>
<tr>
<td>CNF</td>
<td>Contains no Free Liquid</td>
</tr>
<tr>
<td>DER</td>
<td>Duplicate error ratio (normalized absolute difference)</td>
</tr>
<tr>
<td>Dil Fac</td>
<td>Dilution Factor</td>
</tr>
<tr>
<td>DL, RA, RE, IN</td>
<td>Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample</td>
</tr>
<tr>
<td>DLC</td>
<td>Decision level concentration</td>
</tr>
<tr>
<td>MDA</td>
<td>Minimum detectable activity</td>
</tr>
<tr>
<td>EDL</td>
<td>Estimated Detection Limit</td>
</tr>
<tr>
<td>MDC</td>
<td>Minimum detectable concentration</td>
</tr>
<tr>
<td>MDL</td>
<td>Method Detection Limit</td>
</tr>
<tr>
<td>ML</td>
<td>Minimum Level (Dioxin)</td>
</tr>
<tr>
<td>NC</td>
<td>Not Calculated</td>
</tr>
<tr>
<td>ND</td>
<td>Not detected at the reporting limit (or MDL or EDL if shown)</td>
</tr>
<tr>
<td>PQL</td>
<td>Practical Quantitation Limit</td>
</tr>
<tr>
<td>QC</td>
<td>Quality Control</td>
</tr>
<tr>
<td>RER</td>
<td>Relative error ratio</td>
</tr>
<tr>
<td>RL</td>
<td>Reporting Limit or Requested Limit (Radiochemistry)</td>
</tr>
<tr>
<td>RPD</td>
<td>Relative Percent Difference, a measure of the relative difference between two points</td>
</tr>
<tr>
<td>TEF</td>
<td>Toxicity Equivalent Factor (Dioxin)</td>
</tr>
<tr>
<td>TEQ</td>
<td>Toxicity Equivalent Quotient (Dioxin)</td>
</tr>
</tbody>
</table>
Job ID: 660-80222-1

Laboratory: TestAmerica Tampa

Narrative

Receipt
The samples were received on 4/19/2017 1:30 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.4°C.

Metals
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.
### Client Sample ID: L17D013-01

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>Qualifier</th>
<th>PQL</th>
<th>MDL</th>
<th>Unit</th>
<th>Dil Fac</th>
<th>D</th>
<th>Method</th>
<th>Prep Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithium</td>
<td>0.010</td>
<td></td>
<td>0.050</td>
<td>0.0010</td>
<td>mg/L</td>
<td></td>
<td>I</td>
<td>200.7 Rev 4.4</td>
<td>Total/NA</td>
</tr>
</tbody>
</table>

### Client Sample ID: L17D013-02

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>Qualifier</th>
<th>PQL</th>
<th>MDL</th>
<th>Unit</th>
<th>Dil Fac</th>
<th>D</th>
<th>Method</th>
<th>Prep Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithium</td>
<td>0.013</td>
<td></td>
<td>0.050</td>
<td>0.0010</td>
<td>mg/L</td>
<td></td>
<td>I</td>
<td>200.7 Rev 4.4</td>
<td>Total/NA</td>
</tr>
</tbody>
</table>

### Client Sample ID: L17D013-03

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>Qualifier</th>
<th>PQL</th>
<th>MDL</th>
<th>Unit</th>
<th>Dil Fac</th>
<th>D</th>
<th>Method</th>
<th>Prep Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithium</td>
<td>0.0063</td>
<td></td>
<td>0.050</td>
<td>0.0010</td>
<td>mg/L</td>
<td></td>
<td>I</td>
<td>200.7 Rev 4.4</td>
<td>Total/NA</td>
</tr>
</tbody>
</table>

### Client Sample ID: L17D013-04

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>Qualifier</th>
<th>PQL</th>
<th>MDL</th>
<th>Unit</th>
<th>Dil Fac</th>
<th>D</th>
<th>Method</th>
<th>Prep Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithium</td>
<td>0.012</td>
<td></td>
<td>0.050</td>
<td>0.0010</td>
<td>mg/L</td>
<td></td>
<td>I</td>
<td>200.7 Rev 4.4</td>
<td>Total/NA</td>
</tr>
</tbody>
</table>

### Client Sample ID: L17D013-05

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>Qualifier</th>
<th>PQL</th>
<th>MDL</th>
<th>Unit</th>
<th>Dil Fac</th>
<th>D</th>
<th>Method</th>
<th>Prep Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithium</td>
<td>0.0034</td>
<td></td>
<td>0.050</td>
<td>0.0010</td>
<td>mg/L</td>
<td></td>
<td>I</td>
<td>200.7 Rev 4.4</td>
<td>Total/NA</td>
</tr>
</tbody>
</table>

This Detection Summary does not include radiochemical test results.
# Client Sample Results

**Client:** Tampa Electric Company  
**Project/Site:** L17D013

## Client Sample ID: L17D013-01
**Lab Sample ID:** 660-80222-1  
**Matrix:** Water  
**Date Collected:** 04/13/17 12:05  
**Date Received:** 04/19/17 13:30  

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>Qualifier</th>
<th>PQL</th>
<th>MDL</th>
<th>Unit</th>
<th>D</th>
<th>Prepared</th>
<th>Analyzed</th>
<th>Dil Fac</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithium</td>
<td>0.010</td>
<td>I</td>
<td>0.050</td>
<td>0.0010</td>
<td>mg/L</td>
<td>04/21/17 10:59</td>
<td>04/27/17 10:53</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

## Client Sample ID: L17D013-02
**Lab Sample ID:** 660-80222-2  
**Matrix:** Water  
**Date Collected:** 04/13/17 11:33  
**Date Received:** 04/19/17 13:30  

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>Qualifier</th>
<th>PQL</th>
<th>MDL</th>
<th>Unit</th>
<th>D</th>
<th>Prepared</th>
<th>Analyzed</th>
<th>Dil Fac</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithium</td>
<td>0.013</td>
<td>I</td>
<td>0.050</td>
<td>0.0010</td>
<td>mg/L</td>
<td>04/21/17 10:59</td>
<td>04/27/17 11:07</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

## Client Sample ID: L17D013-03
**Lab Sample ID:** 660-80222-3  
**Matrix:** Water  
**Date Collected:** 04/13/17 11:11  
**Date Received:** 04/19/17 13:30  

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>Qualifier</th>
<th>PQL</th>
<th>MDL</th>
<th>Unit</th>
<th>D</th>
<th>Prepared</th>
<th>Analyzed</th>
<th>Dil Fac</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithium</td>
<td>0.0063</td>
<td>I</td>
<td>0.050</td>
<td>0.0010</td>
<td>mg/L</td>
<td>04/21/17 10:59</td>
<td>04/27/17 11:10</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

## Client Sample ID: L17D013-04
**Lab Sample ID:** 660-80222-4  
**Matrix:** Water  
**Date Collected:** 04/13/17 10:32  
**Date Received:** 04/19/17 13:30  

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>Qualifier</th>
<th>PQL</th>
<th>MDL</th>
<th>Unit</th>
<th>D</th>
<th>Prepared</th>
<th>Analyzed</th>
<th>Dil Fac</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithium</td>
<td>0.012</td>
<td>I</td>
<td>0.050</td>
<td>0.0010</td>
<td>mg/L</td>
<td>04/21/17 10:59</td>
<td>04/27/17 11:13</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

## Client Sample ID: L17D013-05
**Lab Sample ID:** 660-80222-5  
**Matrix:** Water  
**Date Collected:** 04/13/17 10:06  
**Date Received:** 04/19/17 13:30  

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>Qualifier</th>
<th>PQL</th>
<th>MDL</th>
<th>Unit</th>
<th>D</th>
<th>Prepared</th>
<th>Analyzed</th>
<th>Dil Fac</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithium</td>
<td>0.0034</td>
<td>I</td>
<td>0.050</td>
<td>0.0010</td>
<td>mg/L</td>
<td>04/21/17 10:59</td>
<td>04/27/17 11:17</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>
# QC Sample Results

Client: Tampa Electric Company  
Project/Site: L17D013  

**Method: 200.7 Rev 4.4 - Metals (ICP)**

| Client Sample ID | Method Blank Lab Sample ID | Matrix: Water Prep Type: Total/NA  
| Lab Sample ID | Prep Batch: 350739 | Analysis Batch: 351616 |

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>Qualifier</th>
<th>PQL</th>
<th>MDL</th>
<th>Unit</th>
<th>D</th>
<th>Prepared</th>
<th>Analyzed</th>
<th>Dil Fac</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithium</td>
<td>0.0010</td>
<td>U</td>
<td>0.050</td>
<td>0.0010</td>
<td>mg/L</td>
<td>04/21/17 10:59</td>
<td>04/27/17 10:01</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

| Lab Sample ID | LCS 400-350739/2-A  
| Client Sample ID: Lab Control Sample Prep Type: Total/NA Prep Batch: 350739  
| Analysis Batch: 351616 |

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Spike Added</th>
<th>LCS Result</th>
<th>LCS Qualifier</th>
<th>Unit</th>
<th>D</th>
<th>%Rec</th>
<th>Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithium</td>
<td>1.00</td>
<td>1.11</td>
<td>mg/L</td>
<td>111</td>
<td>85.115</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| Lab Sample ID: 400-136677-D-1-B MS  
| Client Sample ID: Matrix Spike Prep Type: Total/NA Prep Batch: 350739  
| Analysis Batch: 351616 |

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Sample Result</th>
<th>Sample Qualifier</th>
<th>Spike Added</th>
<th>MS Result</th>
<th>MS Qualifier</th>
<th>Unit</th>
<th>D</th>
<th>%Rec</th>
<th>Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithium</td>
<td>0.0021</td>
<td>I</td>
<td>1.00</td>
<td>1.08</td>
<td>mg/L</td>
<td>107</td>
<td>70.130</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| Lab Sample ID: 400-136677-D-1-C MSD  
| Client Sample ID: Matrix Spike Duplicate Prep Type: Total/NA Prep Batch: 350739  
| Analysis Batch: 351616 |

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Sample Result</th>
<th>Sample Qualifier</th>
<th>Spike Added</th>
<th>MSD Result</th>
<th>MSD Qualifier</th>
<th>Unit</th>
<th>D</th>
<th>%Rec</th>
<th>Limits</th>
<th>RPD</th>
<th>Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithium</td>
<td>0.0021</td>
<td>I</td>
<td>1.00</td>
<td>1.06</td>
<td>mg/L</td>
<td>106</td>
<td>70.130</td>
<td>1</td>
<td>20</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

TestAmerica Tampa  
Page 8 of 16  
4/28/2017
## Metals

### Prep Batch: 350739

<table>
<thead>
<tr>
<th>Lab Sample ID</th>
<th>Client Sample ID</th>
<th>Prep Type</th>
<th>Matrix</th>
<th>Method</th>
<th>Prep Batch</th>
</tr>
</thead>
<tbody>
<tr>
<td>660-80222-1</td>
<td>L17D013-01</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7</td>
<td></td>
</tr>
<tr>
<td>660-80222-2</td>
<td>L17D013-02</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7</td>
<td></td>
</tr>
<tr>
<td>660-80222-3</td>
<td>L17D013-03</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7</td>
<td></td>
</tr>
<tr>
<td>660-80222-4</td>
<td>L17D013-04</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7</td>
<td></td>
</tr>
<tr>
<td>660-80222-5</td>
<td>L17D013-05</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7</td>
<td></td>
</tr>
<tr>
<td>MB 400-350739/1-A</td>
<td>Method Blank</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7</td>
<td></td>
</tr>
<tr>
<td>LCS 400-350739/2-A</td>
<td>Lab Control Sample</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7</td>
<td></td>
</tr>
<tr>
<td>400-136677-D-1-B MS</td>
<td>Matrix Spike</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7</td>
<td></td>
</tr>
<tr>
<td>400-136677-D-1-C MSD</td>
<td>Matrix Spike Duplicate</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7</td>
<td></td>
</tr>
</tbody>
</table>

### Analysis Batch: 351616

<table>
<thead>
<tr>
<th>Lab Sample ID</th>
<th>Client Sample ID</th>
<th>Prep Type</th>
<th>Matrix</th>
<th>Method</th>
<th>Prep Batch</th>
</tr>
</thead>
<tbody>
<tr>
<td>660-80222-1</td>
<td>L17D013-01</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7 Rev 4.4</td>
<td>350739</td>
</tr>
<tr>
<td>660-80222-2</td>
<td>L17D013-02</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7 Rev 4.4</td>
<td>350739</td>
</tr>
<tr>
<td>660-80222-3</td>
<td>L17D013-03</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7 Rev 4.4</td>
<td>350739</td>
</tr>
<tr>
<td>660-80222-4</td>
<td>L17D013-04</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7 Rev 4.4</td>
<td>350739</td>
</tr>
<tr>
<td>660-80222-5</td>
<td>L17D013-05</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7 Rev 4.4</td>
<td>350739</td>
</tr>
<tr>
<td>MB 400-350739/1-A</td>
<td>Method Blank</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7 Rev 4.4</td>
<td>350739</td>
</tr>
<tr>
<td>LCS 400-350739/2-A</td>
<td>Lab Control Sample</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7 Rev 4.4</td>
<td>350739</td>
</tr>
<tr>
<td>400-136677-D-1-B MS</td>
<td>Matrix Spike</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7 Rev 4.4</td>
<td>350739</td>
</tr>
<tr>
<td>400-136677-D-1-C MSD</td>
<td>Matrix Spike Duplicate</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7 Rev 4.4</td>
<td>350739</td>
</tr>
<tr>
<td>Client Sample ID: L17D013-01</td>
<td>Lab Sample ID: 660-80222-1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-----------------------------</td>
<td>---------------------------</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Date Collected: 04/13/17 12:05</td>
<td>Date Collected: 04/13/17 12:05</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Date Received: 04/19/17 13:30</td>
<td>Date Received: 04/19/17 13:30</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Prep Type</strong></td>
<td><strong>Batch Type</strong></td>
<td><strong>Batch Method</strong></td>
<td><strong>Run</strong></td>
<td><strong>Dil Factor</strong></td>
<td><strong>Initial Amount</strong></td>
</tr>
<tr>
<td>Total/NA</td>
<td>Prep</td>
<td>200.7</td>
<td></td>
<td></td>
<td>50 mL</td>
</tr>
<tr>
<td>Total/NA</td>
<td>Analysis</td>
<td>200.7 Rev 4.4</td>
<td></td>
<td></td>
<td>1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Client Sample ID: L17D013-02</th>
<th>Lab Sample ID: 660-80222-2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date Collected: 04/13/17 11:33</td>
<td>Date Collected: 04/13/17 11:33</td>
</tr>
<tr>
<td>Date Received: 04/19/17 13:30</td>
<td>Date Received: 04/19/17 13:30</td>
</tr>
<tr>
<td><strong>Prep Type</strong></td>
<td><strong>Batch Type</strong></td>
</tr>
<tr>
<td>Total/NA</td>
<td>Prep</td>
</tr>
<tr>
<td>Total/NA</td>
<td>Analysis</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Client Sample ID: L17D013-03</th>
<th>Lab Sample ID: 660-80222-3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date Collected: 04/13/17 11:11</td>
<td>Date Collected: 04/13/17 11:11</td>
</tr>
<tr>
<td>Date Received: 04/19/17 13:30</td>
<td>Date Received: 04/19/17 13:30</td>
</tr>
<tr>
<td><strong>Prep Type</strong></td>
<td><strong>Batch Type</strong></td>
</tr>
<tr>
<td>Total/NA</td>
<td>Prep</td>
</tr>
<tr>
<td>Total/NA</td>
<td>Analysis</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Client Sample ID: L17D013-04</th>
<th>Lab Sample ID: 660-80222-4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date Collected: 04/13/17 10:32</td>
<td>Date Collected: 04/13/17 10:32</td>
</tr>
<tr>
<td>Date Received: 04/19/17 13:30</td>
<td>Date Received: 04/19/17 13:30</td>
</tr>
<tr>
<td><strong>Prep Type</strong></td>
<td><strong>Batch Type</strong></td>
</tr>
<tr>
<td>Total/NA</td>
<td>Prep</td>
</tr>
<tr>
<td>Total/NA</td>
<td>Analysis</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Client Sample ID: L17D013-05</th>
<th>Lab Sample ID: 660-80222-5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date Collected: 04/13/17 10:06</td>
<td>Date Collected: 04/13/17 10:06</td>
</tr>
<tr>
<td>Date Received: 04/19/17 13:30</td>
<td>Date Received: 04/19/17 13:30</td>
</tr>
<tr>
<td><strong>Prep Type</strong></td>
<td><strong>Batch Type</strong></td>
</tr>
<tr>
<td>Total/NA</td>
<td>Prep</td>
</tr>
<tr>
<td>Total/NA</td>
<td>Analysis</td>
</tr>
</tbody>
</table>

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

TestAmerica Tampa
# Accreditation/Certification Summary

Client: Tampa Electric Company  
Project/Site: L17D013  
TestAmerica Job ID: 660-80222-1

## Laboratory: TestAmerica Tampa

The accreditations/certifications listed below are applicable to this report.

<table>
<thead>
<tr>
<th>Authority</th>
<th>Program</th>
<th>EPA Region</th>
<th>Identification Number</th>
<th>Expiration Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Florida</td>
<td>NELAP</td>
<td>4</td>
<td>E84282</td>
<td>06-30-17</td>
</tr>
</tbody>
</table>

## Laboratory: TestAmerica Pensacola

The accreditations/certifications listed below are applicable to this report.

<table>
<thead>
<tr>
<th>Authority</th>
<th>Program</th>
<th>EPA Region</th>
<th>Identification Number</th>
<th>Expiration Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Florida</td>
<td>NELAP</td>
<td>4</td>
<td>E81010</td>
<td>06-30-17</td>
</tr>
</tbody>
</table>
### Method Summary

<table>
<thead>
<tr>
<th>Method</th>
<th>Method Description</th>
<th>Protocol</th>
<th>Laboratory</th>
</tr>
</thead>
<tbody>
<tr>
<td>200.7 Rev 4.4</td>
<td>Metals (ICP)</td>
<td>EPA</td>
<td>TAL PEN</td>
</tr>
</tbody>
</table>

**Protocol References:**

EPA = US Environmental Protection Agency

**Laboratory References:**

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

**Tampa Electric Company, Laboratory Services**  
**L17D013**

### SENDING LABORATORY:
Tampa Electric Company, Laboratory Services  
5012 Causeway Blvd  
Tampa, FL 33619  
Phone: (813) 630-7490  
Fax: (813) 630-7360  
Project Manager: Peggy Penner

### RECEIVING LABORATORY:
TestAmerica Laboratories, Inc. - Tampa  
6712 Benjamin Rd., Suite 100  
Tampa, FL 33634  
Phone: (813) 885-7427  
Fax: -

### Due Date: 04/28/17 16:00

<table>
<thead>
<tr>
<th>Analysis</th>
<th>Expires</th>
<th>Laboratory ID</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample ID: L17D013-01 BBS-CCR-1</td>
<td>Water</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sampled: 04/13/17 12:05</td>
<td>10/10/17 12:05</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lithium, Total EPA 6010</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Containers Supplied:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poly HNO3 - 250mL (B)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sample ID: L17D013-02 BBS-CCR-2</td>
<td>Water</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sampled: 04/13/17 11:33</td>
<td>10/10/17 11:33</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lithium, Total EPA 6010</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Containers Supplied:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poly HNO3 - 250mL (B)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sample ID: L17D013-03 BBS-CCR-3</td>
<td>Water</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sampled: 04/13/17 11:11</td>
<td>10/10/17 11:11</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lithium, Total EPA 6010</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Containers Supplied:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poly HNO3 - 250mL (B)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sample ID: L17D013-04 BBS-CCR-BW1</td>
<td>Water</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sampled: 04/13/17 10:32</td>
<td>10/10/17 10:32</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lithium, Total EPA 6010</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Containers Supplied:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sample ID: L17D013-05 BBS-CCR-BW2</td>
<td>Water</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sampled: 04/13/17 10:06</td>
<td>10/10/17 10:06</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lithium, Total EPA 6010</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Containers Supplied:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poly HNO3 - 250mL (B)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- 2.8/2.4 mm

- Released By: [Signature]  
- Date & Time: 4/13/17 @14:26
- Received By: [Signature]  
- Date & Time: [Signature] 4/19/17 @13:30

Page 3 of 3

[Signature]  
4/28/2017
## Chain of Custody Record

### Client Information (Sub Contract Lab)
- **Company:** TestAmerica Laboratories, Inc.
- **Address:** 3355 McElmores Drive, Pensacola, FL, 32514
- **Phone:** 850-474-1001(Tel), 850-478-2671(Fax)
- **PO #:** 0
- **W.O. #:** 0
- **Project #:** L17D013
- **Site:** 95070
- **Due Date Requested:** 4/26/2017

### Analysis Requested
- **Preservation Codes:** A - HCL, M - Hexane, B - NaOH, N - Nones, C - Zn Acetate, O - AsA/SS03, D - NHI Acid, P - TSS045, E - NaH2SO4, Q - Na2SO4, F - CaCH, R - Na2SO3, G - Ammonia, S - HSS04, H - Acetic Acid, T - TSP, Dscarylate, I - HS, U - Acesone, J - DI Water, V - MCIA, K - EDTA, W - pH 4.5, L - EDA, Z - other (specify)
- **TAT Requested (days):** 1
- **Sample Identification - Client ID (Lab ID):** L17D013-05 (660-80222-5)
- **Sample Date:** 4/13/17
- **Sample Time:** 11:06 Eastern
- **Sample Type:** Water
- **Preservation Code:** X
- **Field Planned Sample (Yes or No):** Yes
- **Total Number of Containers:** 1

### Sample Information

<table>
<thead>
<tr>
<th>Sample ID</th>
<th>Sample Date</th>
<th>Sample Time</th>
<th>Matrix</th>
<th>Field Planned Sample</th>
<th>Total Number of Containers</th>
</tr>
</thead>
<tbody>
<tr>
<td>L17D013-01</td>
<td>4/13/17</td>
<td>12:05</td>
<td>Water</td>
<td>X</td>
<td>1</td>
</tr>
<tr>
<td>L17D013-02</td>
<td>4/13/17</td>
<td>11:33</td>
<td>Water</td>
<td>X</td>
<td>1</td>
</tr>
<tr>
<td>L17D013-03</td>
<td>4/13/17</td>
<td>11:11</td>
<td>Water</td>
<td>X</td>
<td>1</td>
</tr>
<tr>
<td>L17D013-04</td>
<td>4/13/17</td>
<td>10:32</td>
<td>Water</td>
<td>X</td>
<td>1</td>
</tr>
<tr>
<td>L17D013-05</td>
<td>4/13/17</td>
<td>10:06</td>
<td>Water</td>
<td>X</td>
<td>1</td>
</tr>
</tbody>
</table>

### Possible Hazard Identification
- **Unconfirmed:**
- **Deliverable Requested:** I, II, III, IV, Other (specify)
- **Primary Deliverable Rank:** 2

### Sample Disposal
- **Sample Disposal (A fee may be assessed if samples are retained longer than 1 month):**
- **Return To Client:**
- **Disposal By Lab:**
- **Archive For:**
- **Special Instructions/QC Requirements:**

### Empty Kit Replaced by
- **Date/Time:** 4/19/17  1000

### Custody Seal(s) Intact
- **Company:** TestAmerica Laboratories, Inc.
- **Date/Time:** 4/19/17  1000
- **Custody Seal No.:** 1

---

**Note:** Since laboratory acclimatizations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyze & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory at other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested acclimatizations are current to date, return the signed Chain of Custody advising to test compliance to TestAmerica Laboratories, Inc.
## Login Sample Receipt Checklist

**Client:** Tampa Electric Company  
**Job Number:** 660-80222-1  
**Login Number:** 80222  
**List Number:** 1  
**Creator:** Moccia, Vanessa M  
**List Source:** TestAmerica Tampa

<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Radioactivity wasn't checked or is ( \leq ) background as measured by a survey meter.</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>The cooler's custody seal, if present, is intact.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Sample custody seals, if present, are intact.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>The cooler or samples do not appear to have been compromised or tampered with.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Samples were received on ice.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Cooler Temperature is acceptable.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Cooler Temperature is recorded.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>COC is present.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>COC is filled out in ink and legible.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>COC is filled out with all pertinent information.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Is the Field Sampler's name present on COC?</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>There are no discrepancies between the containers received and the COC.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Samples are received within Holding Time (excluding tests with immediate HTs)</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Sample containers have legible labels.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Containers are not broken or leaking.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Sample collection date/times are provided.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Appropriate sample containers are used.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Sample bottles are completely filled.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Sample Preservation Verified.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Containers requiring zero headspace have no headspace or bubble is &lt;6mm (1/4&quot;).</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Multiphasic samples are not present.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Samples do not require splitting or compositing.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Residual Chlorine Checked.</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Question</td>
<td>Answer</td>
<td>Comment</td>
</tr>
<tr>
<td>--------------------------------------------------------------------------</td>
<td>--------</td>
<td>---------</td>
</tr>
<tr>
<td>Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>The cooler's custody seal, if present, is intact.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Sample custody seals, if present, are intact.</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>The cooler or samples do not appear to have been compromised or tampered with.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Samples were received on ice.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Cooler Temperature is acceptable.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Cooler Temperature is recorded.</td>
<td>True</td>
<td>0.0°C IR2</td>
</tr>
<tr>
<td>COC is present.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>COC is filled out in ink and legible.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>COC is filled out with all pertinent information.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Is the Field Sampler’s name present on COC?</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>There are no discrepancies between the containers received and the COC.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Samples are received within Holding Time (excluding tests with immediate HTs)</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Sample containers have legible labels.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Containers are not broken or leaking.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Sample collection date/times are provided.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Appropriate sample containers are used.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Sample bottles are completely filled.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Sample Preservation Verified.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Containers requiring zero headspace have no headspace or bubble is $&lt;6$ mm (1/4&quot;).</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Multiphasic samples are not present.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Samples do not require splitting or compositing.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Residual Chlorine Checked.</td>
<td>N/A</td>
<td></td>
</tr>
</tbody>
</table>
TECO
5012 Causeway Blvd.
Tampa, FL 33619

Attn: Peggy Penner

Field Custody:  
Client
Client/Field ID:  
L17D013-01
Sample Collection:  
4-13-17/1205
Lab ID No:  
17.4338
Lab Custody Date:  
4-18-17/1100
Sample description:  
Water

CERTIFICATE OF ANALYSIS

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Units</th>
<th>Results</th>
<th>Analysis Date</th>
<th>Method</th>
<th>Detection Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Combined Radium (Radium-226 + Radium 228)</td>
<td>pCi/l</td>
<td>35.8 ± 1.7</td>
<td>Calc</td>
<td>Calc</td>
<td>0.7</td>
</tr>
<tr>
<td>Radium-226</td>
<td>pCi/l</td>
<td>33.3 ± 1.7</td>
<td>4-25-17/1157</td>
<td>EPA 903.0</td>
<td>0.4</td>
</tr>
<tr>
<td>Radium-228</td>
<td>pCi/l</td>
<td>2.5 ± 0.6</td>
<td>4-26-17/1145</td>
<td>EPA Ra-05</td>
<td>0.7</td>
</tr>
</tbody>
</table>

Test results meet all requirements of the NELAC standards. Statement of estimated uncertainty available upon request. Test results refer only to sample(s) listed.
Contact person:  Jim Hayes (813) 229-2879.

Page 1 of 1
### CERTIFICATE OF ANALYSIS

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Units</th>
<th>Results</th>
<th>Analysis Date</th>
<th>Method</th>
<th>Detection Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Combined Radium (Radium-226 + Radium 228)</td>
<td>pCi/l</td>
<td>14.2 ± 1.1</td>
<td>Calc</td>
<td>Calc</td>
<td>0.7</td>
</tr>
<tr>
<td>Radium-226</td>
<td>pCi/l</td>
<td>13.8 ± 1.1</td>
<td>4-25-17/1157</td>
<td>EPA 903.0</td>
<td>0.3</td>
</tr>
<tr>
<td>Radium-228</td>
<td>pCi/l</td>
<td>0.4 ± 0.5</td>
<td>5-1-17/1153</td>
<td>EPA Ra-05</td>
<td>0.7</td>
</tr>
</tbody>
</table>

Alpha Standard: Th-230

Test results meet all requirements of the NELAC standards. Statement of estimated uncertainty available upon request. Test results refer only to sample(s) listed. Contact person: Jim Hayes (813) 229-2879.

Page 1 of 1
TECO  
5012 Causeway Blvd.  
Tampa, FL 33619  

Attn: Peggy Penner

Field Custody: 
Client 
Client/Field ID: L17D013-03 
Sample Collection: BBS-CCR-3 
4-13-17/1111 
Lab ID No: 17.4340 
Lab Custody Date: 4-18-17/1100 
Sample description: Water

**CERTIFICATE OF ANALYSIS**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Units</th>
<th>Results</th>
<th>Analysis Date</th>
<th>Method</th>
<th>Detection Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Combined Radium</td>
<td>pCi/l</td>
<td>14.4 ± 1.1</td>
<td>Calc</td>
<td>Calc</td>
<td>0.7</td>
</tr>
<tr>
<td>(Radium-226 + Radium 228)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Radium-226</td>
<td>pCi/l</td>
<td>13.3 ± 1.1</td>
<td>4-25-17/1157</td>
<td>EPA 903.0</td>
<td>0.3</td>
</tr>
<tr>
<td>Radium-228</td>
<td>pCi/l</td>
<td>1.1 ± 0.6</td>
<td>5-1-17/1153</td>
<td>EPA Ra-05</td>
<td>0.7</td>
</tr>
</tbody>
</table>

Alpha Standard: Th-230

Test results meet all requirements of the NELAC standards. Statement of estimated uncertainty available upon request. Test results refer only to sample(s) listed. Contact person: Jim Hayes (813) 229-2879.

James W. Hayes  
Laboratory Manager
TECO
5012 Causeway Blvd.
Tampa, FL 33619
Attn: Peggy Penner

DOH Certification #E84025
DEP COMPOAP # 870251

Report Date: May 1, 2017

Field Custody: Client
Client/Field ID: L17D013-04
Sample Collection: BBS-CCR-4
Lab ID No: 4-13-17/1032
Lab Custody Date: 17.4341
Sample description: 4-18-17/1100
Water

CERTIFICATE OF ANALYSIS

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Units</th>
<th>Results</th>
<th>Analysis Date</th>
<th>Method</th>
<th>Detection Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Combined Radium (Radium-226 + Radium 228)</td>
<td>pCi/l</td>
<td>39.7 ± 1.9</td>
<td>Calc</td>
<td>Calc</td>
<td>0.8</td>
</tr>
<tr>
<td>Radium-226</td>
<td>pCi/l</td>
<td>35.9 ± 1.9</td>
<td>4-27-17/1048</td>
<td>EPA 903.0</td>
<td>0.3</td>
</tr>
<tr>
<td>Radium-228</td>
<td>pCi/l</td>
<td>3.8 ± 0.7</td>
<td>5-1-17/1153</td>
<td>EPA Ra-05</td>
<td>0.8</td>
</tr>
</tbody>
</table>

Alpha Standard: Th-230


Test results meet all requirements of the NELAC standards. Statement of estimated uncertainty available upon request. Test results refer only to sample(s) listed. Contact person: Jim Hayes (813) 229-2879.

Page 1 of 1
CERTIFICATE OF ANALYSIS

Parameter                  Units | Results  | Analysis Date | Method     | Detection Limit |
-------------------------------|---------|---------------|------------|----------------|
Combined Radium (Radium-226 + Radium 228) | pCi/l  | 4.5 ± 0.7 | Calc | Calc | 0.7 |
Radium-226 | pCi/l  | 3.9 ± 0.7 | 4-27-17/1048 | EPA 903.0 | 0.4  |
Radium-228 | pCi/l  | 0.6 ± 0.5 | 5-1-17/1153 | EPA Ra-05 | 0.7  |

Alpha Standard: Th-230

Test results meet all requirements of the NELAC standards. Statement of estimated uncertainty available upon request. Test results refer only to sample(s) listed. Contact person: Jim Hayes (813) 229-2879.
### SUBCONTRACT ORDER

**Tampa Electric Company, Laboratory Services**  
**L17D013**

**SENDING LABORATORY:**  
Tampa Electric Company, Laboratory Services  
5012 Causeway Blvd  
Tampa, FL 33619  
Phone: (813) 630-7490  
Fax: (813) 630-7360  
Project Manager: Peggy Penner

**RECEIVING LABORATORY:**  
KNL Laboratory Services  
3202 N. Florida Ave.  
Tampa, FL 33603  
Phone: (813) 229-2879  
Fax: -

### Due Date: 04/28/17 16:00

<table>
<thead>
<tr>
<th>Analysis</th>
<th>Expires</th>
<th>Laboratory ID</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sample ID:</strong> L17D013-01 BBS-CCR-1 <strong>Sampled:</strong> 04/13/17 12:05 <strong>containers supplied:</strong> RAD Poly HNO3 - 1000mL (C) RAD Poly HNO3 - 1000mL (D)</td>
<td>10/10/17 12:05 Water 17.4338</td>
<td>Level 2 Data required</td>
<td></td>
</tr>
<tr>
<td>Radium 226 EPA 903.0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Radium 226+228, Total</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Radium 228 Ra-05</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Sample ID:</strong> L17D013-02 BBS-CCR-2 <strong>Sampled:</strong> 04/13/17 11:33 <strong>containers supplied:</strong> RAD Poly HNO3 - 1000mL (C) RAD Poly HNO3 - 1000mL (D)</td>
<td>10/10/17 11:33 Water 17.4339</td>
<td>Level 2 Data required</td>
<td></td>
</tr>
<tr>
<td>Radium 226 EPA 903.0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Radium 226+228, Total</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Radium 228 Ra-05</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Sample ID:</strong> L17D013-03 BBS-CCR-3 <strong>Sampled:</strong> 04/13/17 11:11 <strong>containers supplied:</strong> RAD Poly HNO3 - 1000mL (C) RAD Poly HNO3 - 1000mL (D)</td>
<td>10/10/17 11:11 Water 17.4340</td>
<td>Level 2 Data required</td>
<td></td>
</tr>
<tr>
<td>Radium 226+228, Total</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Radium 226 EPA 903.0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Radium 228 Ra-05</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Sample ID:</strong> L17D013-04 BBS-CCR-BW1 <strong>Sampled:</strong> 04/13/17 10:32</td>
<td>10/10/17 10:32 Water 17.4341</td>
<td>Level 2 Data required</td>
<td></td>
</tr>
<tr>
<td>Radium 226 EPA 903.0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Radium 226+228, Total</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Radium 228 Ra-05</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>containers supplied:</strong> RAD Poly HNO3 - 1000mL (C) RAD Poly HNO3 - 1000mL (D)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Analysis

<table>
<thead>
<tr>
<th>Sample ID: L17D013-05</th>
<th>Expires</th>
<th>Laboratory ID</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>BBS-CCR-BW2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sampled: 04/13/17 10:06</td>
<td>10/10/17 10:06</td>
<td></td>
<td>Level 2 Data required</td>
</tr>
<tr>
<td>Radium 228 Ra-05</td>
<td>10/10/17 10:06</td>
<td></td>
<td>Level 2 Data required</td>
</tr>
<tr>
<td>Radium 226 EPA 903.0</td>
<td>10/10/17 10:06</td>
<td></td>
<td>Level 2 Data required</td>
</tr>
<tr>
<td>Radium 226+228, Total</td>
<td>10/10/17 10:06</td>
<td></td>
<td>Level 2 Data required</td>
</tr>
</tbody>
</table>

**Containers Supplied:**

- RAD Poly HNO3 - 1000mL (C)
- RAD Poly HNO3 - 1000mL (D)

---

Released By: [Signature]
Date & Time: 4/18/17 11:00

Received By: [Signature]
Date & Time: [Time]

**Page 2 of 3**
FL DOH Certification # E84025

 QC Summary: **Total Radium Analysis**

 Client Project #: **L17D013**

 Analysis Completion Date: **4/25/17**

<table>
<thead>
<tr>
<th>Precision Data:</th>
<th>Sample #: <strong>17.4250</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample Analysis (pCi/l)</td>
<td>Duplicate Analysis (pCi/l)</td>
</tr>
<tr>
<td>4.7</td>
<td>4.1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Spike Data:</th>
<th>Sample #: <strong>17.4250</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample Analysis (pCi/l)</td>
<td>Spike Added (pCi/l)</td>
</tr>
<tr>
<td>0.4</td>
<td>4.5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>LCS Data:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Analytical Result (pCi/l)</td>
</tr>
<tr>
<td>11.4</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Lab Blank:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lab Blank</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>
FL DOH Certification # E84025

QC Summary: **Total Radium Analysis**

Client Project #: **L17D013**

Analysis Completion Date: **4/27/17**

<table>
<thead>
<tr>
<th>Sample #</th>
<th>17.4342</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Sample Analysis (pCi/l)</th>
<th>Duplicate Analysis (pCi/l)</th>
<th>Range (pCi/l)</th>
<th>RPD (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>9.6</td>
<td>9.6</td>
<td>0.0</td>
<td>0.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sample #</th>
<th>17.4342</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Sample Analysis (pCi/l)</th>
<th>Spike Added (pCi/l)</th>
<th>Analytical Result (pCi/l)</th>
<th>Spike Rec (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.9</td>
<td>4.5</td>
<td>9.6</td>
<td>127%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Analytical Result (pCi/l)</th>
<th>True Value (pCi/l)</th>
<th>% Recovery</th>
</tr>
</thead>
<tbody>
<tr>
<td>10.2</td>
<td>10.1</td>
<td>101%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Lab Blank</th>
<th>Analytical Result (pCi/l)</th>
<th>Analysis Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lab Blank</td>
<td>0.3 ± 0.1</td>
<td>4/27/17</td>
</tr>
</tbody>
</table>
## FL DOH Certification # E84025

**QC Summary:** Radium 228 Analysis

Client Project #: L17DO13

Analysis Completion Date: 4/26/17

### Precision Data:

<table>
<thead>
<tr>
<th>Sample Analysis (pCi/l)</th>
<th>Duplicate Analysis (pCi/l)</th>
<th>Range (pCi/l)</th>
<th>RPD (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.5</td>
<td>3.8</td>
<td>0.7</td>
<td>16.8%</td>
</tr>
</tbody>
</table>

### Spike Data:

<table>
<thead>
<tr>
<th>Sample Analysis (pCi/l)</th>
<th>Spike Added (pCi/l)</th>
<th>Analytical Result (pCi/l)</th>
<th>Spike Rec (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0</td>
<td>4.0</td>
<td>3.8</td>
<td>95%</td>
</tr>
</tbody>
</table>

### LCS Data:

<table>
<thead>
<tr>
<th>Analytical Result (pCi/l)</th>
<th>True Value (pCi/l)</th>
<th>% Recovery</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.3</td>
<td>4.44</td>
<td>97.2%</td>
</tr>
</tbody>
</table>

### Lab Blank:

<table>
<thead>
<tr>
<th>Lab Blank</th>
<th>Analytical Result (pCi/l)</th>
<th>Analysis Date</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.1 +/- 0.2</td>
<td>4/26/17</td>
</tr>
</tbody>
</table>
FL DOH Certification # E84025

QC Summary: **Radium 228 Analysis**

Client Project #: **L170 013**

Analysis Completion Date: **5/1/17**

### Precision Data:

<table>
<thead>
<tr>
<th>Sample Analysis (pCi/l)</th>
<th>Duplicate Analysis (pCi/l)</th>
<th>Range (pCi/l)</th>
<th>RPD (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.8</td>
<td>8.9</td>
<td>0.0</td>
<td>0.0</td>
</tr>
</tbody>
</table>

### Spike Data:

<table>
<thead>
<tr>
<th>Sample Analysis (pCi/l)</th>
<th>Spike Added (pCi/l)</th>
<th>Analytical Result (pCi/l)</th>
<th>Spike Rec (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.8</td>
<td>3.95</td>
<td>8.8</td>
<td>127%</td>
</tr>
</tbody>
</table>

### LCS Data:

<table>
<thead>
<tr>
<th>Analytical Result (pCi/l)</th>
<th>True Value (pCi/l)</th>
<th>% Recovery</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.2</td>
<td>4.39</td>
<td>96%</td>
</tr>
</tbody>
</table>

### Lab Blank:

<table>
<thead>
<tr>
<th>Analytical Result (pCi/l)</th>
<th>Analysis Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0 ± 0.2</td>
<td>5/1/17</td>
</tr>
</tbody>
</table>

---

KNL – Radium 228 Analysis- FL DOH Certification QC Data sheet – Form #139
Revised 6/30/16

1 of 1
Tampa Electric Laboratory Services
5012 Causeway Blvd Tampa FL 33619 * Ph (813)630-7490 * Fax (813)630-7360 * DOH #E54272

Report Date: 07/17/17 11:04

Big Bend Power Station
Terry Eastley
13031 Wyandott Rd
Apollo Beach, FL 33572
tleastley@tecoenergy.com

Lithium was subcontracted to TestAmerica Labs. The report is attached.

Rad 226/228 was subcontracted to KNL Laboratories, the report is attached.

**EPA 300.0**

The recovery of the matrix spike and spike duplicate for Sulfate was above the control limits due to matrix interference. The parent sample is flagged with a J qualifier.

**EPA 6010**

The recovery of the matrix spike and/or spike duplicate for Calcium and Boron could not be accurately determined due to the amount of target analyte in the sample matrix. The parent sample is flagged with a J qualifier.

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
# Sample Information

**Client:** Big Bend Power Station  
**Lab Sample ID:** L17F009-01  
**Sample Description:** BBS-CCR-1  
**Sample Collection Method:** Grab  
**Sampled By:** Robert Barthelette  
**Date and Time Collected:** 6/28/17 12:45  
**Date of Sample Receipt:** 6/28/17 15:12

# Laboratory Results

**Sample Qualifier:**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Code</th>
<th>Dil</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis</th>
<th>Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>General Chemistry Parameters</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chloride</td>
<td>720</td>
<td>mg/L</td>
<td>2.00</td>
<td>50.0</td>
<td>100</td>
<td></td>
<td>EPA 300.0</td>
<td>RFL</td>
<td>6/29/17</td>
<td>17:33</td>
</tr>
<tr>
<td>Specific Conductance</td>
<td>4060</td>
<td>umhos/cm</td>
<td>100</td>
<td>100</td>
<td>1</td>
<td>FDEP SOP FT 1200</td>
<td>RAB</td>
<td>6/28/17</td>
<td>12:45</td>
<td></td>
</tr>
<tr>
<td>Dissolved Oxygen</td>
<td>0.270</td>
<td>mg/L</td>
<td>0.100</td>
<td>0.100</td>
<td>1</td>
<td>FDEP SOP FT 1500</td>
<td>RAB</td>
<td>6/28/17</td>
<td>12:45</td>
<td></td>
</tr>
<tr>
<td>Fluoride</td>
<td>0.208</td>
<td>mg/L</td>
<td>0.0100</td>
<td>0.0500</td>
<td>1</td>
<td>EPA 300.0</td>
<td>RFL</td>
<td>6/29/17</td>
<td>17:23</td>
<td></td>
</tr>
<tr>
<td>pH</td>
<td>6.78</td>
<td>pH Units</td>
<td>1.00</td>
<td>1.00</td>
<td>1</td>
<td>FDEP SOP FT 1100</td>
<td>RAB</td>
<td>6/28/17</td>
<td>12:45</td>
<td></td>
</tr>
<tr>
<td>REDOX Potential</td>
<td>-80.6</td>
<td>mV</td>
<td>-999</td>
<td>-999</td>
<td>1</td>
<td>SM 2580B</td>
<td>RAB</td>
<td>6/28/17</td>
<td>12:45</td>
<td></td>
</tr>
<tr>
<td>Total Dissolved Solids</td>
<td>3140</td>
<td>mg/L</td>
<td>24.0</td>
<td>40.0</td>
<td>2</td>
<td>SM 2540C</td>
<td>TMH</td>
<td>7/3/17</td>
<td>13:19</td>
<td></td>
</tr>
<tr>
<td>Sulfate</td>
<td>1120</td>
<td>mg/L</td>
<td>50.0</td>
<td>200</td>
<td>100</td>
<td>EPA 300.0</td>
<td>RFL</td>
<td>7/10/17</td>
<td>13:29</td>
<td></td>
</tr>
<tr>
<td>Turbidity</td>
<td>3.63</td>
<td>NTU</td>
<td>0.100</td>
<td>0.100</td>
<td>1</td>
<td>FDEP SOP FT 1600</td>
<td>RAB</td>
<td>6/28/17</td>
<td>12:45</td>
<td></td>
</tr>
<tr>
<td><strong>Total Mercury by SW846 Method 7470/7471</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mercury</td>
<td>0.0500</td>
<td>ug/L</td>
<td>0.0500</td>
<td>0.200</td>
<td>U</td>
<td>1</td>
<td>EPA 7470A</td>
<td>RLC</td>
<td>7/5/17</td>
<td>14:04</td>
</tr>
<tr>
<td><strong>Total Recoverable Metals by 200 Series</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Antimony</td>
<td>0.600</td>
<td>ug/L</td>
<td>0.600</td>
<td>2.00</td>
<td>U</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RLC</td>
<td>6/29/17</td>
<td>14:49</td>
</tr>
<tr>
<td>Arsenic</td>
<td>9.76</td>
<td>ug/L</td>
<td>0.320</td>
<td>2.00</td>
<td>U</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RLC</td>
<td>6/29/17</td>
<td>14:49</td>
</tr>
<tr>
<td>Cadmium</td>
<td>0.100</td>
<td>ug/L</td>
<td>0.100</td>
<td>0.500</td>
<td>U</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RLC</td>
<td>6/29/17</td>
<td>14:49</td>
</tr>
<tr>
<td>Cobalt</td>
<td>0.484</td>
<td>ug/L</td>
<td>0.0400</td>
<td>2.00</td>
<td>I</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RLC</td>
<td>6/29/17</td>
<td>14:49</td>
</tr>
<tr>
<td>Lead</td>
<td>8.00E-5</td>
<td>mg/L</td>
<td>8.00E-5</td>
<td>0.00200</td>
<td>U</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RLC</td>
<td>6/29/17</td>
<td>14:49</td>
</tr>
<tr>
<td>Selenium</td>
<td>0.756</td>
<td>ug/L</td>
<td>0.200</td>
<td>2.00</td>
<td>I</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RLC</td>
<td>6/29/17</td>
<td>14:49</td>
</tr>
<tr>
<td>Thallium</td>
<td>0.100</td>
<td>ug/L</td>
<td>0.100</td>
<td>0.500</td>
<td>U</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RLC</td>
<td>6/29/17</td>
<td>14:49</td>
</tr>
<tr>
<td><strong>Total Recoverable Metals by SW846 Method 6010B</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Barium</td>
<td>0.113</td>
<td>mg/L</td>
<td>0.000500</td>
<td>0.0200</td>
<td>1</td>
<td>EPA 6010B</td>
<td>RLC</td>
<td>6/30/17</td>
<td>8:46</td>
<td></td>
</tr>
<tr>
<td>Beryllium</td>
<td>0.200</td>
<td>ug/L</td>
<td>0.200</td>
<td>2.00</td>
<td>U</td>
<td>1</td>
<td>EPA 6010B</td>
<td>RLC</td>
<td>6/30/17</td>
<td>8:46</td>
</tr>
<tr>
<td>Boron</td>
<td>16.5</td>
<td>mg/L</td>
<td>0.0100</td>
<td>0.0500</td>
<td>1</td>
<td>EPA 6010B</td>
<td>RLC</td>
<td>6/30/17</td>
<td>8:46</td>
<td></td>
</tr>
<tr>
<td>Calcium</td>
<td>569</td>
<td>mg/L</td>
<td>0.0300</td>
<td>1.00</td>
<td>U</td>
<td>1</td>
<td>EPA 6010B</td>
<td>RLC</td>
<td>6/29/17</td>
<td>13:49</td>
</tr>
<tr>
<td>Chromium</td>
<td>1.93</td>
<td>ug/L</td>
<td>1.60</td>
<td>12.0</td>
<td>I</td>
<td>1</td>
<td>EPA 6010B</td>
<td>RLC</td>
<td>6/30/17</td>
<td>8:46</td>
</tr>
<tr>
<td>Molybdenum</td>
<td>96.5</td>
<td>ug/L</td>
<td>1.00</td>
<td>20.0</td>
<td>V</td>
<td>1</td>
<td>EPA 6010B</td>
<td>RLC</td>
<td>6/30/17</td>
<td>12:58</td>
</tr>
</tbody>
</table>

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
### Sample Information

- **Client:** Big Bend Power Station
- **Lab Sample ID:** L17F009-02
- **Sample Description:** BBS-CCR-2
- **Sample Collection Method:** Grab
- **Sampled By:** Robert Barthelette
- **Date and Time Collected:** 6/28/17 11:27
- **Date of Sample Receipt:** 6/28/17 15:12

### Laboratory Results

#### Sample Qualifier:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier Code</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>General Chemistry Parameters</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chloride</td>
<td>105</td>
<td>mg/L</td>
<td>0.200</td>
<td>5.00</td>
<td>10</td>
<td>EPA 300.0</td>
<td>RFL</td>
<td>6/29/17 17:53</td>
</tr>
<tr>
<td>Specific Conductance</td>
<td>1480</td>
<td>umhos/cm</td>
<td>100</td>
<td>100</td>
<td>1</td>
<td>FDEP SOP FT 1200</td>
<td>RAB</td>
<td>6/28/17 11:27</td>
</tr>
<tr>
<td>Dissolved Oxygen</td>
<td>0.240</td>
<td>mg/L</td>
<td>0.100</td>
<td>0.100</td>
<td>1</td>
<td>FDEP SOP FT 1500</td>
<td>RAB</td>
<td>6/28/17 11:27</td>
</tr>
<tr>
<td>Fluoride</td>
<td>0.214</td>
<td>mg/L</td>
<td>0.0100</td>
<td>0.0500</td>
<td>1</td>
<td>EPA 300.0</td>
<td>RFL</td>
<td>6/29/17 17:43</td>
</tr>
<tr>
<td>pH</td>
<td>6.87</td>
<td>pH Units</td>
<td>1.00</td>
<td>1.00</td>
<td>1</td>
<td>FDEP SOP FT 1100</td>
<td>RAB</td>
<td>6/28/17 11:27</td>
</tr>
<tr>
<td>REDOX Potential</td>
<td>-131</td>
<td>mV</td>
<td>-999</td>
<td>-999</td>
<td>1</td>
<td>SM 2580B</td>
<td>RAB</td>
<td>6/28/17 11:27</td>
</tr>
<tr>
<td>Total Dissolved Solids</td>
<td>1080</td>
<td>mg/L</td>
<td>12.0</td>
<td>20.0</td>
<td>1</td>
<td>SM 2540C</td>
<td>TMH</td>
<td>7/3/17 13:19</td>
</tr>
<tr>
<td>Sulfate</td>
<td>415</td>
<td>mg/L</td>
<td>5.00</td>
<td>20.0</td>
<td>J- 10</td>
<td>EPA 300.0</td>
<td>RFL</td>
<td>7/10/17 13:39</td>
</tr>
<tr>
<td>Turbidity</td>
<td>4.71</td>
<td>NTU</td>
<td>0.100</td>
<td>0.100</td>
<td>1</td>
<td>FDEP SOP FT 1600</td>
<td>RAB</td>
<td>6/28/17 11:27</td>
</tr>
<tr>
<td><strong>Total Mercury by SW846 Method 7470/7471</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mercury</td>
<td>0.0500</td>
<td>ug/L</td>
<td>0.0500</td>
<td>0.200</td>
<td>U</td>
<td>EPA 7470A</td>
<td>RLC</td>
<td>7/5/17 14:08</td>
</tr>
<tr>
<td><strong>Total Recoverable Metals by 200 Series</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Antimony</td>
<td>0.600</td>
<td>ug/L</td>
<td>0.600</td>
<td>2.00</td>
<td>U</td>
<td>EPA 200.8</td>
<td>RLC</td>
<td>6/29/17 14:53</td>
</tr>
<tr>
<td>Arsenic</td>
<td>1.01</td>
<td>ug/L</td>
<td>0.320</td>
<td>2.00</td>
<td>I</td>
<td>EPA 200.8</td>
<td>RLC</td>
<td>6/29/17 14:53</td>
</tr>
<tr>
<td>Cadmium</td>
<td>0.100</td>
<td>ug/L</td>
<td>0.100</td>
<td>0.500</td>
<td>U</td>
<td>EPA 200.8</td>
<td>RLC</td>
<td>6/29/17 14:53</td>
</tr>
<tr>
<td>Cobalt</td>
<td>0.0875</td>
<td>ug/L</td>
<td>0.0400</td>
<td>2.00</td>
<td>I</td>
<td>EPA 200.8</td>
<td>RLC</td>
<td>6/29/17 14:53</td>
</tr>
<tr>
<td>Lead</td>
<td>0.000144</td>
<td>mg/L</td>
<td>8.00E-5</td>
<td>0.00200</td>
<td>I</td>
<td>EPA 200.8</td>
<td>RLC</td>
<td>6/29/17 14:53</td>
</tr>
<tr>
<td>Selenium</td>
<td>0.200</td>
<td>ug/L</td>
<td>0.200</td>
<td>2.00</td>
<td>U</td>
<td>EPA 200.8</td>
<td>RLC</td>
<td>6/29/17 14:53</td>
</tr>
<tr>
<td>Thallium</td>
<td>0.100</td>
<td>ug/L</td>
<td>0.100</td>
<td>0.500</td>
<td>U</td>
<td>EPA 200.8</td>
<td>RLC</td>
<td>6/29/17 14:53</td>
</tr>
<tr>
<td><strong>Total Recoverable Metals by SW846 Method 6010B</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Barium</td>
<td>0.0546</td>
<td>mg/L</td>
<td>0.000500</td>
<td>0.0200</td>
<td>I</td>
<td>EPA 6010B</td>
<td>RLC</td>
<td>6/30/17 8:49</td>
</tr>
<tr>
<td>Beryllium</td>
<td>0.200</td>
<td>ug/L</td>
<td>0.200</td>
<td>2.00</td>
<td>U</td>
<td>EPA 6010B</td>
<td>RLC</td>
<td>6/30/17 8:49</td>
</tr>
<tr>
<td>Boron</td>
<td>3.20</td>
<td>mg/L</td>
<td>0.0100</td>
<td>0.0500</td>
<td>1</td>
<td>EPA 6010B</td>
<td>RLC</td>
<td>6/30/17 8:49</td>
</tr>
<tr>
<td>Calcium</td>
<td>173</td>
<td>mg/L</td>
<td>0.0300</td>
<td>1.00</td>
<td>1</td>
<td>EPA 6010B</td>
<td>RLC</td>
<td>6/29/17 13:51</td>
</tr>
<tr>
<td>Chromium</td>
<td>1.96</td>
<td>ug/L</td>
<td>1.60</td>
<td>12.0</td>
<td>I</td>
<td>EPA 6010B</td>
<td>RLC</td>
<td>6/30/17 8:49</td>
</tr>
<tr>
<td>Molybdenum</td>
<td>9.59</td>
<td>ug/L</td>
<td>1.00</td>
<td>20.0</td>
<td>I,V</td>
<td>EPA 6010B</td>
<td>RLC</td>
<td>6/30/17 13:00</td>
</tr>
</tbody>
</table>

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
Tampa Electric Laboratory Services
5012 Causeway Blvd Tampa Fl 33619 * Ph (813)630-7490 * Fax (813)630-7360 * DOH #E54272

Sample Information

<table>
<thead>
<tr>
<th>Client:</th>
<th>Big Bend Power Station</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lab Sample ID:</td>
<td>L17F009-03</td>
</tr>
<tr>
<td>Sample Description:</td>
<td>BBS-CCR-3</td>
</tr>
<tr>
<td>Sample Collection Method:</td>
<td>Grab</td>
</tr>
<tr>
<td>Sampled By:</td>
<td>Robert Barthelette</td>
</tr>
<tr>
<td>Date and Time Collected:</td>
<td>6/28/17 11:00</td>
</tr>
<tr>
<td>Date of Sample Receipt:</td>
<td>6/28/17 15:12</td>
</tr>
</tbody>
</table>

Laboratory Results

Sample Qualifier:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier</th>
<th>Code</th>
<th>Dil</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chloride</td>
<td>168</td>
<td>mg/L</td>
<td>0.200</td>
<td>5.00</td>
<td>10</td>
<td>EPA 300.0</td>
<td>RFL</td>
<td>6/29/17 18:54</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Specific Conductance</td>
<td>1760</td>
<td>umhos/cm</td>
<td>100</td>
<td>100</td>
<td>1</td>
<td>FDEP SOP FT 1200</td>
<td>RAB</td>
<td>6/28/17 11:00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dissolved Oxygen</td>
<td>0.280</td>
<td>mg/L</td>
<td>0.100</td>
<td>0.100</td>
<td>1</td>
<td>FDEP SOP FT 1500</td>
<td>RAB</td>
<td>6/28/17 11:00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fluoride</td>
<td>0.338</td>
<td>mg/L</td>
<td>0.0100</td>
<td>0.0500</td>
<td>1</td>
<td>EPA 300.0</td>
<td>RFL</td>
<td>6/29/17 18:24</td>
<td></td>
<td></td>
</tr>
<tr>
<td>pH</td>
<td>6.38</td>
<td>pH Units</td>
<td>1.00</td>
<td>1.00</td>
<td>1</td>
<td>FDEP SOP FT 1100</td>
<td>RAB</td>
<td>6/28/17 11:00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>REDOX Potential</td>
<td>-125</td>
<td>mV</td>
<td>-999</td>
<td>-999</td>
<td>1</td>
<td>SM 2580B</td>
<td>RAB</td>
<td>6/28/17 11:00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Dissolved Solids</td>
<td>1280</td>
<td>mg/L</td>
<td>12.0</td>
<td>20.0</td>
<td>10</td>
<td>EPA 300.0</td>
<td>RFL</td>
<td>7/10/17 14:09</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sulfate</td>
<td>493</td>
<td>mg/L</td>
<td>5.00</td>
<td>20.0</td>
<td>1</td>
<td>EPA 300.0</td>
<td>RFL</td>
<td>7/10/17 14:09</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Turbidity</td>
<td>0.940</td>
<td>NTU</td>
<td>0.100</td>
<td>0.100</td>
<td>1</td>
<td>FDEP SOP FT 1600</td>
<td>RAB</td>
<td>6/28/17 11:00</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Total Mercury by SW846 Method 7470/7471

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier</th>
<th>Code</th>
<th>Dil</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mercury</td>
<td>0.0500</td>
<td>ug/L</td>
<td>0.0500</td>
<td>0.200</td>
<td>U</td>
<td>1</td>
<td>EPA 7470A</td>
<td>RLC</td>
<td>7/5/17 14:11</td>
<td></td>
</tr>
</tbody>
</table>

Total Recoverable Metals by 200 Series

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier</th>
<th>Code</th>
<th>Dil</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antimony</td>
<td>0.600</td>
<td>ug/L</td>
<td>0.600</td>
<td>2.00</td>
<td>U</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RLC</td>
<td>6/29/17 14:57</td>
<td></td>
</tr>
<tr>
<td>Arsenic</td>
<td>0.525</td>
<td>ug/L</td>
<td>0.320</td>
<td>2.00</td>
<td>I</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RLC</td>
<td>6/29/17 14:57</td>
<td></td>
</tr>
<tr>
<td>Cadmium</td>
<td>0.100</td>
<td>ug/L</td>
<td>0.100</td>
<td>0.500</td>
<td>U</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RLC</td>
<td>6/29/17 14:57</td>
<td></td>
</tr>
<tr>
<td>Cobalt</td>
<td>0.119</td>
<td>ug/L</td>
<td>0.0400</td>
<td>2.00</td>
<td>I</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RLC</td>
<td>6/29/17 14:57</td>
<td></td>
</tr>
<tr>
<td>Lead</td>
<td>8.00E-5</td>
<td>mg/L</td>
<td>8.00E-5</td>
<td>0.00200</td>
<td>U</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RLC</td>
<td>6/29/17 14:57</td>
<td></td>
</tr>
<tr>
<td>Selenium</td>
<td>0.200</td>
<td>ug/L</td>
<td>0.200</td>
<td>2.00</td>
<td>U</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RLC</td>
<td>6/29/17 14:57</td>
<td></td>
</tr>
<tr>
<td>Thallium</td>
<td>0.100</td>
<td>ug/L</td>
<td>0.100</td>
<td>0.500</td>
<td>U</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RLC</td>
<td>6/29/17 14:57</td>
<td></td>
</tr>
</tbody>
</table>

Total Recoverable Metals by SW846 Method 6010B

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier</th>
<th>Code</th>
<th>Dil</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barium</td>
<td>0.0618</td>
<td>mg/L</td>
<td>0.000500</td>
<td>0.0200</td>
<td>1</td>
<td>EPA 6010B</td>
<td>RLC</td>
<td>6/30/17 8:51</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beryllium</td>
<td>0.200</td>
<td>ug/L</td>
<td>0.200</td>
<td>2.00</td>
<td>U</td>
<td>1</td>
<td>EPA 6010B</td>
<td>RLC</td>
<td>6/30/17 8:51</td>
<td></td>
</tr>
<tr>
<td>Boron</td>
<td>0.184</td>
<td>mg/L</td>
<td>0.0100</td>
<td>0.0500</td>
<td>1</td>
<td>EPA 6010B</td>
<td>RLC</td>
<td>6/30/17 8:51</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Calcium</td>
<td>192</td>
<td>mg/L</td>
<td>0.0300</td>
<td>1.00</td>
<td>1</td>
<td>EPA 6010B</td>
<td>RLC</td>
<td>6/29/17 13:54</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chromium</td>
<td>3.12</td>
<td>ug/L</td>
<td>1.60</td>
<td>12.0</td>
<td>I</td>
<td>1</td>
<td>EPA 6010B</td>
<td>RLC</td>
<td>6/30/17 8:51</td>
<td></td>
</tr>
<tr>
<td>Molybdenum</td>
<td>11.9</td>
<td>ug/L</td>
<td>1.00</td>
<td>20.0</td>
<td>I,V</td>
<td>1</td>
<td>EPA 6010B</td>
<td>RLC</td>
<td>6/30/17 13:03</td>
<td></td>
</tr>
</tbody>
</table>

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
**Sample Information**

- **Client:** Big Bend Power Station
- **Lab Sample ID:** L17F009-04
- **Sample Description:** BBS-CCR-BW1
- **Sample Collection Method:** Grab
- **Sampled By:** Robert Barthelette
- **Date and Time Collected:** 6/28/17 10:28
- **Date of Sample Receipt:** 6/28/17 15:12

---

**Laboratory Results**

### General Chemistry Parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier</th>
<th>Dil</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chloride</td>
<td>995</td>
<td>mg/L</td>
<td>2.00</td>
<td>50.0</td>
<td>100</td>
<td></td>
<td>EPA 300.0</td>
<td>RFL</td>
<td>6/29/17 19:14</td>
</tr>
<tr>
<td>Specific Conductance</td>
<td>5010</td>
<td>umhos/cm</td>
<td>100</td>
<td>100</td>
<td>1</td>
<td></td>
<td>FDEP SOP FT 1200</td>
<td>RAB</td>
<td>6/28/17 10:28</td>
</tr>
<tr>
<td>Dissolved Oxygen</td>
<td>0.420</td>
<td>mg/L</td>
<td>0.100</td>
<td>0.100</td>
<td>1</td>
<td></td>
<td>FDEP SOP FT 1500</td>
<td>RAB</td>
<td>6/28/17 10:28</td>
</tr>
<tr>
<td>Fluoride</td>
<td>0.298</td>
<td>mg/L</td>
<td>0.0100</td>
<td>0.0500</td>
<td>1</td>
<td></td>
<td>EPA 300.0</td>
<td>RFL</td>
<td>6/29/17 19:04</td>
</tr>
<tr>
<td>pH</td>
<td>6.47</td>
<td>pH Units</td>
<td>1.00</td>
<td>1.00</td>
<td>1</td>
<td></td>
<td>FDEP SOP FT 1100</td>
<td>RAB</td>
<td>6/28/17 10:28</td>
</tr>
<tr>
<td>REDOX Potential</td>
<td>-11.4</td>
<td>mV</td>
<td>-999</td>
<td>-999</td>
<td>1</td>
<td></td>
<td>SM 2580B</td>
<td>RAB</td>
<td>6/28/17 10:28</td>
</tr>
<tr>
<td>Total Dissolved Solids</td>
<td>4430</td>
<td>mg/L</td>
<td>48.0</td>
<td>80.0</td>
<td>4</td>
<td></td>
<td>SM 2540C</td>
<td>TMH</td>
<td>7/3/17 13:19</td>
</tr>
<tr>
<td>Sulfate</td>
<td>1510</td>
<td>mg/L</td>
<td>50.0</td>
<td>200</td>
<td>100</td>
<td></td>
<td>EPA 300.0</td>
<td>RFL</td>
<td>7/10/17 14:19</td>
</tr>
<tr>
<td>Turbidity</td>
<td>0.690</td>
<td>NTU</td>
<td>0.100</td>
<td>0.100</td>
<td>1</td>
<td></td>
<td>FDEP SOP FT 1600</td>
<td>RAB</td>
<td>6/28/17 10:28</td>
</tr>
</tbody>
</table>

**Total Mercury by SW846 Method 7470/7471**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>Qualifier</th>
<th>Dil</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mercury</td>
<td>0.0500</td>
<td>ug/L</td>
<td>0.0500</td>
<td>0.200</td>
<td>U</td>
<td>1</td>
<td>EPA 7470A</td>
</tr>
</tbody>
</table>

**Total Recoverable Metals by 200 Series**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>Qualifier</th>
<th>Dil</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antimony</td>
<td>0.600</td>
<td>ug/L</td>
<td>0.600</td>
<td>2.00</td>
<td>U</td>
<td>1</td>
<td>EPA 200.8</td>
</tr>
<tr>
<td>Arsenic</td>
<td>7.68</td>
<td>ug/L</td>
<td>0.320</td>
<td>2.00</td>
<td>1</td>
<td>1</td>
<td>EPA 200.8</td>
</tr>
<tr>
<td>Cadmium</td>
<td>0.124</td>
<td>ug/L</td>
<td>0.100</td>
<td>0.500</td>
<td>I</td>
<td>1</td>
<td>EPA 200.8</td>
</tr>
<tr>
<td>Cobalt</td>
<td>1.71</td>
<td>ug/L</td>
<td>0.0400</td>
<td>2.00</td>
<td>I</td>
<td>1</td>
<td>EPA 200.8</td>
</tr>
<tr>
<td>Lead</td>
<td>8.00E-5</td>
<td>mg/L</td>
<td>8.00E-5</td>
<td>0.00200</td>
<td>U</td>
<td>1</td>
<td>EPA 200.8</td>
</tr>
<tr>
<td>Selenium</td>
<td>1.81</td>
<td>ug/L</td>
<td>0.200</td>
<td>2.00</td>
<td>I</td>
<td>1</td>
<td>EPA 200.8</td>
</tr>
<tr>
<td>Thallium</td>
<td>0.100</td>
<td>ug/L</td>
<td>0.100</td>
<td>0.500</td>
<td>U</td>
<td>1</td>
<td>EPA 200.8</td>
</tr>
</tbody>
</table>

**Total Recoverable Metals by SW846 Method 6010B**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>Qualifier</th>
<th>Dil</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barium</td>
<td>0.0554</td>
<td>mg/L</td>
<td>0.000500</td>
<td>0.0200</td>
<td>1</td>
<td>EPA 6010B</td>
<td>RLC</td>
</tr>
<tr>
<td>Beryllium</td>
<td>0.200</td>
<td>ug/L</td>
<td>0.200</td>
<td>2.00</td>
<td>U</td>
<td>1</td>
<td>EPA 6010B</td>
</tr>
<tr>
<td>Boron</td>
<td>51.7</td>
<td>mg/L</td>
<td>0.0100</td>
<td>0.0500</td>
<td>1</td>
<td>EPA 6010B</td>
<td>RLC</td>
</tr>
<tr>
<td>Calcium</td>
<td>781</td>
<td>mg/L</td>
<td>0.0300</td>
<td>1.00</td>
<td>1</td>
<td>EPA 6010B</td>
<td>RLC</td>
</tr>
<tr>
<td>Chromium</td>
<td>2.29</td>
<td>ug/L</td>
<td>1.60</td>
<td>12.0</td>
<td>I</td>
<td>1</td>
<td>EPA 6010B</td>
</tr>
<tr>
<td>Molybdenum</td>
<td>16.3</td>
<td>ug/L</td>
<td>1.00</td>
<td>20.0</td>
<td>I,V</td>
<td>1</td>
<td>EPA 6010B</td>
</tr>
</tbody>
</table>

Tampa Electric Company, Laboratory Services

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
### Sample Information

<table>
<thead>
<tr>
<th>Client:</th>
<th>Big Bend Power Station</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lab Sample ID:</td>
<td>L17F009-05</td>
</tr>
<tr>
<td>Sample Description:</td>
<td>BBS-CCR-BW2</td>
</tr>
<tr>
<td>Sample Collection Method:</td>
<td>Grab</td>
</tr>
</tbody>
</table>

**Sample Collection:**

- **Sampled By:** Robert Barthelette
- **Date and Time Collected:** 6/28/17 10:02
- **Date of Sample Receipt:** 6/28/17 15:12

### Laboratory Results

#### Sample Qualifier:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier Code</th>
<th>Dil</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
</table>

#### General Chemistry Parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Code</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chloride</td>
<td>135</td>
<td>mg/L</td>
<td>0.200</td>
<td>5.00</td>
<td>10</td>
<td>EPA 300.0</td>
<td>RFL</td>
<td>6/29/17 19:34</td>
</tr>
<tr>
<td>Specific Conductance</td>
<td>1540</td>
<td>umhos/cm</td>
<td>100</td>
<td>100</td>
<td>1</td>
<td>FDEP SOP FT 1200</td>
<td>RAB</td>
<td>6/28/17 10:02</td>
</tr>
<tr>
<td>Dissolved Oxygen</td>
<td>0.190</td>
<td>mg/L</td>
<td>0.100</td>
<td>0.100</td>
<td>1</td>
<td>FDEP SOP FT 1500</td>
<td>RAB</td>
<td>6/28/17 10:02</td>
</tr>
<tr>
<td>Fluoride</td>
<td>0.559</td>
<td>mg/L</td>
<td>0.0100</td>
<td>0.0500</td>
<td>1</td>
<td>EPA 300.0</td>
<td>RFL</td>
<td>6/29/17 19:24</td>
</tr>
<tr>
<td>pH</td>
<td>6.64</td>
<td>pH Units</td>
<td>1.00</td>
<td>1.00</td>
<td>1</td>
<td>FDEP SOP FT 1100</td>
<td>RAB</td>
<td>6/28/17 10:02</td>
</tr>
<tr>
<td>REDOX Potential</td>
<td>-82.4</td>
<td>mV</td>
<td>-999</td>
<td>-999</td>
<td>1</td>
<td>SM 2580B</td>
<td>RAB</td>
<td>6/28/17 10:02</td>
</tr>
<tr>
<td>Total Dissolved Solids</td>
<td>1170</td>
<td>mg/L</td>
<td>12.0</td>
<td>20.0</td>
<td>10</td>
<td>EPA 300.0</td>
<td>RFL</td>
<td>7/10/17 14:29</td>
</tr>
<tr>
<td>Sulfate</td>
<td>402</td>
<td>mg/L</td>
<td>5.00</td>
<td>20.0</td>
<td>1</td>
<td>EPA 300.0</td>
<td>RFL</td>
<td>7/10/17 14:29</td>
</tr>
<tr>
<td>Turbidity</td>
<td>6.09</td>
<td>NTU</td>
<td>0.100</td>
<td>0.100</td>
<td>1</td>
<td>FDEP SOP FT 1600</td>
<td>RAB</td>
<td>6/28/17 10:02</td>
</tr>
</tbody>
</table>

#### Total Mercury by SW846 Method 7470/7471

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Code</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mercury</td>
<td>0.0500</td>
<td>ug/L</td>
<td>0.0500</td>
<td>0.200</td>
<td>U</td>
<td>EPA 7470A</td>
<td>RLC</td>
<td>7/5/17 14:25</td>
</tr>
</tbody>
</table>

#### Total Recoverable Metals by 200 Series

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Code</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antimony</td>
<td>0.600</td>
<td>ug/L</td>
<td>0.600</td>
<td>2.00</td>
<td>U</td>
<td>EPA 200.8</td>
<td>RLC</td>
<td>6/29/17 15:04</td>
</tr>
<tr>
<td>Arsenic</td>
<td>1.68</td>
<td>ug/L</td>
<td>0.320</td>
<td>2.00</td>
<td>I</td>
<td>EPA 200.8</td>
<td>RLC</td>
<td>6/29/17 15:04</td>
</tr>
<tr>
<td>Cadmium</td>
<td>0.100</td>
<td>ug/L</td>
<td>0.100</td>
<td>0.500</td>
<td>U</td>
<td>EPA 200.8</td>
<td>RLC</td>
<td>6/29/17 15:04</td>
</tr>
<tr>
<td>Cobalt</td>
<td>0.0959</td>
<td>ug/L</td>
<td>0.0400</td>
<td>2.00</td>
<td>I</td>
<td>EPA 200.8</td>
<td>RLC</td>
<td>6/29/17 15:04</td>
</tr>
<tr>
<td>Lead</td>
<td>8.00E-5</td>
<td>mg/L</td>
<td>8.00E-5</td>
<td>0.00200</td>
<td>U</td>
<td>EPA 200.8</td>
<td>RLC</td>
<td>6/29/17 15:04</td>
</tr>
<tr>
<td>Selenium</td>
<td>0.386</td>
<td>ug/L</td>
<td>0.200</td>
<td>2.00</td>
<td>I</td>
<td>EPA 200.8</td>
<td>RLC</td>
<td>6/29/17 15:04</td>
</tr>
<tr>
<td>Thallium</td>
<td>0.100</td>
<td>ug/L</td>
<td>0.100</td>
<td>0.500</td>
<td>U</td>
<td>EPA 200.8</td>
<td>RLC</td>
<td>6/29/17 15:04</td>
</tr>
</tbody>
</table>

#### Total Recoverable Metals by SW846 Method 6010B

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Code</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barium</td>
<td>0.0488</td>
<td>mg/L</td>
<td>0.000500</td>
<td>0.0200</td>
<td>1</td>
<td>EPA 6010B</td>
<td>RLC</td>
<td>6/30/17 8:56</td>
</tr>
<tr>
<td>Beryllium</td>
<td>0.200</td>
<td>ug/L</td>
<td>0.200</td>
<td>2.00</td>
<td>U</td>
<td>EPA 6010B</td>
<td>RLC</td>
<td>6/30/17 8:56</td>
</tr>
<tr>
<td>Boron</td>
<td>4.54</td>
<td>mg/L</td>
<td>0.0100</td>
<td>0.0500</td>
<td>J-</td>
<td>EPA 6010B</td>
<td>RLC</td>
<td>6/30/17 8:56</td>
</tr>
<tr>
<td>Calcium</td>
<td>290</td>
<td>mg/L</td>
<td>0.0300</td>
<td>1.00</td>
<td>J-</td>
<td>EPA 6010B</td>
<td>RLC</td>
<td>6/29/17 13:59</td>
</tr>
<tr>
<td>Chromium</td>
<td>1.68</td>
<td>ug/L</td>
<td>1.60</td>
<td>12.0</td>
<td>I</td>
<td>EPA 6010B</td>
<td>RLC</td>
<td>6/30/17 8:56</td>
</tr>
<tr>
<td>Molybdenum</td>
<td>10.2</td>
<td>ug/L</td>
<td>1.00</td>
<td>20.0</td>
<td>I,V</td>
<td>EPA 6010B</td>
<td>RLC</td>
<td>6/30/17 13:08</td>
</tr>
</tbody>
</table>

### Comments

- **U** Indicates that the compound was analyzed for but not detected.
- **J-** The reported value is an estimated value, see the case narrative for specifics.
- **I** Estimated value
- **V** Analyte detected in the method blank

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>MDL</th>
<th>PQL</th>
<th>Units</th>
<th>Spike Level</th>
<th>Source</th>
<th>%Rec Limits</th>
<th>RPD Limit Qualifier</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Batch 17F0185 - EPA 6010B</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blank (17F0185-BLK1)</td>
<td>Prepared: 06/29/17 Analyzed: 06/30/17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Barium</td>
<td>0.000500</td>
<td>0.000500</td>
<td>0.0200</td>
<td>mg/L</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beryllium</td>
<td>0.200</td>
<td>0.200</td>
<td>2.00</td>
<td>ug/L</td>
<td></td>
<td></td>
<td></td>
<td>U</td>
</tr>
<tr>
<td>Boron</td>
<td>0.0100</td>
<td>0.0100</td>
<td>0.0500</td>
<td>mg/L</td>
<td></td>
<td></td>
<td></td>
<td>U</td>
</tr>
<tr>
<td>Calcium</td>
<td>0.0300</td>
<td>0.0300</td>
<td>1.00</td>
<td>mg/L</td>
<td></td>
<td></td>
<td></td>
<td>U</td>
</tr>
<tr>
<td>Chromium</td>
<td>1.60</td>
<td>1.60</td>
<td>12.0</td>
<td>ug/L</td>
<td></td>
<td></td>
<td></td>
<td>U</td>
</tr>
<tr>
<td>LCS (17F0185-BS1)</td>
<td>Prepared: 06/29/17 Analyzed: 06/30/17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Barium</td>
<td>0.997</td>
<td>0.000500</td>
<td>0.0200</td>
<td>mg/L</td>
<td>1.0000</td>
<td></td>
<td>99.7</td>
<td>80-120</td>
</tr>
<tr>
<td>Beryllium</td>
<td>10.30</td>
<td>0.200</td>
<td>2.00</td>
<td>ug/L</td>
<td>100.0</td>
<td></td>
<td>103</td>
<td>80-120</td>
</tr>
<tr>
<td>Boron</td>
<td>1.05</td>
<td>0.0100</td>
<td>0.0500</td>
<td>mg/L</td>
<td>1.0000</td>
<td></td>
<td>105</td>
<td>80-120</td>
</tr>
<tr>
<td>Chromium</td>
<td>996</td>
<td>1.60</td>
<td>12.0</td>
<td>ug/L</td>
<td>1000.0</td>
<td></td>
<td>99.6</td>
<td>80-120</td>
</tr>
<tr>
<td>Matrix Spike (17F0185-MS1)</td>
<td>Source: L17F009-05</td>
<td>Prepared: 06/29/17 Analyzed: 06/30/17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Barium</td>
<td>1.01</td>
<td>0.000500</td>
<td>0.0200</td>
<td>mg/L</td>
<td>1.0000</td>
<td>0.0488</td>
<td>96.2</td>
<td>75-125</td>
</tr>
<tr>
<td>Beryllium</td>
<td>994</td>
<td>0.200</td>
<td>2.00</td>
<td>ug/L</td>
<td>1000.0</td>
<td>U</td>
<td>99.4</td>
<td>75-125</td>
</tr>
<tr>
<td>Boron</td>
<td>5.44</td>
<td>0.0100</td>
<td>0.0500</td>
<td>mg/L</td>
<td>1.0000</td>
<td>4.54</td>
<td>90.6</td>
<td>75-125</td>
</tr>
<tr>
<td>Chromium</td>
<td>977</td>
<td>1.60</td>
<td>12.0</td>
<td>ug/L</td>
<td>1000.0</td>
<td>1.68</td>
<td>97.5</td>
<td>75-125</td>
</tr>
<tr>
<td>Matrix Spike Dup (17F0185-MSD1)</td>
<td>Source: L17F009-05</td>
<td>Prepared: 06/29/17 Analyzed: 06/30/17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Barium</td>
<td>0.983</td>
<td>0.000500</td>
<td>0.0200</td>
<td>mg/L</td>
<td>1.0000</td>
<td>0.0488</td>
<td>93.4</td>
<td>75-125</td>
</tr>
<tr>
<td>Beryllium</td>
<td>982</td>
<td>0.200</td>
<td>2.00</td>
<td>ug/L</td>
<td>1000.0</td>
<td>U</td>
<td>98.2</td>
<td>75-125</td>
</tr>
<tr>
<td>Boron</td>
<td>5.23</td>
<td>0.0100</td>
<td>0.0500</td>
<td>mg/L</td>
<td>1.0000</td>
<td>4.54</td>
<td>69.7</td>
<td>75-125</td>
</tr>
<tr>
<td>Chromium</td>
<td>960</td>
<td>1.60</td>
<td>12.0</td>
<td>ug/L</td>
<td>1000.0</td>
<td>1.68</td>
<td>95.8</td>
<td>75-125</td>
</tr>
<tr>
<td><strong>Batch 17F0216 - EPA 6010B</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blank (17F0216-BLK1)</td>
<td>Prepared &amp; Analyzed: 06/30/17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Molybdenum</td>
<td>1.12</td>
<td>1.00</td>
<td>20.0</td>
<td>ug/L</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
### Total Recoverable Metals by SW846 Method 6010B - Quality Control

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>MDL</th>
<th>PQL</th>
<th>Units</th>
<th>Level</th>
<th>Source</th>
<th>%Rec</th>
<th>Limit Qualifier</th>
<th>Analyte</th>
</tr>
</thead>
<tbody>
<tr>
<td>Molybdenum</td>
<td>1020</td>
<td>1.00</td>
<td>20.0</td>
<td>ug/L</td>
<td>1000.0</td>
<td>Source: L17F081-01RE1</td>
<td>102</td>
<td>80-120</td>
<td>V</td>
</tr>
<tr>
<td>Molybdenum</td>
<td>1080</td>
<td>1.00</td>
<td>20.0</td>
<td>ug/L</td>
<td>1000.0</td>
<td>Prepared &amp; Analyzed: 06/30/17</td>
<td>71.6</td>
<td>75-125</td>
<td>V</td>
</tr>
<tr>
<td>Molybdenum</td>
<td>1080</td>
<td>1.00</td>
<td>20.0</td>
<td>ug/L</td>
<td>1000.0</td>
<td>Prepared &amp; Analyzed: 06/30/17</td>
<td>71.6</td>
<td>75-125</td>
<td>0.0171</td>
</tr>
</tbody>
</table>

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
## Total Mercury by SW846 Method 7470/7471 - Quality Control

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>MDL</th>
<th>PQL</th>
<th>Units</th>
<th>Spike Level</th>
<th>Source</th>
<th>%Rec Limits</th>
<th>RPD Limit</th>
<th>Qualifier</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blank (17G0011-BLK1)</td>
<td>Prepared &amp; Analyzed: 07/05/17</td>
<td></td>
<td></td>
<td>ug/L</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mercury</td>
<td>0.0500</td>
<td>0.0500</td>
<td>0.200</td>
<td></td>
<td>0.05000.0500</td>
<td>U</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LCS (17G0011-BS1)</td>
<td>Prepared &amp; Analyzed: 07/05/17</td>
<td></td>
<td></td>
<td>ug/L</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mercury</td>
<td>1.02</td>
<td>0.0500</td>
<td>0.200</td>
<td></td>
<td>1.00001.02</td>
<td>80-120</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Matrix Spike (17G0011-MS1)</td>
<td>Source: L17F009-03</td>
<td></td>
<td></td>
<td>ug/L</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mercury</td>
<td>0.956</td>
<td>0.0500</td>
<td>0.200</td>
<td></td>
<td>1.00000.956</td>
<td>U</td>
<td>75-125</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Matrix Spike Dup (17G0011-MSD1)</td>
<td>Source: L17F009-03</td>
<td></td>
<td></td>
<td>ug/L</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mercury</td>
<td>0.993</td>
<td>0.0500</td>
<td>0.200</td>
<td></td>
<td>1.00000.993</td>
<td>U</td>
<td>75-125</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>MDL</th>
<th>PQL</th>
<th>Units</th>
<th>Spike Level</th>
<th>Source Result</th>
<th>%Rec Limits</th>
<th>RPD Limit Qualifier</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antimony</td>
<td>100.00</td>
<td>6.00</td>
<td>2.00</td>
<td>ug/L</td>
<td>100.00</td>
<td>U</td>
<td>101</td>
<td>85-115</td>
</tr>
<tr>
<td>Arsenic</td>
<td>105.00</td>
<td>3.20</td>
<td>2.00</td>
<td>ug/L</td>
<td>100.00</td>
<td>U</td>
<td>105</td>
<td>85-115</td>
</tr>
<tr>
<td>Cadmium</td>
<td>107.00</td>
<td>1.00</td>
<td>0.50</td>
<td>ug/L</td>
<td>100.00</td>
<td>U</td>
<td>107</td>
<td>85-115</td>
</tr>
<tr>
<td>Cobalt</td>
<td>107.00</td>
<td>0.40</td>
<td>2.00</td>
<td>ug/L</td>
<td>100.00</td>
<td>U</td>
<td>107</td>
<td>85-115</td>
</tr>
<tr>
<td>Lead</td>
<td>0.105</td>
<td>8.00E-5</td>
<td>0.002</td>
<td>mg/L</td>
<td>0.100000</td>
<td>U</td>
<td>105</td>
<td>85-115</td>
</tr>
<tr>
<td>Selenium</td>
<td>107.00</td>
<td>0.20</td>
<td>2.00</td>
<td>ug/L</td>
<td>100.00</td>
<td>U</td>
<td>107</td>
<td>85-115</td>
</tr>
<tr>
<td>Thallium</td>
<td>103.00</td>
<td>0.10</td>
<td>0.50</td>
<td>ug/L</td>
<td>100.00</td>
<td>U</td>
<td>103</td>
<td>85-115</td>
</tr>
</tbody>
</table>

**Matrix Spike (17F0201-MS1)**

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>MDL</th>
<th>PQL</th>
<th>Units</th>
<th>Spike Level</th>
<th>Source Result</th>
<th>%Rec Limits</th>
<th>RPD Limit Qualifier</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antimony</td>
<td>101.00</td>
<td>6.00</td>
<td>2.00</td>
<td>ug/L</td>
<td>100.00</td>
<td>U</td>
<td>101</td>
<td>70-130</td>
</tr>
<tr>
<td>Arsenic</td>
<td>102.00</td>
<td>3.20</td>
<td>2.00</td>
<td>ug/L</td>
<td>100.00</td>
<td>U</td>
<td>102</td>
<td>70-130</td>
</tr>
<tr>
<td>Cadmium</td>
<td>84.4</td>
<td>1.00</td>
<td>0.50</td>
<td>ug/L</td>
<td>100.00</td>
<td>U</td>
<td>84.4</td>
<td>70-130</td>
</tr>
<tr>
<td>Cobalt</td>
<td>90.3</td>
<td>0.40</td>
<td>2.00</td>
<td>ug/L</td>
<td>100.00</td>
<td>U</td>
<td>90.3</td>
<td>70-130</td>
</tr>
<tr>
<td>Lead</td>
<td>0.0858</td>
<td>8.00E-5</td>
<td>0.002</td>
<td>mg/L</td>
<td>0.100000</td>
<td>U</td>
<td>85.8</td>
<td>70-130</td>
</tr>
<tr>
<td>Selenium</td>
<td>88.0</td>
<td>0.20</td>
<td>2.00</td>
<td>ug/L</td>
<td>100.00</td>
<td>U</td>
<td>88.0</td>
<td>70-130</td>
</tr>
<tr>
<td>Thallium</td>
<td>88.5</td>
<td>0.10</td>
<td>0.50</td>
<td>ug/L</td>
<td>100.00</td>
<td>U</td>
<td>88.5</td>
<td>70-130</td>
</tr>
</tbody>
</table>

**Matrix Spike Dup (17F0201-MSD1)**

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>MDL</th>
<th>PQL</th>
<th>Units</th>
<th>Spike Level</th>
<th>Source Result</th>
<th>%Rec Limits</th>
<th>RPD Limit Qualifier</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antimony</td>
<td>101.00</td>
<td>6.00</td>
<td>2.00</td>
<td>ug/L</td>
<td>100.00</td>
<td>U</td>
<td>101</td>
<td>70-130</td>
</tr>
<tr>
<td>Arsenic</td>
<td>102.00</td>
<td>3.20</td>
<td>2.00</td>
<td>ug/L</td>
<td>100.00</td>
<td>U</td>
<td>102</td>
<td>70-130</td>
</tr>
<tr>
<td>Cadmium</td>
<td>81.2</td>
<td>1.00</td>
<td>0.50</td>
<td>ug/L</td>
<td>100.00</td>
<td>U</td>
<td>81.2</td>
<td>70-130</td>
</tr>
<tr>
<td>Cobalt</td>
<td>90.3</td>
<td>0.40</td>
<td>2.00</td>
<td>ug/L</td>
<td>100.00</td>
<td>U</td>
<td>90.3</td>
<td>70-130</td>
</tr>
<tr>
<td>Lead</td>
<td>0.0877</td>
<td>8.00E-5</td>
<td>0.002</td>
<td>mg/L</td>
<td>0.100000</td>
<td>U</td>
<td>87.7</td>
<td>70-130</td>
</tr>
<tr>
<td>Selenium</td>
<td>90.1</td>
<td>0.20</td>
<td>2.00</td>
<td>ug/L</td>
<td>100.00</td>
<td>U</td>
<td>90.1</td>
<td>70-130</td>
</tr>
<tr>
<td>Thallium</td>
<td>89.8</td>
<td>0.10</td>
<td>0.50</td>
<td>ug/L</td>
<td>100.00</td>
<td>U</td>
<td>89.8</td>
<td>70-130</td>
</tr>
</tbody>
</table>

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
### General Chemistry Parameters - Quality Control

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>MDL</th>
<th>PQL</th>
<th>Units</th>
<th>Spike</th>
<th>Level</th>
<th>Source</th>
<th>%Rec</th>
<th>%Rec Limits</th>
<th>RPD</th>
<th>RPD Limit</th>
<th>Qualifier</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Batch 17F0214 - EPA 300.0</strong></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><strong>Blank (17F0214-BLK1)</strong></td>
<td>Prepared &amp; Analyzed: 06/29/17</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>Chloride</td>
<td>0.0200</td>
<td>0.0200</td>
<td>0.500</td>
<td>mg/L</td>
<td></td>
<td></td>
<td>U</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fluoride</td>
<td>0.0100</td>
<td>0.0100</td>
<td>0.500</td>
<td>mg/L</td>
<td></td>
<td></td>
<td>U</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>LCS (17F0214-BS1)</strong></td>
<td>Prepared &amp; Analyzed: 06/29/17</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>Chloride</td>
<td>4.90</td>
<td>0.0200</td>
<td>0.500</td>
<td>mg/L</td>
<td>5.000</td>
<td>97.9</td>
<td>90-110</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fluoride</td>
<td>4.90</td>
<td>0.0100</td>
<td>0.500</td>
<td>mg/L</td>
<td>5.000</td>
<td>98.1</td>
<td>90-110</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Matrix Spike (17F0214-MS1)</strong></td>
<td>Source: L17F009-02</td>
<td>Prepared &amp; Analyzed: 06/29/17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chloride</td>
<td>155</td>
<td>0.200</td>
<td>5.000</td>
<td>mg/L</td>
<td>50.000</td>
<td>105</td>
<td>90-110</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fluoride</td>
<td>54.1</td>
<td>0.100</td>
<td>5.000</td>
<td>mg/L</td>
<td>50.000</td>
<td>0.214</td>
<td>90-110</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Matrix Spike Dup (17F0214-MSD1)</strong></td>
<td>Source: L17F009-02</td>
<td>Prepared &amp; Analyzed: 06/29/17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chloride</td>
<td>155</td>
<td>0.200</td>
<td>5.000</td>
<td>mg/L</td>
<td>50.000</td>
<td>105</td>
<td>90-110</td>
<td></td>
<td>0.457</td>
<td>20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fluoride</td>
<td>54.0</td>
<td>0.100</td>
<td>5.000</td>
<td>mg/L</td>
<td>50.000</td>
<td>0.214</td>
<td>90-110</td>
<td></td>
<td>0.168</td>
<td>20</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Batch 17G0002 - SM 2540C</strong></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><strong>Blank (17G0002-BLK1)</strong></td>
<td>Prepared &amp; Analyzed: 07/03/17</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>Total Dissolved Solids</td>
<td>12.0</td>
<td>12.0</td>
<td>20.0</td>
<td>mg/L</td>
<td></td>
<td></td>
<td>U</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>LCS (17G0002-BS1)</strong></td>
<td>Prepared &amp; Analyzed: 07/03/17</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>Total Dissolved Solids</td>
<td>999</td>
<td>12.0</td>
<td>20.0</td>
<td>mg/L</td>
<td>1000.0</td>
<td>99.9</td>
<td>80-120</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Duplicate (17G0002-DUP1)</strong></td>
<td>Source: L17F009-01</td>
<td>Prepared &amp; Analyzed: 07/03/17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1.15</td>
<td></td>
<td>10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Dissolved Solids</td>
<td>3110</td>
<td>24.0</td>
<td>40.0</td>
<td>mg/L</td>
<td>3140</td>
<td>1.15</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
## General Chemistry Parameters - Quality Control

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>MDL</th>
<th>PQL</th>
<th>Units</th>
<th>Spike Level</th>
<th>Source</th>
<th>%Rec</th>
<th>%Rec Limits</th>
<th>RPD</th>
<th>RPD Limit</th>
<th>Qualifier</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Batch 17G0008 - EPA 300.0</strong></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>Blank (17G0008-BLK1)</td>
<td>Prepared &amp; Analyzed: 07/03/17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sulfate</td>
<td>0.500</td>
<td>0.500</td>
<td>2.00</td>
<td>mg/L</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>U</td>
</tr>
<tr>
<td>LCS (17G0008-BS1)</td>
<td>Prepared &amp; Analyzed: 07/03/17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sulfate</td>
<td>4.94</td>
<td>0.500</td>
<td>2.00</td>
<td>mg/L</td>
<td>5.0000</td>
<td></td>
<td>98.7</td>
<td>90-110</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Batch 17G0042 - EPA 300.0</strong></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>Blank (17G0042-BLK1)</td>
<td>Prepared &amp; Analyzed: 07/10/17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sulfate</td>
<td>0.500</td>
<td>0.500</td>
<td>2.00</td>
<td>mg/L</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>U</td>
</tr>
<tr>
<td>LCS (17G0042-BS1)</td>
<td>Prepared &amp; Analyzed: 07/10/17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sulfate</td>
<td>4.68</td>
<td>0.500</td>
<td>2.00</td>
<td>mg/L</td>
<td>5.0000</td>
<td></td>
<td>93.7</td>
<td>90-110</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Matrix Spike (17G0042-MS1)</td>
<td>Source: L17F009-02RE1</td>
<td>Prepared &amp; Analyzed: 07/10/17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sulfate</td>
<td>476</td>
<td>5.00</td>
<td>20.0</td>
<td>mg/L</td>
<td>50.000</td>
<td>415</td>
<td>122</td>
<td>90-110</td>
<td></td>
<td></td>
<td>J-</td>
</tr>
<tr>
<td>Matrix Spike Dup (17G0042-MSD1)</td>
<td>Source: L17F009-02RE1</td>
<td>Prepared &amp; Analyzed: 07/10/17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sulfate</td>
<td>493</td>
<td>5.00</td>
<td>20.0</td>
<td>mg/L</td>
<td>50.000</td>
<td>415</td>
<td>155</td>
<td>90-110</td>
<td>3.44</td>
<td>20</td>
<td>J-</td>
</tr>
</tbody>
</table>

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Tampa Electric Company, Laboratory Services

Peggy Penner, Manager, Laboratory Services

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
<table>
<thead>
<tr>
<th>LIMS #</th>
<th>Location Code</th>
<th>Time</th>
<th>PE3</th>
<th>pH (US)</th>
<th>Temp (°C)</th>
<th>Cond (μS/cm)</th>
<th>DO</th>
<th>Turbidity (NTU)</th>
<th>Redox (mg/L)</th>
<th>Salinity (mg/L)</th>
<th>Color</th>
<th>ODO</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>L17F0909-01</td>
<td>BBS-CR-1</td>
<td>12:45</td>
<td>6.78</td>
<td>25.64</td>
<td>4063.00</td>
<td>0.27</td>
<td>3.63</td>
<td>-80.60</td>
<td>SCOL-TR</td>
<td>REDOX</td>
<td>LT. YELLOW</td>
<td>08/28/17</td>
<td></td>
</tr>
<tr>
<td>L17F0909-02</td>
<td>BBS-CR-2</td>
<td>11:27</td>
<td>6.67</td>
<td>25.12</td>
<td>1465.00</td>
<td>0.27</td>
<td>3.47</td>
<td>-131.30</td>
<td>SCOL-TR</td>
<td>REDOX</td>
<td>LT. YELLOW</td>
<td>08/28/17</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>LIMS #</th>
<th>Location Code</th>
<th>Time</th>
<th>PE3</th>
<th>pH (US)</th>
<th>Temp (°C)</th>
<th>Cond (μS/cm)</th>
<th>DO</th>
<th>Turbidity (NTU)</th>
<th>Redox (mg/L)</th>
<th>Salinity (mg/L)</th>
<th>Color</th>
<th>ODO</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>L17F0909-01</td>
<td>BBS-CR-1</td>
<td>12:45</td>
<td>6.78</td>
<td>25.64</td>
<td>4063.00</td>
<td>0.27</td>
<td>3.63</td>
<td>-80.60</td>
<td>SCOL-TR</td>
<td>REDOX</td>
<td>LT. YELLOW</td>
<td>08/28/17</td>
<td></td>
</tr>
<tr>
<td>L17F0909-02</td>
<td>BBS-CR-2</td>
<td>11:27</td>
<td>6.67</td>
<td>25.12</td>
<td>1465.00</td>
<td>0.27</td>
<td>3.47</td>
<td>-131.30</td>
<td>SCOL-TR</td>
<td>REDOX</td>
<td>LT. YELLOW</td>
<td>08/28/17</td>
<td></td>
</tr>
</tbody>
</table>

**Preservation**
- **Preservation of Samples:**
  - **Preservation Code:** PBS-CR-1
  - **Preservation Date:** 08/28/17
  - **Preservation Time:** 12:45
  - **Preservation Temp (°C):** 6.78
  - **Preservation Cond (μS/cm):** 25.64
  - **Preservation DO (mg/L):** 4063.00
  - **Preservation Turbidity (NTU):** 0.27
  - **Preservation Redox (mg/L):** -80.60
  - **Preservation Salinity (mg/L):** SCOL-TR

**Comments:**
- 10 Gallons to Purge 0.12
- Stability Values = 3.67
- Stability Values = 25.12
- Stability Values = 1485.00

**Purge:**
- **Purge Flow:** 12.29
- **Purge Volume:** 0.12
- **Purge Volume (gallons):** 10.10
- **Purge Volume (m³):** 0.06
- **Purge Volume (cm³):** 0.12

**Turbidity Inside Dams:**
- **Dams:** 25.64
- **Dams:** 1485.00

**Equipment ID:**
- **Equipment ID:** PBS-CR-1

**Table:**
- **Table:** Purge

**Stability:**
- **Stability:** 3.67
- **Stability:** 25.12
- **Stability:** 1485.00
<table>
<thead>
<tr>
<th>Site: Big Bend</th>
<th>Date: 06/28/17</th>
<th>File Name: 062817_Wells_RAB</th>
<th>Weather: Pity Cloudy &amp; Hot</th>
<th>Sampler(s)/Initials: RAB /TECO</th>
<th>Initials: NGVD</th>
</tr>
</thead>
<tbody>
<tr>
<td>LIMS #</td>
<td>Location Code</td>
<td>Time</td>
<td>FE (mg/l)</td>
<td>pH (SU)</td>
<td>Temp (°C)</td>
</tr>
<tr>
<td>L17F003-03</td>
<td>BBS-CCR-3</td>
<td>11:30</td>
<td>0.38</td>
<td>8.38</td>
<td>26.15</td>
</tr>
</tbody>
</table>

### Preservation
- **Preservation Date:**
  - 10/25/23
  - 10/25/23
- **Preservation Time:**
  - 11:15
  - 11:15

### Preservative
- **Preservative:**
  - 000 ml bottles (vials) of 5 ml HNO3 to pH < 2
  - 000 ml bottles (vials) of 5 ml HNO3 to pH < 2

### pH Meter Calibration
- **Buffer Value:**
  - Buffer Value 1: 7.48
  - Buffer Value 2: 4.01

### Conductivity Meter Calibration
- **Standard Solution:**
  - 1000 µS
  - 1000 µS

### Turbidity Meter Calibration
- **Standard Solution:**
  - 20 NTU
  - 20 NTU

### Buffer info (Calculation)
- **Buffer Value:**
  - Buffer Value 1: 7.48
  - Buffer Value 2: 4.01

### Purging Information
- **Gallons to Purge:** 0.12
- **Stability Values:** 6.38

### Purge Meth
- **Volume (gal):** 300
- **Total Vol. (gal):** 26.15
- **Water Depth (in):** 1755

### Purge Start:
- **Temp (°C):** 0.2
- **Cond (mg/l):** 30
- **DO (mg/l):** 2.0

### Purge End:
- **Temp (°C):** 0.2
- **Cond (mg/l):** 30
- **DO (mg/l):** 2.0

### Purge Complete At:
- **Gallons to Purge:** 0.00
- **Stability Values:**

### Comments:
- Total Time: 010.36
- Total Miles: 000.00

---

**Note:** The table above contains data related to environmental sampling and analysis, including values for pH, temperature, conductivity, DO, and turbidity, among other parameters. The data is collected and recorded on a specific date and location, with preservation and calibration information also included. The purging information indicates the volume to be purged and the stability values at the end of the process.
<p>| Site: Big Bend | Date: 06/28/17 | File Name: 062817_Wells_RAB | Weather: Partly Cloudy &amp; Hot |</p>
<table>
<thead>
<tr>
<th>LIMS #</th>
<th>Location Code</th>
<th>Time</th>
<th>FE</th>
<th>pH (pH)</th>
<th>Temp (°C)</th>
<th>Cond (μS/cm)</th>
<th>DO (mg/L)</th>
<th>Turbidity (NTU)</th>
<th>Redox (mV)</th>
<th>Sulfide (mg/L)</th>
<th>Coliform</th>
<th>Other</th>
<th>RAB /TECO</th>
<th>Initials</th>
</tr>
</thead>
<tbody>
<tr>
<td>L17F09-04</td>
<td>BSS-CR-BW-1</td>
<td>10:28</td>
<td>6:47</td>
<td>27.72</td>
<td>5010.00</td>
<td>0.42</td>
<td>0.69</td>
<td>-11.40</td>
<td>9.59</td>
<td>59.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>L17F09-05</td>
<td>BSS-CR-BW-2</td>
<td>10:02</td>
<td>6:44</td>
<td>26.69</td>
<td>1538.00</td>
<td>0.19</td>
<td>0.60</td>
<td>-32.40</td>
<td>29.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>L17F09-04</td>
<td>BSS-CR-BW-1</td>
<td>10:28</td>
<td>26.69</td>
<td>2250.00</td>
<td>1538.00</td>
<td>0.19</td>
<td>0.60</td>
<td>-32.40</td>
<td>29.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>L17F09-05</td>
<td>BSS-CR-BW-2</td>
<td>10:02</td>
<td>26.69</td>
<td>2250.00</td>
<td>1538.00</td>
<td>0.19</td>
<td>0.60</td>
<td>-32.40</td>
<td>29.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Preservation**

<table>
<thead>
<tr>
<th>Preservation</th>
<th>Pres ID</th>
<th>Preservation</th>
<th>Pres ID</th>
<th>Preservation</th>
<th>Pres ID</th>
</tr>
</thead>
<tbody>
<tr>
<td>1L bottles</td>
<td>L 012553</td>
<td>250mL bottles (VOCs) - 1 mL HS2O3 to pH =2</td>
<td>L 012553</td>
<td>250mL bottles (VOCs) - 1 mL HS2O3 to pH =2</td>
<td></td>
</tr>
<tr>
<td>1L bottles</td>
<td>L 012553</td>
<td>250mL bottles (VOCs) - 1 mL HS2O3 to pH =2</td>
<td>L 012553</td>
<td>250mL bottles (VOCs) - 1 mL HS2O3 to pH =2</td>
<td></td>
</tr>
</tbody>
</table>

**pH Meter Calibration**

<table>
<thead>
<tr>
<th>Buffer ID</th>
<th>Buffer Value</th>
<th>Cal</th>
<th>Time</th>
<th>ICV</th>
<th>Time</th>
<th>CCV</th>
<th>Time</th>
<th>Redox Cal</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>L 013075A</td>
<td>7</td>
<td>7</td>
<td>8:51</td>
<td>7.10</td>
<td>14:58</td>
<td>L 013075A</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>L 013075B</td>
<td>10</td>
<td>10</td>
<td>8:51</td>
<td>QC (pH +/-0.2) (Cond +/-5%) (DO +/-0.3mg/L) (Redox +/-10mv)</td>
<td>L 013075A</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Conductivity Meter Calib.**

<table>
<thead>
<tr>
<th>Standard ID</th>
<th>Std Value</th>
<th>Cal</th>
<th>Time</th>
<th>ICV</th>
<th>Time</th>
<th>CCV</th>
<th>Time</th>
<th>Redox Cal</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>L 013075A</td>
<td>7</td>
<td>7</td>
<td>8:51</td>
<td>7.10</td>
<td>14:58</td>
<td>L 013075A</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>L 013075B</td>
<td>10</td>
<td>10</td>
<td>8:51</td>
<td>QC (pH +/-0.2) (Cond +/-5%) (DO +/-0.3mg/L) (Redox +/-10mv)</td>
<td>L 013075A</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Salt Info**

<table>
<thead>
<tr>
<th>QC Result</th>
<th>mg/L</th>
<th>Time</th>
<th>Ticker ID</th>
<th>Unit ID</th>
<th>Unit ID</th>
<th>Unit ID</th>
<th>Unit ID</th>
<th>Unit ID</th>
</tr>
</thead>
<tbody>
<tr>
<td>019150A</td>
<td>7</td>
<td>7</td>
<td>8:51</td>
<td>QC (pH +/-0.2) (Cond +/-5%) (DO +/-0.3mg/L) (Redox +/-10mv)</td>
<td>L 019150A</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Well Details**

<table>
<thead>
<tr>
<th>Well #</th>
<th>Diamic Comp</th>
<th>Screen Interval (ft)</th>
<th>Intake Depth (ft)</th>
<th>Well Volume (ft³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BSS-CR-BW-1</td>
<td>2</td>
<td>10</td>
<td>39.3</td>
<td>44.3</td>
</tr>
</tbody>
</table>

**Purge Details**

<table>
<thead>
<tr>
<th>Purge</th>
<th>Raw Volume (gallons)</th>
<th>Raw Volume (gallons)</th>
<th>Purge Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>1A</td>
<td>10.21</td>
<td>2200</td>
<td>4.65</td>
</tr>
</tbody>
</table>

**Total Time**

<table>
<thead>
<tr>
<th>Total Time</th>
<th>Total Miles</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**GROUNDWATER WELL SAMPLING EQUIPMENT CALIBRATION**

<table>
<thead>
<tr>
<th>Date: 06/23/17</th>
<th>Sampler(s): RAB</th>
<th>Initials</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>CCV</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>19.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Meter ID: MPM08</th>
<th>Buffer ID: L</th>
<th>Buffer Value: 10</th>
<th>Cal: 7</th>
<th>Time: 6:51</th>
<th>Pass/Fail:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>FDEP FT 1100</td>
<td>L</td>
<td>1010</td>
<td>4</td>
<td>3.99</td>
<td>ICV</td>
<td>7.09</td>
</tr>
<tr>
<td><strong>Conductivity Meter Calib:</strong></td>
<td>Standard: L</td>
<td>Std Value: 1000</td>
<td>Cal: 9</td>
<td>Time: 9.04</td>
<td>ICV</td>
<td>9792</td>
</tr>
<tr>
<td>Meter ID: TM07</td>
<td>L</td>
<td>2010</td>
<td>4.76</td>
<td>4.28</td>
<td>ICV</td>
<td>4.83</td>
</tr>
<tr>
<td>FDEP FT 1600</td>
<td>L</td>
<td>2100</td>
<td>52.10</td>
<td>48.71</td>
<td>ICV</td>
<td>55.49</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Buffer Info (QC Check): SPA 372.1</th>
<th>QC Result</th>
<th>mV</th>
<th>Time</th>
<th>QC Std: 600 (Nac/KSO4)</th>
<th>mV</th>
<th></th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>4.00</td>
<td>20.1</td>
<td>236.9</td>
<td>237.5</td>
<td>Pass</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>15.09</td>
<td>21.2</td>
<td>233.1</td>
<td>238.2</td>
<td>Pass</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Redox Cal:**

- **Zinc Sal:** L | 011950A | | | | 730 |

**Twinl Sal:**

- **pH:** 5.9 | **Conductivity:** 200 | **Redox mV:** 236.9 | **CL2 Cal:** 50 |

**Chlorine Dioxide (mg/L):**

- **Std. C60:** 1.0 | **Std. C60 Volume:** 100 |

<table>
<thead>
<tr>
<th>Initial Calibration Verification ICV</th>
<th>Continuous Calibration Verification CCV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pass/Fail:</td>
<td>Equivalent to Standard Methods, 4500 ClO₂, D.</td>
</tr>
</tbody>
</table>

**COMMENTS:** CL2 Std. ID: L
**GROUNDBWATER SAMPLING LOG**

**FACILITY NAME:** Big Bend  
**SITE LOCATION:** Apollo Beach, FL.

**WELL NO:** BBS-CCR-1  
**SAMPLE ID:** L17F009-01  
**DATE:** 6/28/17

### PURGING DATA

<table>
<thead>
<tr>
<th>TIME</th>
<th>VOL. PURGED (GALLONS)</th>
<th>COND. (µmhos/cm OR µS/cm)</th>
<th>DISSOLVED OXYGEN (circle mg/l or % saturation)</th>
<th>TURBIDITY (NTUs)</th>
<th>COLOR (describe)</th>
<th>ODOR (describe)</th>
</tr>
</thead>
<tbody>
<tr>
<td>12:34</td>
<td>0.87</td>
<td>6.78</td>
<td>4063</td>
<td>6.42</td>
<td>LT. YELLOW</td>
<td>NONE</td>
</tr>
<tr>
<td>12:36</td>
<td>0.29</td>
<td>6.77</td>
<td>4063</td>
<td>4.58</td>
<td>LT. YELLOW</td>
<td>NONE</td>
</tr>
<tr>
<td>12:38</td>
<td>0.29</td>
<td>6.78</td>
<td>4063</td>
<td>3.63</td>
<td>LT. YELLOW</td>
<td>NONE</td>
</tr>
</tbody>
</table>

### WELL CAPACITY (Gallons Per Foot):
- 0.75" = 0.02
- 1" = 0.04
- 1.25" = 0.06
- 2" = 0.16
- 3" = 0.37
- 5" = 1.02
- 6" = 1.47
- 12" = 5.88

### TUBING INSIDE DIA. CAPACITY (Gal./Ft.):
- 1/8" = 0.00006
- 3/16" = 0.0014
- 1/4" = 0.0026
- 5/16" = 0.004
- 3/8" = 0.006
- 1/2" = 0.010
- 5/8" = 0.016

### SAMPLING DATA

**PUMP OR TUBING DEPTH IN WELL (feet):** 17.3

<table>
<thead>
<tr>
<th>SAMPLED BY (PRINT) / AFFILIATION</th>
<th>RAB</th>
<th>TECO</th>
<th>SAMPLING (S) SIGNATURES</th>
<th>SAMPLING INITIATED AT:</th>
<th>SAMPLING ENDED AT:</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIELDS FILTERED:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FILTER EQUIPMENT TYPE:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FILTER SIZE:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DUPLICATE:</td>
<td>Y</td>
<td>N</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SAMPLE CONTAINER SPECIFICATION</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SAMPLE ID CODE</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CONTAINERS</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MATERIAL CODE</td>
<td>PE</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VOLUME</td>
<td>500ml</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PRESERVATIVE USED</td>
<td>NONE</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL VOL. ADDED IN FIELD (mL)</td>
<td>N/A</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FINAL pH</td>
<td>N/A</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### REMARKS:

1. Sample bottles pre-preserved at laboratory prior to sample collection.

**MATERIAL CODES:**
- AG = Amber Glass;  
- CG = Clear Glass;  
- PE = Polyethylene;  
- PP = Polypropylene;  
- S = Silicone;  
- T = Teflon;  
- O = Other (Specify)

**SAMPLING/PURGING EQUIPMENT CODES:**
- APP = Affin Peristaltic Pump;  
- B = Bailer;  
- BP = Bladder Pump;  
- ESP = Electric Submersible Pump;  
- RPP = Reverse Flow Peristaltic Pump;  
- SM = Straw Method (tubing Gravity Drain);  
- VT = Vacuum Trap;  
- O = Other (Specify)

**NOTES:**
1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212. SECTION 3)

- pH: ± 0.2 units  
- Temperature: ± 0.2 ºC  
- Conductance: ± 5%  
- Dissolved Oxygen: all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater)  
- Turbidity: all readings ≤ 20 NTU; optionally ± 5 NTU or 10% (whichever is greater)
<table>
<thead>
<tr>
<th>TIME</th>
<th>VOLUME PURGED (GALLONS)</th>
<th>COMPL. VOLUME PURGED (GALLONS)</th>
<th>PURGE RATE (GPM)</th>
<th>DEPTH TO WATER (FEET)</th>
<th>pH (standard units)</th>
<th>TEMP. (ºC)</th>
<th>COND. (µmhos/cm or µS/cm)</th>
<th>DISSOLVED OXYGEN (circle mg/l or % saturation)</th>
<th>TURBIDITY (NTUs)</th>
<th>COLOR (describe)</th>
<th>ODOR (describe)</th>
<th>PURGING INITIATED AT</th>
<th>PURGING ENDED AT</th>
<th>TOTAL VOLUME PURGED (gallons):</th>
</tr>
</thead>
<tbody>
<tr>
<td>11:15</td>
<td>1.08</td>
<td>1.08</td>
<td>0.18</td>
<td>7.11</td>
<td>6.91</td>
<td>25.15</td>
<td>1478</td>
<td>0.23</td>
<td>7.90</td>
<td>YELLOW</td>
<td>MILDE</td>
<td>11:09</td>
<td>11:19</td>
<td>1.82</td>
</tr>
<tr>
<td>11:17</td>
<td>0.37</td>
<td>1.45</td>
<td>0.19</td>
<td>7.11</td>
<td>6.87</td>
<td>25.07</td>
<td>1493</td>
<td>0.26</td>
<td>5.74</td>
<td>YELLOW</td>
<td>MILDE</td>
<td>11:19</td>
<td>11:27</td>
<td>1.69</td>
</tr>
<tr>
<td>11:19</td>
<td>0.37</td>
<td>1.82</td>
<td>0.19</td>
<td>7.10</td>
<td>6.87</td>
<td>25.12</td>
<td>1485</td>
<td>0.24</td>
<td>4.71</td>
<td>YELLOW</td>
<td>MILDE</td>
<td>11:19</td>
<td>11:27</td>
<td>1.77</td>
</tr>
</tbody>
</table>

**WELL CAPACITY** (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

**TUBING INSIDE DIA. CAPACITY** (Gal./Ft.): 1/8" = 0.00006; 3/16" = 0.0014; 1/4" = 0.0026; 5/32" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016
### PURGING DATA

<table>
<thead>
<tr>
<th>TIME</th>
<th>VOLUME PURGED (GALLONS)</th>
<th>CUMUL. VOLUME PURGED (GALLONS)</th>
<th>PURGE RATE (GPM)</th>
<th>DEPTH TO WATER (FEET)</th>
<th>pH (standard units)</th>
<th>TEMP. (ºC)</th>
<th>COND. (µmhos/cm or µS/cm)</th>
<th>DISSOLVED OXYGEN (circle mg/l or % saturation)</th>
<th>TURBIDITY (NTUs)</th>
<th>COLOR (describe)</th>
<th>ODOR (describe)</th>
</tr>
</thead>
<tbody>
<tr>
<td>10:43</td>
<td>0.48</td>
<td>0.48</td>
<td>0.08</td>
<td>7.00</td>
<td>6.40</td>
<td>26.43</td>
<td>1781</td>
<td>0.20</td>
<td>1.00</td>
<td>YELLOW</td>
<td>MODERATE</td>
</tr>
<tr>
<td>10:45</td>
<td>0.16</td>
<td>0.64</td>
<td>0.08</td>
<td>7.01</td>
<td>6.39</td>
<td>26.23</td>
<td>1770</td>
<td>0.27</td>
<td>0.85</td>
<td>YELLOW</td>
<td>MODERATE</td>
</tr>
<tr>
<td>10:47</td>
<td>0.16</td>
<td>0.80</td>
<td>0.08</td>
<td>7.02</td>
<td>6.38</td>
<td>26.21</td>
<td>1764</td>
<td>0.30</td>
<td>1.39</td>
<td>YELLOW</td>
<td>MODERATE</td>
</tr>
<tr>
<td>10:49</td>
<td>0.16</td>
<td>0.96</td>
<td>0.08</td>
<td>7.04</td>
<td>6.38</td>
<td>26.15</td>
<td>1755</td>
<td>0.28</td>
<td>0.94</td>
<td>YELLOW</td>
<td>MODERATE</td>
</tr>
</tbody>
</table>

### WELL CAPACITY

- **Gallons Per Foot**: 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
- **Tubing Inside Dia. Capacity (Gal./Ft.)**: 1/8" = 0.00096; 1/4" = 0.00384; 5/32" = 0.00576; 3/16" = 0.00699; 1/4" = 0.0026; 5/32" = 0.00624; 3/16" = 0.00476; 5/32" = 0.00624; 3/16" = 0.00476

### SAMPLING DATA

- **Sampled By (PRINT) / Affiliation**: RAB
- **Sampler (s) Signatures**: TECO
- **Sampling Initiated At**: 10:49
- **Sampling Ended At**: 11:00
- **Pump or Tubing Flow Rate (mL per minute)**: 300
- **Tubing Material Code**: PE/S
- **Field Decontamination**: Y ☑ N □ ☑
- **Field-Filtered: Filtration Equipment**: @Met-250 ☐ ☑
- **Filter Size**: µm
- **Duplicate**: Y ☑ N □
- **Sample Container Specification**:
  - **Sample Container Code**: @Ino-500
  - **Materials Code**: PE
  - **Volume (ml)**: 500ml
  - **Preservative Used**: NONE
  - **Total Vol. Added in Field (ml)**: N/A
  - **Final pH**: Inorganics
  - **Intended Analysis and/or Method**: PP

- **Sample Container Code**: @Met-250
  - **Materials Code**: PE
  - **Volume (ml)**: 250ml
  - **Preservative Used**: HNO3
  - **Total Vol. Added in Field (ml)**: 1ml
  - **Final pH**: <2
  - **Intended Analysis and/or Method**: Metals
  - **Sampling Equipment Code**: PP

- **Sample Container Code**: @Rad-1L
  - **Materials Code**: PE
  - **Volume (ml)**: 1L
  - **Preservative Used**: HNO3
  - **Total Vol. Added in Field (ml)**: 5ml
  - **Final pH**: <2
  - **Intended Analysis and/or Method**: Radiologicals
  - **Sampling Equipment Code**: PP

### Remarks:

1. Sample bottles pre-preserved at laboratory prior to sample collection.
2. **Material Codes**:
   - AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; B = Silicone; T = Teflon; O = Other (Specify)
3. **Sampling/Purging Codes**:
   - APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump
4. **Equipment Codes**:
   - RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (tubing gravity drain); VT = Vacuum Trap; O = Other (Specify)
5. **Notes**:
   - 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.
   - 2. Stabilization Criteria for Range of Variation of Last Three Consecutive Readings (see FS 2212, Section 3)
   - pH ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: ± 5% Dissolved Oxygen: all readings ± 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) Turbidity: all readings ≤ 20 NTU; optionally ± 5 NTU or 10% (whichever is greater)
### Purging Data

**Site Name:** Big Bend  
**Sample ID:** L17F009-04  
**Date:** 6/28/17

<table>
<thead>
<tr>
<th>Time</th>
<th>Volume Purged (Gallons)</th>
<th>Depth to Water (feet)</th>
<th>pH</th>
<th>Temp. (ºC)</th>
<th>Cond. (µhos/cm or µS/cm)</th>
<th>Dissolved O2 (% saturation)</th>
<th>Turbidity (NTUs)</th>
<th>Color</th>
<th>Odor</th>
</tr>
</thead>
<tbody>
<tr>
<td>10:21</td>
<td>4.65</td>
<td>31.10</td>
<td>6.48</td>
<td>27.70</td>
<td>4954</td>
<td>0.39</td>
<td>1.88</td>
<td>CLEAR</td>
<td>NONE</td>
</tr>
<tr>
<td>10:23</td>
<td>1.16</td>
<td>31.10</td>
<td>6.48</td>
<td>27.70</td>
<td>4972</td>
<td>0.45</td>
<td>1.08</td>
<td>CLEAR</td>
<td>NONE</td>
</tr>
<tr>
<td>10:25</td>
<td>1.16</td>
<td>31.10</td>
<td>6.47</td>
<td>27.72</td>
<td>5010</td>
<td>0.42</td>
<td>0.69</td>
<td>CLEAR</td>
<td>NONE</td>
</tr>
</tbody>
</table>

---

### Sampling Data

**Sampled By (Print)/Affiliation:** RAB  
**Sampler (s) Signatures:**

<table>
<thead>
<tr>
<th>Sampled at</th>
<th>Sampling Initiated At</th>
<th>Sampling Ended At</th>
<th>Pump or Tubing Diameter in Well (feet):</th>
</tr>
</thead>
<tbody>
<tr>
<td>RAB</td>
<td>10:25</td>
<td>10:28</td>
<td>39.3</td>
</tr>
</tbody>
</table>

**Pump Material Code:** PE  
**Tubing Material Code:**

- Field Filtered: Y  
- Filter Size: µm

**Sample Container Specification**

<table>
<thead>
<tr>
<th>Sample ID Code</th>
<th># Containers</th>
<th>Material Code</th>
<th>Volume</th>
<th>Preservative Used</th>
<th>Total Vol. Added in Field (mL)</th>
<th>Final pH</th>
<th>Sample Preservation</th>
<th>Intended Analysis and/or Method</th>
<th>Sampling Equipment Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>@Ino-500</td>
<td>1</td>
<td>PE</td>
<td>500ml</td>
<td>NONE</td>
<td>NONE</td>
<td>N/A</td>
<td>Inorganics</td>
<td>ESP</td>
<td></td>
</tr>
<tr>
<td>@Met-250</td>
<td>2</td>
<td>PE</td>
<td>250ml</td>
<td>HNO3</td>
<td>1ml</td>
<td>&lt;2</td>
<td>Metals</td>
<td>ESP</td>
<td></td>
</tr>
<tr>
<td>@Rad-1L</td>
<td>2</td>
<td>PE</td>
<td>1L</td>
<td>HNO3</td>
<td>5ml</td>
<td>&lt;2</td>
<td>Radiologics</td>
<td>ESP</td>
<td></td>
</tr>
</tbody>
</table>

**Remarks:**

1. Sample bottles pre-preserved at laboratory prior to sample collection.
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212. SECTION 3)
   - pH: ± 0.2 units
   - Temperature: ± 0.2 ºC
   - Specific Conductance: ± 5%
   - Dissolved Oxygen: all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater)
   - Turbidity: all readings ≤ 20 NTU; optionally ± 5 NTU or 10% (whichever is greater)
DEP-SOP-001/01
FS 2200 Groundwater Sampling
Form FD 9000-24
GROUNDBWATER SAMPLING LOG

SITE NAME: Big Bend
SITE LOCATION: Apollo Beach, FL.
WELL NO: BBS-CCR-BW-2
SAMPLE ID: L17F009-05
DATE: 6/28/17

PURGING DATA

<table>
<thead>
<tr>
<th>TIME</th>
<th>VOLUME PURGED (GALLONS)</th>
<th>COND. VOLUME PURGED (GALLONS)</th>
<th>PURGE RATE (GPM)</th>
<th>DEPTH TO WATER (FEET)</th>
<th>pH (standard units)</th>
<th>TEMP. (ºC)</th>
<th>COND. (µmhos/cm or µS/cm)</th>
<th>DISSOLVED OXYGEN (circled mg/l or % saturation)</th>
<th>TURBIDITY (NTUs)</th>
<th>COLOR (describe)</th>
<th>ODOR (describe)</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:49</td>
<td>1.36</td>
<td>0</td>
<td>8.78</td>
<td>6.64</td>
<td>26.67</td>
<td>1537</td>
<td>0.18</td>
<td>11.20</td>
<td>LT. YELLOW</td>
<td>NONE</td>
<td></td>
</tr>
<tr>
<td>9:51</td>
<td>0.29</td>
<td>1.65</td>
<td>8.77</td>
<td>6.64</td>
<td>26.66</td>
<td>1538</td>
<td>0.18</td>
<td>12.20</td>
<td>LT. YELLOW</td>
<td>NONE</td>
<td></td>
</tr>
<tr>
<td>9:53</td>
<td>0.29</td>
<td>1.94</td>
<td>8.78</td>
<td>6.64</td>
<td>26.69</td>
<td>1538</td>
<td>0.19</td>
<td>6.09</td>
<td>LT. YELLOW</td>
<td>NONE</td>
<td></td>
</tr>
</tbody>
</table>

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 6.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.00006; 3/16" = 0.00014; 1/4" = 0.00006; 5/16" = 0.00036; 3/8" = 0.00066; 1/2" = 0.0010; 5/8" = 0.0016

SAMPLING DATA

SAMPLED BY (PRINT)/AFFILIATION: RAB TECO
SAMPLER (S) SIGNATURES: 9:53 10:02
PUMP OR TUBING DEPTH IN WELL (feet): 18.5
SAMPLE PUMP FLOW RATE (mL per minute): 557
TUBING MATERIAL CODE: PE/S
FIELD DECONTAMINATION: Y N Y
FIELD-FILTERED: N Y FILTER SIZE: µm
DUPLICATE: Y N Y
SAMPLE CONTAINER SPECIFICATION:

<table>
<thead>
<tr>
<th>SAMPLE ID CODE</th>
<th># CONTAINERS</th>
<th>MATERIAL CODE</th>
<th>VOLUME</th>
<th>PRESERVATIVE USED</th>
<th>TOTAL VOL ADDED IN FIELD (mL)</th>
<th>pH</th>
<th>INTENDED ANALYSIS AND/OR METHOD</th>
<th>SAMPLING EQUIPMENT CODE</th>
</tr>
</thead>
<tbody>
<tr>
<td>@Ino-500</td>
<td>1</td>
<td>PE</td>
<td>500ml</td>
<td>NONE</td>
<td>NONE</td>
<td>N/A</td>
<td>inorganics</td>
<td>PP</td>
</tr>
<tr>
<td>@Met-250</td>
<td>2</td>
<td>PE</td>
<td>250ml</td>
<td>HNO3</td>
<td>1ml</td>
<td>&lt;2</td>
<td>Metals</td>
<td>PP</td>
</tr>
<tr>
<td>@Rad-1L</td>
<td>2</td>
<td>PE</td>
<td>1L</td>
<td>HNO3</td>
<td>5ml</td>
<td>&lt;2</td>
<td>Radiologicals</td>
<td>PP</td>
</tr>
</tbody>
</table>

REMARKS:
(1) Sample bottles pre-preserved at laboratory prior to sample collection.

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O= Other (Specify).
SAMPLING/PURGING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (tubing Gravity Drain); VT = Vacuum Trap; O= Other (Specify)

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

TestAmerica Laboratories, Inc.
TestAmerica Tampa
6712 Benjamin Road
Suite 100
Tampa, FL 33634
Tel: (813)885-7427

TestAmerica Job ID: 660-81511-1
Client Project/Site: L17F009

For:
Tampa Electric Company
5012 Causeway Boulevard
Tampa, Florida 33619

Attn: Ms. Peggy Penner

Authorized for release by:
7/5/2017 1:02:55 PM
Keaton Conner, Project Manager I
(813)885-7427
keaton.conner@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.
# Table of Contents

- Cover Page ................................................. 1
- Table of Contents ........................................ 2
- Sample Summary ......................................... 3
- Definitions ............................................... 4
- Case Narrative .......................................... 5
- Detection Summary ...................................... 6
- Client Sample Results .................................. 7
- QC Sample Results ....................................... 8
- QC Association .......................................... 9
- Chronicle ............................................... 10
- Certification Summary .................................. 11
- Method Summary ........................................ 12
- Chain of Custody ....................................... 13
- Receipt Checklists ..................................... 15
<table>
<thead>
<tr>
<th>Lab Sample ID</th>
<th>Client Sample ID</th>
<th>Matrix</th>
<th>Collected</th>
<th>Received</th>
</tr>
</thead>
<tbody>
<tr>
<td>660-81511-1</td>
<td>L17F009-01</td>
<td>Water</td>
<td>06/28/17 12:45</td>
<td>06/29/17 12:40</td>
</tr>
<tr>
<td>660-81511-2</td>
<td>L17F009-02</td>
<td>Water</td>
<td>06/28/17 11:27</td>
<td>06/29/17 12:40</td>
</tr>
<tr>
<td>660-81511-3</td>
<td>L17F009-03</td>
<td>Water</td>
<td>06/28/17 11:00</td>
<td>06/29/17 12:40</td>
</tr>
<tr>
<td>660-81511-4</td>
<td>L17F009-04</td>
<td>Water</td>
<td>06/28/17 10:28</td>
<td>06/29/17 12:40</td>
</tr>
<tr>
<td>660-81511-5</td>
<td>L17F009-05</td>
<td>Water</td>
<td>06/28/17 10:02</td>
<td>06/29/17 12:40</td>
</tr>
</tbody>
</table>
## Qualifiers

### Metals

<table>
<thead>
<tr>
<th>Qualifier</th>
<th>Qualifier Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.</td>
</tr>
<tr>
<td>U</td>
<td>Indicates that the compound was analyzed for but not detected.</td>
</tr>
</tbody>
</table>

## Glossary

These commonly used abbreviations may or may not be present in this report.

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>%R</td>
<td>Percent Recovery</td>
</tr>
<tr>
<td>CFL</td>
<td>Contains Free Liquid</td>
</tr>
<tr>
<td>CNF</td>
<td>Contains No Free Liquid</td>
</tr>
<tr>
<td>DER</td>
<td>Duplicate Error Ratio (normalized absolute difference)</td>
</tr>
<tr>
<td>Dil Fac</td>
<td>Dilution Factor</td>
</tr>
<tr>
<td>DL</td>
<td>Detection Limit (DoD/DOE)</td>
</tr>
<tr>
<td>DL, RA, RE, IN</td>
<td>Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample</td>
</tr>
<tr>
<td>DLC</td>
<td>Decision Level Concentration (Radiochemistry)</td>
</tr>
<tr>
<td>EDL</td>
<td>Estimated Detection Limit (Dioxin)</td>
</tr>
<tr>
<td>LOD</td>
<td>Limit of Detection (DoD/DOE)</td>
</tr>
<tr>
<td>LOQ</td>
<td>Limit of Quantitation (DoD/DOE)</td>
</tr>
<tr>
<td>MDA</td>
<td>Minimum Detectable Activity (Radiochemistry)</td>
</tr>
<tr>
<td>MDC</td>
<td>Minimum Detectable Concentration (Radiochemistry)</td>
</tr>
<tr>
<td>MDL</td>
<td>Method Detection Limit</td>
</tr>
<tr>
<td>ML</td>
<td>Minimum Level (Dioxin)</td>
</tr>
<tr>
<td>NC</td>
<td>Not Calculated</td>
</tr>
<tr>
<td>ND</td>
<td>Not Detected at the reporting limit (or MDL or EDL if shown)</td>
</tr>
<tr>
<td>PQL</td>
<td>Practical Quantitation Limit</td>
</tr>
<tr>
<td>QC</td>
<td>Quality Control</td>
</tr>
<tr>
<td>RER</td>
<td>Relative Error Ratio (Radiochemistry)</td>
</tr>
<tr>
<td>RL</td>
<td>Reporting Limit or Requested Limit (Radiochemistry)</td>
</tr>
<tr>
<td>RPD</td>
<td>Relative Percent Difference, a measure of the relative difference between two points</td>
</tr>
<tr>
<td>TEF</td>
<td>Toxicity Equivalent Factor (Dioxin)</td>
</tr>
<tr>
<td>TEQ</td>
<td>Toxicity Equivalent Quotient (Dioxin)</td>
</tr>
</tbody>
</table>
Job ID: 660-81511-1

Laboratory: TestAmerica Tampa

Narrative

Job Narrative
660-81511-1

Receipt
The samples were received on 6/29/2017 12:40 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.4º C.

Metals
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.
## Detection Summary

**Client**: Tampa Electric Company  
**Project/Site**: L17F009

<table>
<thead>
<tr>
<th>Client Sample ID: L17F009-01</th>
<th>Lab Sample ID: 660-81511-1</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Analyte</strong></td>
<td><strong>Result</strong></td>
</tr>
<tr>
<td>Lithium</td>
<td>0.013</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Client Sample ID: L17F009-02</th>
<th>Lab Sample ID: 660-81511-2</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Analyte</strong></td>
<td><strong>Result</strong></td>
</tr>
<tr>
<td>Lithium</td>
<td>0.014</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Client Sample ID: L17F009-03</th>
<th>Lab Sample ID: 660-81511-3</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Analyte</strong></td>
<td><strong>Result</strong></td>
</tr>
<tr>
<td>Lithium</td>
<td>0.0093</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Client Sample ID: L17F009-04</th>
<th>Lab Sample ID: 660-81511-4</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Analyte</strong></td>
<td><strong>Result</strong></td>
</tr>
<tr>
<td>Lithium</td>
<td>0.015</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Client Sample ID: L17F009-05</th>
<th>Lab Sample ID: 660-81511-5</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Analyte</strong></td>
<td><strong>Result</strong></td>
</tr>
<tr>
<td>Lithium</td>
<td>0.0052</td>
</tr>
</tbody>
</table>

This Detection Summary does not include radiochemical test results.
## Client Sample Results

**Client:** Tampa Electric Company  
**Project/Site:** L17F009  
**TestAmerica Job ID:** 660-81511-1

### Client Sample ID: L17F009-01
- **Date Collected:** 06/28/17 12:45  
- **Date Received:** 06/29/17 12:40  
- **Lab Sample ID:** 660-81511-1  
- **Matrix:** Water  
- **Method:** 200.7 Rev 4.4 - Metals (ICP)

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>Qualifier</th>
<th>PQL</th>
<th>MDL</th>
<th>Unit</th>
<th>D Prepared</th>
<th>Analyzed</th>
<th>Dil Fac</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithium</td>
<td>0.013 I</td>
<td></td>
<td>0.050</td>
<td>0.0010 mg/L</td>
<td>07/02/17 10:47</td>
<td>07/03/17 13:10</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

### Client Sample ID: L17F009-02
- **Date Collected:** 06/28/17 11:27  
- **Date Received:** 06/29/17 12:40  
- **Lab Sample ID:** 660-81511-2  
- **Matrix:** Water  
- **Method:** 200.7 Rev 4.4 - Metals (ICP)

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>Qualifier</th>
<th>PQL</th>
<th>MDL</th>
<th>Unit</th>
<th>D Prepared</th>
<th>Analyzed</th>
<th>Dil Fac</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithium</td>
<td>0.014 I</td>
<td></td>
<td>0.050</td>
<td>0.0010 mg/L</td>
<td>07/02/17 10:47</td>
<td>07/03/17 13:24</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

### Client Sample ID: L17F009-03
- **Date Collected:** 06/28/17 11:00  
- **Date Received:** 06/29/17 12:40  
- **Lab Sample ID:** 660-81511-3  
- **Matrix:** Water  
- **Method:** 200.7 Rev 4.4 - Metals (ICP)

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>Qualifier</th>
<th>PQL</th>
<th>MDL</th>
<th>Unit</th>
<th>D Prepared</th>
<th>Analyzed</th>
<th>Dil Fac</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithium</td>
<td>0.0093 I</td>
<td></td>
<td>0.050</td>
<td>0.0010 mg/L</td>
<td>07/02/17 10:47</td>
<td>07/03/17 13:27</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

### Client Sample ID: L17F009-04
- **Date Collected:** 06/28/17 10:28  
- **Date Received:** 06/29/17 12:40  
- **Lab Sample ID:** 660-81511-4  
- **Matrix:** Water  
- **Method:** 200.7 Rev 4.4 - Metals (ICP)

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>Qualifier</th>
<th>PQL</th>
<th>MDL</th>
<th>Unit</th>
<th>D Prepared</th>
<th>Analyzed</th>
<th>Dil Fac</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithium</td>
<td>0.015 I</td>
<td></td>
<td>0.050</td>
<td>0.0010 mg/L</td>
<td>07/02/17 10:47</td>
<td>07/03/17 13:30</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

### Client Sample ID: L17F009-05
- **Date Collected:** 06/28/17 10:02  
- **Date Received:** 06/29/17 12:40  
- **Lab Sample ID:** 660-81511-5  
- **Matrix:** Water  
- **Method:** 200.7 Rev 4.4 - Metals (ICP)

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>Qualifier</th>
<th>PQL</th>
<th>MDL</th>
<th>Unit</th>
<th>D Prepared</th>
<th>Analyzed</th>
<th>Dil Fac</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithium</td>
<td>0.0052 I</td>
<td></td>
<td>0.050</td>
<td>0.0010 mg/L</td>
<td>07/02/17 10:47</td>
<td>07/03/17 13:34</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

TestAmerica Tampa
# QC Sample Results

## Method: 200.7 Rev 4.4 - Metals (ICP)

### Lab Sample ID: MB 400-359159/1-A
**Matrix:** Water  
**Analysis Batch:** 359305

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Client Sample ID</th>
<th>MB</th>
<th>Result</th>
<th>Qualifier</th>
<th>PQL</th>
<th>MDL</th>
<th>Unit</th>
<th>Dil Fac</th>
<th>Prepared</th>
<th>Analyzed</th>
<th>%Rec.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithium</td>
<td>MB 400-359159/1-A</td>
<td>U</td>
<td>0.0010</td>
<td>0.050</td>
<td>0.0010</td>
<td>mg/L</td>
<td></td>
<td></td>
<td>07/02/17 10:47</td>
<td>07/03/17 12:41</td>
<td>0.0010</td>
</tr>
</tbody>
</table>

### Lab Sample ID: LCS 400-359159/2-A
**Matrix:** Water  
**Analysis Batch:** 359305

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Client Sample ID</th>
<th>Spike</th>
<th>Added</th>
<th>LCS</th>
<th>Result</th>
<th>Qualifier</th>
<th>Unit</th>
<th>%Rec.</th>
<th>Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithium</td>
<td>LCS 400-359159/2-A</td>
<td>1.00</td>
<td>1.06</td>
<td>LCS</td>
<td>1.06</td>
<td></td>
<td>mg/L</td>
<td>106</td>
<td>85 - 115</td>
</tr>
</tbody>
</table>

### Lab Sample ID: 400-139832-A-1-B MS
**Matrix:** Water  
**Analysis Batch:** 359305

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Client Sample ID</th>
<th>Sample</th>
<th>Result</th>
<th>Spike</th>
<th>Added</th>
<th>MS</th>
<th>Result</th>
<th>Qualifier</th>
<th>Unit</th>
<th>%Rec.</th>
<th>Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithium</td>
<td>400-139832-A-1-B MS</td>
<td>Sample</td>
<td>0.047</td>
<td>1.00</td>
<td>1.13</td>
<td>MS</td>
<td>1.13</td>
<td></td>
<td>mg/L</td>
<td>108</td>
<td>70 - 130</td>
</tr>
</tbody>
</table>

### Lab Sample ID: 400-139832-A-1-C MSD
**Matrix:** Water  
**Analysis Batch:** 359305

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Client Sample ID</th>
<th>Sample</th>
<th>Result</th>
<th>Spike</th>
<th>Added</th>
<th>MSD</th>
<th>Result</th>
<th>Qualifier</th>
<th>Unit</th>
<th>%Rec.</th>
<th>Limits</th>
<th>RPD</th>
<th>Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithium</td>
<td>400-139832-A-1-C MSD</td>
<td>Sample</td>
<td>0.047</td>
<td>1.00</td>
<td>1.18</td>
<td>MSD</td>
<td>1.18</td>
<td></td>
<td>mg/L</td>
<td>113</td>
<td>70 - 130</td>
<td>4</td>
<td>25</td>
</tr>
</tbody>
</table>
### Metals

**Prep Batch: 359159**

<table>
<thead>
<tr>
<th>Lab Sample ID</th>
<th>Client Sample ID</th>
<th>Prep Type</th>
<th>Matrix</th>
<th>Method</th>
<th>Prep Batch</th>
</tr>
</thead>
<tbody>
<tr>
<td>660-81511-1</td>
<td>L17F009-01</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7</td>
<td></td>
</tr>
<tr>
<td>660-81511-2</td>
<td>L17F009-02</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7</td>
<td></td>
</tr>
<tr>
<td>660-81511-3</td>
<td>L17F009-03</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7</td>
<td></td>
</tr>
<tr>
<td>660-81511-4</td>
<td>L17F009-04</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7</td>
<td></td>
</tr>
<tr>
<td>660-81511-5</td>
<td>L17F009-05</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7</td>
<td></td>
</tr>
<tr>
<td>MB 400-359159/1-A</td>
<td>Method Blank</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7</td>
<td></td>
</tr>
<tr>
<td>LCS 400-359159/2-A</td>
<td>Lab Control Sample</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7</td>
<td></td>
</tr>
<tr>
<td>400-139832-A-1-B MS</td>
<td>Matrix Spike</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7</td>
<td></td>
</tr>
<tr>
<td>400-139832-A-1-C MSD</td>
<td>Matrix Spike Duplicate</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7</td>
<td></td>
</tr>
</tbody>
</table>

**Analysis Batch: 359305**

<table>
<thead>
<tr>
<th>Lab Sample ID</th>
<th>Client Sample ID</th>
<th>Prep Type</th>
<th>Matrix</th>
<th>Method</th>
<th>Prep Batch</th>
</tr>
</thead>
<tbody>
<tr>
<td>660-81511-1</td>
<td>L17F009-01</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7 Rev 4.4</td>
<td>359159</td>
</tr>
<tr>
<td>660-81511-2</td>
<td>L17F009-02</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7 Rev 4.4</td>
<td>359159</td>
</tr>
<tr>
<td>660-81511-3</td>
<td>L17F009-03</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7 Rev 4.4</td>
<td>359159</td>
</tr>
<tr>
<td>660-81511-4</td>
<td>L17F009-04</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7 Rev 4.4</td>
<td>359159</td>
</tr>
<tr>
<td>660-81511-5</td>
<td>L17F009-05</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7 Rev 4.4</td>
<td>359159</td>
</tr>
<tr>
<td>MB 400-359159/1-A</td>
<td>Method Blank</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7 Rev 4.4</td>
<td>359159</td>
</tr>
<tr>
<td>LCS 400-359159/2-A</td>
<td>Lab Control Sample</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7 Rev 4.4</td>
<td>359159</td>
</tr>
<tr>
<td>400-139832-A-1-B MS</td>
<td>Matrix Spike</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7 Rev 4.4</td>
<td>359159</td>
</tr>
<tr>
<td>400-139832-A-1-C MSD</td>
<td>Matrix Spike Duplicate</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7 Rev 4.4</td>
<td>359159</td>
</tr>
</tbody>
</table>
### Client Sample ID: L17F009-01
**Date Collected:** 06/28/17 12:45  
**Date Received:** 06/29/17 12:40  

<table>
<thead>
<tr>
<th>Prep Type</th>
<th>Batch Type</th>
<th>Batch Method</th>
<th>Run</th>
<th>Dil Factor</th>
<th>Initial Amount</th>
<th>Final Amount</th>
<th>Batch Number</th>
<th>Prepared or Analyzed</th>
<th>Analyst</th>
<th>Lab</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total/NA</td>
<td>Prep</td>
<td>200.7</td>
<td></td>
<td></td>
<td>50 mL</td>
<td>50 mL</td>
<td>359159</td>
<td></td>
<td>DN1</td>
<td>TAL PEN</td>
</tr>
<tr>
<td>Total/NA</td>
<td>Analysis</td>
<td>200.7 Rev 4.4</td>
<td></td>
<td>1</td>
<td>50 mL</td>
<td>50 mL</td>
<td>359305</td>
<td></td>
<td>GESP</td>
<td>TAL PEN</td>
</tr>
</tbody>
</table>

**Matrix:** Water  
**Date Collected:** 06/28/17 12:45  
**Date Received:** 06/29/17 12:40  

**Prep Type** | **Batch Type** | **Batch Method** | **Run** | **Dil Factor** | **Initial Amount** | **Final Amount** | **Batch Number** | **Prepared or Analyzed** | **Analyst** | **Lab** |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total/NA</td>
<td>Prep</td>
<td>200.7</td>
<td></td>
<td></td>
<td>50 mL</td>
<td>50 mL</td>
<td>359159</td>
<td></td>
<td>DN1</td>
<td>TAL PEN</td>
</tr>
<tr>
<td>Total/NA</td>
<td>Analysis</td>
<td>200.7 Rev 4.4</td>
<td></td>
<td>1</td>
<td>50 mL</td>
<td>50 mL</td>
<td>359305</td>
<td></td>
<td>GESP</td>
<td>TAL PEN</td>
</tr>
</tbody>
</table>

**Instrument ID:** 6500 ICP Duo

### Client Sample ID: L17F009-02
**Date Collected:** 06/28/17 11:27  
**Date Received:** 06/29/17 12:40  

<table>
<thead>
<tr>
<th>Prep Type</th>
<th>Batch Type</th>
<th>Batch Method</th>
<th>Run</th>
<th>Dil Factor</th>
<th>Initial Amount</th>
<th>Final Amount</th>
<th>Batch Number</th>
<th>Prepared or Analyzed</th>
<th>Analyst</th>
<th>Lab</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total/NA</td>
<td>Prep</td>
<td>200.7</td>
<td></td>
<td></td>
<td>50 mL</td>
<td>50 mL</td>
<td>359159</td>
<td></td>
<td>DN1</td>
<td>TAL PEN</td>
</tr>
<tr>
<td>Total/NA</td>
<td>Analysis</td>
<td>200.7 Rev 4.4</td>
<td></td>
<td>1</td>
<td>50 mL</td>
<td>50 mL</td>
<td>359305</td>
<td></td>
<td>GESP</td>
<td>TAL PEN</td>
</tr>
</tbody>
</table>

**Matrix:** Water  
**Date Collected:** 06/28/17 11:27  
**Date Received:** 06/29/17 12:40  

**Prep Type** | **Batch Type** | **Batch Method** | **Run** | **Dil Factor** | **Initial Amount** | **Final Amount** | **Batch Number** | **Prepared or Analyzed** | **Analyst** | **Lab** |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total/NA</td>
<td>Prep</td>
<td>200.7</td>
<td></td>
<td></td>
<td>50 mL</td>
<td>50 mL</td>
<td>359159</td>
<td></td>
<td>DN1</td>
<td>TAL PEN</td>
</tr>
<tr>
<td>Total/NA</td>
<td>Analysis</td>
<td>200.7 Rev 4.4</td>
<td></td>
<td>1</td>
<td>50 mL</td>
<td>50 mL</td>
<td>359305</td>
<td></td>
<td>GESP</td>
<td>TAL PEN</td>
</tr>
</tbody>
</table>

**Instrument ID:** 6500 ICP Duo

### Client Sample ID: L17F009-03
**Date Collected:** 06/28/17 11:00  
**Date Received:** 06/29/17 12:40  

<table>
<thead>
<tr>
<th>Prep Type</th>
<th>Batch Type</th>
<th>Batch Method</th>
<th>Run</th>
<th>Dil Factor</th>
<th>Initial Amount</th>
<th>Final Amount</th>
<th>Batch Number</th>
<th>Prepared or Analyzed</th>
<th>Analyst</th>
<th>Lab</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total/NA</td>
<td>Prep</td>
<td>200.7</td>
<td></td>
<td></td>
<td>50 mL</td>
<td>50 mL</td>
<td>359159</td>
<td></td>
<td>DN1</td>
<td>TAL PEN</td>
</tr>
<tr>
<td>Total/NA</td>
<td>Analysis</td>
<td>200.7 Rev 4.4</td>
<td></td>
<td>1</td>
<td>50 mL</td>
<td>50 mL</td>
<td>359305</td>
<td></td>
<td>GESP</td>
<td>TAL PEN</td>
</tr>
</tbody>
</table>

**Matrix:** Water  
**Date Collected:** 06/28/17 11:00  
**Date Received:** 06/29/17 12:40  

**Prep Type** | **Batch Type** | **Batch Method** | **Run** | **Dil Factor** | **Initial Amount** | **Final Amount** | **Batch Number** | **Prepared or Analyzed** | **Analyst** | **Lab** |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total/NA</td>
<td>Prep</td>
<td>200.7</td>
<td></td>
<td></td>
<td>50 mL</td>
<td>50 mL</td>
<td>359159</td>
<td></td>
<td>DN1</td>
<td>TAL PEN</td>
</tr>
<tr>
<td>Total/NA</td>
<td>Analysis</td>
<td>200.7 Rev 4.4</td>
<td></td>
<td>1</td>
<td>50 mL</td>
<td>50 mL</td>
<td>359305</td>
<td></td>
<td>GESP</td>
<td>TAL PEN</td>
</tr>
</tbody>
</table>

**Instrument ID:** 6500 ICP Duo

### Client Sample ID: L17F009-04
**Date Collected:** 06/28/17 10:28  
**Date Received:** 06/29/17 12:40  

<table>
<thead>
<tr>
<th>Prep Type</th>
<th>Batch Type</th>
<th>Batch Method</th>
<th>Run</th>
<th>Dil Factor</th>
<th>Initial Amount</th>
<th>Final Amount</th>
<th>Batch Number</th>
<th>Prepared or Analyzed</th>
<th>Analyst</th>
<th>Lab</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total/NA</td>
<td>Prep</td>
<td>200.7</td>
<td></td>
<td></td>
<td>50 mL</td>
<td>50 mL</td>
<td>359159</td>
<td></td>
<td>DN1</td>
<td>TAL PEN</td>
</tr>
<tr>
<td>Total/NA</td>
<td>Analysis</td>
<td>200.7 Rev 4.4</td>
<td></td>
<td>1</td>
<td>50 mL</td>
<td>50 mL</td>
<td>359305</td>
<td></td>
<td>GESP</td>
<td>TAL PEN</td>
</tr>
</tbody>
</table>

**Matrix:** Water  
**Date Collected:** 06/28/17 10:28  
**Date Received:** 06/29/17 12:40  

**Prep Type** | **Batch Type** | **Batch Method** | **Run** | **Dil Factor** | **Initial Amount** | **Final Amount** | **Batch Number** | **Prepared or Analyzed** | **Analyst** | **Lab** |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total/NA</td>
<td>Prep</td>
<td>200.7</td>
<td></td>
<td></td>
<td>50 mL</td>
<td>50 mL</td>
<td>359159</td>
<td></td>
<td>DN1</td>
<td>TAL PEN</td>
</tr>
<tr>
<td>Total/NA</td>
<td>Analysis</td>
<td>200.7 Rev 4.4</td>
<td></td>
<td>1</td>
<td>50 mL</td>
<td>50 mL</td>
<td>359305</td>
<td></td>
<td>GESP</td>
<td>TAL PEN</td>
</tr>
</tbody>
</table>

**Instrument ID:** 6500 ICP Duo

### Client Sample ID: L17F009-05
**Date Collected:** 06/28/17 10:02  
**Date Received:** 06/29/17 12:40  

<table>
<thead>
<tr>
<th>Prep Type</th>
<th>Batch Type</th>
<th>Batch Method</th>
<th>Run</th>
<th>Dil Factor</th>
<th>Initial Amount</th>
<th>Final Amount</th>
<th>Batch Number</th>
<th>Prepared or Analyzed</th>
<th>Analyst</th>
<th>Lab</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total/NA</td>
<td>Prep</td>
<td>200.7</td>
<td></td>
<td></td>
<td>50 mL</td>
<td>50 mL</td>
<td>359159</td>
<td></td>
<td>DN1</td>
<td>TAL PEN</td>
</tr>
<tr>
<td>Total/NA</td>
<td>Analysis</td>
<td>200.7 Rev 4.4</td>
<td></td>
<td>1</td>
<td>50 mL</td>
<td>50 mL</td>
<td>359305</td>
<td></td>
<td>GESP</td>
<td>TAL PEN</td>
</tr>
</tbody>
</table>

**Matrix:** Water  
**Date Collected:** 06/28/17 10:02  
**Date Received:** 06/29/17 12:40  

**Prep Type** | **Batch Type** | **Batch Method** | **Run** | **Dil Factor** | **Initial Amount** | **Final Amount** | **Batch Number** | **Prepared or Analyzed** | **Analyst** | **Lab** |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total/NA</td>
<td>Prep</td>
<td>200.7</td>
<td></td>
<td></td>
<td>50 mL</td>
<td>50 mL</td>
<td>359159</td>
<td></td>
<td>DN1</td>
<td>TAL PEN</td>
</tr>
<tr>
<td>Total/NA</td>
<td>Analysis</td>
<td>200.7 Rev 4.4</td>
<td></td>
<td>1</td>
<td>50 mL</td>
<td>50 mL</td>
<td>359305</td>
<td></td>
<td>GESP</td>
<td>TAL PEN</td>
</tr>
</tbody>
</table>

**Instrument ID:** 6500 ICP Duo

**Laboratory References:**  
TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001
## Accreditation/Certification Summary

Client: Tampa Electric Company  
Project/Site: L17F009  
TestAmerica Job ID: 660-81511-1

### Laboratory: TestAmerica Tampa

The accreditations/certifications listed below are applicable to this report.

<table>
<thead>
<tr>
<th>Authority</th>
<th>Program</th>
<th>EPA Region</th>
<th>Identification Number</th>
<th>Expiration Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Florida</td>
<td>NELAP</td>
<td>4</td>
<td>E84282</td>
<td>06-30-18</td>
</tr>
</tbody>
</table>

### Laboratory: TestAmerica Pensacola

The accreditations/certifications listed below are applicable to this report.

<table>
<thead>
<tr>
<th>Authority</th>
<th>Program</th>
<th>EPA Region</th>
<th>Identification Number</th>
<th>Expiration Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Florida</td>
<td>NELAP</td>
<td>4</td>
<td>E81010</td>
<td>06-30-18</td>
</tr>
</tbody>
</table>
## Method Summary

Client: Tampa Electric Company  
Project/Site: L17F009  
TestAmerica Job ID: 660-81511-1

<table>
<thead>
<tr>
<th>Method</th>
<th>Method Description</th>
<th>Protocol</th>
<th>Laboratory</th>
</tr>
</thead>
<tbody>
<tr>
<td>200.7 Rev 4.4</td>
<td>Metals (ICP)</td>
<td>EPA</td>
<td>TAL PEN</td>
</tr>
</tbody>
</table>

**Protocol References:**
- EPA = US Environmental Protection Agency

**Laboratory References:**
- TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001
## SUBCONTRACT ORDER

**Tampa Electric Company, Laboratory Services**

**L17F009**

### SENDING LABORATORY:

Tampa Electric Company, Laboratory Services  
5012 Causeway Blvd  
Tampa, FL 33619  
Phone: (813) 630-7490  
Fax: (813) 630-7360  
Project Manager: Peggy Penner

### RECEIVING LABORATORY:

TestAmerica Laboratories, Inc. - Tampa  
6712 Benjamin Rd., Suite 100  
Tampa, FL 33634  
Phone: (813) 885-7427  
Fax: -

### Due Date: 07/13/17 16:00

<table>
<thead>
<tr>
<th>Analysis</th>
<th>Expires</th>
<th>Laboratory ID</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample ID: L17F009-01 BBS-CCR-1</td>
<td>Water</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sampled: 06/28/17 12:45 lithium, Total EPA 6010</td>
<td>12/25/17 12:45</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Containers Supplied: Poly HNO3 - 250mL (A)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sample ID: L17F009-02 BBS-CCR-2</td>
<td>Water</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sampled: 06/28/17 11:27 lithium, Total EPA 6010</td>
<td>12/25/17 11:27</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Containers Supplied: Poly HNO3 - 250mL (A)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sample ID: L17F009-03 BBS-CCR-3</td>
<td>Water</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sampled: 06/28/17 11:00 lithium, Total EPA 6010</td>
<td>12/25/17 11:00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Containers Supplied: Poly HNO3 - 250mL (A)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sample ID: L17F009-04 BBS-CCR-BW1</td>
<td>Water</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sampled: 06/28/17 10:28 lithium, Total EPA 6010</td>
<td>12/25/17 10:28</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Containers Supplied: Poly HNO3 - 250mL (A)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sample ID: L17F009-05 BBS-CCR-BW2</td>
<td>Water</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sampled: 06/28/17 10:02 lithium, Total EPA 6010</td>
<td>12/25/17 10:02</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Containers Supplied: Poly HNO3 - 250mL (A)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

**Released By**  6.28.17 16:05  **Date & Time**  6.29.17 10:12:40  **Received By**

**Date & Time**
# Chain of Custody Record

## Client Information (Sub Contract Lab)

<table>
<thead>
<tr>
<th>Field</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Client Contact</td>
<td>Conner, Keaton</td>
</tr>
<tr>
<td>Phone</td>
<td>850-478-7427 (Fax)</td>
</tr>
<tr>
<td>Email</td>
<td><a href="mailto:keaton.conner@testamericainc.com">keaton.conner@testamericainc.com</a></td>
</tr>
<tr>
<td>Company</td>
<td>TestAmerica Laboratories, Inc.</td>
</tr>
<tr>
<td>Address</td>
<td>3355 Mclomore Drive, Pensacola FL 32514</td>
</tr>
<tr>
<td>City</td>
<td>Pensacola</td>
</tr>
<tr>
<td>State, Zip</td>
<td>FL 32514</td>
</tr>
<tr>
<td>Phone</td>
<td>850-474-1001 (Tel) 850-478-2671 (Fax)</td>
</tr>
<tr>
<td>Project Name</td>
<td>L17F009</td>
</tr>
<tr>
<td>Project #</td>
<td>66004821</td>
</tr>
</tbody>
</table>

## Sample Identification - Client ID (Lab ID)

<table>
<thead>
<tr>
<th>Sample ID</th>
<th>Sample Date</th>
<th>Sample Time</th>
<th>Sample Type</th>
<th>Field空白 Sample (Yes or No)</th>
<th>Special Instructions/Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>L17F009-01 (660-81511-1)</td>
<td>6/28/17</td>
<td>12:45 Eastern</td>
<td>Water</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>L17F009-03 (660-81511-3)</td>
<td>6/28/17</td>
<td>11:00 Eastern</td>
<td>Water</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>L17F009-04 (660-81511-4)</td>
<td>6/28/17</td>
<td>10:28 Eastern</td>
<td>Water</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>L17F009-05 (660-81511-5)</td>
<td>6/28/17</td>
<td>10:02 Eastern</td>
<td>Water</td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>

## Analysis Requested

<table>
<thead>
<tr>
<th>Preservation Codes:</th>
<th>Analysis Requested</th>
</tr>
</thead>
<tbody>
<tr>
<td>A: HCL</td>
<td>M: Mercury</td>
</tr>
<tr>
<td>B: NaOH</td>
<td>N: None</td>
</tr>
<tr>
<td>C: Zn Acetate</td>
<td>O: NaNO₂</td>
</tr>
<tr>
<td>D: Nitric Acid</td>
<td>P: Na₂CO₃</td>
</tr>
<tr>
<td>E: NaISO₄</td>
<td>Q: Na₂SO₄</td>
</tr>
<tr>
<td>F: MoOH</td>
<td>R: Na₂CO₃</td>
</tr>
<tr>
<td>G: Anhydride</td>
<td>S: KOH</td>
</tr>
<tr>
<td>H: Ascorbic Acid</td>
<td>T: TSP Dicarbonate</td>
</tr>
<tr>
<td>I: Ice</td>
<td>U: Acetone</td>
</tr>
<tr>
<td>J: El Water</td>
<td>V: MOA</td>
</tr>
<tr>
<td>K: EDTA</td>
<td>W: pH 4-6</td>
</tr>
<tr>
<td>L: EDA</td>
<td>Z: - other (specify)</td>
</tr>
</tbody>
</table>

## Possible Hazard Identification

- **Unconfirmed**
- **Deliverable Requested**: I, II, III, IV, Other (specify)
- **Primary Deliverable Rank**: 2
- **Special Instructions/QC Requirements**: [ ]

## 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

<table>
<thead>
<tr>
<th>Date/Time</th>
<th>Company</th>
</tr>
</thead>
<tbody>
<tr>
<td>5/29/17</td>
<td>TA</td>
</tr>
</tbody>
</table>

## Custody Seal Intact

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
</table>

## Cooler Temperature and Other Remarks

- [ ]
## Login Sample Receipt Checklist

**Client:** Tampa Electric Company  
**Job Number:** 660-81511-1

**Login Number:** 81511  
**List Number:** 1  
**Creator:** Moccia, Vanessa M

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

Client: Tampa Electric Company
Job Number: 660-81511-1

Login Number: 81511
List Number: 2
Creator: Edwards, Robin S

<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Radioactivity wasn't checked or is ( \leq ) background as measured by a survey meter</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>The cooler's custody seal, if present, is intact.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Sample custody seals, if present, are intact.</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>The cooler or samples do not appear to have been compromised or tampered with.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Samples were received on ice.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Cooler Temperature is acceptable.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Cooler Temperature is recorded.</td>
<td>True</td>
<td>0.6°C IR-2</td>
</tr>
<tr>
<td>COC is present.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>COC is filled out in ink and legible.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>COC is filled out with all pertinent information.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Is the Field Sampler's name present on COC?</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>There are no discrepancies between the containers received and the COC.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Samples are received within Holding Time (excluding tests with immediate HTs)</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Sample containers have legible labels.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Containers are not broken or leaking.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Sample collection date/times are provided.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Appropriate sample containers are used.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Sample bottles are completely filled.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Sample Preservation Verified.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Containers requiring zero headspace have no headspace or bubble is (&lt;6\text{mm (1/4&quot;)}.)</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Multiphasic samples are not present.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Samples do not require splitting or compositing.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Residual Chlorine Checked.</td>
<td>N/A</td>
<td></td>
</tr>
</tbody>
</table>
TECO
5012 Causeway Blvd.
Tampa, FL  33619
Attn: Peggy Penner

Field Custody: Client
Client/Field ID: L17F009-05
Sample Collection: 6-28-17/1002
Lab ID No: 17.7747
Lab Custody Date: 6-29-17/1450
Sample description: Water

CERTIFICATE OF ANALYSIS

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Units</th>
<th>Results</th>
<th>Analysis Date</th>
<th>Method</th>
<th>Detection Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Combined Radium (Radium-226 + Radium 228)</td>
<td>pCi/l</td>
<td>4.8 ± 0.7</td>
<td>Calc</td>
<td>Calc</td>
<td>0.7</td>
</tr>
<tr>
<td>Radium-226</td>
<td>pCi/l</td>
<td>4.4 ± 0.7</td>
<td>7-5-17/1227</td>
<td>EPA</td>
<td>903.0</td>
</tr>
<tr>
<td>Radium-228</td>
<td>pCi/l</td>
<td>0.4 ± 0.5</td>
<td>7-11-17/0952</td>
<td>EPA Ra-05</td>
<td>0.7</td>
</tr>
</tbody>
</table>

Alpha Standard: Th-230

James W. Hayes
Laboratory Manager

Test results meet all requirements of the NELAC standards. Statement of estimated uncertainty available upon request. Test results refer only to sample(s) listed. Contact person: Jim Hayes (813) 229-2879.

Page 1 of 1
DOH Certification #E84025  
DEP COMPOQAP # 870251  

Report Date: July 11, 2017

TECO  
5012 Causeway Blvd.  
Tampa, FL 33619  
Attn: Peggy Penner

Field Custody:  
Client  
Client/Field ID: L17F009-04  
BBS-CCR-BW1

Sample Collection: 6-28-17/1028  
Lab ID No: 17.7746  
Lab Custody Date: 6-29-17/1450  
Sample description: Water

### CERTIFICATE OF ANALYSIS

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Units</th>
<th>Results</th>
<th>Analysis Date</th>
<th>Method</th>
<th>Detection Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Combined Radium</td>
<td>pCi/l</td>
<td>37.8 ± 1.7</td>
<td>Calc</td>
<td>Calc</td>
<td>0.7</td>
</tr>
<tr>
<td>(Radium-226 + Radium 228)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Radium-226</td>
<td>pCi/l</td>
<td>34.4 ± 1.7</td>
<td>7-5-17/1227</td>
<td>EPA 903.0</td>
<td>0.4</td>
</tr>
<tr>
<td>Radium-228</td>
<td>pCi/l</td>
<td>3.4 ± 0.6</td>
<td>7-11-17/0952</td>
<td>EPA Ra-05</td>
<td>0.7</td>
</tr>
</tbody>
</table>

Alpha Standard: Th-230  

James W. Hayes  
Laboratory Manager

Test results meet all requirements of the NELAC standards. Statement of estimated uncertainty available upon request. Test results refer only to sample(s) listed. Contact person: Jim Hayes (813) 229-2879.
DOH Certification #E84025
DEP COMPOAP # 870251

Report Date: July 11, 2017

TECO
5012 Causeway Blvd.
Tampa, FL 33619
Attn: Peggy Penner

Field Custody: Client
Client/Field ID: L17F009-03
Sample Collection: 6-28-17/1100
Lab ID No: 17.7745
Lab Custody Date: 6-29-17/1450
Sample description: Water

CERTIFICATE OF ANALYSIS

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Units</th>
<th>Results</th>
<th>Analysis Date</th>
<th>Method</th>
<th>Detection Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Combined Radium</td>
<td>pCi/l</td>
<td>17.7 ± 1.2</td>
<td>Calc</td>
<td>Calc</td>
<td>0.7</td>
</tr>
<tr>
<td>(Radium-226 + Radium 228)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Radium-226</td>
<td>pCi/l</td>
<td>15.9 ± 1.2</td>
<td>7-5-17/1227</td>
<td>EPA 903.0</td>
<td>0.4</td>
</tr>
<tr>
<td>Radium-228</td>
<td>pCi/l</td>
<td>1.8 ± 0.6</td>
<td>7-11-17/0952</td>
<td>EPA Ra-05</td>
<td>0.7</td>
</tr>
</tbody>
</table>

Alpha Standard: Th-230

James W. Hayes
Laboratory Manager

Test results meet all requirements of the NELAC standards. Statement of estimated uncertainty available upon request. Test results refer only to sample(s) listed. Contact person: Jim Hayes (813) 229-2879.
DOH Certification #E84025
DEP COMPOAP # 870251

Report Date: July 11, 2017

TECO
5012 Causeway Blvd.
Tampa, FL 33619

Attn: Peggy Penner

Field Custody: L17F009-02
Client/Field ID: BBS-CCR-2
Sample Collection: 6-28-17/1127
Lab ID No.: 17.7744
Lab Custody Date: 6-29-17/1450
Sample description: Water

CERTIFICATE OF ANALYSIS

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Units</th>
<th>Results</th>
<th>Analysis Date</th>
<th>Method</th>
<th>Detection Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Combined Radium (Radium-226 + Radium 228)</td>
<td>pCi/l</td>
<td>14.7 ± 1.1</td>
<td>Calc</td>
<td>Calc</td>
<td>0.7</td>
</tr>
<tr>
<td>Radium-226</td>
<td>pCi/l</td>
<td>13.7 ± 1.1</td>
<td>7-5-17/1227</td>
<td>EPA 903.0</td>
<td>0.4</td>
</tr>
<tr>
<td>Radium-228</td>
<td>pCi/l</td>
<td>1.0 ± 0.5</td>
<td>7-11-17/0952</td>
<td>EPA Ra-05</td>
<td>0.7</td>
</tr>
</tbody>
</table>

Alpha Standard: Th-230

James W. Hayes
Laboratory Manager

Test results meet all requirements of the NELAC standards. Statement of estimated uncertainty available upon request. Test results refer only to sample(s) listed.
Contact person: Jim Hayes (813) 229-2879.

Page 1 of 1
DOH Certification #E84025
DEP COMPOAP # 870251

Report Date: July 11, 2017

TECO
5012 Causeway Blvd.
Tampa, FL 33619
Attn: Peggy Penner

Field Custody: Client
Client/Field ID: L17F009-01
Sample Collection: 6-28-17/1245
Lab ID No: 17.7743
Lab Custody Date: 6-29-17/1450
Sample description: Water

CERTIFICATE OF ANALYSIS

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Units</th>
<th>Results</th>
<th>Analysis Date</th>
<th>Method</th>
<th>Detection Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Combined Radium (Rad-226 +</td>
<td>pCi/l</td>
<td>41.4 ± 1.9</td>
<td>Calc</td>
<td>Calc</td>
<td>0.7</td>
</tr>
<tr>
<td>Rad-228)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rad-226</td>
<td>pCi/l</td>
<td>39.7 ± 1.9</td>
<td>7-5-17/1227</td>
<td>EPA 903.0</td>
<td>0.4</td>
</tr>
<tr>
<td>Rad-228</td>
<td>pCi/l</td>
<td>1.7 ± 0.6</td>
<td>7-11-17/0952</td>
<td>EPA Ra-05</td>
<td>0.7</td>
</tr>
</tbody>
</table>

Alpha Standard: Th-230

[Signature]
James W. Hayes
Laboratory Manager

Test results meet all requirements of the NELAC standards. Statement of estimated uncertainty available upon request. Test results refer only to sample(s) listed. Contact person: Jim Hayes (813) 229-2879.

Page 1 of 1
## SUBCONTRACT ORDER
Tampa Electric Company, Laboratory Services
L17F009

### SENDING LABORATORY:
Tampa Electric Company, Laboratory Services
5012 Causeway Blvd
Tampa, FL 33619
Phone: (813) 630-7490
Fax: (813) 630-7360

Project Manager: Peggy Penner

### RECEIVING LABORATORY:
KNL Laboratory Services
3202 N. Florida Ave.
Tampa, FL 33603
Phone: (813) 229-2879
Fax: -

### Due Date: 07/13/17 16:00

<table>
<thead>
<tr>
<th>Analysis</th>
<th>Expires</th>
<th>Laboratory ID</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample ID: L17F009-01  BBS-CCR-1</td>
<td>Water</td>
<td>17.7443</td>
<td>Level 2 Data required</td>
</tr>
<tr>
<td>Sample ID: L17F009-02  BBS-CCR-2</td>
<td>Water</td>
<td>17.7444</td>
<td>Level 2 Data required</td>
</tr>
<tr>
<td>Sample ID: L17F009-03  BBS-CCR-3</td>
<td>Water</td>
<td>17.7445</td>
<td>Level 2 Data required</td>
</tr>
<tr>
<td>Sample ID: L17F009-04  BBS-CCR-BW1</td>
<td>Water</td>
<td>17.7446</td>
<td>Level 2 Data required</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sample</th>
<th>Expires</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Radium 226 EPA 903.0</td>
<td>12/25/17 12:45</td>
<td>Level 2 Data required</td>
</tr>
<tr>
<td>Radium 226+228, Total</td>
<td>12/25/17 12:45</td>
<td>Level 2 Data required</td>
</tr>
<tr>
<td>Radium 228 Ra-05</td>
<td>12/25/17 12:45</td>
<td>Level 2 Data required</td>
</tr>
</tbody>
</table>

### Containers Supplied:
RAD Poly HNO3 - 1000mL (C) RAD Poly HNO3 - 1000mL (D)

<table>
<thead>
<tr>
<th>Sample</th>
<th>Expires</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Radium 226 EPA 903.0</td>
<td>12/25/17 11:27</td>
<td>Level 2 Data required</td>
</tr>
<tr>
<td>Radium 226+228, Total</td>
<td>12/25/17 11:27</td>
<td>Level 2 Data required</td>
</tr>
<tr>
<td>Radium 228 Ra-05</td>
<td>12/25/17 11:27</td>
<td>Level 2 Data required</td>
</tr>
</tbody>
</table>

### Containers Supplied:
RAD Poly HNO3 - 1000mL (C) RAD Poly HNO3 - 1000mL (D)

<table>
<thead>
<tr>
<th>Sample</th>
<th>Expires</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Radium 226 EPA 903.0</td>
<td>12/25/17 11:00</td>
<td>Level 2 Data required</td>
</tr>
<tr>
<td>Radium 226+228, Total</td>
<td>12/25/17 11:00</td>
<td>Level 2 Data required</td>
</tr>
<tr>
<td>Radium 228 Ra-05</td>
<td>12/25/17 11:00</td>
<td>Level 2 Data required</td>
</tr>
</tbody>
</table>

### Containers Supplied:
RAD Poly HNO3 - 1000mL (C) RAD Poly HNO3 - 1000mL (D)

<table>
<thead>
<tr>
<th>Sample</th>
<th>Expires</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Radium 226 EPA 903.0</td>
<td>12/25/17 10:28</td>
<td>Level 2 Data required</td>
</tr>
<tr>
<td>Radium 226+228, Total</td>
<td>12/25/17 10:28</td>
<td>Level 2 Data required</td>
</tr>
<tr>
<td>Radium 228 Ra-05</td>
<td>12/25/17 10:28</td>
<td>Level 2 Data required</td>
</tr>
</tbody>
</table>

### Containers Supplied:
RAD Poly HNO3 - 1000mL (C) RAD Poly HNO3 - 1000mL (D)

---

Released By
Date & Time

Received By
Date & Time

Page 1 of 3
<table>
<thead>
<tr>
<th>Analysis</th>
<th>Expires</th>
<th>Laboratory ID</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample ID: L17F009-05</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sampled: 06/28/17 10:02</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Radium 228 Ra-05</td>
<td>12/25/17 10:02</td>
<td></td>
<td>Level 2 Data required</td>
</tr>
<tr>
<td>Radium 226 EPA 903.0</td>
<td>12/25/17 10:02</td>
<td></td>
<td>Level 2 Data required</td>
</tr>
<tr>
<td>Radium 226+228, Total</td>
<td>12/25/17 10:02</td>
<td></td>
<td>Level 2 Data required</td>
</tr>
</tbody>
</table>

**Containers Supplied:**

- RAD Poly HNO3 - 1000mL (C)
- RAD Poly HNO3 - 1000mL (D)
**FL DOH Certification # E84025**

**QC Summary:** Radium 228 Analysis

Client Project #: L17F009

Analysis Completion Date: 7/11/17

### Precision Data:

<table>
<thead>
<tr>
<th>Sample Analysis (pCi/l)</th>
<th>Duplicate Analysis (pCi/l)</th>
<th>Range (pCi/l)</th>
<th>RPD (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.1</td>
<td>6.9</td>
<td>1.2</td>
<td>16.0%</td>
</tr>
</tbody>
</table>

### Spike Data:

<table>
<thead>
<tr>
<th>Sample Analysis (pCi/l)</th>
<th>Spike Added (pCi/l)</th>
<th>Analytical Result (pCi/l)</th>
<th>Spike Rec (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.4</td>
<td>3.85</td>
<td>6.9</td>
<td>91.2%</td>
</tr>
</tbody>
</table>

### LCS Data:

<table>
<thead>
<tr>
<th>Analytical Result (pCi/l)</th>
<th>True Value (pCi/l)</th>
<th>% Recovery</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.4</td>
<td>4.28</td>
<td>103.7%</td>
</tr>
</tbody>
</table>

### Lab Blank:

<table>
<thead>
<tr>
<th>Lab Blank</th>
<th>Analytical Result (pCi/l)</th>
<th>Analysis Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.3 +/- 0.2</td>
<td>7/1/1/17</td>
<td>7/11/17</td>
</tr>
</tbody>
</table>
FL DOH Certification # E84025

QC Summary: **Total Radium Analysis**

Client Project #: **L17F009**

Analysis Completion Date: **2/5/17**

<table>
<thead>
<tr>
<th>Precision Data:</th>
<th>Sample #: <strong>17.7744</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample Analysis (pCi/l)</td>
<td><strong>18.7</strong></td>
</tr>
<tr>
<td>Duplicate Analysis (pCi/l)</td>
<td><strong>17.6</strong></td>
</tr>
<tr>
<td>Range (pCi/l)</td>
<td><strong>1.1</strong></td>
</tr>
<tr>
<td>RPD (%)</td>
<td><strong>6.66</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Spike Data:</th>
<th>Sample #: <strong>17.7744</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample Analysis (pCi/l)</td>
<td><strong>13.7</strong></td>
</tr>
<tr>
<td>Spike Added (pCi/l)</td>
<td><strong>4.5</strong></td>
</tr>
<tr>
<td>Analytical Result (pCi/l)</td>
<td><strong>17.6</strong></td>
</tr>
<tr>
<td>Spike Rec (%)</td>
<td><strong>87.2%</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>LCS Data:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Analytical Result (pCi/l)</td>
</tr>
<tr>
<td>True Value (pCi/l)</td>
</tr>
<tr>
<td>% Recovery</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Lab Blank:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Analytical Result (pCi/l)</td>
</tr>
<tr>
<td>Analysis Date</td>
</tr>
</tbody>
</table>
JULY 2017
5 sample(s) were received on 07/20/17 13:30.

There were no issues noted with the sample(s) associated with this workorder unless noted below.

**SM2540C TDS**

When reviewing the data, it was noticed that sample BBS-CCR-1 results was 1/2 of the expected range. In addition, the water quality comparison was outside of expected ranges. The sample was reanalyzed past the EPA recommended hold time. The result was within the expected historical and water quality comparison ranges. The re-analysis is reported with a Q qualifier.

A constant weight could not be achieved after three consecutive weighing and drying cycles for sample CCR-BW-1. The sample(s) are flagged with a J qualifier.

**EPA 300.0**

The recovery of the matrix spike and/or spike duplicate for Chloride and Fluoride were outside the control limits due to matrix interference. The parent sample is flagged with a J qualifier.

The CCV for Fluoride was above the control limits. Review of historical data showed that all results were comparable to historical values, therefore the results were reported. The samples are flagged with a J qualifier.

**EPA 200.7**

The recovery of the matrix spike and spike duplicate for Calcium could not be accurately determined due to the amount of target analyte in the sample matrix. The parent sample is flagged with a J qualifier.
Laboratory Results

Sample Information

Client: Big Bend Power Station
Lab Sample ID: L17G024-01
Sample Description: BBS-CCR-1
Sample Collection Method: Grab
Sampled By: Robert Barthelette
Date and Time Collected: 7/20/17 12:25
Date of Sample Receipt: 7/20/17 13:30

Laboratory Results

Sample Qualifier:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier</th>
<th>Code</th>
<th>Dil</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chloride</td>
<td>694</td>
<td>mg/L</td>
<td>2.00</td>
<td>50.0</td>
<td>J,-V</td>
<td>100</td>
<td>EPA 300.0</td>
<td>RFL 8/14/17 16:32</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Specific Conductance</td>
<td>3960</td>
<td>umhos/cm</td>
<td>100</td>
<td>100</td>
<td>1</td>
<td>FDEP SOP FT 1200</td>
<td>RAB 7/20/17 12:25</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dissolved Oxygen</td>
<td>0.100</td>
<td>mg/L</td>
<td>0.100</td>
<td>0.100</td>
<td>1</td>
<td>FDEP SOP FT 1500</td>
<td>RAB 7/20/17 12:25</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fluoride</td>
<td>0.157</td>
<td>mg/L</td>
<td>0.0100</td>
<td>0.0500</td>
<td>J,-V</td>
<td>1</td>
<td>EPA 300.0</td>
<td>RFL 8/14/17 16:22</td>
<td></td>
<td></td>
</tr>
<tr>
<td>pH</td>
<td>6.81</td>
<td>pH Units</td>
<td>1.00</td>
<td>1.00</td>
<td>1</td>
<td>FDEP SOP FT 1100</td>
<td>RAB 7/20/17 12:25</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>REDOX Potential</td>
<td>-122</td>
<td>mV</td>
<td>-999</td>
<td>-999</td>
<td>1</td>
<td>SM 2580B</td>
<td>RAB 7/20/17 12:25</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Dissolved Solids</td>
<td>3400</td>
<td>mg/L</td>
<td>12.0</td>
<td>20.0</td>
<td>Q</td>
<td>1</td>
<td>SM 2540C</td>
<td>RFL 8/18/17 15:25</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sulfate</td>
<td>1390</td>
<td>mg/L</td>
<td>50.0</td>
<td>200</td>
<td>100</td>
<td>EPA 300.0</td>
<td>RFL 8/9/17 22:43</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Turbidity</td>
<td>1.58</td>
<td>NTU</td>
<td>0.100</td>
<td>0.100</td>
<td>1</td>
<td>FDEP SOP FT 1600</td>
<td>RAB 7/20/17 12:25</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Mercury by SW846 Method 7470/7471</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mercury</td>
<td>0.0500</td>
<td>ug/L</td>
<td>0.0500</td>
<td>0.200</td>
<td>U</td>
<td>1</td>
<td>EPA 7470A</td>
<td>RLC 7/26/17 14:46</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Recoverable Metals by 200 Series</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Antimony</td>
<td>3.00</td>
<td>ug/L</td>
<td>3.00</td>
<td>10.0</td>
<td>U</td>
<td>5</td>
<td>EPA 200.8</td>
<td>RLC 8/3/17 8:08</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arsenic</td>
<td>10.3</td>
<td>ug/L</td>
<td>1.60</td>
<td>10.0</td>
<td>5</td>
<td>EPA 200.8</td>
<td>RLC 8/3/17 8:08</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cadmium</td>
<td>0.500</td>
<td>ug/L</td>
<td>0.500</td>
<td>2.50</td>
<td>U</td>
<td>5</td>
<td>EPA 200.8</td>
<td>RLC 8/3/17 8:08</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cobalt</td>
<td>0.495</td>
<td>ug/L</td>
<td>0.200</td>
<td>10.0</td>
<td>I</td>
<td>5</td>
<td>EPA 200.8</td>
<td>RLC 8/3/17 8:08</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lead</td>
<td>0.000400</td>
<td>mg/L</td>
<td>0.000400</td>
<td>0.00100</td>
<td>U</td>
<td>5</td>
<td>EPA 200.8</td>
<td>RLC 8/3/17 8:08</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Selenium</td>
<td>2.25</td>
<td>ug/L</td>
<td>1.00</td>
<td>10.0</td>
<td>I</td>
<td>5</td>
<td>EPA 200.8</td>
<td>RLC 8/3/17 8:08</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thallium</td>
<td>0.500</td>
<td>ug/L</td>
<td>0.500</td>
<td>2.50</td>
<td>U</td>
<td>5</td>
<td>EPA 200.8</td>
<td>RLC 8/3/17 8:08</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Recoverable Metals by SW846 Method 6010B</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Barium</td>
<td>0.112</td>
<td>mg/L</td>
<td>0.000500</td>
<td>0.0200</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR 7/27/17 12:53</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beryllium</td>
<td>0.200</td>
<td>ug/L</td>
<td>0.200</td>
<td>2.00</td>
<td>U</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR 7/27/17 12:53</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Boron</td>
<td>16.0</td>
<td>mg/L</td>
<td>0.0100</td>
<td>0.0500</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR 7/27/17 12:53</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Calcium</td>
<td>576</td>
<td>mg/L</td>
<td>0.0300</td>
<td>1.00</td>
<td>V</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR 7/31/17 11:24</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chromium</td>
<td>1.62</td>
<td>ug/L</td>
<td>1.60</td>
<td>12.0</td>
<td>I</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR 7/27/17 12:53</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Molybdenum</td>
<td>99.6</td>
<td>ug/L</td>
<td>1.00</td>
<td>20.0</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR 7/28/17 14:54</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
### Sample Information

**Client:** Big Bend Power Station  
**Lab Sample ID:** L17G024-02  
**Sample Description:** BBS-CCR-2  
**Sample Collection Method:** Grab  
**Sampled By:** Robert Barthelette  
**Date and Time Collected:** 7/20/17 12:56  
**Date of Sample Receipt:** 7/20/17 13:30

### Laboratory Results

**Sample Qualifier:**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier Code</th>
<th>Dil</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>General Chemistry Parameters</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chloride</td>
<td>114</td>
<td>mg/L</td>
<td>0.200</td>
<td>5.00</td>
<td>V</td>
<td>10</td>
<td>EPA 300.0</td>
<td>RFL</td>
<td>8/14/17 17:13</td>
</tr>
<tr>
<td>Specific Conductance</td>
<td>1630</td>
<td>umhos/cm</td>
<td>100</td>
<td>100</td>
<td>1</td>
<td>FDEP SOP FT 1200</td>
<td>RAB</td>
<td>7/20/17 12:56</td>
<td></td>
</tr>
<tr>
<td>Dissolved Oxygen</td>
<td>0.100</td>
<td>mg/L</td>
<td>0.100</td>
<td>0.100</td>
<td>U</td>
<td>1</td>
<td>FDEP SOP FT 1500</td>
<td>RAB</td>
<td>7/20/17 12:56</td>
</tr>
<tr>
<td>Fluoride</td>
<td>0.166</td>
<td>mg/L</td>
<td>0.0100</td>
<td>0.0500</td>
<td>J-,V</td>
<td>1</td>
<td>EPA 300.0</td>
<td>RFL</td>
<td>8/14/17 16:43</td>
</tr>
<tr>
<td>pH</td>
<td>6.97</td>
<td>pH Units</td>
<td>1.00</td>
<td>1.00</td>
<td>1</td>
<td>FDEP SOP FT 1100</td>
<td>RAB</td>
<td>7/20/17 12:56</td>
<td></td>
</tr>
<tr>
<td>REDOX Potential</td>
<td>-154</td>
<td>mV</td>
<td>-999</td>
<td>-999</td>
<td>1</td>
<td>SM 2580B</td>
<td>RAB</td>
<td>7/20/17 12:56</td>
<td></td>
</tr>
<tr>
<td>Total Dissolved Solids</td>
<td>1140</td>
<td>mg/L</td>
<td>24.0</td>
<td>40.0</td>
<td>2</td>
<td>SM 2540C</td>
<td>RFL</td>
<td>7/24/17 17:30</td>
<td></td>
</tr>
<tr>
<td>Sulfate</td>
<td>481</td>
<td>mg/L</td>
<td>5.00</td>
<td>20.0</td>
<td>10</td>
<td>EPA 300.0</td>
<td>RFL</td>
<td>8/9/17 23:03</td>
<td></td>
</tr>
<tr>
<td>Turbidity</td>
<td>4.56</td>
<td>NTU</td>
<td>0.100</td>
<td>0.100</td>
<td>1</td>
<td>FDEP SOP FT 1600</td>
<td>RAB</td>
<td>7/20/17 12:56</td>
<td></td>
</tr>
<tr>
<td><strong>Total Mercury by SW846 Method 7470/7471</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mercury</td>
<td>0.0500</td>
<td>ug/L</td>
<td>0.0500</td>
<td>0.200</td>
<td>U</td>
<td>1</td>
<td>EPA 7470A</td>
<td>RLC</td>
<td>7/26/17 14:49</td>
</tr>
<tr>
<td><strong>Total Recoverable Metals by 200 Series</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Antimony</td>
<td>0.600</td>
<td>ug/L</td>
<td>0.600</td>
<td>2.00</td>
<td>U</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RLC</td>
<td>7/31/17 9:49</td>
</tr>
<tr>
<td>Arsenic</td>
<td>0.974</td>
<td>ug/L</td>
<td>0.320</td>
<td>2.00</td>
<td>I</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RLC</td>
<td>7/31/17 9:49</td>
</tr>
<tr>
<td>Cadmium</td>
<td>0.100</td>
<td>ug/L</td>
<td>0.100</td>
<td>0.500</td>
<td>U</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RLC</td>
<td>7/31/17 9:49</td>
</tr>
<tr>
<td>Cobalt</td>
<td>0.0887</td>
<td>ug/L</td>
<td>0.0400</td>
<td>2.00</td>
<td>I</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RLC</td>
<td>7/31/17 9:49</td>
</tr>
<tr>
<td>Lead</td>
<td>0.000127</td>
<td>mg/L</td>
<td>8.00E-5</td>
<td>0.00200</td>
<td>I</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RLC</td>
<td>7/31/17 9:49</td>
</tr>
<tr>
<td>Selenium</td>
<td>0.474</td>
<td>ug/L</td>
<td>0.200</td>
<td>2.00</td>
<td>I</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RLC</td>
<td>7/31/17 9:49</td>
</tr>
<tr>
<td>Thallium</td>
<td>0.100</td>
<td>ug/L</td>
<td>0.100</td>
<td>0.500</td>
<td>U</td>
<td>1</td>
<td>EPA 200.8</td>
<td>RLC</td>
<td>7/31/17 9:49</td>
</tr>
<tr>
<td><strong>Total Recoverable Metals by SW846 Method 6010B</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Barium</td>
<td>0.0546</td>
<td>mg/L</td>
<td>0.000500</td>
<td>0.0200</td>
<td></td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>7/27/17 12:56</td>
</tr>
<tr>
<td>Beryllium</td>
<td>0.423</td>
<td>ug/L</td>
<td>0.200</td>
<td>2.00</td>
<td>I,V</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>7/27/17 12:56</td>
</tr>
<tr>
<td>Boron</td>
<td>4.94</td>
<td>mg/L</td>
<td>0.0100</td>
<td>0.0500</td>
<td></td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>7/27/17 12:56</td>
</tr>
<tr>
<td>Calcium</td>
<td>178</td>
<td>mg/L</td>
<td>0.0300</td>
<td>1.00</td>
<td>V</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>7/31/17 11:26</td>
</tr>
<tr>
<td>Chromium</td>
<td>3.11</td>
<td>ug/L</td>
<td>1.60</td>
<td>12.0</td>
<td>I</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>7/27/17 12:56</td>
</tr>
<tr>
<td>Molybdenum</td>
<td>9.88</td>
<td>ug/L</td>
<td>1.00</td>
<td>20.0</td>
<td>I</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>7/28/17 14:57</td>
</tr>
</tbody>
</table>

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
Sample Information

Client: Big Bend Power Station
Lab Sample ID: L17G024-03
Sample Description: BBS-CCR-3
Sample Collection Method: Grab
Sampled By: Robert Barthelette
Date and Time Collected: 7/20/17 11:56
Date of Sample Receipt: 7/20/17 13:30

Laboratory Results

Sample Qualifier:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier Code</th>
<th>Dil</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chloride</td>
<td>158</td>
<td>mg/L</td>
<td>0.200</td>
<td>5.000</td>
<td>V</td>
<td>10</td>
<td>EPA 300.0</td>
<td>RFL</td>
<td>8/14/17 17:33</td>
</tr>
<tr>
<td>Specific Conductance</td>
<td>1750</td>
<td>umhos/cm</td>
<td>100</td>
<td>100</td>
<td>1</td>
<td>FDEP SOP FT 1200</td>
<td>RAB</td>
<td>7/20/17 11:56</td>
<td></td>
</tr>
<tr>
<td>Dissolved Oxygen</td>
<td>0.170</td>
<td>mg/L</td>
<td>0.100</td>
<td>0.100</td>
<td>1</td>
<td>FDEP SOP FT 1500</td>
<td>RAB</td>
<td>7/20/17 11:56</td>
<td></td>
</tr>
<tr>
<td>Fluoride</td>
<td>0.230</td>
<td>mg/L</td>
<td>0.0100</td>
<td>0.0500</td>
<td>J,-V</td>
<td>1</td>
<td>EPA 300.0</td>
<td>RFL</td>
<td>8/14/17 17:23</td>
</tr>
<tr>
<td>pH</td>
<td>6.36</td>
<td>pH Units</td>
<td>1.00</td>
<td>1.00</td>
<td>1</td>
<td>FDEP SOP FT 1100</td>
<td>RAB</td>
<td>7/20/17 11:56</td>
<td></td>
</tr>
<tr>
<td>REDOX Potential</td>
<td>-122</td>
<td>mV</td>
<td>-999</td>
<td>-999</td>
<td>1</td>
<td>SM 2580B</td>
<td>RAB</td>
<td>7/20/17 11:56</td>
<td></td>
</tr>
<tr>
<td>Total Dissolved Solids</td>
<td>1310</td>
<td>mg/L</td>
<td>24.0</td>
<td>40.0</td>
<td>2</td>
<td>SM 2540C</td>
<td>RFL</td>
<td>7/24/17 17:30</td>
<td></td>
</tr>
<tr>
<td>Sulfate</td>
<td>506</td>
<td>mg/L</td>
<td>5.00</td>
<td>20.0</td>
<td>10</td>
<td>EPA 300.0</td>
<td>RFL</td>
<td>8/9/17 23:24</td>
<td></td>
</tr>
<tr>
<td>Turbidity</td>
<td>0.510</td>
<td>NTU</td>
<td>0.100</td>
<td>0.100</td>
<td>1</td>
<td>FDEP SOP FT 1600</td>
<td>RAB</td>
<td>7/20/17 11:56</td>
<td></td>
</tr>
</tbody>
</table>

Total Mercury by SW846 Method 7470/7471
Mercury                    | 0.0500 | ug/L  | 0.0500| 0.200| U              | 1   | EPA 7470A | RLC     | 7/26/17 14:53        |

Total Recoverable Metals by 200 Series
Antimony                   | 3.00   | ug/L  | 3.00 | 10.0 | U              | 5   | EPA 200.8 | RLC     | 8/3/17 8:11          |
Arsenic                    | 1.60   | ug/L  | 1.60 | 10.0 | U              | 5   | EPA 200.8 | RLC     | 8/3/17 8:11          |
Cadmium                    | 0.500  | ug/L  | 0.500| 2.50 | U              | 5   | EPA 200.8 | RLC     | 8/3/17 8:11          |
Cobalt                     | 0.200  | ug/L  | 0.200| 10.0 | U              | 5   | EPA 200.8 | RLC     | 8/3/17 8:11          |
Lead                       | 0.00400| mg/L  | 0.00400| 0.0100| U          | 5   | EPA 200.8 | RLC     | 8/3/17 8:11          |
Selenium                   | 1.00   | ug/L  | 1.00 | 10.0 | U              | 5   | EPA 200.8 | RLC     | 8/3/17 8:11          |
Thallium                   | 0.500  | ug/L  | 0.500| 2.50 | U              | 5   | EPA 200.8 | RLC     | 8/3/17 8:11          |

Total Recoverable Metals by SW846 Method 6010B
Barium                     | 0.0634 | mg/L  | 0.000500| 0.0200| U          | 1   | EPA 6010B | MCR     | 7/27/17 12:59        |
Beryllium                  | 0.356  | ug/L  | 0.200 | 2.00 | I,-V        | 1   | EPA 6010B | MCR     | 7/27/17 12:59        |
Boron                      | 0.211  | mg/L  | 0.0100 | 0.0500| U          | 1   | EPA 6010B | MCR     | 7/27/17 12:59        |
Calcium                    | 205    | mg/L  | 0.0300| 1.00 | J,-V        | 1   | EPA 6010B | MCR     | 7/31/17 11:29        |
Chromium                   | 3.43   | ug/L  | 1.60 | 12.0 | I           | 1   | EPA 6010B | MCR     | 7/27/17 12:59        |
Molybdenium                | 10.6   | ug/L  | 1.00 | 20.0 | I           | 1   | EPA 6010B | MCR     | 7/28/17 14:59        |

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
Sample Information

Client: Big Bend Power Station
Lab Sample ID: L17G024-04
Sample Description: BBS-CCR-BW1
Sample Collection Method: Grab
Sampled By: Robert Barthelette
Date and Time Collected: 7/20/17 11:01
Date of Sample Receipt: 7/20/17 13:30

Laboratory Results

Sample Qualifier:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier Code</th>
<th>Dil</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>General Chemistry Parameters</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chloride</td>
<td>915</td>
<td>mg/L</td>
<td>4.00</td>
<td>100</td>
<td>V</td>
<td>200</td>
<td>EPA 300.0</td>
<td>RFL</td>
<td>8/14/17 17:53</td>
</tr>
<tr>
<td>Specific Conductance</td>
<td>4960</td>
<td>umhos/cm</td>
<td>100</td>
<td>100</td>
<td>1</td>
<td>FDEP SOP FT 1200</td>
<td>RAB</td>
<td>7/20/17 11:01</td>
<td></td>
</tr>
<tr>
<td>Dissolved Oxygen</td>
<td>0.600</td>
<td>mg/L</td>
<td>0.100</td>
<td>0.100</td>
<td>1</td>
<td>FDEP SOP FT 1500</td>
<td>RAB</td>
<td>7/20/17 11:01</td>
<td></td>
</tr>
<tr>
<td>Fluoride</td>
<td>0.255</td>
<td>mg/L</td>
<td>0.0100</td>
<td>0.0500</td>
<td>1</td>
<td>EPA 300.0</td>
<td>RFL</td>
<td>8/14/17 17:43</td>
<td></td>
</tr>
<tr>
<td>pH</td>
<td>6.49</td>
<td>pH Units</td>
<td>1.00</td>
<td>1.00</td>
<td>1</td>
<td>FDEP SOP FT 1100</td>
<td>RAB</td>
<td>7/20/17 11:01</td>
<td></td>
</tr>
<tr>
<td>REDOX Potential</td>
<td>-23.0</td>
<td>mV</td>
<td>-999</td>
<td>-999</td>
<td>1</td>
<td>SM 2580B</td>
<td>RAB</td>
<td>7/20/17 11:01</td>
<td></td>
</tr>
<tr>
<td>Total Dissolved Solids</td>
<td>4160</td>
<td>mg/L</td>
<td>48.0</td>
<td>80.0</td>
<td>4</td>
<td>SM 2540C</td>
<td>RFL</td>
<td>7/24/17 17:30</td>
<td></td>
</tr>
<tr>
<td>Sulfate</td>
<td>1470</td>
<td>mg/L</td>
<td>100</td>
<td>400</td>
<td>200</td>
<td>EPA 300.0</td>
<td>RFL</td>
<td>8/14/17 17:53</td>
<td></td>
</tr>
<tr>
<td>Turbidity</td>
<td>2.38</td>
<td>NTU</td>
<td>0.100</td>
<td>0.100</td>
<td>1</td>
<td>FDEP SOP FT 1600</td>
<td>RAB</td>
<td>7/20/17 11:01</td>
<td></td>
</tr>
<tr>
<td><strong>Total Mercury by SW846 Method 7470/7471</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mercury</td>
<td>0.0500</td>
<td>ug/L</td>
<td>0.0500</td>
<td>0.200</td>
<td>U</td>
<td>1</td>
<td>EPA 7470A</td>
<td>RLC</td>
<td>7/26/17 14:56</td>
</tr>
<tr>
<td><strong>Total Recoverable Metals by 200 Series</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Antimony</td>
<td>6.00</td>
<td>ug/L</td>
<td>6.00</td>
<td>20.0</td>
<td>U</td>
<td>10</td>
<td>EPA 200.8</td>
<td>RLC</td>
<td>7/31/17 10:06</td>
</tr>
<tr>
<td>Arsenic</td>
<td>8.48</td>
<td>ug/L</td>
<td>3.20</td>
<td>20.0</td>
<td>I</td>
<td>10</td>
<td>EPA 200.8</td>
<td>RLC</td>
<td>7/31/17 10:06</td>
</tr>
<tr>
<td>Cadmium</td>
<td>1.00</td>
<td>ug/L</td>
<td>1.00</td>
<td>5.00</td>
<td>U</td>
<td>10</td>
<td>EPA 200.8</td>
<td>RLC</td>
<td>7/31/17 10:06</td>
</tr>
<tr>
<td>Cobalt</td>
<td>1.97</td>
<td>ug/L</td>
<td>0.400</td>
<td>20.0</td>
<td>I</td>
<td>10</td>
<td>EPA 200.8</td>
<td>RLC</td>
<td>7/31/17 10:06</td>
</tr>
<tr>
<td>Lead</td>
<td>0.000800</td>
<td>mg/L</td>
<td>0.000800</td>
<td>0.0200</td>
<td>U</td>
<td>10</td>
<td>EPA 200.8</td>
<td>RLC</td>
<td>7/31/17 10:06</td>
</tr>
<tr>
<td>Selenium</td>
<td>2.00</td>
<td>ug/L</td>
<td>2.00</td>
<td>20.0</td>
<td>U</td>
<td>10</td>
<td>EPA 200.8</td>
<td>RLC</td>
<td>7/31/17 10:06</td>
</tr>
<tr>
<td>Thallium</td>
<td>1.00</td>
<td>ug/L</td>
<td>1.00</td>
<td>5.00</td>
<td>U</td>
<td>10</td>
<td>EPA 200.8</td>
<td>RLC</td>
<td>7/31/17 10:06</td>
</tr>
<tr>
<td><strong>Total Recoverable Metals by SW846 Method 6010B</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Barium</td>
<td>0.0517</td>
<td>mg/L</td>
<td>0.000500</td>
<td>0.0200</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>7/27/17 13:01</td>
<td></td>
</tr>
<tr>
<td>Beryllium</td>
<td>0.200</td>
<td>ug/L</td>
<td>0.200</td>
<td>2.00</td>
<td>U</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>7/27/17 13:01</td>
</tr>
<tr>
<td>Boron</td>
<td>47.0</td>
<td>mg/L</td>
<td>0.0100</td>
<td>0.0500</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>7/27/17 13:01</td>
<td></td>
</tr>
<tr>
<td>Calcium</td>
<td>744</td>
<td>mg/L</td>
<td>0.0300</td>
<td>1.00</td>
<td>V</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>7/31/17 11:31</td>
</tr>
<tr>
<td>Chromium</td>
<td>2.16</td>
<td>ug/L</td>
<td>1.60</td>
<td>12.0</td>
<td>I</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>7/27/17 13:01</td>
</tr>
<tr>
<td>Molybdenium</td>
<td>13.6</td>
<td>ug/L</td>
<td>1.00</td>
<td>20.0</td>
<td>I</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>7/28/17 15:02</td>
</tr>
</tbody>
</table>

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
### Sample Information

**Client:** Big Bend Power Station  
**Lab Sample ID:** L17G024-05  
**Sample Description:** BBS-CCR-BW2  
**Sample Collection Method:** Grab  
**Sampled By:** Robert Barthelette  
**Date and Time Collected:** 7/20/17 10:29  
**Date of Sample Receipt:** 7/20/17 13:30

### Laboratory Results

**Sample Qualifier:**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier Code</th>
<th>Dil</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>General Chemistry Parameters</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chloride</td>
<td>123</td>
<td>mg/L</td>
<td>0.200</td>
<td>5.00</td>
<td>V</td>
<td>10</td>
<td>EPA 300.0</td>
<td>RFL</td>
<td>8/14/17 18:13</td>
</tr>
<tr>
<td>Specific Conductance</td>
<td>1540</td>
<td>umhos/cm</td>
<td>100</td>
<td>100</td>
<td>1</td>
<td>FDEP SOP FT 1200</td>
<td>RAB</td>
<td>7/20/17 10:29</td>
<td></td>
</tr>
<tr>
<td>Dissolved Oxygen</td>
<td>0.330</td>
<td>mg/L</td>
<td>0.100</td>
<td>0.100</td>
<td>1</td>
<td>FDEP SOP FT 1500</td>
<td>RAB</td>
<td>7/20/17 10:29</td>
<td></td>
</tr>
<tr>
<td>Fluoride</td>
<td>0.319</td>
<td>mg/L</td>
<td>0.0100</td>
<td>0.0500</td>
<td>J-V</td>
<td>1</td>
<td>EPA 300.0</td>
<td>RFL</td>
<td>8/14/17 18:03</td>
</tr>
<tr>
<td>pH</td>
<td>6.66</td>
<td>pH Units</td>
<td>1.00</td>
<td>1.00</td>
<td>1</td>
<td>FDEP SOP FT 1100</td>
<td>RAB</td>
<td>7/20/17 10:29</td>
<td></td>
</tr>
<tr>
<td>REDOX Potential</td>
<td>-94.0</td>
<td>mV</td>
<td>-999</td>
<td>-999</td>
<td>2</td>
<td>SM 2540C</td>
<td>RFL</td>
<td>7/24/17 17:30</td>
<td></td>
</tr>
<tr>
<td>Total Dissolved Solids</td>
<td>1200</td>
<td>mg/L</td>
<td>24.0</td>
<td>40.0</td>
<td>10</td>
<td>FDEP SOP FT 1600</td>
<td>RAB</td>
<td>7/20/17 10:29</td>
<td></td>
</tr>
<tr>
<td>Sulfate</td>
<td>41.7</td>
<td>mg/L</td>
<td>5.00</td>
<td>20.0</td>
<td>10</td>
<td>EPA 300.0</td>
<td>RFL</td>
<td>8/10/17 02:24</td>
<td></td>
</tr>
<tr>
<td>Turbidity</td>
<td>5.27</td>
<td>NTU</td>
<td>0.100</td>
<td>0.100</td>
<td>1</td>
<td>FDEP SOP FT 1600</td>
<td>RAB</td>
<td>7/20/17 10:29</td>
<td></td>
</tr>
<tr>
<td><strong>Total Mercury by SW846 Method 7470/7471</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mercury</td>
<td>0.0500</td>
<td>ug/L</td>
<td>0.0500</td>
<td>0.200</td>
<td>U</td>
<td>1</td>
<td>EPA 7470A</td>
<td>RLC</td>
<td>7/26/17 14:59</td>
</tr>
<tr>
<td><strong>Total Recoverable Metals by 200 Series</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Antimony</td>
<td>6.00</td>
<td>ug/L</td>
<td>6.00</td>
<td>20.0</td>
<td>U</td>
<td>10</td>
<td>EPA 200.8</td>
<td>RLC</td>
<td>7/31/17 10:09</td>
</tr>
<tr>
<td>Arsenic</td>
<td>3.20</td>
<td>ug/L</td>
<td>3.20</td>
<td>20.0</td>
<td>U</td>
<td>10</td>
<td>EPA 200.8</td>
<td>RLC</td>
<td>7/31/17 10:09</td>
</tr>
<tr>
<td>Cadmium</td>
<td>1.00</td>
<td>ug/L</td>
<td>1.00</td>
<td>5.00</td>
<td>U</td>
<td>10</td>
<td>EPA 200.8</td>
<td>RLC</td>
<td>7/31/17 10:09</td>
</tr>
<tr>
<td>Cobalt</td>
<td>0.400</td>
<td>ug/L</td>
<td>0.400</td>
<td>20.0</td>
<td>U</td>
<td>10</td>
<td>EPA 200.8</td>
<td>RLC</td>
<td>7/31/17 10:09</td>
</tr>
<tr>
<td>Lead</td>
<td>0.000800</td>
<td>mg/L</td>
<td>0.000800</td>
<td>0.0200</td>
<td>U</td>
<td>10</td>
<td>EPA 200.8</td>
<td>RLC</td>
<td>7/31/17 10:09</td>
</tr>
<tr>
<td>Selenium</td>
<td>2.00</td>
<td>ug/L</td>
<td>2.00</td>
<td>20.0</td>
<td>U</td>
<td>10</td>
<td>EPA 200.8</td>
<td>RLC</td>
<td>7/31/17 10:09</td>
</tr>
<tr>
<td>Thallium</td>
<td>1.00</td>
<td>ug/L</td>
<td>1.00</td>
<td>5.00</td>
<td>U</td>
<td>10</td>
<td>EPA 200.8</td>
<td>RLC</td>
<td>7/31/17 10:09</td>
</tr>
<tr>
<td><strong>Total Recoverable Metals by SW846 Method 6010B</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Barium</td>
<td>0.0477</td>
<td>mg/L</td>
<td>0.000500</td>
<td>0.0200</td>
<td></td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>7/27/17 13:04</td>
</tr>
<tr>
<td>Beryllium</td>
<td>0.220</td>
<td>ug/L</td>
<td>0.200</td>
<td>2.00</td>
<td>I,V</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>7/27/17 13:04</td>
</tr>
<tr>
<td>Boron</td>
<td>4.57</td>
<td>mg/L</td>
<td>0.0100</td>
<td>0.0500</td>
<td>V</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>7/27/17 13:04</td>
</tr>
<tr>
<td>Calcium</td>
<td>278</td>
<td>mg/L</td>
<td>0.0300</td>
<td>1.00</td>
<td>V</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>7/31/17 11:34</td>
</tr>
<tr>
<td>Chromium</td>
<td>2.26</td>
<td>ug/L</td>
<td>1.60</td>
<td>12.0</td>
<td>I</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>7/27/17 13:04</td>
</tr>
<tr>
<td>Molybdenum</td>
<td>8.90</td>
<td>ug/L</td>
<td>1.00</td>
<td>20.0</td>
<td>I</td>
<td>1</td>
<td>EPA 6010B</td>
<td>MCR</td>
<td>7/27/17 15:04</td>
</tr>
</tbody>
</table>

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
**Comments**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>U</td>
<td>Indicates that the compound was analyzed for but not detected.</td>
</tr>
<tr>
<td>Q</td>
<td>Sample held beyond the accepted holding time.</td>
</tr>
<tr>
<td>J</td>
<td>The reported value is an estimated value, see the case narrative for specifics.</td>
</tr>
<tr>
<td>I</td>
<td>Estimated value</td>
</tr>
<tr>
<td>V</td>
<td>Analyte detected in the method blank</td>
</tr>
</tbody>
</table>

**Subcontract Laboratories:**
#### Total Recoverable Metals by SW846 Method 6010B - Quality Control

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>MDL</th>
<th>PQL</th>
<th>Units</th>
<th>Spike</th>
<th>Source</th>
<th>%Rec</th>
<th>%Rec Limits</th>
<th>RPD</th>
<th>RPD Limit</th>
<th>Qualifier</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Batch 17G0203 - EPA 6010B</strong></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>Barium</td>
<td>0.000500</td>
<td>0.00500</td>
<td>0.0200</td>
<td>mg/L</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>U</td>
</tr>
<tr>
<td>Beryllium</td>
<td>0.556</td>
<td>0.200</td>
<td>2.00</td>
<td>ug/L</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>I</td>
</tr>
<tr>
<td>Boron</td>
<td>0.0100</td>
<td>0.0100</td>
<td>0.0500</td>
<td>mg/L</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>U</td>
</tr>
<tr>
<td>Calcium</td>
<td>0.0511</td>
<td>0.0300</td>
<td>1.00</td>
<td>mg/L</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>I</td>
</tr>
<tr>
<td>Chromium</td>
<td>1.60</td>
<td>1.60</td>
<td>12.0</td>
<td>ug/L</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>U</td>
</tr>
<tr>
<td><strong>LCS (17G0203-BS1)</strong></td>
<td>Prepared: 07/25/17  Analyzed: 07/27/17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Barium</td>
<td>0.963</td>
<td>0.00500</td>
<td>0.0200</td>
<td>mg/L</td>
<td>1.000</td>
<td></td>
<td>96.3</td>
<td>80-120</td>
<td></td>
<td></td>
<td>V</td>
</tr>
<tr>
<td>Beryllium</td>
<td>962</td>
<td>0.200</td>
<td>2.00</td>
<td>ug/L</td>
<td>1000.0</td>
<td></td>
<td>96.2</td>
<td>80-120</td>
<td></td>
<td></td>
<td>V</td>
</tr>
<tr>
<td>Boron</td>
<td>0.991</td>
<td>0.0100</td>
<td>0.0500</td>
<td>mg/L</td>
<td>1.000</td>
<td></td>
<td>99.1</td>
<td>80-120</td>
<td></td>
<td></td>
<td>V</td>
</tr>
<tr>
<td>Chromium</td>
<td>963</td>
<td>1.60</td>
<td>12.0</td>
<td>ug/L</td>
<td>1000.0</td>
<td></td>
<td>96.3</td>
<td>80-120</td>
<td></td>
<td></td>
<td>V</td>
</tr>
<tr>
<td><strong>Matrix Spike (17G0203-MS1)</strong></td>
<td>Source: L17G024-03</td>
<td>Prepared: 07/25/17  Analyzed: 07/27/17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Barium</td>
<td>1.01</td>
<td>0.00500</td>
<td>0.0200</td>
<td>mg/L</td>
<td>1.000</td>
<td></td>
<td>95.0</td>
<td>75-125</td>
<td></td>
<td></td>
<td>V</td>
</tr>
<tr>
<td>Beryllium</td>
<td>957</td>
<td>0.200</td>
<td>2.00</td>
<td>ug/L</td>
<td>1000.0</td>
<td></td>
<td>95.7</td>
<td>75-125</td>
<td></td>
<td></td>
<td>V</td>
</tr>
<tr>
<td>Boron</td>
<td>1.21</td>
<td>0.0100</td>
<td>0.0500</td>
<td>mg/L</td>
<td>1.000</td>
<td></td>
<td>100</td>
<td>75-125</td>
<td></td>
<td></td>
<td>V</td>
</tr>
<tr>
<td>Chromium</td>
<td>958</td>
<td>1.60</td>
<td>12.0</td>
<td>ug/L</td>
<td>1000.0</td>
<td></td>
<td>95.5</td>
<td>75-125</td>
<td></td>
<td></td>
<td>V</td>
</tr>
<tr>
<td><strong>Matrix Spike Dup (17G0203-MSD1)</strong></td>
<td>Source: L17G024-03</td>
<td>Prepared: 07/25/17  Analyzed: 07/27/17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Barium</td>
<td>0.985</td>
<td>0.00500</td>
<td>0.0200</td>
<td>mg/L</td>
<td>1.000</td>
<td></td>
<td>92.2</td>
<td>75-125</td>
<td>2.83</td>
<td>20</td>
<td>V</td>
</tr>
<tr>
<td>Beryllium</td>
<td>938</td>
<td>0.200</td>
<td>2.00</td>
<td>ug/L</td>
<td>1000.0</td>
<td></td>
<td>93.7</td>
<td>75-125</td>
<td>2.10</td>
<td>20</td>
<td>V</td>
</tr>
<tr>
<td>Boron</td>
<td>1.18</td>
<td>0.0100</td>
<td>0.0500</td>
<td>mg/L</td>
<td>1.000</td>
<td></td>
<td>96.6</td>
<td>75-125</td>
<td>3.09</td>
<td>20</td>
<td>V</td>
</tr>
<tr>
<td>Chromium</td>
<td>936</td>
<td>1.60</td>
<td>12.0</td>
<td>ug/L</td>
<td>1000.0</td>
<td></td>
<td>93.2</td>
<td>75-125</td>
<td>2.36</td>
<td>20</td>
<td>V</td>
</tr>
<tr>
<td><strong>Batch 17G0232 - EPA 6010B</strong></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>Molybdenum</td>
<td>1.00</td>
<td>1.00</td>
<td>20.0</td>
<td>ug/L</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>U</td>
</tr>
</tbody>
</table>

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
### Total Recoverable Metals by SW846 Method 6010B - Quality Control

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>MDL</th>
<th>PQL</th>
<th>Units</th>
<th>Spike Level</th>
<th>Source</th>
<th>%Rec</th>
<th>%Rec Limits</th>
<th>RPD Limit</th>
<th>Qualifier</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Batch 17G0232 - EPA 6010B</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LCS (17G0232-BS1)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>928.0</td>
<td></td>
<td>1000.0</td>
<td>92.0</td>
<td>80-120</td>
<td></td>
</tr>
<tr>
<td>Molybdenum</td>
<td>920</td>
<td>1.00</td>
<td>20.0</td>
<td>ug/L</td>
<td>1000.0</td>
<td>92.0</td>
<td>80-120</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Matrix Spike (17G0232-MS1)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>85.8</td>
<td>99.6</td>
<td>80-120</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Molybdenum</td>
<td>943</td>
<td>1.00</td>
<td>20.0</td>
<td>ug/L</td>
<td>1000.0</td>
<td>99.6</td>
<td>80-120</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Matrix Spike Dup (17G0232-MSD1)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>85.8</td>
<td>99.6</td>
<td>80-120</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Molybdenum</td>
<td>957</td>
<td>1.00</td>
<td>20.0</td>
<td>ug/L</td>
<td>1000.0</td>
<td>99.6</td>
<td>80-120</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>MDL</th>
<th>PQL</th>
<th>Units</th>
<th>Spike Level</th>
<th>Source</th>
<th>%Rec</th>
<th>%Rec Limits</th>
<th>RPD Limit</th>
<th>Qualifier</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blank (17G0170-BLK1)</td>
<td>Prepared &amp; Analyzed: 07/26/17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mercury</td>
<td>0.0500</td>
<td>0.0500</td>
<td>0.200</td>
<td>ug/L</td>
<td></td>
<td></td>
<td>U</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LCS (17G0170-BS1)</td>
<td>Prepared &amp; Analyzed: 07/26/17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mercury</td>
<td>0.995</td>
<td>0.0500</td>
<td>0.200</td>
<td>ug/L</td>
<td>1.0000</td>
<td></td>
<td>99.5</td>
<td>80-120</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Matrix Spike (17G0170-MS1)</td>
<td>Source: L17G024-04</td>
<td>Prepared &amp; Analyzed: 07/26/17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mercury</td>
<td>1.00</td>
<td>0.0500</td>
<td>0.200</td>
<td>ug/L</td>
<td>1.0000</td>
<td>U</td>
<td>100</td>
<td>75-125</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Matrix Spike Dup (17G0170-MSD1)</td>
<td>Source: L17G024-04</td>
<td>Prepared &amp; Analyzed: 07/26/17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mercury</td>
<td>1.00</td>
<td>0.0500</td>
<td>0.200</td>
<td>ug/L</td>
<td>1.0000</td>
<td>U</td>
<td>100</td>
<td>75-125</td>
<td>0.390</td>
<td>20</td>
</tr>
</tbody>
</table>

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>MDL</th>
<th>PQL</th>
<th>Units</th>
<th>Spike Level</th>
<th>Source Result</th>
<th>%Rec Limits</th>
<th>RPD Limit Qualifier</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antimony</td>
<td>0.600</td>
<td>0.600</td>
<td>2.00</td>
<td>ug/L</td>
<td>85-115</td>
<td>0.600</td>
<td>U</td>
<td></td>
</tr>
<tr>
<td>Arsenic</td>
<td>0.320</td>
<td>0.320</td>
<td>2.00</td>
<td>ug/L</td>
<td>85-115</td>
<td>0.320</td>
<td>U</td>
<td></td>
</tr>
<tr>
<td>Cadmium</td>
<td>0.100</td>
<td>0.100</td>
<td>0.500</td>
<td>ug/L</td>
<td>85-115</td>
<td>0.100</td>
<td>U</td>
<td></td>
</tr>
<tr>
<td>Cobalt</td>
<td>0.0400</td>
<td>0.0400</td>
<td>2.00</td>
<td>ug/L</td>
<td>85-115</td>
<td>0.0400</td>
<td>U</td>
<td></td>
</tr>
<tr>
<td>Lead</td>
<td>8.00E-5</td>
<td>8.00E-5</td>
<td>0.00200</td>
<td>mg/L</td>
<td>103-115</td>
<td>0.1000</td>
<td>U</td>
<td></td>
</tr>
<tr>
<td>Selenium</td>
<td>0.200</td>
<td>0.200</td>
<td>2.00</td>
<td>ug/L</td>
<td>85-115</td>
<td>0.200</td>
<td>U</td>
<td></td>
</tr>
<tr>
<td>Thallium</td>
<td>0.100</td>
<td>0.100</td>
<td>0.500</td>
<td>ug/L</td>
<td>85-115</td>
<td>0.100</td>
<td>U</td>
<td></td>
</tr>
<tr>
<td>Antimony</td>
<td>106</td>
<td>0.600</td>
<td>2.00</td>
<td>ug/L</td>
<td>85-115</td>
<td>106</td>
<td>106</td>
<td></td>
</tr>
<tr>
<td>Arsenic</td>
<td>99.9</td>
<td>0.320</td>
<td>2.00</td>
<td>ug/L</td>
<td>85-115</td>
<td>99.9</td>
<td>85-115</td>
<td></td>
</tr>
<tr>
<td>Cadmium</td>
<td>104</td>
<td>0.100</td>
<td>0.500</td>
<td>ug/L</td>
<td>85-115</td>
<td>104</td>
<td>85-115</td>
<td></td>
</tr>
<tr>
<td>Cobalt</td>
<td>94.5</td>
<td>0.0400</td>
<td>2.00</td>
<td>ug/L</td>
<td>85-115</td>
<td>94.5</td>
<td>85-115</td>
<td></td>
</tr>
<tr>
<td>Lead</td>
<td>0.103</td>
<td>8.00E-5</td>
<td>0.00200</td>
<td>mg/L</td>
<td>103-115</td>
<td>0.1000</td>
<td>103</td>
<td></td>
</tr>
<tr>
<td>Selenium</td>
<td>105</td>
<td>0.200</td>
<td>2.00</td>
<td>ug/L</td>
<td>85-115</td>
<td>105</td>
<td>85-115</td>
<td></td>
</tr>
<tr>
<td>Thallium</td>
<td>108</td>
<td>0.100</td>
<td>0.500</td>
<td>ug/L</td>
<td>85-115</td>
<td>108</td>
<td>85-115</td>
<td></td>
</tr>
<tr>
<td>Antimony</td>
<td>117</td>
<td>3.00</td>
<td>10.0</td>
<td>ug/L</td>
<td>70-130</td>
<td>14.5</td>
<td>102</td>
<td></td>
</tr>
<tr>
<td>Arsenic</td>
<td>108</td>
<td>1.60</td>
<td>10.0</td>
<td>ug/L</td>
<td>70-130</td>
<td>2.89</td>
<td>105</td>
<td></td>
</tr>
<tr>
<td>Cadmium</td>
<td>97.8</td>
<td>0.500</td>
<td>2.50</td>
<td>ug/L</td>
<td>70-130</td>
<td>0.746</td>
<td>97.1</td>
<td></td>
</tr>
<tr>
<td>Cobalt</td>
<td>99.1</td>
<td>0.200</td>
<td>10.0</td>
<td>ug/L</td>
<td>70-130</td>
<td>3.49</td>
<td>95.6</td>
<td></td>
</tr>
<tr>
<td>Lead</td>
<td>0.0943</td>
<td>0.000400</td>
<td>0.01000</td>
<td>mg/L</td>
<td>94.3</td>
<td>0.1000</td>
<td>U</td>
<td></td>
</tr>
<tr>
<td>Selenium</td>
<td>278</td>
<td>1.00</td>
<td>10.0</td>
<td>ug/L</td>
<td>70-130</td>
<td>173</td>
<td>105</td>
<td></td>
</tr>
<tr>
<td>Thallium</td>
<td>97.4</td>
<td>0.500</td>
<td>2.50</td>
<td>ug/L</td>
<td>70-130</td>
<td>1.93</td>
<td>95.5</td>
<td></td>
</tr>
<tr>
<td>Antimony</td>
<td>107</td>
<td>3.00</td>
<td>10.0</td>
<td>ug/L</td>
<td>70-130</td>
<td>1.00</td>
<td>U</td>
<td></td>
</tr>
<tr>
<td>Arsenic</td>
<td>119</td>
<td>1.60</td>
<td>10.0</td>
<td>ug/L</td>
<td>70-130</td>
<td>10.3</td>
<td>108</td>
<td></td>
</tr>
<tr>
<td>Cadmium</td>
<td>97.1</td>
<td>0.500</td>
<td>2.50</td>
<td>ug/L</td>
<td>70-130</td>
<td>0.746</td>
<td>97.1</td>
<td></td>
</tr>
<tr>
<td>Cobalt</td>
<td>96.3</td>
<td>0.200</td>
<td>10.0</td>
<td>ug/L</td>
<td>70-130</td>
<td>0.495</td>
<td>95.8</td>
<td></td>
</tr>
<tr>
<td>Lead</td>
<td>0.0932</td>
<td>0.000400</td>
<td>0.01000</td>
<td>mg/L</td>
<td>93.2</td>
<td>0.1000</td>
<td>U</td>
<td></td>
</tr>
<tr>
<td>Selenium</td>
<td>113</td>
<td>1.00</td>
<td>10.0</td>
<td>ug/L</td>
<td>70-130</td>
<td>2.25</td>
<td>111</td>
<td></td>
</tr>
<tr>
<td>Thallium</td>
<td>95.3</td>
<td>0.500</td>
<td>2.50</td>
<td>ug/L</td>
<td>70-130</td>
<td>0.95</td>
<td>95.3</td>
<td></td>
</tr>
</tbody>
</table>

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
## Total Recoverable Metals by 200 Series - Quality Control

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>MDL</th>
<th>PQL</th>
<th>Units</th>
<th>Spike Level</th>
<th>Source</th>
<th>%Rec</th>
<th>%Rec Limits</th>
<th>RPD Limit</th>
<th>Qualifier</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Batch 17G0141 - EPA 200.8</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Matrix Spike Dup (17G0141-MSD1)</strong></td>
<td>Source: L17G013-03</td>
<td>Prepared: 07/20/17</td>
<td>Analyzed: 08/03/17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Antimony</td>
<td>119</td>
<td>3.00</td>
<td>10.0</td>
<td>ug/L</td>
<td>100.0</td>
<td>14.5</td>
<td>105</td>
<td>70-130</td>
<td>1.83</td>
<td>20</td>
</tr>
<tr>
<td>Arsenic</td>
<td>114</td>
<td>1.60</td>
<td>10.0</td>
<td>ug/L</td>
<td>100.0</td>
<td>2.89</td>
<td>111</td>
<td>70-130</td>
<td>5.95</td>
<td>20</td>
</tr>
<tr>
<td>Cadmium</td>
<td>103</td>
<td>0.500</td>
<td>2.50</td>
<td>ug/L</td>
<td>100.0</td>
<td>0.746</td>
<td>102</td>
<td>70-130</td>
<td>5.13</td>
<td>20</td>
</tr>
<tr>
<td>Cobalt</td>
<td>99.8</td>
<td>0.200</td>
<td>10.0</td>
<td>ug/L</td>
<td>100.0</td>
<td>3.49</td>
<td>96.3</td>
<td>70-130</td>
<td>0.700</td>
<td>20</td>
</tr>
<tr>
<td>Lead</td>
<td>0.0982</td>
<td>0.000400</td>
<td>0.0100</td>
<td>mg/L</td>
<td>0.10000</td>
<td>U</td>
<td>98.2</td>
<td>70-130</td>
<td>4.13</td>
<td>20</td>
</tr>
<tr>
<td>Selenium</td>
<td>300</td>
<td>1.00</td>
<td>10.0</td>
<td>ug/L</td>
<td>100.0</td>
<td>173</td>
<td>126</td>
<td>70-130</td>
<td>7.42</td>
<td>20</td>
</tr>
<tr>
<td>Thallium</td>
<td>102</td>
<td>0.500</td>
<td>2.50</td>
<td>ug/L</td>
<td>100.0</td>
<td>1.93</td>
<td>100</td>
<td>70-130</td>
<td>4.83</td>
<td>20</td>
</tr>
<tr>
<td><strong>Matrix Spike Dup (17G0141-MSD2)</strong></td>
<td>Source: L17G024-01</td>
<td>Prepared: 07/20/17</td>
<td>Analyzed: 08/03/17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Antimony</td>
<td>106</td>
<td>3.00</td>
<td>10.0</td>
<td>ug/L</td>
<td>100.0</td>
<td>U</td>
<td>106</td>
<td>70-130</td>
<td>0.540</td>
<td>20</td>
</tr>
<tr>
<td>Arsenic</td>
<td>119</td>
<td>1.60</td>
<td>10.0</td>
<td>ug/L</td>
<td>100.0</td>
<td>10.3</td>
<td>109</td>
<td>70-130</td>
<td>0.633</td>
<td>20</td>
</tr>
<tr>
<td>Cadmium</td>
<td>95.1</td>
<td>0.500</td>
<td>2.50</td>
<td>ug/L</td>
<td>100.0</td>
<td>U</td>
<td>95.1</td>
<td>70-130</td>
<td>2.04</td>
<td>20</td>
</tr>
<tr>
<td>Cobalt</td>
<td>94.5</td>
<td>0.200</td>
<td>10.0</td>
<td>ug/L</td>
<td>100.0</td>
<td>0.495</td>
<td>94.0</td>
<td>70-130</td>
<td>1.87</td>
<td>20</td>
</tr>
<tr>
<td>Lead</td>
<td>0.0915</td>
<td>0.000400</td>
<td>0.0100</td>
<td>mg/L</td>
<td>0.10000</td>
<td>U</td>
<td>91.5</td>
<td>70-130</td>
<td>1.87</td>
<td>20</td>
</tr>
<tr>
<td>Selenium</td>
<td>107</td>
<td>1.00</td>
<td>10.0</td>
<td>ug/L</td>
<td>100.0</td>
<td>2.25</td>
<td>104</td>
<td>70-130</td>
<td>6.18</td>
<td>20</td>
</tr>
<tr>
<td>Thallium</td>
<td>94.4</td>
<td>0.500</td>
<td>2.50</td>
<td>ug/L</td>
<td>100.0</td>
<td>U</td>
<td>94.4</td>
<td>70-130</td>
<td>0.965</td>
<td>20</td>
</tr>
</tbody>
</table>

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>MDL</th>
<th>PQL</th>
<th>Units</th>
<th>Spike</th>
<th>Source</th>
<th>%Rec</th>
<th>%Rec Limits</th>
<th>RPD Limit</th>
<th>Qualifier</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Batch 17G0187 - SM 2540C</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blank (17G0187-BLK1)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Prepared &amp; Analyzed: 07/24/17</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Dissolved Solids</td>
<td>12.0</td>
<td>12.0</td>
<td>20.0</td>
<td>mg/L</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>U</td>
</tr>
<tr>
<td>LCS (17G0187-BS1)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Prepared &amp; Analyzed: 07/24/17</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Dissolved Solids</td>
<td>1000</td>
<td>12.0</td>
<td>20.0</td>
<td>mg/L</td>
<td>1000.0</td>
<td>100</td>
<td>80-120</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Duplicate (17G0187-DUP1)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Source: L17G003-01</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Dissolved Solids</td>
<td>193</td>
<td>12.0</td>
<td>20.0</td>
<td>mg/L</td>
<td>187</td>
<td>3.16</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Duplicate (17G0187-DUP2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Source: L17G013-03</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Dissolved Solids</td>
<td>721</td>
<td>12.0</td>
<td>20.0</td>
<td>mg/L</td>
<td>724</td>
<td>0.415</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Batch 17H0076 - EPA 300.0</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blank (17H0076-BLK1)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Prepared &amp; Analyzed: 08/09/17</td>
<td></td>
<td></td>
<td></td>
<td>U</td>
</tr>
<tr>
<td>Sulfate</td>
<td>0.500</td>
<td>0.500</td>
<td>2.00</td>
<td>mg/L</td>
<td>5.000</td>
<td>91.6</td>
<td>90-110</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LCS (17H0076-BS1)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Prepared &amp; Analyzed: 08/09/17</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sulfate</td>
<td>4.58</td>
<td>0.500</td>
<td>2.00</td>
<td>mg/L</td>
<td>5.000</td>
<td>91.6</td>
<td>90-110</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Matrix Spike (17H0076-MS1)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Source: L17G003-01</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sulfate</td>
<td>33.9</td>
<td>0.500</td>
<td>2.00</td>
<td>mg/L</td>
<td>5.000</td>
<td>28.5</td>
<td>107</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Matrix Spike (17H0076-MS2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Source: L17G003-01</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sulfate</td>
<td>6.81</td>
<td>0.500</td>
<td>2.00</td>
<td>mg/L</td>
<td>5.000</td>
<td>2.16</td>
<td>93.0</td>
<td>90-110</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Matrix Spike Dup (17H0076-MSD1)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Source: L17G003-01</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sulfate</td>
<td>35.7</td>
<td>0.500</td>
<td>2.00</td>
<td>mg/L</td>
<td>5.000</td>
<td>28.5</td>
<td>143</td>
<td>90-110</td>
<td>5.12</td>
<td>20</td>
</tr>
</tbody>
</table>

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>MDL</th>
<th>PQL</th>
<th>Units</th>
<th>Spike Level</th>
<th>Source</th>
<th>%Rec</th>
<th>%Rec Limits</th>
<th>RPD Limit</th>
<th>Qualifier</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Batch 17H0076 - EPA 300.0</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Matrix Spike Dup (17H0076-MSD2)</strong></td>
<td>Source: L17G010-01</td>
<td>Prepared &amp; Analyzed: 08/09/17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sulfate</td>
<td>6.99</td>
<td>0.500</td>
<td>2.00</td>
<td>mg/L</td>
<td>5.0000</td>
<td>2.16</td>
<td>96.7</td>
<td>90-110</td>
<td>2.69</td>
<td>20</td>
</tr>
<tr>
<td><strong>Batch 17H0125 - EPA 300.0</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Blank (17H0125-BLK1)</strong></td>
<td>Prepared &amp; Analyzed: 08/14/17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chloride</td>
<td>0.631</td>
<td>0.0200</td>
<td>0.500</td>
<td>mg/L</td>
<td>5.0000</td>
<td>93.5</td>
<td>90-110</td>
<td>V</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fluoride</td>
<td>0.0688</td>
<td>0.0100</td>
<td>0.0500</td>
<td>mg/L</td>
<td>5.0000</td>
<td>98.6</td>
<td>90-110</td>
<td>V</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sulfate</td>
<td>0.500</td>
<td>0.500</td>
<td>2.00</td>
<td>mg/L</td>
<td>5.0000</td>
<td>96.5</td>
<td>90-110</td>
<td>U</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>LCS (17H0125-BS1)</strong></td>
<td>Prepared &amp; Analyzed: 08/14/17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chloride</td>
<td>4.67</td>
<td>0.0200</td>
<td>0.500</td>
<td>mg/L</td>
<td>5.0000</td>
<td>86.1</td>
<td>90-110</td>
<td>V</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fluoride</td>
<td>4.93</td>
<td>0.0100</td>
<td>0.0500</td>
<td>mg/L</td>
<td>5.0000</td>
<td>117</td>
<td>90-110</td>
<td>V</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sulfate</td>
<td>4.83</td>
<td>0.500</td>
<td>2.00</td>
<td>mg/L</td>
<td>5.0000</td>
<td>84.9</td>
<td>90-110</td>
<td>U</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Matrix Spike (17H0125-MS1)</strong></td>
<td>Source: L17G015-01</td>
<td>Prepared &amp; Analyzed: 08/14/17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chloride</td>
<td>339</td>
<td>0.200</td>
<td>5.00</td>
<td>mg/L</td>
<td>5.0000</td>
<td>93.3</td>
<td>90-110</td>
<td>J-,V</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fluoride</td>
<td>59.6</td>
<td>0.100</td>
<td>0.500</td>
<td>mg/L</td>
<td>5.0000</td>
<td>120</td>
<td>90-110</td>
<td>J-,V</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sulfate</td>
<td>483</td>
<td>5.00</td>
<td>20.0</td>
<td>mg/L</td>
<td>5.0000</td>
<td>92.7</td>
<td>90-110</td>
<td>J-</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Matrix Spike Dup (17H0125-MSD1)</strong></td>
<td>Source: L17G015-01</td>
<td>Prepared &amp; Analyzed: 08/14/17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chloride</td>
<td>343</td>
<td>0.200</td>
<td>5.00</td>
<td>mg/L</td>
<td>5.0000</td>
<td>93.3</td>
<td>90-110</td>
<td>1.05</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fluoride</td>
<td>60.7</td>
<td>0.100</td>
<td>0.500</td>
<td>mg/L</td>
<td>5.0000</td>
<td>120</td>
<td>90-110</td>
<td>1.82</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sulfate</td>
<td>486</td>
<td>5.00</td>
<td>20.0</td>
<td>mg/L</td>
<td>5.0000</td>
<td>92.7</td>
<td>90-110</td>
<td>0.812</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
<table>
<thead>
<tr>
<th>Date</th>
<th>07/20/17</th>
<th>File Name</th>
<th>072017_Wells_RAS</th>
<th>Weather</th>
<th>CLOUDY &amp; HOT</th>
<th>Sample(s) / initials</th>
<th>RAB /TECO</th>
<th>Initials</th>
<th>NGVD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Site:</td>
<td>Big Bend</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LIMS #</td>
<td></td>
<td>Location Code</td>
<td>Time</td>
<td>FE</td>
<td>pH</td>
<td>Temp ºC</td>
<td>Cond (µS/cm)</td>
<td>DO Mg/L</td>
<td>Turbidity (NTU)</td>
</tr>
<tr>
<td>L17G024-01 A</td>
<td>BBS-COR-1</td>
<td>12:25</td>
<td>6.8</td>
<td>25.8</td>
<td>3955</td>
<td>0.1</td>
<td>1.6</td>
<td>-122</td>
<td>500-18</td>
</tr>
<tr>
<td>L17G024-02 A</td>
<td>BBS-COR-2</td>
<td>12:56</td>
<td>7.0</td>
<td>25.7</td>
<td>1629</td>
<td>0.1</td>
<td>4.6</td>
<td>-154</td>
<td>100</td>
</tr>
<tr>
<td>L17G024-01 A</td>
<td></td>
<td></td>
<td>250ml Cyan (3)</td>
<td>5L tasteg (1)</td>
<td>5L Meta (1)</td>
<td>250ml Meta (3)</td>
<td>1L Meta (1)</td>
<td>500ml Sulfide (2)</td>
<td>LT. YELLOW</td>
</tr>
<tr>
<td>L17G024-02 A</td>
<td></td>
<td></td>
<td>250ml plastic (PP)</td>
<td>500ml plastic (PP)</td>
<td>250ml plastic (PP)</td>
<td>100ml coliform bottle</td>
<td>5L amber glass (AG)</td>
<td>40mvis (6)</td>
<td>500 ml Nuts (2)</td>
</tr>
<tr>
<td>L17G024-01 A</td>
<td></td>
<td></td>
<td>250ml plastic (PP)</td>
<td>500ml plastic (PP)</td>
<td>250ml plastic (PP)</td>
<td>100ml coliform bottle</td>
<td>5L amber glass (AG)</td>
<td>40mvis (6)</td>
<td>500 ml Nuts (2)</td>
</tr>
</tbody>
</table>

**Samples On Kit** | **Sample Receipt** |
--- | --- |
ESS | ESS |
0107301Y | 0218201Y |
0307301Y | ESS |
ESS | ESS |

**Preserv.** | **Preserv.** | **Preserv.** | **Preserv.** |
--- | --- | --- | --- |
L 011664 | L 011664 | L 016611D | L 016770A |
7 | 10 | 52.10 | 4.01 |
7.02 | 8.45 | 58.71 | 8.45 |
12.30 | 18.50 | 12.30 | 18.50 |

**Conductivity** | **Std Value** | **Std Value** | **Std Value** | **Std Value** |
--- | --- | --- | --- | --- |
1000 | 9.00 | 9.06 | 9.06 | 9.06 |
7915 | 9.06 | 9.06 | 9.06 | 9.06 |
1000 | 9.00 | 9.06 | 9.06 | 9.06 |

**Reading mg/L** | **Reading mg/L** | **Reading mg/L** | **Reading mg/L** | **Reading mg/L** |
--- | --- | --- | --- | --- |
237.6 | 237.6 | 237.6 | 237.6 |
36.2 | 36.2 | 36.2 | 36.2 |
9.89 | 9.89 | 9.89 | 9.89 |
9.84 | 9.84 | 9.84 | 9.84 |

**Quality Criteria** | **Status** | **Equipment ID** | **Eval Table** |
--- | --- | --- | --- |
DO 250 mg/L | STABLE | WLM08 | Level Meter: |
Temp<20 ºC | STABLE | WLM08 | Level Meter: |
Cond<60 µS/cm | STABLE | WLM08 | Level Meter: |
Turb<5 NTU | STABLE | WLM08 | Level Meter: |

**Purge Complete** | **Gallons to Purge** | **Stability Values** |
--- | --- | --- |
12:06 | 25.81 | 6.81 |
12:06 | 25.81 | 6.81 |

**Purge Complete** | **Gallons to Purge** | **Stability Values** |
--- | --- | --- |
12:30 | 25.74 | 6.97 |
12:30 | 25.74 | 6.97 |

**Purge Complete** | **Gallons to Purge** | **Stability Values** |
--- | --- | --- |
12:44 | 25.74 | 6.97 |
12:44 | 25.74 | 6.97 |

**Comments:**
Total Time: 13:30
Total Miles: 19
### Water Quality Data for Big Bend

**Date:** 07/20/17  
**File Name:** 072017_Wells_RAB  
**Weather:** CLOUDY & HOT  
**Sample(s) Initials:** RAB/TECO  
**NGVD:**

<table>
<thead>
<tr>
<th>Site Location</th>
<th>Time</th>
<th>Location Code</th>
<th>L17G024-03 A</th>
<th>Pres ID</th>
<th>Temp (°C)</th>
<th>Color</th>
<th>Acidic</th>
<th>pH</th>
<th>Temp (°C)</th>
<th>Conductivity (μS/cm)</th>
<th>DO (mg/L)</th>
<th>TURB ID</th>
<th>REDOX</th>
<th>Sulfide (μg/L)</th>
<th>Silica (mg/L)</th>
<th>Silica (mg/L)</th>
<th>Total Time</th>
<th>Total Miles</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>L17G024-03 A</strong></td>
<td>11:56</td>
<td>BBS-CRR-3</td>
<td>L 11564</td>
<td>L 1164</td>
<td>25.7</td>
<td>1749</td>
<td>0.2</td>
<td>0.5</td>
<td>-123</td>
<td>500-TR</td>
<td>SCOLOR-W</td>
<td>SOCOLOR-W</td>
<td>Time</td>
<td>LEVEL</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>L17G024-03 A</strong></td>
<td>250mL Cyan (G)</td>
<td>1L Inset (G)</td>
<td>250mL Inset (G)</td>
<td>1L Mils (G)</td>
<td>25mL Mils (G)</td>
<td>1L Radi (G)</td>
<td>500mL Sulphate (G)</td>
<td>500mL Mils (G)</td>
<td>25mL Nuts (G)</td>
<td>40mL Vials (G)</td>
<td>500mL Nuts</td>
<td>1L Radi Diss. (G)</td>
<td>Total Containers</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>L17G024-03 A</strong></td>
<td>(1) 1L plastic (PP)</td>
<td>(2) 250mL plastic (PP)</td>
<td>(3) 25mL plastic (PP)</td>
<td>(4) 100mL coliform bottle</td>
<td>(5) 1L amber glass (AG)</td>
<td>(6) 43mL VOA vial (CO)</td>
<td>Samples On File</td>
<td>Sample Receipt</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Water Quality Collection and Preservation

- **Preservation:**
  - Pres ID: L 011644  
  - Temp: 1.3°C
- **Preservation:**
  - Pres ID: L 011644  
  - Temp: 1.3°C
- **Preservation:**
  - Pres ID: L 011644  
  - Temp: 1.3°C
- **Preservation:**
  - Pres ID: L 011644  
  - Temp: 1.3°C

### Water Quality Parameters

- **pH:** 6.4
- **Temp:** 26.7
- **Conductivity:** 1749 μS/cm
- **DO (mg/L):** 0.2
- **TURB ID:** 0.5
- **REDOX:** -123

### Water Quality Analysis

- **Buffer Value:** Cal Time IGV Time ICC Time
- **Buffer Value:** Cal Time IGV Time ICC Time
- **Buffer Value:** Cal Time IGV Time ICC Time

### Water Quality Standards

- **Conductivity Meter Calibr.:**
  - Standard ID: L 116644
  - Standard Value: 1000
- **Turbidity Meter Calibration:**
  - Standard ID: L 116644
  - Acceptability Range: 1000

### Water Quality Summary

- **DO Meter Read:** 9.10
- **Temp:** 21.5
- **Reading mg/L:** 235.0
- **Theo Value mg/L:** 236.2

### Purge Information

- **Well Capacities (gallons/ft):** 10.6 = 0.65
- **Tubing Inside Diameter:** 0.12 = 0.56

### Purge Complete At

- **Gallons to Purge:** 0.12
- **Stability Values:**
  - 11:10
  - 0.12
  - 0.51

### Comments:

- **Total Time:**
- **Total Miles:**
<table>
<thead>
<tr>
<th>Site:</th>
<th>Big Bend</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date:</td>
<td>07/20/17</td>
</tr>
<tr>
<td>File Name:</td>
<td>072017_Wells_RAB</td>
</tr>
<tr>
<td>Weather:</td>
<td>CLOUDY &amp; HOT</td>
</tr>
<tr>
<td>Sampler(s) / Initials:</td>
<td>RAB /TECO</td>
</tr>
<tr>
<td>Level:</td>
<td>LEVEL</td>
</tr>
<tr>
<td>Location Code:</td>
<td>BBS-CCR-BW1</td>
</tr>
<tr>
<td>Time:</td>
<td>11:01</td>
</tr>
<tr>
<td>FE:</td>
<td>0.6</td>
</tr>
<tr>
<td>pH:</td>
<td>6.5</td>
</tr>
<tr>
<td>TEMP:</td>
<td>27.9</td>
</tr>
<tr>
<td>250ml Inorg (C):</td>
<td>0.56</td>
</tr>
<tr>
<td>250ml Inorg (D):</td>
<td>3.4</td>
</tr>
<tr>
<td>1L Nuts (C):</td>
<td>0.56</td>
</tr>
<tr>
<td>1L Nuts (D):</td>
<td>0.56</td>
</tr>
<tr>
<td>1L Rads (C):</td>
<td>0.56</td>
</tr>
<tr>
<td>1L Rads (D):</td>
<td>0.56</td>
</tr>
<tr>
<td>500ml Sulfate (C):</td>
<td>0.56</td>
</tr>
<tr>
<td>500ml Sulfate (D):</td>
<td>0.56</td>
</tr>
<tr>
<td>250ml Nuts (C):</td>
<td>0.56</td>
</tr>
<tr>
<td>250ml Nuts (D):</td>
<td>0.56</td>
</tr>
<tr>
<td>40ml Vol (C):</td>
<td>0.56</td>
</tr>
<tr>
<td>40ml Vol (D):</td>
<td>0.56</td>
</tr>
<tr>
<td>500ml Nuts (C):</td>
<td>0.56</td>
</tr>
<tr>
<td>500ml Nuts (D):</td>
<td>0.56</td>
</tr>
<tr>
<td>1L Rads Diss. (C):</td>
<td>0.56</td>
</tr>
<tr>
<td>1L Rads Diss. (D):</td>
<td>0.56</td>
</tr>
<tr>
<td>Total Containers:</td>
<td>10</td>
</tr>
<tr>
<td>1L plastic: (PP)</td>
<td>1</td>
</tr>
<tr>
<td>250ml plastic: (PP)</td>
<td>1</td>
</tr>
<tr>
<td>100ml colin bottle: (PP)</td>
<td>1</td>
</tr>
<tr>
<td>5L amber glass: (AG)</td>
<td>1</td>
</tr>
<tr>
<td>40ml VOA vial: (CO)</td>
<td>1</td>
</tr>
</tbody>
</table>

### Preservation

<table>
<thead>
<tr>
<th>Preservation</th>
<th>Press ID</th>
<th>Press ID</th>
<th>Press ID</th>
</tr>
</thead>
<tbody>
<tr>
<td>1L bottles: (rad): 5 ml HINO3 to pH &lt;2</td>
<td>L 018664</td>
<td>L 018664</td>
<td>L 018664</td>
</tr>
<tr>
<td>1L bottles: (rad): 1 ml HINO3 to pH &lt;2</td>
<td>L 018664</td>
<td>L 018664</td>
<td>L 018664</td>
</tr>
<tr>
<td>1L bottles: (rad): 6.5 ml HINO3 to pH &lt;2</td>
<td>L 018664</td>
<td>L 018664</td>
<td>L 018664</td>
</tr>
<tr>
<td>ICV:</td>
<td>L 018664</td>
<td>L 018664</td>
<td>L 018664</td>
</tr>
<tr>
<td>ICV:</td>
<td>L 018664</td>
<td>L 018664</td>
<td>L 018664</td>
</tr>
<tr>
<td>ICV:</td>
<td>L 018664</td>
<td>L 018664</td>
<td>L 018664</td>
</tr>
</tbody>
</table>

### Conductivity Meter Calib.

<table>
<thead>
<tr>
<th>Conductivity Meter Calib.</th>
<th>Standard</th>
<th>Standard</th>
<th>Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>L 018679</td>
<td>L 018679</td>
<td>L 018679</td>
<td></td>
</tr>
</tbody>
</table>

### Turbidity Meter Calibration

<table>
<thead>
<tr>
<th>Turbidity Meter Calibration</th>
<th>Standard</th>
<th>Acceptability Range</th>
<th>Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>L 018737</td>
<td>L 018737</td>
<td>L 018737</td>
<td></td>
</tr>
</tbody>
</table>

### Suffice Info (EPA 37.1)

<table>
<thead>
<tr>
<th>Suffice Info (EPA 37.1)</th>
<th>Species</th>
<th>Species</th>
<th>Species</th>
</tr>
</thead>
<tbody>
<tr>
<td>L 018664</td>
<td>L 018664</td>
<td>L 018664</td>
<td></td>
</tr>
</tbody>
</table>

### Purging Information

<table>
<thead>
<tr>
<th>Purging Information</th>
<th>Well Diameter (gal)/h</th>
<th>Flow Rate (gph)</th>
<th>Total Volume (gal)</th>
<th>Water Column (ft)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1A: 10.57</td>
<td>10.57</td>
<td>10.57</td>
<td>10.57</td>
<td>10.57</td>
</tr>
</tbody>
</table>

### Purge Meth:

<table>
<thead>
<tr>
<th>Purge Meth:</th>
<th>Rate (gph)</th>
<th>Volume (gal)</th>
<th>Water Column (ft)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1A: 10.57</td>
<td>10.57</td>
<td>10.57</td>
<td>10.57</td>
</tr>
</tbody>
</table>

### Purge Complete At:

<table>
<thead>
<tr>
<th>Purge Complete At</th>
<th>Gallons to Purge</th>
<th>Stability Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>10.43</td>
<td>0.32</td>
<td>0.32</td>
</tr>
</tbody>
</table>

### Well #1

<table>
<thead>
<tr>
<th>Well</th>
<th>Diameter/Cone</th>
<th>Screen Area (sq ft)</th>
<th>Intake Depth (ft)</th>
<th>Water Column (ft)</th>
<th>X</th>
<th>Well Capacity (gph)</th>
<th>1 Well Volume (gal)</th>
<th>Tubing Capacity (gph)</th>
<th>1 tubing Length (ft)</th>
<th>+ Pump + Cell Volume (gal)</th>
<th>1 tubing Volume (gal)</th>
<th>1 tubing Total Volume (gal)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BBS-CCR-BW1</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
</tr>
</tbody>
</table>

### Purge Meth:

<table>
<thead>
<tr>
<th>Purge Meth:</th>
<th>Rate (gph)</th>
<th>Volume (gal)</th>
<th>Water Column (ft)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.4</td>
<td>10.57</td>
<td>10.57</td>
<td>10.57</td>
</tr>
</tbody>
</table>

### Purge Complete At:

<table>
<thead>
<tr>
<th>Purge Complete At</th>
<th>Gallons to Purge</th>
<th>Stability Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>9.49</td>
<td>0.12</td>
<td>0.12</td>
</tr>
</tbody>
</table>
# GROUNDWATER WELL SAMPLING EQUIPMENT CALIBRATION

<table>
<thead>
<tr>
<th>Date:</th>
<th>07/20/17</th>
<th>Sampler(s): RAB</th>
<th>Initials</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>pH Meter Calibration</th>
<th>Buffer Value</th>
<th>Cal</th>
<th>Time</th>
<th>Initials</th>
<th>CCV</th>
<th>Time</th>
<th>Pass/Fail</th>
</tr>
</thead>
<tbody>
<tr>
<td>MPM08 L</td>
<td>7</td>
<td>7.02</td>
<td>8.45</td>
<td></td>
<td>7.00</td>
<td>13.30</td>
<td>Pass</td>
</tr>
<tr>
<td>FDEP PT 1100</td>
<td>10</td>
<td>10.02</td>
<td>8.45</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Units: SU</td>
<td>4</td>
<td>4.01</td>
<td>0.42</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Conductivity Meter Calibration</th>
<th>Std Value</th>
<th>Cal</th>
<th>Time</th>
<th>Initials</th>
<th>CCV</th>
<th>Time</th>
<th>Pass/Fail</th>
</tr>
</thead>
<tbody>
<tr>
<td>MPM08 L</td>
<td>10000</td>
<td>9715</td>
<td>9.06</td>
<td>Pass</td>
<td>960</td>
<td>13.30</td>
<td>Pass</td>
</tr>
<tr>
<td>FDEP PT 1200, Units: LMG08</td>
<td>10000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Turbidity Meter Calibration</td>
<td>Std Value</td>
<td>Acceptability</td>
<td>Range</td>
<td>Initials</td>
<td>CCV</td>
<td>Time</td>
<td>Pass/Fail</td>
</tr>
<tr>
<td>TMD07 L</td>
<td>52.10</td>
<td>46.71</td>
<td>55.49</td>
<td>Pass</td>
<td>50.0</td>
<td>13.12</td>
<td>Pass</td>
</tr>
<tr>
<td>FDEP PT 1600, Units: NTU</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Buffer Info (QC Check): (EPAR3771)</th>
<th>QC Result</th>
<th>mg/l</th>
<th>Time</th>
<th>Initials</th>
<th>CCV</th>
<th>Time</th>
<th>Pass/Fail</th>
</tr>
</thead>
<tbody>
<tr>
<td>MPM08 L</td>
<td>21.54</td>
<td>236.0</td>
<td>238.2</td>
<td>Pass</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FDEP PT 1100</td>
<td>8.24</td>
<td>21.49</td>
<td>8.88</td>
<td>Pass</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Zoppeil Std ID: L</td>
<td>101590A</td>
<td>760</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Calibrant</th>
<th>pH</th>
<th>Conductivity</th>
<th>Redox</th>
<th>CL2 Calibration</th>
<th>Reagent ID</th>
</tr>
</thead>
<tbody>
<tr>
<td>MPM08 L</td>
<td>2</td>
<td>2</td>
<td>0.2</td>
<td>Ferrous Iron</td>
<td>L</td>
</tr>
</tbody>
</table>

**ClO₂ DPD Check must read +/- 10% of the Calculated Std. Concentration, multiplied by 2.4.**

**Glycope check should read < 0.10 mg/l ClO₂.**

<table>
<thead>
<tr>
<th>Chlorine Dioxide (mg/l)</th>
<th>Std Conc.</th>
<th>Std Spike Volume (ml)</th>
<th>Calc Sample Volume (ml)</th>
<th>Initial Calibration Verification</th>
<th>Continuous Calibration Verification</th>
</tr>
</thead>
<tbody>
<tr>
<td>MPM08 L</td>
<td>0.2</td>
<td>5</td>
<td>0.3</td>
<td>10</td>
<td>0.2</td>
</tr>
</tbody>
</table>

**Method 10120**

**Equivalent to Standard Methods, 4500 ClO₂-D**

**COMMENTS:**
A checked box indicates reagent aspiration date has been verified.
# GROUNDWATER SAMPLING LOG

**FACILITY NAME:** Big Bend  
**SITE LOCATION:** Apollo Beach, FL.

### PURGING DATA

<table>
<thead>
<tr>
<th>WELL NO.</th>
<th>SAMPLE ID:</th>
<th>DATE:</th>
</tr>
</thead>
<tbody>
<tr>
<td>BBS-CCR-1</td>
<td>L17G024-01 A</td>
<td>7/20/17</td>
</tr>
</tbody>
</table>

#### WELL VOLUME PURGE:
- \( \text{WELL VOLUME} = (\text{TOTAL WELL DEPTH} \times \text{STATIC DEPTH TO WATER}) \times \text{WELL CAPACITY} \)

#### EQUIPMENT VOLUME PURGE:
- \( \text{EQUIPMENT VOL.} = \text{PUMP VOLUME} \times (\text{TUBING CAPACITY} \times \text{TUBING LENGTH}) + \text{FLOW CELL VOLUME} \)

### PURGING DATA

<table>
<thead>
<tr>
<th>TIME</th>
<th>VOLUME PURGED (GALLONS)</th>
<th>COMPL. VOLUME PURGED (GALLONS)</th>
<th>PURGE RATE (GPM)</th>
<th>DEPTH TO WATER (FEET)</th>
<th>pH (standard units)</th>
<th>TEMP. (°C)</th>
<th>COND. (µS/cm)</th>
<th>OXYGEN (ppm):</th>
<th>TURBIDITY (NTU)</th>
<th>COLOR</th>
<th>ODOR</th>
</tr>
</thead>
<tbody>
<tr>
<td>12:14</td>
<td>1.33</td>
<td>1.33</td>
<td>0.15</td>
<td>6.03</td>
<td>6.82</td>
<td>25.62</td>
<td>3962</td>
<td>0.11</td>
<td>5.99</td>
<td>CLEAR</td>
<td>NONE</td>
</tr>
<tr>
<td>12:15</td>
<td>0.29</td>
<td>1.62</td>
<td>0.15</td>
<td>6.03</td>
<td>6.81</td>
<td>25.60</td>
<td>3965</td>
<td>0.13</td>
<td>1.62</td>
<td>CLEAR</td>
<td>NONE</td>
</tr>
<tr>
<td>12:18</td>
<td>0.29</td>
<td>1.91</td>
<td>0.15</td>
<td>6.02</td>
<td>6.81</td>
<td>25.61</td>
<td>3965</td>
<td>0.13</td>
<td>1.56</td>
<td>CLEAR</td>
<td>NONE</td>
</tr>
</tbody>
</table>

### WELL CAPACITY (Gallons/Per Foot):
- 0.75 in. = 0.02: 1 in. = 0.04: 1.25 in. = 0.06: 2 in. = 0.10: 3 in. = 0.15: 4 in. = 0.20: 6 in. = 0.30: 8 in. = 0.40: 12 in. = 0.60

### TUBING SIZE (IN.):
- 1/16" = 0.0063: 1/8" = 0.0125: 1/4" = 0.025: 3/8" = 0.0375: 1/2" = 0.0625: 5/16" = 0.03125: 3/4" = 0.078125: 7/16" = 0.06875

### MEDIUM FOR SAMPLING:
- PP = Peristaltic Pump
- B = Bailer
- BP = Blender Pump
- ESP = Electric Submersible Pump
- SV = Straw Method (using Gravity Drain)
- VT = Vacuum Trap
- St = Stain

### NOTES:
1. The above do not constitute all of the information required by Chapter 62-169, F.A.C.
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)
   - pH: ± 0.2 units; Temperature: ± 0.2 °C; Specific Conductivity: ± 5% Dissolved Oxygen: all readings ≥ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/l or ± 10% (whichever is greater); Turbidity: all readings ≥ 2D NTU, optionally ± 5 NTU or 10% (whichever is greater)

### SAMPLING DATA

<table>
<thead>
<tr>
<th>RAB</th>
<th>TECO</th>
<th>WELL DECON TICATION</th>
<th>FIELD FILTERED</th>
<th>FIELD SIZE</th>
<th>TUBING MATERIAL CODE</th>
<th>TUBING MATERIAL TYPE</th>
<th>TUBING MATERIAL SIZE</th>
<th>INTENDED ANALYZING METHOD</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>y</td>
<td>y</td>
<td></td>
<td>PE/S</td>
<td>Filter</td>
<td>15 µm</td>
<td>Inorganics</td>
</tr>
</tbody>
</table>

### SAMPLE CONTAINER SPECIFICATION

<table>
<thead>
<tr>
<th>SAMPLE ID CODE</th>
<th>CONTAINERS</th>
<th>MATERIAL CODE</th>
<th>VOLUME</th>
<th>PRESERVATIVE</th>
<th>TOTAL VOL.</th>
<th>FINAL pH</th>
</tr>
</thead>
<tbody>
<tr>
<td>@h0-500</td>
<td>1</td>
<td>PE</td>
<td>500ml</td>
<td>None</td>
<td>None</td>
<td>N/A</td>
</tr>
<tr>
<td>@Met-250</td>
<td>2</td>
<td>PE</td>
<td>250ml</td>
<td>HNO3</td>
<td>1ml</td>
<td>&lt;2</td>
</tr>
<tr>
<td>@Rad-1L</td>
<td>2</td>
<td>PE</td>
<td>1L</td>
<td>HNO3</td>
<td>5ml</td>
<td>&lt;2</td>
</tr>
</tbody>
</table>

### REMARKS:
(1) Sample bottles pre-preserved at laboratory prior to sample collection.

### MATERIAL CODES:
- AG = Amber Glass
- CG = Clear Glass
- PE = Polyethylene
- PP = Polypropylene
- S = Silicone
- T = Teflon
- O = Other (Specify)

### SAMPLING/PURGING EQUIPMENT CODES:
- A = After Peristaltic Pump
- B = Bailer
- BP = Blender Pump
- ESP = Electric Submersible Pump
- PP = Peristaltic Pump
- SV = Straw Method (using Gravity Drain)
- VT = Vacuum Trap
- St = Stain
- Other (Specify)
## PURGING DATA

### WELL VOLUME PURGE:
- **WELL VOLUME =** TOTAL WELL DEPTH - STATIC DEPTH TO WATER x WELL CAPACITY

<table>
<thead>
<tr>
<th>ELEMENT VOLUME PURGE: (only if stated in the applicable)</th>
</tr>
</thead>
<tbody>
<tr>
<td>WELL VOLUME PURGE: 1 WELL VOLUME = TOTAL WELL DEPTH - STATIC DEPTH TO WATER x WELL CAPACITY</td>
</tr>
</tbody>
</table>

### EQUIPMENT VOLUME PURGE:
- **EQUIPMENT VOLUME PURGE:** PUMP VOLUME + (TUBING CAPACITY x TUBING LENGTH) + FLOW CELL VOLUME

### INITIAL PUMP OR TUBING DEPTH IN WELL (feet):
- 16.84

### FINAL PUMP OR TUBING DEPTH IN WELL (feet):
- 16.84

### PURGING INITIATED AT:
- 12:30

### PURGING ENDED AT:
- 12:44

### TOTAL VOLUME PURGED (gallons):
- 2.01

### WELL CAPACITY (Gallons Per Foot):
- 0.75" = 0.02, 1" = 0.04, 1.25" = 0.06, 2" = 0.15, 3" = 0.37, 4" = 0.66, 5" = 1.02, 6" = 1.47, 8" = 2.68

### TUBING INSIDE DIA. CAPACITY (Gallons):
- 1/8" = 0.00055, 3/16" = 0.0014, 1/4" = 0.0029, 1/2" = 0.0084, 3/4" = 0.0168, 1" = 0.0314, 1-1/4" = 0.0462, 1-1/2" = 0.0620, 2" = 0.1250

### SAMPLING DATA

### DUMP OR TUBING DEPTH IN WELL (feet):
- 16.8

### TUBING FLOW RATE (ml per minute):
- 547

### TUBING MATERIAL CODE:
- PE/S

### FIELD DECONTAMINATION:
- Y N

### FIELD-FILTERED:
- Y N

### FILTER SIZE:
- µm

### INTENDED ANALYSIS AND/OR METHOD:
- N/A

### SAMPLING EQUIPMENT CODE:
- PP

### SAMPLE CONTAINER SPECIFICATION

<table>
<thead>
<tr>
<th>SAMPLE ID CODE</th>
<th>VOLUME</th>
<th>PRESERVATIVE USED</th>
<th>TOTAL VOL. ADDED IN FIELD (ml or µl)</th>
<th>FINAL pH</th>
</tr>
</thead>
<tbody>
<tr>
<td>@Bio-500</td>
<td>1</td>
<td>PE 500ml</td>
<td>NONE</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Inorganics</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>PE 250ml</td>
<td>HNO3 1ml</td>
<td>&lt;2</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>PE 1L</td>
<td>HNO3 5ml</td>
<td>&lt;2</td>
</tr>
</tbody>
</table>

### REMARKS:
- (1) Sample bottles pre-preserved at laboratory prior to sample collection.

**Material Codes:**
- AQ = Amber Glass
- CG = Clear Glass
- PE = Polyethylene
- PP = Polypropylene
- S = Silicone
- T = Teflon
- O = Other (Specify)

**Sampling Purging Equipment Codes:**
- APP = After Peristaltic Pump
- BP = Baller
- BB = Bladder Pump
- ESP = Electric Submersible Pump
- RRPP = Reversal Flow Peristaltic Pump
- EM = E-Flow Method (Using Gravity Draw)
- VT = Vacuum Trap
- O = Other (Specify)

**Notes:**
1. The above do not constitute all of the information required by Chapter 63-186, F.A.C.
2. Stabilization Criteria for Range of Variation of Last Three Consecutive Readings (See FS 2212, Section 3)
3. pH ± 0.2 units; Temperature ± 0.2 °C; Specific Conductance ± 5%; Dissolved Oxygen ± readings ± 20% saturation (see Table FS 2220-2);
4. Optionally, ± 0.2 mg/L, or ± 10% (whichever is greater). Turbidity: ± 20 NTU; optionally ± 5 NTU or 10% (whichever is greater)

Page 32 of 32
Revision Date: February 1, 2004
# GROUNDWATER SAMPLING LOG

## PURGING DATA

<table>
<thead>
<tr>
<th>WELL VOL. PURGE (gallons)</th>
<th>EQUIPMENT VOL. PURGE (gallons)</th>
<th>INITIAL PUMP OR TUBING DEPTH IN WELL (feet)</th>
<th>FINAL PUMP OR TUBING DEPTH IN WELL (feet)</th>
<th>PURGING INITIATED AT:</th>
<th>PURGING ENDED AT:</th>
<th>TOTAL VOLUME PURGED (gallons)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.006</td>
<td>0.0026</td>
<td>18.2</td>
<td>16.2</td>
<td>11:09</td>
<td>11:43</td>
<td>3.05</td>
</tr>
</tbody>
</table>

**WELL CAPACITY (Gallons Per Foot):** 0.797

**TUBING SIZE (in.):** 0.114 in. **CAPACITY:** 24.6 ft.

**Flow rate:** 343 gal./min., **Temperature:** 72°F, **Conductivity:** 2500 micro-Siemens, **DOX:** 8.0 % saturated

**COLOR:** YELLOW, **ODOR:** MILD

## SAMPLING DATA

- **Samples ID Code**: @lno-500, @Met-250, @Rad-1L
- **Containers**: PE, PE
- **Volume**: 500ml, 250ml
- **Preservative Used**: None, HNO3
- **Sample Preservation**: None, 1ml
- **Final pH**: <2, <2
- **Intended Analytical Method**: Inorganics, Metals, Radiologicals
- **Sample Purge Code**: PP

**Sample Bottles Pre-Preserved at Laboratory Prior to Sample Collection.**

**Material Codes**: AG = Amber Glass, CG = Clear Glass, PE = Polyethylene, PP = Polypropylene, S = Silicone, T = Teflon, O = Other

**Sampling/Purging Equipment Codes**: APP = Air Peristaltic Pump, D = Diver, SP = Syringe Pump, ESP = Electro Submersible Pump, PP = Peristaltic Pump, RP = Reverse Flow Peristaltic Pump, EM = Emulsifying Lawn

**Notes**:

1. The above do not constitute all of the information required by Chapter 62-168, F.A.C.
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE F.S. 2212. SECTION 3)
   - pH ± 0.2
   - Temperature: ± 0.1°C
   - Specific Conductance: ± 5%
   - Dissolved Oxygen: all readings ± 20% saturation (see Table F.S. 2210.2)
   - turbidity: all readings ± 20 NTU; optionally ± 5 NTU or 10% (whichever is greater)

**Revision Date**: February 1, 2004

Page 32 of 32
### DEP-SOP-001/01
### FS 2200 Groundwater Sampling
#### Form FD 9000-24

**GROUNDWATER SAMPLING LOG**

**SITE NAME:** Big Bend  
**WELL NO.:** BBS-CCR-BW-1  
**SITE LOCATION:** Apollo Beach, FL  
**SAMPLE ID:** L17G024-04 A  
**DATE:** 7/20/17

---

**PURGING DATA**

- **WELL VOLUME PURGED:**  
  - 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) / WELL CAPACITY
  - (feet) x (gallons/foot) = gallons

- **EQUIPMENT VOLUME PURGED:**  
  - 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY x TUBING LENGTH) + FLOW CELL VOLUME
  - (gallons) x (100 feet) = gallons

**INITIAL PUMP OR TUBING DEPTH IN WEL (feet):** 39.30  
**FINAL PUMP OR TUBING DEPTH IN WELL (feet):** 39.30  
**PURGING INITIATED AT:** 10:42  
**PURGING ENDED AT:** 10:57  
**TOTAL PURGED (gallons):** 6.35

<table>
<thead>
<tr>
<th>TIME</th>
<th>VOLUME PURGED (GALLONS)</th>
<th>DEPTH TO WATER (FEET)</th>
<th>TEMP. (°C)</th>
<th>pH (standard units)</th>
<th>TURBIDITY (NTUs)</th>
<th>COLOR (describe)</th>
<th>DOOR (describe)</th>
</tr>
</thead>
<tbody>
<tr>
<td>10:53</td>
<td>4.65</td>
<td>29.81</td>
<td>27.64</td>
<td>6.49</td>
<td>4959</td>
<td>0.69</td>
<td>CLEAR</td>
</tr>
<tr>
<td>10:55</td>
<td>0.85</td>
<td>29.82</td>
<td>27.86</td>
<td>6.49</td>
<td>4953</td>
<td>0.69</td>
<td>CLEAR</td>
</tr>
<tr>
<td>10:57</td>
<td>0.85</td>
<td>29.80</td>
<td>27.89</td>
<td>6.49</td>
<td>4961</td>
<td>0.60</td>
<td>CLEAR</td>
</tr>
</tbody>
</table>

**WELL CAPACITY (Gallons Per Foot):**  
- 0.75" = 0.02;  
- 1" = 0.04;  
- 1.25" = 0.06;  
- 2" = 0.16;  
- 3" = 0.37;  
- 4" = 0.63;  
- 5" = 1.02;  
- 6" = 1.47;  
- 12" = 5.98

**TUBING INSIDE DIAMETER, CAPACITY (gal/l):**  
- 1/8" = 0.00006;  
- 21/32" = 0.00014;  
- 1/4" = 0.00028;  
- 3/8" = 0.00056;  
- 1/2" = 0.00110;  
- 5/8" = 0.0016

---

**SAMPLING DATA**

- **SAMPLED BY (PRNT) / AFFILIATION:**  
- **RAB:**  
- **TECO:**  
- **SAMPLED AT DATES:**  
- **SAMPLER ID:  
  - **SPECIFICATIONS:**

<table>
<thead>
<tr>
<th>FIELD DECONTAMINATION:</th>
<th>FILTERED:</th>
<th>FILTER SIZE:</th>
<th>INTENDED ANALYSIS AND/OR METHOD:</th>
<th>SAMPLING EQUIPMENT CODE:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Y</td>
<td>Y</td>
<td>100 µm</td>
<td>Metals</td>
<td>ESP</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
<td></td>
<td>Radiologicals</td>
<td>ESP</td>
</tr>
</tbody>
</table>

**SAMPLE CONTAINER SPECIFICATION**

<table>
<thead>
<tr>
<th>SAMPLE ID CODE</th>
<th># CONTAINERS</th>
<th>MATERIAL CODE</th>
<th>VOLUME (mL)</th>
<th>PRESERVATIVE</th>
<th>TOTAL VOLUME ADDED IN FIELD (ml)</th>
<th>FINAL pH</th>
<th>INTENDED ANALYSIS AND/OR METHOD</th>
<th>SAMPLING EQUIPMENT CODE</th>
</tr>
</thead>
<tbody>
<tr>
<td>@ino-500</td>
<td>1</td>
<td>PE</td>
<td>500</td>
<td>NONE</td>
<td>N/A</td>
<td>&lt;2</td>
<td>Inorganics</td>
<td>ESP</td>
</tr>
<tr>
<td>@Met-250</td>
<td>2</td>
<td>PE</td>
<td>250</td>
<td>HNO3</td>
<td>1ml</td>
<td>&lt;2</td>
<td>Metals</td>
<td>ESP</td>
</tr>
<tr>
<td>@Rad-1L</td>
<td>2</td>
<td>PE</td>
<td>1L</td>
<td>HNO3</td>
<td>5ml</td>
<td>&lt;2</td>
<td>Radiologicals</td>
<td>ESP</td>
</tr>
</tbody>
</table>

**REMARKS:**

(1) Sample bottles pre-preserved at laboratory prior to sample collection.

**MATERIAL CODES:**  
- AG = Amber Glass  
- CG = Clear Glass  
- PE = Polyethylene  
- PP = Polypropylene  
- S = Silicone  
- T = Teflon  
- O = Other (Specify)

**SAMPLING/PURGING EQUIPMENT CODES:**  
- APP = After Peristaltic Pump  
- B = Baller  
- BP = Bladder Pump  
- ESP = Electric Submersible Pump  
- RPP = Reverse Flow Peristaltic Pump  
- SM = Straw Method (tubing Gravity Drain)  
- VT = Vacuum Trap  
- O = Other (Specify)

**NOTES:**

1. The above do not constitute all of the Information required by Chapter 62-186, F.A.C.
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212. SECTION 3)

- pH ± 0.2 units
- Temperature ± 0.2°C
- Specific Conductance ± 5%
- Dissolved Oxygen: all readings ≤ 20% saturation (see Table FS 2220-2);
  - optionally, ≤ 0.2 mg/L or ± 10% (whichever is greater)
- Turbidity: all readings ≤ 20 NTU; optionally ≤ 5 NTU or ≥ 10% (whichever is greater)

---

**Revision Date:** February 1, 2004

Page 32 of 32
**DEP-SOP-001/01**

**FS 2200 Groundwater Sampling**

**Form FD 9000-24**

**GROUNDWATER SAMPLING LOG**

| SITE | NAME: Big Bond | LOCATION: Apollo Beach, FL.
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>WELL NO:</td>
<td>BBS-CCR-BW2</td>
<td>SAMPLE ID: L17G024-05 A</td>
</tr>
</tbody>
</table>

### PURGING DATA

- **WELL VOLUME PURGE:**
  - 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) x WELL CAPACITY

- **EQUIPMENT VOLUME PURGE:**
  - 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY x TUBING LENGTH) + FLOW CELL VOLUME

- **INITIAL PUMP OR TUBING DEPTH IN WELL (feet):** 18.49
- **FINAL PUMP OR TUBING DEPTH IN WELL (feet):** 18.49
- **PURGING INITIATED AT:** 9:48
- **PURGING ENDED AT:** 10:23
- **TOTAL VOLUME PURGED (gallons):** 6.66

<table>
<thead>
<tr>
<th>TIME</th>
<th>VOLUME PURGED (GALLONS)</th>
<th>CORRECT VOLUME PURGED (GALLONS)</th>
<th>PURGE RATE (GPM)</th>
<th>DEPTH TO WATER (FEET)</th>
<th>TEMP. (°C)</th>
<th>COND. (µS/cm)</th>
<th>DISSOLVED OXYGEN (mg/L)</th>
<th>TURBIDITY (NTU)</th>
<th>COLOR</th>
<th>ODOR</th>
</tr>
</thead>
<tbody>
<tr>
<td>10:19</td>
<td>5.90</td>
<td>5.90</td>
<td>0.19</td>
<td>7.87</td>
<td>6.65</td>
<td>27.19</td>
<td>1542</td>
<td>0.50</td>
<td>6.32</td>
<td>CLEAR</td>
</tr>
<tr>
<td>10:21</td>
<td>0.38</td>
<td>6.28</td>
<td>0.19</td>
<td>7.89</td>
<td>6.65</td>
<td>27.22</td>
<td>1540</td>
<td>0.40</td>
<td>4.65</td>
<td>CLEAR</td>
</tr>
<tr>
<td>10:23</td>
<td>0.38</td>
<td>6.66</td>
<td>0.19</td>
<td>7.88</td>
<td>6.65</td>
<td>27.20</td>
<td>1539</td>
<td>0.33</td>
<td>4.27</td>
<td>CLEAR</td>
</tr>
</tbody>
</table>

**WELL CAPACITY (Gallons Per Foot):** 0.750 ± 0.02

**TUBING INSIDE DIAMETER (in.):** 0.625 ± 0.0003

### SAMPLING DATA

**SAMPLED BY (PRINT):** RAB

**Sampler's Affiliation:** TECO

**SAMPLED INITIATED AT:** 10:23

**SAMPLED ENDED AT:** 10:29

**FIELD DECONTAMINATION:** Y N [ ]

**Flow Rate (ml per minute):** 720

**Tubing Material Code:** PE/S

<table>
<thead>
<tr>
<th>SAMPLE CONTAINER SPECIFICATION</th>
<th>SAMPLE PLATFORM</th>
<th>SAMPLE PRESERVATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAMPLE ID CODE</td>
<td># CONTAINERS</td>
<td>MATERIAL CODE</td>
</tr>
<tr>
<td>@ino-500</td>
<td>1</td>
<td>PE</td>
</tr>
<tr>
<td>@Met-250</td>
<td>2</td>
<td>PE</td>
</tr>
<tr>
<td>@Rad-1L</td>
<td>2</td>
<td>PE</td>
</tr>
</tbody>
</table>

**REMARKS:**

1. Sample bottles pre-preserved at laboratory prior to sample collection.

**MATERIAL CODES:**
- AG = Amber Glass
- CG = Clear Glass
- PE = Polyethylene
- PP = Polypneylene
- S = Silicone
- T = Teflon
- O = Other (Specify)

**NOTES:**

1. The above do not constitute all of the information required by Chapter 62-166, F.A.C.

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212. SECTION 3)
- pH ± 0.2 units
- Temperature ± 0.2 °C
- Specific Conductance ± 0.5 mg/L
- Dissolved Oxygen ± 20% saturation (see Table FS 2200-2)
- Turbidity ± 20 NTU
- Metals ± 5 NTU
- Radiologicals ± 5 NTU

**Revision Date:** February 1, 2004
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.
# Table of Contents

- Cover Page ................................................................. 1  
- Table of Contents ....................................................... 2  
- Sample Summary ......................................................... 3  
- Definitions ................................................................. 4  
- Case Narrative ............................................................ 5  
- Detection Summary ....................................................... 6  
- Client Sample Results .................................................. 7  
- QC Sample Results ....................................................... 8  
- QC Association ............................................................ 9  
- Chronicle ................................................................. 10  
- Certification Summary .................................................. 11  
- Method Summary ......................................................... 12  
- Chain of Custody .......................................................... 13  
- Receipt Checklists ....................................................... 15  

TestAmerica Tampa  
7/28/2017
## Sample Summary

Client: Tampa Electric Company  
Project/Site: L17G024

<table>
<thead>
<tr>
<th>Lab Sample ID</th>
<th>Client Sample ID</th>
<th>Matrix</th>
<th>Collected</th>
<th>Received</th>
</tr>
</thead>
<tbody>
<tr>
<td>660-81885-1</td>
<td>L17G024-01</td>
<td>Water</td>
<td>07/20/17 12:25</td>
<td>07/21/17 07:55</td>
</tr>
<tr>
<td>660-81885-2</td>
<td>L17G024-02</td>
<td>Water</td>
<td>07/20/17 12:56</td>
<td>07/21/17 07:55</td>
</tr>
<tr>
<td>660-81885-3</td>
<td>L17G024-03</td>
<td>Water</td>
<td>07/20/17 11:56</td>
<td>07/21/17 07:55</td>
</tr>
<tr>
<td>660-81885-4</td>
<td>L17G024-04</td>
<td>Water</td>
<td>07/20/17 11:01</td>
<td>07/21/17 07:55</td>
</tr>
<tr>
<td>660-81885-5</td>
<td>L17G024-05</td>
<td>Water</td>
<td>07/20/17 10:29</td>
<td>07/21/17 07:55</td>
</tr>
</tbody>
</table>
## Qualifiers

### Metals

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

## Glossary

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>D</td>
<td>Listed under the &quot;D&quot; column to designate that the result is reported on a dry weight basis</td>
</tr>
<tr>
<td>%R</td>
<td>Percent Recovery</td>
</tr>
<tr>
<td>CFL</td>
<td>Contains Free Liquid</td>
</tr>
<tr>
<td>CNF</td>
<td>Contains No Free Liquid</td>
</tr>
<tr>
<td>DER</td>
<td>Duplicate Error Ratio (normalized absolute difference)</td>
</tr>
<tr>
<td>Dil Fac</td>
<td>Dilution Factor</td>
</tr>
<tr>
<td>DL</td>
<td>Detection Limit (DoD/DOE)</td>
</tr>
<tr>
<td>DL, RA, RE, IN</td>
<td>Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample</td>
</tr>
<tr>
<td>DLC</td>
<td>Decision Level Concentration (Radiochemistry)</td>
</tr>
<tr>
<td>EDL</td>
<td>Estimated Detection Limit (Dioxin)</td>
</tr>
<tr>
<td>LOD</td>
<td>Limit of Detection (DoD/DOE)</td>
</tr>
<tr>
<td>LOQ</td>
<td>Limit of Quantitation (DoD/DOE)</td>
</tr>
<tr>
<td>MDA</td>
<td>Minimum Detectable Activity (Radiochemistry)</td>
</tr>
<tr>
<td>MDC</td>
<td>Minimum Detectable Concentration (Radiochemistry)</td>
</tr>
<tr>
<td>MDL</td>
<td>Method Detection Limit</td>
</tr>
<tr>
<td>ML</td>
<td>Minimum Level (Dioxin)</td>
</tr>
<tr>
<td>NC</td>
<td>Not Calculated</td>
</tr>
<tr>
<td>ND</td>
<td>Not Detected at the reporting limit (or MDL or EDL if shown)</td>
</tr>
<tr>
<td>PQL</td>
<td>Practical Quantitation Limit</td>
</tr>
<tr>
<td>QC</td>
<td>Quality Control</td>
</tr>
<tr>
<td>RER</td>
<td>Relative Error Ratio (Radiochemistry)</td>
</tr>
<tr>
<td>RL</td>
<td>Reporting Limit or Requested Limit (Radiochemistry)</td>
</tr>
<tr>
<td>RPD</td>
<td>Relative Percent Difference, a measure of the relative difference between two points</td>
</tr>
<tr>
<td>TEF</td>
<td>Toxicity Equivalent Factor (Dioxin)</td>
</tr>
<tr>
<td>TEQ</td>
<td>Toxicity Equivalent Quotient (Dioxin)</td>
</tr>
</tbody>
</table>
Receipt
The samples were received on 7/21/2017 7:55 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.4º C.

Metals
Method 200.7 Rev 4.4: Spike compounds were inadvertently omitted during the extraction process for the matrix spike (MS); therefore, matrix spike recoveries are unavailable for preparation batch 400-361570 and analytical batch 400-361867. Since the spike compound was omitted, the RPD calculations will not pass criteria. The associated laboratory control sample (LCS) met acceptance criteria. The post-digestion spike (PDS) recoveries also met acceptance criteria.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.
## Detection Summary

Client: Tampa Electric Company  
Project/Site: L17G024

<table>
<thead>
<tr>
<th>Client Sample ID: L17G024-01</th>
<th>Lab Sample ID: 660-81885-1</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Analyte</strong></td>
<td><strong>Result</strong></td>
</tr>
<tr>
<td>Lithium</td>
<td>0.014</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Client Sample ID: L17G024-02</th>
<th>Lab Sample ID: 660-81885-2</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Analyte</strong></td>
<td><strong>Result</strong></td>
</tr>
<tr>
<td>Lithium</td>
<td>0.016</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Client Sample ID: L17G024-03</th>
<th>Lab Sample ID: 660-81885-3</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Analyte</strong></td>
<td><strong>Result</strong></td>
</tr>
<tr>
<td>Lithium</td>
<td>0.010</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Client Sample ID: L17G024-04</th>
<th>Lab Sample ID: 660-81885-4</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Analyte</strong></td>
<td><strong>Result</strong></td>
</tr>
<tr>
<td>Lithium</td>
<td>0.017</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Client Sample ID: L17G024-05</th>
<th>Lab Sample ID: 660-81885-5</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Analyte</strong></td>
<td><strong>Result</strong></td>
</tr>
<tr>
<td>Lithium</td>
<td>0.0059</td>
</tr>
</tbody>
</table>

This Detection Summary does not include radiochemical test results.
<table>
<thead>
<tr>
<th>Client Sample ID: L17G024-01</th>
<th>Lab Sample ID: 660-81885-1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date Collected: 07/20/17 12:25</td>
<td>Date Received: 07/21/17 07:55</td>
</tr>
<tr>
<td><strong>Method: 200.7 Rev 4.4 - Metals (ICP)</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Analyte</strong></td>
<td>Result</td>
</tr>
<tr>
<td>------------------</td>
<td>--------</td>
</tr>
<tr>
<td>Lithium</td>
<td>0.014 I</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Client Sample ID: L17G024-02</th>
<th>Lab Sample ID: 660-81885-2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date Collected: 07/20/17 12:56</td>
<td>Date Received: 07/21/17 07:55</td>
</tr>
<tr>
<td><strong>Method: 200.7 Rev 4.4 - Metals (ICP)</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Analyte</strong></td>
<td>Result</td>
</tr>
<tr>
<td>------------------</td>
<td>--------</td>
</tr>
<tr>
<td>Lithium</td>
<td>0.016</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Client Sample ID: L17G024-03</th>
<th>Lab Sample ID: 660-81885-3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date Collected: 07/20/17 11:56</td>
<td>Date Received: 07/21/17 07:55</td>
</tr>
<tr>
<td><strong>Method: 200.7 Rev 4.4 - Metals (ICP)</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Analyte</strong></td>
<td>Result</td>
</tr>
<tr>
<td>------------------</td>
<td>--------</td>
</tr>
<tr>
<td>Lithium</td>
<td>0.010</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Client Sample ID: L17G024-04</th>
<th>Lab Sample ID: 660-81885-4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date Collected: 07/20/17 11:01</td>
<td>Date Received: 07/21/17 07:55</td>
</tr>
<tr>
<td><strong>Method: 200.7 Rev 4.4 - Metals (ICP)</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Analyte</strong></td>
<td>Result</td>
</tr>
<tr>
<td>------------------</td>
<td>--------</td>
</tr>
<tr>
<td>Lithium</td>
<td>0.017</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Client Sample ID: L17G024-05</th>
<th>Lab Sample ID: 660-81885-5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date Collected: 07/20/17 10:29</td>
<td>Date Received: 07/21/17 07:55</td>
</tr>
<tr>
<td><strong>Method: 200.7 Rev 4.4 - Metals (ICP)</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Analyte</strong></td>
<td>Result</td>
</tr>
<tr>
<td>------------------</td>
<td>--------</td>
</tr>
<tr>
<td>Lithium</td>
<td>0.0059</td>
</tr>
</tbody>
</table>
### QC Sample Results

**Method: 200.7 Rev 4.4 - Metals (ICP)**

#### Lab Sample ID: MB 400-361570/1-A
**Matrix:** Water  
**Analysis Batch:** 361867

<table>
<thead>
<tr>
<th>Analyte</th>
<th>MB</th>
<th>Result</th>
<th>Qualifier</th>
<th>PQL</th>
<th>MDL</th>
<th>Unit</th>
<th>D</th>
<th>Prepared</th>
<th>Analyzed</th>
<th>Dil Fac</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithium</td>
<td>MB</td>
<td>0.0010</td>
<td>U</td>
<td>0.050</td>
<td>0.0010</td>
<td>mg/L</td>
<td>07/25/17 09:29</td>
<td>07/26/17 13:04</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Lab Sample ID: LCS 400-361570/2-A
**Matrix:** Water  
**Analysis Batch:** 361867

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Spike</th>
<th>LCS</th>
<th>Unit</th>
<th>D</th>
<th>%Rec.</th>
<th>Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithium</td>
<td>1.00</td>
<td>1.04</td>
<td>mg/L</td>
<td>—</td>
<td>104</td>
<td>85.115</td>
</tr>
</tbody>
</table>

#### Lab Sample ID: 660-81885-1 MS
**Matrix:** Water  
**Analysis Batch:** 361867

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Sample</th>
<th>Spike</th>
<th>MS</th>
<th>Unit</th>
<th>%Rec.</th>
<th>Limits</th>
<th>RPD</th>
<th>Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithium</td>
<td>0.014</td>
<td>1.00</td>
<td>0.0147</td>
<td>mg/L</td>
<td>0.1</td>
<td>70.130</td>
<td>—</td>
<td>—</td>
</tr>
</tbody>
</table>

#### Lab Sample ID: 660-81885-1 MSD
**Matrix:** Water  
**Analysis Batch:** 361867

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Sample</th>
<th>Spike</th>
<th>MSD</th>
<th>Unit</th>
<th>%Rec.</th>
<th>Limits</th>
<th>RPD</th>
<th>Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithium</td>
<td>0.014</td>
<td>1.00</td>
<td>1.16</td>
<td>mg/L</td>
<td>115</td>
<td>70.130</td>
<td>195</td>
<td>25</td>
</tr>
</tbody>
</table>
## QC Association Summary

**Client:** Tampa Electric Company  
**Project/Site:** L17G024  
**TestAmerica Job ID:** 660-81885-1  

### Metals

#### Prep Batch: 361570

<table>
<thead>
<tr>
<th>Lab Sample ID</th>
<th>Client Sample ID</th>
<th>Prep Type</th>
<th>Matrix</th>
<th>Method</th>
<th>Prep Batch</th>
</tr>
</thead>
<tbody>
<tr>
<td>660-81885-1</td>
<td>L17G024-01</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7</td>
<td>361570</td>
</tr>
<tr>
<td>660-81885-2</td>
<td>L17G024-02</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7</td>
<td>361570</td>
</tr>
<tr>
<td>660-81885-3</td>
<td>L17G024-03</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7</td>
<td>361570</td>
</tr>
<tr>
<td>660-81885-4</td>
<td>L17G024-04</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7</td>
<td>361570</td>
</tr>
<tr>
<td>660-81885-5</td>
<td>L17G024-05</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7</td>
<td>361570</td>
</tr>
<tr>
<td>MB 400-361570/1-A</td>
<td>Method Blank</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7</td>
<td>361570</td>
</tr>
<tr>
<td>LCS 400-361570/2-A</td>
<td>Lab Control Sample</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7</td>
<td>361570</td>
</tr>
<tr>
<td>660-81885-1 MS</td>
<td>L17G024-01</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7</td>
<td>361570</td>
</tr>
<tr>
<td>660-81885-1 MSD</td>
<td>L17G024-01</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7</td>
<td>361570</td>
</tr>
</tbody>
</table>

#### Analysis Batch: 361867

<table>
<thead>
<tr>
<th>Lab Sample ID</th>
<th>Client Sample ID</th>
<th>Prep Type</th>
<th>Matrix</th>
<th>Method</th>
<th>Prep Batch</th>
</tr>
</thead>
<tbody>
<tr>
<td>660-81885-1</td>
<td>L17G024-01</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7 Rev 4.4</td>
<td>361570</td>
</tr>
<tr>
<td>660-81885-2</td>
<td>L17G024-02</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7 Rev 4.4</td>
<td>361570</td>
</tr>
<tr>
<td>660-81885-3</td>
<td>L17G024-03</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7 Rev 4.4</td>
<td>361570</td>
</tr>
<tr>
<td>660-81885-4</td>
<td>L17G024-04</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7 Rev 4.4</td>
<td>361570</td>
</tr>
<tr>
<td>660-81885-5</td>
<td>L17G024-05</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7 Rev 4.4</td>
<td>361570</td>
</tr>
<tr>
<td>MB 400-361570/1-A</td>
<td>Method Blank</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7 Rev 4.4</td>
<td>361570</td>
</tr>
<tr>
<td>LCS 400-361570/2-A</td>
<td>Lab Control Sample</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7 Rev 4.4</td>
<td>361570</td>
</tr>
<tr>
<td>660-81885-1 MS</td>
<td>L17G024-01</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7 Rev 4.4</td>
<td>361570</td>
</tr>
<tr>
<td>660-81885-1 MSD</td>
<td>L17G024-01</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7 Rev 4.4</td>
<td>361570</td>
</tr>
<tr>
<td>Prep Type</td>
<td>Batch Type</td>
<td>Batch Method</td>
<td>Run</td>
<td>Dil Factor</td>
<td>Initial Amount</td>
</tr>
<tr>
<td>-----------</td>
<td>------------</td>
<td>--------------</td>
<td>-----</td>
<td>------------</td>
<td>----------------</td>
</tr>
<tr>
<td>Total/NA</td>
<td>Prep</td>
<td>200.7</td>
<td></td>
<td></td>
<td>50 mL</td>
</tr>
<tr>
<td>Total/NA</td>
<td>Analysis</td>
<td>200.7 Rev 4.4</td>
<td>1</td>
<td></td>
<td>50 mL</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total/NA</td>
<td>Prep</td>
<td>200.7</td>
<td></td>
<td></td>
<td>50 mL</td>
</tr>
<tr>
<td>Total/NA</td>
<td>Analysis</td>
<td>200.7 Rev 4.4</td>
<td>1</td>
<td></td>
<td>50 mL</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total/NA</td>
<td>Prep</td>
<td>200.7</td>
<td></td>
<td></td>
<td>50 mL</td>
</tr>
<tr>
<td>Total/NA</td>
<td>Analysis</td>
<td>200.7 Rev 4.4</td>
<td>1</td>
<td></td>
<td>50 mL</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total/NA</td>
<td>Prep</td>
<td>200.7</td>
<td></td>
<td></td>
<td>50 mL</td>
</tr>
<tr>
<td>Total/NA</td>
<td>Analysis</td>
<td>200.7 Rev 4.4</td>
<td>1</td>
<td></td>
<td>50 mL</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total/NA</td>
<td>Prep</td>
<td>200.7</td>
<td></td>
<td></td>
<td>50 mL</td>
</tr>
<tr>
<td>Total/NA</td>
<td>Analysis</td>
<td>200.7 Rev 4.4</td>
<td>1</td>
<td></td>
<td>50 mL</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Laboratory References:
TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001
# Accreditation/Certification Summary

**Client:** Tampa Electric Company  
**Project/Site:** L17G024  
**TestAmerica Job ID:** 660-81885-1

## Laboratory: TestAmerica Tampa

The accreditations/certifications listed below are applicable to this report.

<table>
<thead>
<tr>
<th>Authority</th>
<th>Program</th>
<th>EPA Region</th>
<th>Identification Number</th>
<th>Expiration Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Florida</td>
<td>NELAP</td>
<td>4</td>
<td>E84282</td>
<td>06-30-18</td>
</tr>
</tbody>
</table>

## Laboratory: TestAmerica Pensacola

The accreditations/certifications listed below are applicable to this report.

<table>
<thead>
<tr>
<th>Authority</th>
<th>Program</th>
<th>EPA Region</th>
<th>Identification Number</th>
<th>Expiration Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Florida</td>
<td>NELAP</td>
<td>4</td>
<td>E81010</td>
<td>06-30-18</td>
</tr>
</tbody>
</table>
## Method Summary

Client: Tampa Electric Company  
Project/Site: L17G024

<table>
<thead>
<tr>
<th>Method</th>
<th>Method Description</th>
<th>Protocol</th>
<th>Laboratory</th>
</tr>
</thead>
<tbody>
<tr>
<td>200.7 Rev 4.4</td>
<td>Metals (ICP)</td>
<td>EPA</td>
<td>TAL PEN</td>
</tr>
</tbody>
</table>

**Protocol References:**  
EPA = US Environmental Protection Agency

**Laboratory References:**  
TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001
# SUBCONTRACT ORDER
Tampa Electric Company, Laboratory Services
L17G024

**SENDING LABORATORY:**
Tampa Electric Company, Laboratory Services  
5012 Causeway Blvd  
Tampa, FL 33619  
Phone: (813) 630-7490  
Fax: (813) 630-7360  
Project Manager: Peggy Penner

**RECEIVING LABORATORY:**
TestAmerica Laboratories, Inc. - Tampa  
6712 Benjamin Rd., Suite 100  
Tampa, FL 33634  
Phone: (813) 885-7427  
Fax: -

**Due Date:** 08/03/17 16:00

<table>
<thead>
<tr>
<th>Analysis</th>
<th>Expires</th>
<th>Laboratory ID</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample ID: L17G024-01 BBS-CCR-1</td>
<td>01/16/18 12:25</td>
<td>Water</td>
<td></td>
</tr>
<tr>
<td>Sample ID: L17G024-02 BBS-CCR-2</td>
<td>01/16/18 12:56</td>
<td>Water</td>
<td></td>
</tr>
<tr>
<td>Sample ID: L17G024-03 BBS-CCR-3</td>
<td>01/16/18 11:56</td>
<td>Water</td>
<td></td>
</tr>
<tr>
<td>Sample ID: L17G024-04 BBS-CCR-BW1</td>
<td>01/16/18 11:01</td>
<td>Water</td>
<td></td>
</tr>
<tr>
<td>Sample ID: L17G024-05 BBS-CCR-BW2</td>
<td>01/16/18 10:29</td>
<td>Water</td>
<td></td>
</tr>
</tbody>
</table>

---

3.2/3.4 Cu W 09

Released By: [Signature]  
Date & Time: 7/20/17 1400  
Received By: [Signature]  
Date & Time: 7/21/17 0755

Page 13 of 16

Page 3 of 3  
7/28/2017
## Chain of Custody Record

**TestAmerica Tampa**  
6712 Benjamin Road Sate 100  
Tampa, FL 33634  
Phone (813) 885-7427 Fax (813) 885-7049

### Client Information (Sub Contract Lab)

<table>
<thead>
<tr>
<th>Sample</th>
<th>Lab Pt</th>
<th>Carrier Tracking No(s)</th>
<th>COC No</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Conner, Keaton</td>
<td>660-86130.1</td>
<td></td>
</tr>
</tbody>
</table>

### Client Contact

<table>
<thead>
<tr>
<th>Phone</th>
<th>E Mail</th>
<th>State of Origin</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><a href="mailto:keaton.conner@testamericainc.com">keaton.conner@testamericainc.com</a></td>
<td>Florida</td>
<td>1</td>
</tr>
</tbody>
</table>

### Company

TestAmerica Laboratories, Inc.

<table>
<thead>
<tr>
<th>Address</th>
<th>Due Date Requested:</th>
</tr>
</thead>
<tbody>
<tr>
<td>3355 McLeomore Drive, Pensacola, FL 32514</td>
<td>7/28/2017</td>
</tr>
</tbody>
</table>

### TAT Requested (days):

<table>
<thead>
<tr>
<th>Phone</th>
<th>PO #:</th>
</tr>
</thead>
<tbody>
<tr>
<td>850-474-1001 (Tel) 850-475-2671 (Fax)</td>
<td>PO #</td>
</tr>
</tbody>
</table>

### Project Name: L17G024  
Project #: 66004621

### Special Instructions/Note:

- Sample Disposal: (A fee may be assessed if samples are retained longer than 1 month)
- Wear protective clothing and equipment.
- Specific instructions or QC requirements will be provided.
- Sample: Field Filtered Sample (Vas or No)
- Test Number of containers: 2
- Special Instructions/Note: Other:

### Sample Identification - Client ID (Lab ID)

<table>
<thead>
<tr>
<th>Sample Date</th>
<th>Sample Time</th>
<th>Sample Type</th>
<th>Matrix</th>
</tr>
</thead>
<tbody>
<tr>
<td>7/20/17</td>
<td>12:25</td>
<td>Eastern</td>
<td>Water</td>
</tr>
<tr>
<td>7/20/17</td>
<td>12:56</td>
<td>Eastern</td>
<td>Water</td>
</tr>
<tr>
<td>7/20/17</td>
<td>11:56</td>
<td>Eastern</td>
<td>Water</td>
</tr>
<tr>
<td>7/20/17</td>
<td>11:01</td>
<td>Eastern</td>
<td>Water</td>
</tr>
<tr>
<td>7/20/17</td>
<td>10:29</td>
<td>Eastern</td>
<td>Water</td>
</tr>
</tbody>
</table>

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/test matrix being analyzed, the sample must be shipped back to the TestAmerica Laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to TestAmerica Laboratories, Inc.

### Possible Hazard Identification

- Unconfirmed

### Deliverable Requested

<table>
<thead>
<tr>
<th>Deliverable Requested: I, II, III, IV, Other (specify)</th>
<th>Primary Deliverable Rank:</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>2</td>
</tr>
</tbody>
</table>

### Empty Kit Replenished by

<table>
<thead>
<tr>
<th>Received Date</th>
<th>Company</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Custody Seals Intact

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Login Sample Receipt Checklist

**Client:** Tampa Electric Company  
**Job Number:** 660-81885-1  
**Login Number:** 81885  
**List Number:** 1  
**Creator:** Moccia, Vanessa M  
**List Source:** TestAmerica Tampa

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

**Client:** Tampa Electric Company  
**Job Number:** 660-81885-1  
**Login Number:** 81885  
**List Number:** 2  
**Creator:** Johnson, Jeremy N  
**List Source:** TestAmerica Pensacola  
**List Creation:** 07/22/17 12:00 PM

<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Radioactivity wasn't checked or is &lt;= background as measured by a survey meter.</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>The cooler's custody seal, if present, is intact.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Sample custody seals, if present, are intact.</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>The cooler or samples do not appear to have been compromised or tampered with.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Samples were received on ice.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Cooler Temperature is acceptable.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Cooler Temperature is recorded.</td>
<td>True</td>
<td>2.9°C IR2</td>
</tr>
<tr>
<td>COC is present.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>COC is filled out in ink and legible.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>COC is filled out with all pertinent information.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Is the Field Sampler's name present on COC?</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>There are no discrepancies between the containers received and the COC.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Samples are received within Holding Time (excluding tests with immediate HTs)</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Sample containers have legible labels.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Containers are not broken or leaking.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Sample collection date/times are provided.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Appropriate sample containers are used.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Sample bottles are completely filled.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Sample Preservation Verified.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Containers requiring zero headspace have no headspace or bubble is &lt;6mm (1/4&quot;).</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Multiphasic samples are not present.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Samples do not require splitting or compositing.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Residual Chlorine Checked.</td>
<td>N/A</td>
<td></td>
</tr>
</tbody>
</table>
TEXCO  
5012 Causeway Blvd.  
Tampa, FL 33619

Field Custody: Client  
Client/Field ID: L17G024-01

Sample Collection: 7-20-17/1225  
Lab ID No: 17.8608
Lab Custody Date: 7-21-17/0925  
Sample description: w

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Units</th>
<th>Results</th>
<th>Date</th>
<th>Method</th>
<th>Detection Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Combined Radium</td>
<td>pCi/l</td>
<td>34.7 ± 1.8</td>
<td>Calc</td>
<td>Calc</td>
<td>0.7</td>
</tr>
<tr>
<td>(Radium-226 + Radium 228)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Radium-226</td>
<td>pCi/l</td>
<td>33.1 ± 1.8</td>
<td>7-31-17/1406</td>
<td>EPA 903.0</td>
<td>0.4</td>
</tr>
<tr>
<td>Radium-228</td>
<td>pCi/l</td>
<td>1.6 ± 0.6</td>
<td>8-1-17/1103</td>
<td>EPA Ra-05</td>
<td>0.7</td>
</tr>
</tbody>
</table>

James W. Hayes  
Laboratory Manager

Test results meet all requirements of the NELAC standards. Statement of estimated uncertainty available upon request. Test results refer only to sample(s) listed.  
Contact person: Jim Hayes (813) 229-2879.
TECO
5012 Causeway Blvd.
Tampa, FL 33619

Field Custody: Client
Client/Field ID: L17G024-02
Sample Collection: 7-20-17/1256
Lab ID No: 17.8609
Lab Custody Date: 7-21-17/0925
Sample description: w

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Units</th>
<th>Results</th>
<th>Analysis Date</th>
<th>Method</th>
<th>Detection Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Combined Radium (Radium-226 + Radium 228)</td>
<td>pCi/l</td>
<td>14.4 ± 1.1</td>
<td>Calc</td>
<td>Calc</td>
<td>0.8</td>
</tr>
<tr>
<td>Radium-226</td>
<td>pCi/l</td>
<td>13.6 ± 1.1</td>
<td>7-31-17/1406</td>
<td>EPA 903.0</td>
<td>0.4</td>
</tr>
<tr>
<td>Radium-228</td>
<td>pCi/l</td>
<td>0.8 ± 0.5</td>
<td>8-1-17/1103</td>
<td>EPA Ra-05</td>
<td>0.8</td>
</tr>
</tbody>
</table>

James W. Hayes
Laboratory Manager

Test results meet all requirements of the NELAC standards. Statement of estimated uncertainty available upon request. Test results refer only to sample(s) listed.
Contact person: Jim Hayes (813) 229-2879.
### TECO
5012 Causeway Blvd.
Tampa, FL 33619

Field Custody:  
Client
Client/Field ID:  
L17G024-03
Sample Collection:  
7-20-17/1156
Lab ID No:  
17.8610
Lab Custody Date:  
7-21-17/0925
Sample description:  
w

## CERTIFICATE OF ANALYSIS

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Units</th>
<th>Results</th>
<th>Analysis Date</th>
<th>Method</th>
<th>Detection Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Combined Radium (Radium-226 + Radium 228)</td>
<td>pCi/l</td>
<td>20.3 ± 1.3</td>
<td>Calc</td>
<td>Calc</td>
<td>0.8</td>
</tr>
<tr>
<td>Radium-226</td>
<td>pCi/l</td>
<td>18.6 ± 1.3</td>
<td>7-31-17/1406</td>
<td>EPA 903.0</td>
<td>0.4</td>
</tr>
<tr>
<td>Radium-228</td>
<td>pCi/l</td>
<td>1.7 ± 0.6</td>
<td>8-2-17/1145</td>
<td>EPA Ra-05</td>
<td>0.8</td>
</tr>
</tbody>
</table>

James W. Hayes  
Laboratory Manager

Test results meet all requirements of the NELAC standards. Statement of estimated uncertainty available upon request. Test results refer only to sample(s) listed. Contact person: Jim Hayes (813) 229-2879.
DEOH Certification #E84025

Report Date: August 3, 2017

TECO
5012 Causeway Blvd.
Tampa, FL 33619

Field Custody:         Client
Client/Field ID:       L17G024-04
Sample Collection:    7-20-17/1101
Lab ID No:            17.8611
Lab Custody Date:      7-21-17/0925
Sample description:  w

CERTIFICATE OF ANALYSIS

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Units</th>
<th>Results</th>
<th>Analysis Date</th>
<th>Method</th>
<th>Detection Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Combined Radium</td>
<td>pCi/l</td>
<td>37.2 ± 1.8</td>
<td>Calc</td>
<td>Calc</td>
<td>0.7</td>
</tr>
<tr>
<td>(Radium-226 + Radium 228)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Radium-226</td>
<td>pCi/l</td>
<td>33.8 ± 1.8</td>
<td>8-1-17/1154</td>
<td>EPA 903.0</td>
<td>0.4</td>
</tr>
<tr>
<td>Radium-228</td>
<td>pCi/l</td>
<td>3.4 ± 0.7</td>
<td>8-2-17/1145</td>
<td>EPA Ra-05</td>
<td>0.7</td>
</tr>
</tbody>
</table>

James W. Hayes
Laboratory Manager

Test results meet all requirements of the NELAC standards. Statement of estimated uncertainty available upon request. Test results refer only to sample(s) listed. Contact person: Jim Hayes (813) 229-2879.
**DOH Certification #E84025**

**Report Date:** August 3, 2017

TECO  
5012 Causeway Blvd.  
Tampa, FL 33619

**Field Custody:** Client  
**Client/Field ID:** L17G024-05  
**Sample Collection:** 7-20-17/1029  
**Lab ID No:** 17.8612  
**Lab Custody Date:** 7-21-17/0925  
**Sample description:** w

### CERTIFICATE OF ANALYSIS

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Units</th>
<th>Results</th>
<th>Analysis Date</th>
<th>Method</th>
<th>Detection Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Combined Radium (Radium-226 + Radium 228)</td>
<td>pCi/l</td>
<td>4.4 ± 0.6</td>
<td>Calc</td>
<td>Calc</td>
<td>0.8</td>
</tr>
<tr>
<td>Radium-226</td>
<td>pCi/l</td>
<td>3.9 ± 0.6</td>
<td>8-1-17/1154</td>
<td>EPA</td>
<td>0.5</td>
</tr>
<tr>
<td>Radium-228</td>
<td>pCi/l</td>
<td>0.5 ± 0.5</td>
<td>8-2-17/1145</td>
<td>EPA Ra-05</td>
<td>0.8</td>
</tr>
</tbody>
</table>

Test results meet all requirements of the NELAC standards. Statement of estimated uncertainty available upon request. Test results refer only to sample(s) listed. Contact person: Jim Hayes (813) 229-2879.
### SUBCONTRACT ORDER

**Tampa Electric Company, Laboratory Services**

**L17G024**

<table>
<thead>
<tr>
<th>SENDING LABORATORY:</th>
<th>RECEIVING LABORATORY:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tampa Electric Company, Laboratory Services</td>
<td>KNL Laboratory Services</td>
</tr>
<tr>
<td>5012 Causeway Blvd</td>
<td>3202 N. Florida Ave.</td>
</tr>
<tr>
<td>Tampa, FL 33619</td>
<td>Tampa, FL 33603</td>
</tr>
<tr>
<td>Phone: (813) 630-7490</td>
<td>Phone: (813) 229-2879</td>
</tr>
<tr>
<td>Fax: (813) 630-7360</td>
<td>Fax: -</td>
</tr>
<tr>
<td>Project Manager: Peggy Penner</td>
<td></td>
</tr>
</tbody>
</table>

**Due Date:** 08/03/17 16:00

<table>
<thead>
<tr>
<th>Analysis</th>
<th>Expires</th>
<th>Laboratory ID</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample ID: L17G024-01 BBS-CCR-1</td>
<td>Water</td>
<td><img src="image1.png" alt="" /></td>
<td>Level 2 Data required</td>
</tr>
<tr>
<td>Sample ID: L17G024-02 BBS-CCR-2</td>
<td>RAD Poly HNO3 - 1000mL (C)</td>
<td>Water</td>
<td><img src="image2.png" alt="" /></td>
</tr>
<tr>
<td>Sample ID: L17G024-03 BBS-CCR-3</td>
<td>RAD Poly HNO3 - 1000mL (D)</td>
<td>Water</td>
<td><img src="image3.png" alt="" /></td>
</tr>
<tr>
<td>Sample ID: L17G024-04 BBS-CCR-BW1</td>
<td>RAD Poly HNO3 - 1000mL (C)</td>
<td>Water</td>
<td><img src="image4.png" alt="" /></td>
</tr>
<tr>
<td>Sample ID: L17G024-05 BBS-CCR-BW1</td>
<td>RAD Poly HNO3 - 1000mL (D)</td>
<td>Water</td>
<td><img src="image5.png" alt="" /></td>
</tr>
</tbody>
</table>

**Sample Details:**

- **Sampled:**
  - 07/20/17 12:25
  - 07/20/17 12:56
  - 07/20/17 11:56
  - 07/20/17 11:01

- **Containers Supplied:**
  - RAD Poly HNO3 - 1000mL (C)
  - RAD Poly HNO3 - 1000mL (D)

**Released By:** 7-21-17 0925

<table>
<thead>
<tr>
<th>Date &amp; Time</th>
<th>Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Released By</td>
<td>Received By</td>
</tr>
</tbody>
</table>

Page 1 of 3
## SUBCONTRACT ORDER
Tampa Electric Company, Laboratory Services
L17G024

<table>
<thead>
<tr>
<th>Analysis</th>
<th>Expires</th>
<th>Laboratory ID</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample ID: L17G024-05</td>
<td>BBS-CCR-BW2</td>
<td>Water</td>
<td>178612</td>
</tr>
<tr>
<td>Sampled: 07/20/17 10:29</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Radium 228 Ra-05</td>
<td>01/16/18 10:29</td>
<td></td>
<td>Level 2 Data required</td>
</tr>
<tr>
<td>Radium 226 EPA 903.0</td>
<td>01/16/18 10:29</td>
<td></td>
<td>Level 2 Data required</td>
</tr>
<tr>
<td>Radium 226+228, Total</td>
<td>01/16/18 10:29</td>
<td></td>
<td>Level 2 Data required</td>
</tr>
<tr>
<td>Containers Supplied:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RAD Poly HNO3 - 1000mL (C)</td>
<td>RAD Poly HNO3 - 1000mL (D)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Released By: ___________________________ Date & Time: 7-21-17 09:25
Received By: ___________________________ Date & Time: 07-21-17 09:25

Page 2 of 3
FL DOH Certification # E84025

QC Summary: **Total Radium Analysis**

Client Project #: **L17G024**

Analysis Completion Date: **8/1/17**

<table>
<thead>
<tr>
<th>Precision Data:</th>
<th>Sample #: <strong>17.8611</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample Analysis (pCi/l)</td>
<td></td>
</tr>
<tr>
<td>38.6</td>
<td></td>
</tr>
<tr>
<td>Duplicate Analysis (pCi/l)</td>
<td></td>
</tr>
<tr>
<td>38.1</td>
<td></td>
</tr>
<tr>
<td>Range (pCi/l)</td>
<td></td>
</tr>
<tr>
<td>0.5</td>
<td></td>
</tr>
<tr>
<td>RPD (%)</td>
<td></td>
</tr>
<tr>
<td>1.30</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Spike Data:</th>
<th>Sample #: <strong>17.8611</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample Analysis (pCi/l)</td>
<td></td>
</tr>
<tr>
<td>33.8</td>
<td></td>
</tr>
<tr>
<td>Spike Added (pCi/l)</td>
<td></td>
</tr>
<tr>
<td>4.5</td>
<td></td>
</tr>
<tr>
<td>Analytical Result (pCi/l)</td>
<td></td>
</tr>
<tr>
<td>38.1</td>
<td></td>
</tr>
<tr>
<td>Spike Rec (%)</td>
<td></td>
</tr>
<tr>
<td>96.7%</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>LCS Data:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Analytical Result (pCi/l)</td>
</tr>
<tr>
<td>9.5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Lab Blank:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Analytical Result (pCi/l)</td>
</tr>
<tr>
<td>Lab Blank</td>
</tr>
<tr>
<td>0.2 +/- 0.1</td>
</tr>
</tbody>
</table>
FL DOH Certification # E84025

QC Summary: **Total Radium Analysis**

Client Project #: L176024

Analysis Completion Date: 7/31/17

### Precision Data:

<table>
<thead>
<tr>
<th>Sample Analysis (pCi/l)</th>
<th>Duplicate Analysis (pCi/l)</th>
<th>Range (pCi/l)</th>
<th>RPD (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>19.1</td>
<td>18.6</td>
<td>0.5</td>
<td>2.65%</td>
</tr>
</tbody>
</table>

### Spike Data:

<table>
<thead>
<tr>
<th>Sample Analysis (pCi/l)</th>
<th>Spike Added (pCi/l)</th>
<th>Analytical Result (pCi/l)</th>
<th>Spike Rec (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>13.4</td>
<td>4.5</td>
<td>18.6</td>
<td>111%</td>
</tr>
</tbody>
</table>

### LCS Data:

<table>
<thead>
<tr>
<th>Analytical Result (pCi/l)</th>
<th>True Value (pCi/l)</th>
<th>% Recovery</th>
</tr>
</thead>
<tbody>
<tr>
<td>10.6</td>
<td>10.1</td>
<td>105%</td>
</tr>
</tbody>
</table>

### Lab Blank:

<table>
<thead>
<tr>
<th>Lab Blank</th>
<th>Analytical Result (pCi/l)</th>
<th>Analysis Date</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.4 +/- 0.2</td>
<td>7/31/17</td>
</tr>
</tbody>
</table>
**FL DOH Certification # E84025**

**QC Summary:** Radium 228 Analysis

**Client Project #:** L17 6024

**Analysis Completion Date:** 8/21/17

**Precision Data:**

<table>
<thead>
<tr>
<th>Sample Analysis (pCi/l)</th>
<th>Duplicate Analysis (pCi/l)</th>
<th>Range (pCi/l)</th>
<th>RPD (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.8</td>
<td>4.7</td>
<td>0.1</td>
<td>2.1%</td>
</tr>
</tbody>
</table>

**Spike Data:**

<table>
<thead>
<tr>
<th>Sample Analysis (pCi/l)</th>
<th>Spike Added (pCi/l)</th>
<th>Analytical Result (pCi/l)</th>
<th>Spike Rec (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.2</td>
<td>3.85</td>
<td>4.7</td>
<td>117%</td>
</tr>
</tbody>
</table>

**LCS Data:**

<table>
<thead>
<tr>
<th>Analytical Result (pCi/l)</th>
<th>True Value (pCi/l)</th>
<th>% Recovery</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.1</td>
<td>4.28</td>
<td>96%</td>
</tr>
</tbody>
</table>

**Lab Blank:**

<table>
<thead>
<tr>
<th>Lab Blank</th>
<th>Analytical Result (pCi/l)</th>
<th>Analysis Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.1 +/- 0.3</td>
<td>8/21/17</td>
<td></td>
</tr>
</tbody>
</table>
FL DOH Certification # E84025

QC Summary: **Radium 228 Analysis**

Client Project #: **L176024**

Analysis Completion Date: **8/1/17**

<table>
<thead>
<tr>
<th>Precision Data:</th>
<th>Sample #: <strong>17,8608</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample Analysis (pCi/l)</td>
<td>5.9</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Spike Data:</th>
<th>Sample #: <strong>17,8608</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample Analysis (pCi/l)</td>
<td>1.4</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>LCS Data:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Analytical Result (pCi/l)</td>
</tr>
<tr>
<td>4.1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Lab Blank:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Analytical Result (pCi/l)</td>
</tr>
<tr>
<td>Lab Blank</td>
</tr>
</tbody>
</table>

KNL – Radium 228 Analysis- FL DOH Certification QC Data sheet – Form #139
Revised 6/30/16
AUGUST 2017
5 sample(s) were received on 08/16/17 13:43.

There were no issues noted with the sample(s) associated with this workorder unless noted below.

**SM 2540C**

A constant weight could not be achieved after three consecutive weighing and drying cycles for samples BBS-CCR-1 and BBS-CCR-BW2. The sample(s) are flagged with a J qualifier.

**EPA 200.7**

The recovery of the matrix spike and spike duplicate for Boron and Calcium could not be accurately determined due to the amount of target analyte in the sample matrix. The parent sample is flagged with a J qualifier.

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
## Sample Information

<table>
<thead>
<tr>
<th>Client:</th>
<th>Big Bend Power Station</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lab Sample ID:</td>
<td>L17H005-02</td>
</tr>
<tr>
<td>Sample Description:</td>
<td>BBS-CCR-2</td>
</tr>
<tr>
<td>Sample Collection Method:</td>
<td>Grab</td>
</tr>
<tr>
<td>Sampled By:</td>
<td>Robert Barthelette</td>
</tr>
<tr>
<td>Date and Time Collected:</td>
<td>8/16/17 10:55</td>
</tr>
<tr>
<td>Date of Sample Receipt:</td>
<td>8/16/17 13:43</td>
</tr>
</tbody>
</table>

## Laboratory Results

### Sample Qualifier:

### General Chemistry Parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier Code</th>
<th>Dil</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chloride</td>
<td>113</td>
<td>mg/L</td>
<td>0.200</td>
<td>5.00</td>
<td>10</td>
<td>RFL</td>
<td>EPA 300.0</td>
<td>8/24/17 17:01</td>
<td></td>
</tr>
<tr>
<td>Specific Conductance</td>
<td>1560</td>
<td>umhos/cm</td>
<td>100</td>
<td>100</td>
<td>1</td>
<td>RAB</td>
<td>FDEP SOP FT 1200</td>
<td>8/16/17 10:55</td>
<td></td>
</tr>
<tr>
<td>Dissolved Oxygen</td>
<td>0.250</td>
<td>mg/L</td>
<td>0.100</td>
<td>0.100</td>
<td>1</td>
<td>RAB</td>
<td>FDEP SOP FT 1500</td>
<td>8/16/17 10:55</td>
<td></td>
</tr>
<tr>
<td>Fluoride</td>
<td>0.155</td>
<td>mg/L</td>
<td>0.0100</td>
<td>0.0500</td>
<td>1</td>
<td>RFL</td>
<td>EPA 300.0</td>
<td>8/24/17 16:51</td>
<td></td>
</tr>
<tr>
<td>pH</td>
<td>6.92</td>
<td>pH Units</td>
<td>1.00</td>
<td>1.00</td>
<td>1</td>
<td>RAB</td>
<td>FDEP SOP FT 1100</td>
<td>8/16/17 10:55</td>
<td></td>
</tr>
<tr>
<td>REDOX Potential</td>
<td>-233</td>
<td>mV</td>
<td>-999</td>
<td>-999</td>
<td>2</td>
<td>SM 2580B</td>
<td>RAB</td>
<td>8/16/17 10:55</td>
<td></td>
</tr>
<tr>
<td>Total Dissolved Solids</td>
<td>1080</td>
<td>mg/L</td>
<td>24.0</td>
<td>40.0</td>
<td>10</td>
<td>RAB</td>
<td>FDEP SOP FT 1600</td>
<td>8/16/17 10:55</td>
<td></td>
</tr>
<tr>
<td>Sulfate</td>
<td>459</td>
<td>mg/L</td>
<td>5.00</td>
<td>20.0</td>
<td>1</td>
<td>RAB</td>
<td>EPA 300.0</td>
<td>8/24/17 17:01</td>
<td></td>
</tr>
<tr>
<td>Turbidity</td>
<td>3.22</td>
<td>NTU</td>
<td>0.100</td>
<td>0.100</td>
<td>1</td>
<td>RAB</td>
<td>FDEP SOP FT 1600</td>
<td>8/16/17 10:55</td>
<td></td>
</tr>
</tbody>
</table>

### Total Mercury by SW846 Method 7470/7471

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier Code</th>
<th>Dil</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mercury</td>
<td>0.0500</td>
<td>ug/L</td>
<td>0.0500</td>
<td>0.200</td>
<td>U</td>
<td>1</td>
<td>EPA 7470A</td>
<td>MCR</td>
<td>8/18/17 10:25</td>
</tr>
</tbody>
</table>

### Total Recoverable Metals by 200 Series

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier Code</th>
<th>Dil</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antimony</td>
<td>1.20</td>
<td>ug/L</td>
<td>1.20</td>
<td>4.00</td>
<td>U</td>
<td>2</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>8/18/17 12:38</td>
</tr>
<tr>
<td>Arsenic</td>
<td>1.02</td>
<td>ug/L</td>
<td>0.640</td>
<td>4.00</td>
<td>I</td>
<td>2</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>8/18/17 12:38</td>
</tr>
<tr>
<td>Cadmium</td>
<td>0.200</td>
<td>ug/L</td>
<td>0.200</td>
<td>1.00</td>
<td>U</td>
<td>2</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>8/18/17 12:38</td>
</tr>
<tr>
<td>Cobalt</td>
<td>0.150</td>
<td>ug/L</td>
<td>0.0800</td>
<td>4.00</td>
<td>I</td>
<td>2</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>8/18/17 12:38</td>
</tr>
<tr>
<td>Lead</td>
<td>0.000244</td>
<td>mg/L</td>
<td>0.000160</td>
<td>0.00400</td>
<td>I</td>
<td>2</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>8/18/17 12:38</td>
</tr>
<tr>
<td>Selenium</td>
<td>0.662</td>
<td>ug/L</td>
<td>0.400</td>
<td>4.00</td>
<td>I</td>
<td>2</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>8/18/17 12:38</td>
</tr>
<tr>
<td>Thallium</td>
<td>0.200</td>
<td>ug/L</td>
<td>0.200</td>
<td>1.00</td>
<td>U</td>
<td>2</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>8/18/17 12:38</td>
</tr>
</tbody>
</table>

### Total Recoverable Metals by SW846 Method 6010B

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier Code</th>
<th>Dil</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barium</td>
<td>0.0568</td>
<td>mg/L</td>
<td>0.000500</td>
<td>0.0200</td>
<td>1</td>
<td>EPA 6010B</td>
<td>RLC</td>
<td>8/18/17 9:48</td>
<td></td>
</tr>
<tr>
<td>Beryllium</td>
<td>0.200</td>
<td>ug/L</td>
<td>0.200</td>
<td>2.00</td>
<td>U</td>
<td>1</td>
<td>EPA 6010B</td>
<td>RLC</td>
<td>8/18/17 9:48</td>
</tr>
<tr>
<td>Boron</td>
<td>4.32</td>
<td>mg/L</td>
<td>0.0100</td>
<td>0.0500</td>
<td>1</td>
<td>RLC</td>
<td>EPA 6010B</td>
<td>RLC</td>
<td>8/18/17 9:48</td>
</tr>
<tr>
<td>Calcium</td>
<td>171</td>
<td>mg/L</td>
<td>0.0300</td>
<td>1.00</td>
<td>1</td>
<td>RLC</td>
<td>EPA 6010B</td>
<td>RLC</td>
<td>8/18/17 8:32</td>
</tr>
<tr>
<td>Chromium</td>
<td>1.60</td>
<td>ug/L</td>
<td>1.60</td>
<td>12.0</td>
<td>U</td>
<td>1</td>
<td>EPA 6010B</td>
<td>RLC</td>
<td>8/18/17 9:48</td>
</tr>
<tr>
<td>Molybdenum</td>
<td>3.02</td>
<td>ug/L</td>
<td>1.00</td>
<td>20.0</td>
<td>I</td>
<td>1</td>
<td>EPA 6010B</td>
<td>RLC</td>
<td>8/18/17 9:48</td>
</tr>
</tbody>
</table>

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
Sample Information

Client: Big Bend Power Station
Lab Sample ID: L17H005-03
Sample Description: BBS-CCR-3
Sample Collection Method: Grab
Sampled By: Robert Barthelette
Date and Time Collected: 8/16/17 10:27
Date of Sample Receipt: 8/16/17 13:43

Laboratory Results

Sample Qualifier:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Dil</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>General Chemistry Parameters</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chloride</td>
<td>156</td>
<td>mg/L</td>
<td>0.200</td>
<td>5.00</td>
<td>1</td>
<td>EPA 300.0</td>
<td>RFL</td>
<td>8/24/17 17:22</td>
</tr>
<tr>
<td>Specific Conductance</td>
<td>1790</td>
<td>umhos/cm</td>
<td>100</td>
<td>100</td>
<td>1</td>
<td>FDEP SOP FT 1200</td>
<td>RAB</td>
<td>8/16/17 10:27</td>
</tr>
<tr>
<td>Dissolved Oxygen</td>
<td>0.290</td>
<td>mg/L</td>
<td>0.100</td>
<td>0.100</td>
<td>1</td>
<td>FDEP SOP FT 1500</td>
<td>RAB</td>
<td>8/16/17 10:27</td>
</tr>
<tr>
<td>Fluoride</td>
<td>0.338</td>
<td>mg/L</td>
<td>0.0100</td>
<td>0.0500</td>
<td>1</td>
<td>EPA 300.0</td>
<td>RFL</td>
<td>8/24/17 17:11</td>
</tr>
<tr>
<td>pH</td>
<td>6.42</td>
<td>pH Units</td>
<td>1.00</td>
<td>1.00</td>
<td>1</td>
<td>FDEP SOP FT 1100</td>
<td>RAB</td>
<td>8/16/17 10:27</td>
</tr>
<tr>
<td>REDOX Potential</td>
<td>-206</td>
<td>mV</td>
<td>-999</td>
<td>-999</td>
<td>2</td>
<td>SM 2580B</td>
<td>RAB</td>
<td>8/16/17 10:27</td>
</tr>
<tr>
<td>Total Dissolved Solids</td>
<td>1290</td>
<td>mg/L</td>
<td>24.0</td>
<td>40.0</td>
<td>10</td>
<td>EPA 300.0</td>
<td>RFL</td>
<td>8/24/17 17:22</td>
</tr>
<tr>
<td>Sulfate</td>
<td>484</td>
<td>mg/L</td>
<td>5.00</td>
<td>20.0</td>
<td>1</td>
<td>EPA 300.0</td>
<td>RFL</td>
<td>8/24/17 17:22</td>
</tr>
<tr>
<td>Turbidity</td>
<td>0.470</td>
<td>NTU</td>
<td>0.100</td>
<td>0.100</td>
<td>1</td>
<td>FDEP SOP FT 1600</td>
<td>RAB</td>
<td>8/16/17 10:27</td>
</tr>
<tr>
<td><strong>Total Mercury by SW846 Method 7470/7471</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mercury</td>
<td>0.0500</td>
<td>ug/L</td>
<td>0.0500</td>
<td>0.200</td>
<td>U</td>
<td>EPA 7470A</td>
<td>MCR</td>
<td>8/18/17 10:29</td>
</tr>
<tr>
<td><strong>Total Recoverable Metals by 200 Series</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Antimony</td>
<td>0.600</td>
<td>ug/L</td>
<td>0.600</td>
<td>2.00</td>
<td>U</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>8/18/17 12:09</td>
</tr>
<tr>
<td>Arsenic</td>
<td>0.536</td>
<td>ug/L</td>
<td>0.320</td>
<td>2.00</td>
<td>I</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>8/18/17 12:09</td>
</tr>
<tr>
<td>Cadmium</td>
<td>0.100</td>
<td>ug/L</td>
<td>0.100</td>
<td>0.500</td>
<td>U</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>8/18/17 12:09</td>
</tr>
<tr>
<td>Cobalt</td>
<td>0.123</td>
<td>ug/L</td>
<td>0.0400</td>
<td>2.00</td>
<td>I</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>8/18/17 12:09</td>
</tr>
<tr>
<td>Lead</td>
<td>8.00E-5</td>
<td>mg/L</td>
<td>8.00E-5</td>
<td>0.00200</td>
<td>U</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>8/18/17 12:09</td>
</tr>
<tr>
<td>Selenium</td>
<td>0.200</td>
<td>ug/L</td>
<td>0.200</td>
<td>2.00</td>
<td>U</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>8/18/17 12:09</td>
</tr>
<tr>
<td>Thallium</td>
<td>0.100</td>
<td>ug/L</td>
<td>0.100</td>
<td>0.500</td>
<td>U</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>8/18/17 12:09</td>
</tr>
<tr>
<td><strong>Total Recoverable Metals by SW846 Method 6010B</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Barium</td>
<td>0.0598</td>
<td>mg/L</td>
<td>0.000500</td>
<td>0.0200</td>
<td>U</td>
<td>EPA 6010B</td>
<td>RLC</td>
<td>8/18/17 9.52</td>
</tr>
<tr>
<td>Beryllium</td>
<td>0.200</td>
<td>ug/L</td>
<td>0.200</td>
<td>2.00</td>
<td>U</td>
<td>EPA 6010B</td>
<td>RLC</td>
<td>8/18/17 9.52</td>
</tr>
<tr>
<td>Boron</td>
<td>0.266</td>
<td>mg/L</td>
<td>0.0100</td>
<td>0.0500</td>
<td>U</td>
<td>EPA 6010B</td>
<td>RLC</td>
<td>8/18/17 9.52</td>
</tr>
<tr>
<td>Calcium</td>
<td>187</td>
<td>mg/L</td>
<td>0.0300</td>
<td>1.00</td>
<td>1</td>
<td>EPA 6010B</td>
<td>RLC</td>
<td>8/18/17 8.34</td>
</tr>
<tr>
<td>Chromium</td>
<td>2.02</td>
<td>ug/L</td>
<td>1.60</td>
<td>12.0</td>
<td>I</td>
<td>EPA 6010B</td>
<td>RLC</td>
<td>8/18/17 9.52</td>
</tr>
<tr>
<td>Molybdenum</td>
<td>3.14</td>
<td>ug/L</td>
<td>1.00</td>
<td>20.0</td>
<td>I</td>
<td>EPA 6010B</td>
<td>RLC</td>
<td>8/18/17 9.52</td>
</tr>
</tbody>
</table>

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
## Sample Information

- **Client:** Big Bend Power Station
- **Lab Sample ID:** L17H005-04
- **Sample Description:** BBS-CCR-BW1
- **Sample Collection Method:** Grab
- **Sampled By:** Robert Barthelette
- **Date and Time Collected:** 8/16/17 9:52
- **Date of Sample Receipt:** 8/16/17

## Laboratory Results

### General Chemistry Parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier Code</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chloride</td>
<td>793</td>
<td>mg/L</td>
<td>4.00</td>
<td>100</td>
<td>200</td>
<td>EPA 300.0</td>
<td>RFL</td>
<td>8/24/17 18:02</td>
</tr>
<tr>
<td>Specific Conductance</td>
<td>5000</td>
<td>umhos/cm</td>
<td>100</td>
<td>100</td>
<td>1</td>
<td>FDEP SOP FT 1200</td>
<td>RAB</td>
<td>8/16/17 9:52</td>
</tr>
<tr>
<td>Dissolved Oxygen</td>
<td>0.450</td>
<td>mg/L</td>
<td>0.100</td>
<td>0.100</td>
<td>1</td>
<td>FDEP SOP FT 1500</td>
<td>RAB</td>
<td>8/16/17 9:52</td>
</tr>
<tr>
<td>Fluoride</td>
<td>0.0100</td>
<td>mg/L</td>
<td>0.0100</td>
<td>0.0500</td>
<td>U</td>
<td>EPA 300.0</td>
<td>RFL</td>
<td>8/16/17 17:32</td>
</tr>
<tr>
<td>pH</td>
<td>6.52</td>
<td>pH Units</td>
<td>1.00</td>
<td>1.00</td>
<td>1</td>
<td>FDEP SOP FT 1100</td>
<td>RAB</td>
<td>8/16/17 9:52</td>
</tr>
<tr>
<td>Redox Potential</td>
<td>3.60</td>
<td>mV</td>
<td>-999</td>
<td>-999</td>
<td>1</td>
<td>SM 2580B</td>
<td>RAB</td>
<td>8/16/17 9:52</td>
</tr>
<tr>
<td>Total Dissolved Solids</td>
<td>4340</td>
<td>mg/L</td>
<td>48.0</td>
<td>80.0</td>
<td>4</td>
<td>SM 2540C</td>
<td>NLT</td>
<td>8/18/17 15:35</td>
</tr>
<tr>
<td>Sulfate</td>
<td>1320</td>
<td>mg/L</td>
<td>100</td>
<td>400</td>
<td>200</td>
<td>EPA 300.0</td>
<td>RFL</td>
<td>8/24/17 18:02</td>
</tr>
<tr>
<td>Turbidity</td>
<td>6.03</td>
<td>NTU</td>
<td>0.100</td>
<td>0.100</td>
<td>1</td>
<td>FDEP SOP FT 1600</td>
<td>RAB</td>
<td>8/16/17 9:52</td>
</tr>
</tbody>
</table>

### Total Mercury by SW846 Method 7470/7471

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier Code</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mercury</td>
<td>0.0500</td>
<td>ug/L</td>
<td>0.0500</td>
<td>0.200</td>
<td>U</td>
<td>EPA 7470A</td>
<td>MCR</td>
<td>8/18/17 10:32</td>
</tr>
</tbody>
</table>

### Total Recoverable Metals by 200 Series

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier Code</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antimony</td>
<td>0.600</td>
<td>ug/L</td>
<td>0.600</td>
<td>2.00</td>
<td>U</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>8/18/17 12:12</td>
</tr>
<tr>
<td>Arsenic</td>
<td>6.60</td>
<td>ug/L</td>
<td>0.320</td>
<td>2.00</td>
<td>1</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>8/18/17 12:12</td>
</tr>
<tr>
<td>Cadmium</td>
<td>0.100</td>
<td>ug/L</td>
<td>0.100</td>
<td>0.500</td>
<td>U</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>8/18/17 12:12</td>
</tr>
<tr>
<td>Cobalt</td>
<td>1.66</td>
<td>ug/L</td>
<td>0.0400</td>
<td>2.00</td>
<td>I</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>8/18/17 12:12</td>
</tr>
<tr>
<td>Lead</td>
<td>0.000291</td>
<td>mg/L</td>
<td>8.00E-5</td>
<td>0.00200</td>
<td>I</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>8/18/17 12:12</td>
</tr>
<tr>
<td>Selenium</td>
<td>1.76</td>
<td>ug/L</td>
<td>0.200</td>
<td>2.00</td>
<td>I</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>8/18/17 12:12</td>
</tr>
<tr>
<td>Thallium</td>
<td>0.100</td>
<td>ug/L</td>
<td>0.100</td>
<td>0.500</td>
<td>U</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>8/18/17 12:12</td>
</tr>
</tbody>
</table>

### Total Recoverable Metals by SW846 Method 6010B

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier Code</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barium</td>
<td>0.0556</td>
<td>mg/L</td>
<td>0.000500</td>
<td>0.0200</td>
<td>1</td>
<td>EPA 6010B</td>
<td>RLC</td>
<td>8/18/17 9:54</td>
</tr>
<tr>
<td>Beryllium</td>
<td>0.200</td>
<td>ug/L</td>
<td>0.200</td>
<td>2.00</td>
<td>U</td>
<td>EPA 6010B</td>
<td>RLC</td>
<td>8/18/17 9:54</td>
</tr>
<tr>
<td>Boron</td>
<td>48.0</td>
<td>mg/L</td>
<td>0.0100</td>
<td>0.0500</td>
<td>J-</td>
<td>EPA 6010B</td>
<td>RLC</td>
<td>8/18/17 9:54</td>
</tr>
<tr>
<td>Calcium</td>
<td>743</td>
<td>mg/L</td>
<td>0.0300</td>
<td>1.00</td>
<td>J-</td>
<td>EPA 6010B</td>
<td>RLC</td>
<td>8/18/17 8:36</td>
</tr>
<tr>
<td>Chromium</td>
<td>2.48</td>
<td>ug/L</td>
<td>1.60</td>
<td>12.0</td>
<td>I</td>
<td>EPA 6010B</td>
<td>RLC</td>
<td>8/18/17 9:54</td>
</tr>
<tr>
<td>Molybdenum</td>
<td>1.43</td>
<td>ug/L</td>
<td>1.00</td>
<td>20.0</td>
<td>I</td>
<td>EPA 6010B</td>
<td>RLC</td>
<td>8/18/17 9:54</td>
</tr>
</tbody>
</table>

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
## Sample Information

| Client: | Big Bend Power Station |
| Lab Sample ID: | L17H005-05 |
| Sample Description: | BBS-CCR-BW2 |
| Sample Collection Method: | Grab |

| Sample Collection Method: | Grab |

## Laboratory Results

### Sample Qualifier:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Code</th>
<th>Dil</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
</table>

### General Chemistry Parameters

- **Chloride**: 117 mg/L, 0.200 MDL, 5.00 PQL, 10 Code, EPA 300.0 Method, RFL Analyst, 8/24/17 18:23 Analysis Date & Time
- **Specific Conductance**: 1580 umhos/cm, 100 MDL, 100 PQL, 1 Code, FDEP SOP FT 1200 Method, RAB Analyst, 8/16/17 9:18 Analysis Date & Time
- **Dissolved Oxygen**: 0.430 mg/L, 0.100 MDL, 0.100 PQL, 1 Code, FDEP SOP FT 1500 Method, RAB Analyst, 8/16/17 9:18 Analysis Date & Time
- **Fluoride**: 0.352 mg/L, 0.0100 MDL, 0.0500 PQL, 1 Code, EPA 300.0 Method, RFL Analyst, 8/16/17 18:13 Analysis Date & Time
- **pH**: 6.68 pH Units, 1.00 MDL, 1.00 PQL, 1 Code, FDEP SOP FT 1100 Method, RAB Analyst, 8/16/17 9:18 Analysis Date & Time
- **REDOX Potential**: -53.3 mV, -999 MDL, -999 PQL, 1 Code, SM 2580B Method, RAB Analyst, 8/16/17 9:18 Analysis Date & Time
- **Total Dissolved Solids**: 1180 mg/L, 24.0 MDL, 40.0 PQL, J- Code, SM 2540C Method, NLT Analyst, 8/16/17 15:35 Analysis Date & Time
- **Sulfate**: 462 mg/L, 5.00 MDL, 20.0 PQL, 10 Code, EPA 300.0 Method, RFL Analyst, 8/24/17 18:23 Analysis Date & Time
- **Turbidity**: 3.66 NTU, 0.100 MDL, 0.100 PQL, 1 Code, FDEP SOP FT 1600 Method, RAB Analyst, 8/16/17 9:18 Analysis Date & Time

### Total Mercury by SW846 Method 7470/7471

- **Mercury**: 0.0500 ug/L, 0.0500 MDL, 0.200 PQL, U Code, EPA 7470A Method, MCR Analyst, 8/18/17 10:36 Analysis Date & Time

### Total Recoverable Metals by 200 Series

- **Antimony**: 0.600 ug/L, 0.600 MDL, 2.00 PQL, U Code, EPA 200.8 Method, MCR Analyst, 8/18/17 12:20 Analysis Date & Time
- **Arsenic**: 1.80 ug/L, 0.320 MDL, 2.00 PQL, I Code, EPA 200.8 Method, MCR Analyst, 8/18/17 12:20 Analysis Date & Time
- **Cadmium**: 0.100 ug/L, 0.100 MDL, 0.500 PQL, U Code, EPA 200.8 Method, MCR Analyst, 8/18/17 12:20 Analysis Date & Time
- **Cobalt**: 0.110 ug/L, 0.0400 MDL, 2.00 PQL, I Code, EPA 200.8 Method, MCR Analyst, 8/18/17 12:20 Analysis Date & Time
- **Lead**: 0.0000101 mg/L, 8.00E-5 MDL, 0.00200 PQL, I Code, EPA 200.8 Method, MCR Analyst, 8/18/17 12:20 Analysis Date & Time
- **Selenium**: 0.420 ug/L, 0.200 MDL, 2.00 PQL, I Code, EPA 200.8 Method, MCR Analyst, 8/18/17 12:20 Analysis Date & Time
- **Thallium**: 0.100 ug/L, 0.100 MDL, 0.500 PQL, U Code, EPA 200.8 Method, MCR Analyst, 8/18/17 12:20 Analysis Date & Time

### Total Recoverable Metals by SW846 Method 6010B

- **Barium**: 0.0499 mg/L, 0.000500 MDL, 0.0200 PQL, 1 Code, EPA 6010B Method, RLC Analyst, 8/18/17 10:03 Analysis Date & Time
- **Beryllium**: 0.200 ug/L, 0.200 MDL, 2.00 PQL, U Code, EPA 6010B Method, RLC Analyst, 8/18/17 10:03 Analysis Date & Time
- **Boron**: 4.39 mg/L, 0.0100 MDL, 0.0500 PQL, 1 Code, EPA 6010B Method, RLC Analyst, 8/18/17 10:03 Analysis Date & Time
- **Calcium**: 287 mg/L, 0.0300 MDL, 1.00 PQL, 1 Code, EPA 6010B Method, RLC Analyst, 8/18/17 8:43 Analysis Date & Time
- **Chromium**: 1.60 ug/L, 1.60 MDL, 12.0 PQL, U Code, EPA 6010B Method, RLC Analyst, 8/18/17 10:03 Analysis Date & Time
- **Molybdenum**: 4.08 ug/L, 1.00 MDL, 20.0 PQL, I Code, EPA 6010B Method, RLC Analyst, 8/18/17 10:03 Analysis Date & Time

### Comments

- **U**: Indicates that the compound was analyzed for but not detected.
- **J-**: The reported value is an estimated value, see the case narrative for specifics.
- **I**: Estimated value

### Subcontract Laboratories:

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>MDL</th>
<th>PQL</th>
<th>Units</th>
<th>Spike Source</th>
<th>%Rec Limit</th>
<th>RPD Limit</th>
<th>Qualifier</th>
</tr>
</thead>
<tbody>
<tr>
<td>Batch 17H0161 - EPA 6010B</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blank (17H0161-BLK1) Prepared: 08/17/17 Analyzed: 08/18/17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Barium</td>
<td>0.000500</td>
<td>0.00500</td>
<td>0.0200</td>
<td>mg/L</td>
<td></td>
<td></td>
<td></td>
<td>U</td>
</tr>
<tr>
<td>Beryllium</td>
<td>0.200</td>
<td>0.200</td>
<td>2.00</td>
<td>ug/L</td>
<td></td>
<td></td>
<td></td>
<td>U</td>
</tr>
<tr>
<td>Boron</td>
<td>0.0100</td>
<td>0.0100</td>
<td>0.0500</td>
<td>mg/L</td>
<td></td>
<td></td>
<td></td>
<td>U</td>
</tr>
<tr>
<td>Calcium</td>
<td>0.0300</td>
<td>0.0300</td>
<td>1.00</td>
<td>mg/L</td>
<td></td>
<td></td>
<td></td>
<td>U</td>
</tr>
<tr>
<td>Chromium</td>
<td>1.60</td>
<td>1.60</td>
<td>12.0</td>
<td>ug/L</td>
<td></td>
<td></td>
<td></td>
<td>U</td>
</tr>
<tr>
<td>Molybdenum</td>
<td>1.00</td>
<td>1.00</td>
<td>20.0</td>
<td>ug/L</td>
<td></td>
<td></td>
<td></td>
<td>U</td>
</tr>
<tr>
<td>LCS (17H0161-BS1) Prepared: 08/17/17 Analyzed: 08/18/17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Barium</td>
<td>1.61</td>
<td>0.00500</td>
<td>0.0200</td>
<td>mg/L</td>
<td>1.0000</td>
<td>101</td>
<td>80-120</td>
<td></td>
</tr>
<tr>
<td>Beryllium</td>
<td>1010</td>
<td>0.200</td>
<td>2.00</td>
<td>ug/L</td>
<td>1000.0</td>
<td>101</td>
<td>80-120</td>
<td></td>
</tr>
<tr>
<td>Boron</td>
<td>1.02</td>
<td>0.0100</td>
<td>0.0500</td>
<td>mg/L</td>
<td>1.0000</td>
<td>102</td>
<td>80-120</td>
<td></td>
</tr>
<tr>
<td>Chromium</td>
<td>1010</td>
<td>1.60</td>
<td>12.0</td>
<td>ug/L</td>
<td>1000.0</td>
<td>101</td>
<td>80-120</td>
<td></td>
</tr>
<tr>
<td>Molybdenum</td>
<td>991</td>
<td>1.00</td>
<td>20.0</td>
<td>ug/L</td>
<td>1000.0</td>
<td>99.1</td>
<td>80-120</td>
<td></td>
</tr>
<tr>
<td>Matrix Spike (17H0161-MS1) Source: L17H005-04 Prepared: 08/17/17 Analyzed: 08/18/17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Barium</td>
<td>1.05</td>
<td>0.00500</td>
<td>0.0200</td>
<td>mg/L</td>
<td>1.0000</td>
<td>0.0556</td>
<td>99.1</td>
<td>75-125</td>
</tr>
<tr>
<td>Beryllium</td>
<td>973</td>
<td>0.200</td>
<td>2.00</td>
<td>ug/L</td>
<td>1000.0</td>
<td>U</td>
<td>97.3</td>
<td>75-125</td>
</tr>
<tr>
<td>Boron</td>
<td>51.0</td>
<td>0.0100</td>
<td>0.0500</td>
<td>mg/L</td>
<td>1.0000</td>
<td>48.0</td>
<td>297</td>
<td>75-125</td>
</tr>
<tr>
<td>Chromium</td>
<td>972</td>
<td>1.60</td>
<td>12.0</td>
<td>ug/L</td>
<td>1000.0</td>
<td>2.48</td>
<td>97.0</td>
<td>75-125</td>
</tr>
<tr>
<td>Molybdenum</td>
<td>1020</td>
<td>1.00</td>
<td>20.0</td>
<td>ug/L</td>
<td>1000.0</td>
<td>1.43</td>
<td>102</td>
<td>75-125</td>
</tr>
<tr>
<td>Matrix Spike (17H0161-MS2) Source: L17H025-01 Prepared: 08/17/17 Analyzed: 08/18/17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Barium</td>
<td>1.02</td>
<td>0.00500</td>
<td>0.0200</td>
<td>mg/L</td>
<td>1.0000</td>
<td>0.00457</td>
<td>101</td>
<td>75-125</td>
</tr>
<tr>
<td>Beryllium</td>
<td>1010</td>
<td>0.200</td>
<td>2.00</td>
<td>ug/L</td>
<td>1000.0</td>
<td>U</td>
<td>101</td>
<td>75-125</td>
</tr>
<tr>
<td>Boron</td>
<td>1.15</td>
<td>0.0100</td>
<td>0.0500</td>
<td>mg/L</td>
<td>1.0000</td>
<td>0.0474</td>
<td>110</td>
<td>75-125</td>
</tr>
<tr>
<td>Chromium</td>
<td>1010</td>
<td>1.60</td>
<td>12.0</td>
<td>ug/L</td>
<td>1000.0</td>
<td>U</td>
<td>101</td>
<td>75-125</td>
</tr>
<tr>
<td>Molybdenum</td>
<td>1000</td>
<td>1.00</td>
<td>20.0</td>
<td>ug/L</td>
<td>1000.0</td>
<td>2.21</td>
<td>100</td>
<td>75-125</td>
</tr>
</tbody>
</table>

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
### Total Recoverable Metals by SW846 Method 6010B - Quality Control

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>MDL</th>
<th>PQL</th>
<th>Units</th>
<th>Spike</th>
<th>Source</th>
<th>%Rec</th>
<th>%Rec Limits</th>
<th>RPD Limit</th>
<th>Qualifier</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Batch 17H0161 - EPA 6010B</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Matrix Spike Dup (17H0161-MSD1)</strong></td>
<td>Source: L17H005-04</td>
<td>Prepared: 08/17/17</td>
<td>Analyzed: 08/18/17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Barium</td>
<td>1.05</td>
<td>0.000/500</td>
<td>0.0200</td>
<td>mg/L</td>
<td>1.0000</td>
<td>0.0556</td>
<td>99.7</td>
<td>75-125</td>
<td>0.598</td>
<td>20</td>
</tr>
<tr>
<td>Beryllium</td>
<td>972</td>
<td>0.200</td>
<td>2.00</td>
<td>ug/L</td>
<td>1000.0</td>
<td>U</td>
<td>97.2</td>
<td>75-125</td>
<td>0.0458</td>
<td>20</td>
</tr>
<tr>
<td>Boron</td>
<td>50.5</td>
<td>0.01000</td>
<td>0.0500</td>
<td>mg/L</td>
<td>1.0000</td>
<td>48.0</td>
<td>249</td>
<td>75-125</td>
<td>0.961</td>
<td>20</td>
</tr>
<tr>
<td>Chromium</td>
<td>980</td>
<td>1.60</td>
<td>12.0</td>
<td>ug/L</td>
<td>1000.0</td>
<td>2.48</td>
<td>97.7</td>
<td>75-125</td>
<td>0.792</td>
<td>20</td>
</tr>
<tr>
<td>Molybdenum</td>
<td>1030</td>
<td>1.00</td>
<td>20.0</td>
<td>ug/L</td>
<td>1000.0</td>
<td>1.43</td>
<td>102</td>
<td>75-125</td>
<td>0.636</td>
<td>20</td>
</tr>
<tr>
<td><strong>Matrix Spike Dup (17H0161-MSD2)</strong></td>
<td>Source: L17H025-01</td>
<td>Prepared: 08/17/17</td>
<td>Analyzed: 08/18/17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Barium</td>
<td>1.05</td>
<td>0.000/500</td>
<td>0.0200</td>
<td>mg/L</td>
<td>1.0000</td>
<td>0.00457</td>
<td>104</td>
<td>75-125</td>
<td>2.79</td>
<td>20</td>
</tr>
<tr>
<td>Beryllium</td>
<td>1030</td>
<td>0.200</td>
<td>2.00</td>
<td>ug/L</td>
<td>1000.0</td>
<td>U</td>
<td>103</td>
<td>75-125</td>
<td>2.06</td>
<td>20</td>
</tr>
<tr>
<td>Boron</td>
<td>1.14</td>
<td>0.01000</td>
<td>0.0500</td>
<td>mg/L</td>
<td>1.0000</td>
<td>0.0474</td>
<td>109</td>
<td>75-125</td>
<td>1.08</td>
<td>20</td>
</tr>
<tr>
<td>Chromium</td>
<td>1030</td>
<td>1.60</td>
<td>12.0</td>
<td>ug/L</td>
<td>1000.0</td>
<td>U</td>
<td>103</td>
<td>75-125</td>
<td>2.24</td>
<td>20</td>
</tr>
<tr>
<td>Molybdenum</td>
<td>1020</td>
<td>1.00</td>
<td>20.0</td>
<td>ug/L</td>
<td>1000.0</td>
<td>2.21</td>
<td>102</td>
<td>75-125</td>
<td>2.00</td>
<td>20</td>
</tr>
<tr>
<td>Analyte: Batch 17H0163 - EPA 7470A</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<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><strong>Blank (17H0163-BLK1)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prepared: 08/17/17  Analyzed: 08/18/17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mercury</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Result: 0.0500  MDL: 0.0500  PQL: 0.200  Units: ug/L</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spike Level: 0.0500  Source: Blank (17H0163-BLK1)  %Rec: 80.00  %Rec Limits: 80-120  RPD Limit: 1.00  Qualifier: U</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>LCS (17H0163-BS1)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prepared: 08/17/17  Analyzed: 08/18/17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mercury</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Result: 0.893  MDL: 0.0500  PQL: 0.200  Units: ug/L</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spike Level: 1.0000  Source: LCS (17H0163-BS1)  %Rec: 89.3  %Rec Limits: 80-120  RPD Limit: 1.08  Qualifier: U</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Matrix Spike (17H0163-MS1)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prepared: 08/17/17  Analyzed: 08/18/17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mercury</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Result: 0.966  MDL: 0.0500  PQL: 0.200  Units: ug/L</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spike Level: 1.0000  Source: Matrix Spike (17H0163-MS1)  %Rec: 96.6  %Rec Limits: 75-125  RPD Limit: 1.08  Qualifier: U</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Matrix Spike Dup (17H0163-MSD1)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prepared: 08/17/17  Analyzed: 08/18/17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mercury</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Result: 0.976  MDL: 0.0500  PQL: 0.200  Units: ug/L</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spike Level: 1.0000  Source: Matrix Spike Dup (17H0163-MSD1)  %Rec: 97.6  %Rec Limits: 75-125  RPD Limit: 1.08  Qualifier: U</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
# Total Recoverable Metals by 200 Series - Quality Control

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>MDL</th>
<th>PQL</th>
<th>Units</th>
<th>Spike</th>
<th>Source</th>
<th>%Rec</th>
<th>%Rec Limits</th>
<th>RPD Limit</th>
<th>Qualifier</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Batch 17H0157 - EPA 200.8</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Prepared: 08/16/17 Analyzed: 08/18/17</td>
<td></td>
<td></td>
<td></td>
<td>U</td>
</tr>
<tr>
<td>Antimony</td>
<td>0.600</td>
<td>0.600</td>
<td>2.00</td>
<td>ug/L</td>
<td></td>
<td>U</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arsenic</td>
<td>0.320</td>
<td>0.320</td>
<td>2.00</td>
<td>ug/L</td>
<td></td>
<td>U</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cadmium</td>
<td>0.100</td>
<td>0.100</td>
<td>0.500</td>
<td>ug/L</td>
<td></td>
<td>U</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cobalt</td>
<td>0.0400</td>
<td>0.0400</td>
<td>2.00</td>
<td>ug/L</td>
<td></td>
<td>U</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lead</td>
<td>8.00E-5</td>
<td>8.00E-5</td>
<td>0.00200</td>
<td>mg/L</td>
<td></td>
<td>U</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Selenium</td>
<td>0.200</td>
<td>0.200</td>
<td>2.00</td>
<td>ug/L</td>
<td></td>
<td>U</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thallium</td>
<td>0.100</td>
<td>0.100</td>
<td>0.500</td>
<td>ug/L</td>
<td></td>
<td>U</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| **LCS (17H0157-BS1)** |         |       |       |       |       | Prepared: 08/16/17 Analyzed: 08/18/17 |     |             |           |           |
| Antimony                 | 104    | 0.600 | 2.00  | ug/L  |       | 100.00       | 104  | 85-115       |           |           |
| Arsenic                  | 103    | 0.320 | 2.00  | ug/L  |       | 100.00       | 103  | 85-115       |           |           |
| Cadmium                  | 102    | 0.100 | 0.500 | ug/L  |       | 100.00       | 102  | 85-115       |           |           |
| Cobalt                   | 95.8   | 0.0400| 2.00  | ug/L  |       | 100.00       | 95.8 | 85-115       |           |           |
| Lead                     | 0.0977 | 8.00E-5| 0.00200| mg/L  |       | 0.10000       | 97.7 | 85-115       |           |           |
| Selenium                 | 107    | 0.200 | 2.00  | ug/L  |       | 100.00       | 107  | 85-115       |           |           |
| Thallium                 | 100    | 0.100 | 0.500 | ug/L  |       | 100.00       | 100  | 85-115       |           |           |

| **Matrix Spike (17H0157-MS1)** | Source: L17H027-01 |         |       |       |       | Prepared: 08/16/17 Analyzed: 08/18/17 |     |             |           |           |
| Antimony                 | 107    | 0.600 | 2.00  | ug/L  |       | 100.00       | 0.827 | 106         | 70-130    |           |
| Arsenic                  | 96.5   | 0.320 | 2.00  | ug/L  |       | 100.00       | 1.14  | 95.4        | 70-130    |           |
| Cadmium                  | 87.0   | 0.100 | 0.500 | ug/L  |       | 100.00       | 0.154 | 86.8        | 70-130    |           |
| Cobalt                   | 91.7   | 0.0400| 2.00  | ug/L  |       | 100.00       | 0.223 | 91.5        | 70-130    |           |
| Lead                     | 0.0890 | 8.00E-5| 0.00200| mg/L  |       | 0.10000      | 88.7  | 70-130       |           |           |
| Selenium                 | 93.8   | 0.200 | 2.00  | ug/L  |       | 100.00       | 0.208 | 93.6        | 70-130    |           |
| Thallium                 | 94.3   | 0.100 | 0.500 | ug/L  |       | 100.00       | 0.203 | 94.1        | 70-130    |           |

| **Matrix Spike (17H0157-MS2)** | Source: L17H005-01 |         |       |       |       | Prepared: 08/16/17 Analyzed: 08/18/17 |     |             |           |           |
| Antimony                 | 95.9   | 0.600 | 2.00  | ug/L  |       | 100.00       | U     | 95.9        | 70-130    |           |
| Arsenic                  | 91.9   | 0.320 | 2.00  | ug/L  |       | 100.00       | 9.33  | 82.6        | 70-130    |           |
| Cadmium                  | 73.5   | 0.100 | 0.500 | ug/L  |       | 100.00       | U     | 73.5        | 70-130    |           |
| Cobalt                   | 77.4   | 0.0400| 2.00  | ug/L  |       | 100.00       | 0.473 | 76.9        | 70-130    |           |
| Lead                     | 0.0769 | 8.00E-5| 0.00200| mg/L  |       | 0.10000      | U     | 76.9        | 70-130    |           |
| Selenium                 | 80.7   | 0.200 | 2.00  | ug/L  |       | 100.00       | 0.918 | 79.8        | 70-130    |           |
| Thallium                 | 82.4   | 0.100 | 0.500 | ug/L  |       | 100.00       | U     | 82.4        | 70-130    |           |

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
### Total Recoverable Metals by 200 Series - Quality Control

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>MDL</th>
<th>PQL</th>
<th>Units</th>
<th>Spike</th>
<th>Source</th>
<th>%Rec</th>
<th>RPD</th>
<th>Limits</th>
<th>RPD Limit</th>
<th>Qualifier</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Level</td>
<td>Result</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Batch 17H0157 - EPA 200.8

**Matrix Spike Dup (17H0157-MSD1)**  
Source: L17H027-01  
Prepared: 08/16/17  Analyzed: 08/18/17

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>MDL</th>
<th>PQL</th>
<th>Units</th>
<th>Spike</th>
<th>Source</th>
<th>%Rec</th>
<th>RPD</th>
<th>Limits</th>
<th>RPD Limit</th>
<th>Qualifier</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antimony</td>
<td>104</td>
<td>0.600</td>
<td>2.00</td>
<td>ug/L</td>
<td>100.00</td>
<td>0.827</td>
<td>103</td>
<td>70-130</td>
<td>3.02</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Arsenic</td>
<td>95.8</td>
<td>0.320</td>
<td>2.00</td>
<td>ug/L</td>
<td>100.00</td>
<td>1.14</td>
<td>94.7</td>
<td>70-130</td>
<td>0.752</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Cadmium</td>
<td>84.3</td>
<td>0.100</td>
<td>0.500</td>
<td>ug/L</td>
<td>100.00</td>
<td>0.154</td>
<td>84.1</td>
<td>70-130</td>
<td>3.14</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Cobalt</td>
<td>87.2</td>
<td>0.0400</td>
<td>2.00</td>
<td>ug/L</td>
<td>100.00</td>
<td>0.223</td>
<td>86.9</td>
<td>70-130</td>
<td>5.08</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Lead</td>
<td>0.0859</td>
<td>8.00E-5</td>
<td>0.00200</td>
<td>mg/L</td>
<td>0.10000</td>
<td>0.000269</td>
<td>85.6</td>
<td>70-130</td>
<td>3.53</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Selenium</td>
<td>93.6</td>
<td>0.200</td>
<td>2.00</td>
<td>ug/L</td>
<td>100.00</td>
<td>0.208</td>
<td>93.4</td>
<td>70-130</td>
<td>0.244</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Thallium</td>
<td>90.4</td>
<td>0.100</td>
<td>0.500</td>
<td>ug/L</td>
<td>100.00</td>
<td>0.203</td>
<td>90.2</td>
<td>70-130</td>
<td>4.23</td>
<td>20</td>
<td></td>
</tr>
</tbody>
</table>

**Matrix Spike Dup (17H0157-MSD2)**  
Source: L17H005-01  
Prepared: 08/16/17  Analyzed: 08/18/17

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>MDL</th>
<th>PQL</th>
<th>Units</th>
<th>Spike</th>
<th>Source</th>
<th>%Rec</th>
<th>RPD</th>
<th>Limits</th>
<th>RPD Limit</th>
<th>Qualifier</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antimony</td>
<td>100</td>
<td>0.600</td>
<td>2.00</td>
<td>ug/L</td>
<td>100.00</td>
<td>U</td>
<td>100</td>
<td>70-130</td>
<td>4.65</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Arsenic</td>
<td>98.7</td>
<td>0.320</td>
<td>2.00</td>
<td>ug/L</td>
<td>100.00</td>
<td>9.33</td>
<td>89.4</td>
<td>70-130</td>
<td>7.10</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Cadmium</td>
<td>76.0</td>
<td>0.100</td>
<td>0.500</td>
<td>ug/L</td>
<td>100.00</td>
<td>U</td>
<td>76.0</td>
<td>70-130</td>
<td>3.33</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Cobalt</td>
<td>79.7</td>
<td>0.0400</td>
<td>2.00</td>
<td>ug/L</td>
<td>100.00</td>
<td>0.473</td>
<td>79.2</td>
<td>70-130</td>
<td>2.88</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Lead</td>
<td>0.0794</td>
<td>8.00E-5</td>
<td>0.00200</td>
<td>mg/L</td>
<td>0.10000</td>
<td>U</td>
<td>79.4</td>
<td>70-130</td>
<td>3.21</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Selenium</td>
<td>86.2</td>
<td>0.200</td>
<td>2.00</td>
<td>ug/L</td>
<td>100.00</td>
<td>0.918</td>
<td>85.3</td>
<td>70-130</td>
<td>6.63</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Thallium</td>
<td>86.1</td>
<td>0.100</td>
<td>0.500</td>
<td>ug/L</td>
<td>100.00</td>
<td>U</td>
<td>86.1</td>
<td>70-130</td>
<td>4.43</td>
<td>20</td>
<td></td>
</tr>
</tbody>
</table>

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>MDL</th>
<th>PQL</th>
<th>Units</th>
<th>Spike Level</th>
<th>Source</th>
<th>%Rec Limits</th>
<th>RPD Limit</th>
<th>Qualifier</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Batch 17H0172 - SM 2540C</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Blank (17H0172-BLK1)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Dissolved Solids</td>
<td>12.0</td>
<td>12.0</td>
<td>20.0</td>
<td>mg/L</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>U</td>
</tr>
<tr>
<td><strong>LCS (17H0172-BS1)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Dissolved Solids</td>
<td>1000.0</td>
<td>12.0</td>
<td>20.0</td>
<td>mg/L</td>
<td>1000.0</td>
<td>100</td>
<td>80-120</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Duplicate (17H0172-DUP1)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Dissolved Solids</td>
<td>2970.0</td>
<td>24.0</td>
<td>40.0</td>
<td>mg/L</td>
<td>2960</td>
<td>0.270</td>
<td>10</td>
<td>J-</td>
<td></td>
</tr>
<tr>
<td><strong>Batch 17H0209 - EPA 300.0</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Blank (17H0209-BLK1)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chloride</td>
<td>0.0200</td>
<td>0.0200</td>
<td>0.500</td>
<td>mg/L</td>
<td></td>
<td>U</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fluoride</td>
<td>0.0100</td>
<td>0.0100</td>
<td>0.0500</td>
<td>mg/L</td>
<td></td>
<td>U</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sulfate</td>
<td>0.500</td>
<td>0.500</td>
<td>2.00</td>
<td>mg/L</td>
<td></td>
<td>U</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>LCS (17H0209-BS1)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chloride</td>
<td>4.68</td>
<td>0.0200</td>
<td>0.500</td>
<td>mg/L</td>
<td>5.0000</td>
<td>93.7</td>
<td>90-110</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fluoride</td>
<td>4.65</td>
<td>0.0100</td>
<td>0.0500</td>
<td>mg/L</td>
<td>5.0000</td>
<td>93.0</td>
<td>90-110</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sulfate</td>
<td>4.91</td>
<td>0.500</td>
<td>2.00</td>
<td>mg/L</td>
<td>5.0000</td>
<td>98.2</td>
<td>90-110</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Matrix Spike (17H0209-MS1)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chloride</td>
<td>14.6</td>
<td>0.0200</td>
<td>0.500</td>
<td>mg/L</td>
<td>5.0000</td>
<td>9.91</td>
<td>93.9</td>
<td>90-110</td>
<td></td>
</tr>
<tr>
<td>Fluoride</td>
<td>5.53</td>
<td>0.0100</td>
<td>0.0500</td>
<td>mg/L</td>
<td>5.0000</td>
<td>0.364</td>
<td>103</td>
<td>90-110</td>
<td></td>
</tr>
<tr>
<td>Sulfate</td>
<td>36.6</td>
<td>0.500</td>
<td>2.00</td>
<td>mg/L</td>
<td>5.0000</td>
<td>32.1</td>
<td>90.6</td>
<td>90-110</td>
<td></td>
</tr>
<tr>
<td><strong>Matrix Spike (17H0209-MS2)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chloride</td>
<td>2820.0</td>
<td>2.00</td>
<td>50.0</td>
<td>mg/L</td>
<td>500.00</td>
<td>2370</td>
<td>91.3</td>
<td>90-110</td>
<td></td>
</tr>
<tr>
<td>Fluoride</td>
<td>510.0</td>
<td>1.00</td>
<td>5.00</td>
<td>mg/L</td>
<td>500.00</td>
<td>2.66</td>
<td>101</td>
<td>90-110</td>
<td></td>
</tr>
<tr>
<td>Sulfate</td>
<td>2000.0</td>
<td>50.0</td>
<td>200</td>
<td>mg/L</td>
<td>500.00</td>
<td>1460</td>
<td>108</td>
<td>90-110</td>
<td></td>
</tr>
</tbody>
</table>

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
### General Chemistry Parameters - Quality Control

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>MDL</th>
<th>PQL</th>
<th>Units</th>
<th>Spike Level</th>
<th>Source</th>
<th>%Rec</th>
<th>%Rec Limits</th>
<th>RPD</th>
<th>RPD Limit</th>
<th>Qualifier</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chloride</td>
<td>14.8</td>
<td>0.0200</td>
<td>0.500</td>
<td>mg/L</td>
<td>5.0000</td>
<td>9.91</td>
<td>97.4</td>
<td>90-110</td>
<td>1.21</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Fluoride</td>
<td>5.65</td>
<td>0.0100</td>
<td>0.0500</td>
<td>mg/L</td>
<td>5.0000</td>
<td>0.364</td>
<td>106</td>
<td>90-110</td>
<td>2.19</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Sulfate</td>
<td>36.8</td>
<td>0.500</td>
<td>2.00</td>
<td>mg/L</td>
<td>5.0000</td>
<td>32.1</td>
<td>93.3</td>
<td>90-110</td>
<td>0.380</td>
<td>20</td>
<td></td>
</tr>
</tbody>
</table>

**Batch 17H0209 - EPA 300.0**

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>MDL</th>
<th>PQL</th>
<th>Units</th>
<th>Spike Level</th>
<th>Source</th>
<th>%Rec</th>
<th>%Rec Limits</th>
<th>RPD</th>
<th>RPD Limit</th>
<th>Qualifier</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chloride</td>
<td>50.0</td>
<td>2.00</td>
<td>50.0</td>
<td>mg/L</td>
<td>500.00</td>
<td>2370</td>
<td>97.1</td>
<td>90-110</td>
<td>1.02</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Fluoride</td>
<td>524</td>
<td>1.00</td>
<td>5.00</td>
<td>mg/L</td>
<td>500.00</td>
<td>2.66</td>
<td>104</td>
<td>90-110</td>
<td>2.75</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Sulfate</td>
<td>2020</td>
<td>50.0</td>
<td>200</td>
<td>mg/L</td>
<td>500.00</td>
<td>1460</td>
<td>111</td>
<td>90-110</td>
<td>0.694</td>
<td>20</td>
<td>J-</td>
</tr>
</tbody>
</table>

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
<table>
<thead>
<tr>
<th>Site: Big Bend</th>
<th>Data: 08/16/17</th>
<th>File Name:</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>LIMS #</th>
<th>Location Code</th>
<th>Time</th>
<th>FE</th>
<th>pH</th>
<th>Temp °C</th>
<th>Color (ppm)</th>
<th>DO mg/L</th>
<th>Turbidity (NTU)</th>
<th>Redox (mv)</th>
<th>Sulfite (mg/L)</th>
<th>Color</th>
<th>Color</th>
<th>Sample(s) / Initials</th>
</tr>
</thead>
<tbody>
<tr>
<td>L17H005-01 A</td>
<td>BBS-CCR-1</td>
<td>11:24</td>
<td>6.82</td>
<td>25.80</td>
<td>1119</td>
<td>0.28</td>
<td>1.88</td>
<td>-169.30</td>
<td>L. T. YELLOW</td>
<td>MILD</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>L17H005-02 A</td>
<td>BBS-CCR-1</td>
<td>10:55</td>
<td>6.92</td>
<td>28.43</td>
<td>1565</td>
<td>0.25</td>
<td>3.22</td>
<td>-233.30</td>
<td>L. T. YELLOW</td>
<td>MILD</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### pH Meter Calibration

### Conductivity Meter Calibration

### Sulfite Info
- QC Result mg/L: 0.16
- Time: 7:20
- Meas: 2:00
- DO: 0.0 mg/L
- Redox: 0.0 mg/L

### Purge Complete At
- Gallons to Purge: 0.12
- Stability Values: 6.82
- Time: 11:06
- Purge Method: 0.12
- Screen (gal/h): 10
- Initial Depth (ft): 2
- Well Depth (ft): 15.31
- Water Capacity (gal): 15.31

### Purge Complete At
- Gallons to Purge: 0.12
- Stability Values: 6.82
- Time: 10:45
- Purge Method: 0.12
- Screen (gal/h): 10
- Initial Depth (ft): 2
- Well Depth (ft): 15.31
- Water Capacity (gal): 15.31

**Comments:**
- Total Time: 10:45
- Total Miles:

---

**Preservation**
- L 012551: 200 ml bottles (outlet): 1 ml H2SO4 to pH <2
- L 012551: 200 ml bottles (outlet): 1 ml H2SO4 to pH <2
- L 012551: 200 ml bottles (outlet): 1 ml H2SO4 to pH <2
- L 012551: 200 ml bottles (outlet): 1 ml H2SO4 to pH <2
- L 012551: 200 ml bottles (outlet): 1 ml H2SO4 to pH <2

---

**Notes:**
- A checked box indicates that the sample was verified to a pH of <2.
<table>
<thead>
<tr>
<th>Site:</th>
<th>Big Bend</th>
<th>Date:</th>
<th>08/16/17</th>
<th>File Name:</th>
<th>Weather:</th>
<th>Partly Cloudy &amp; Hot</th>
<th>Sampler(s) / RAB / TECO / Initials</th>
</tr>
</thead>
<tbody>
<tr>
<td>LIMS #</td>
<td>Location Code</td>
<td>Time</td>
<td>FE</td>
<td>pH (SU)</td>
<td>Temp (C)</td>
<td>Cond (µS/cm)</td>
<td>DO (mg/L)</td>
</tr>
<tr>
<td>L17H005-03 A</td>
<td>BBS-COR-3</td>
<td>10:27</td>
<td>9.42</td>
<td>26.86</td>
<td>1788</td>
<td>0.29</td>
<td>0.47</td>
</tr>
<tr>
<td>L17H005-03 A</td>
<td>250ml Cyan (2)</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>1L bottles (n=5): 5 ml HNO3 to pH &lt;2</td>
<td>012551</td>
<td>250ml bottles: 1 ml H2SO4 to pH &lt;2</td>
<td>012551</td>
<td>40 ml Vial (TOC): 0.5 ml H2SO4 to pH &lt;2</td>
<td>012551</td>
<td>40 ml Vial (TOC): 0.5 ml H2SO4 to pH &lt;2</td>
<td>012551</td>
</tr>
<tr>
<td>Buffer ID</td>
<td>Buffer Value</td>
<td>Sal</td>
<td>Time</td>
<td>ICY</td>
<td>Time</td>
<td>CCV</td>
<td>Time</td>
</tr>
<tr>
<td>L17H005-03 A</td>
<td>919670D</td>
<td>7</td>
<td>7</td>
<td>7.05</td>
<td>8.11</td>
<td>7.54</td>
<td>13:15</td>
</tr>
<tr>
<td>L17H005-03 A</td>
<td>918611D</td>
<td>10</td>
<td>10</td>
<td>8.07</td>
<td>QC: (pH +/- 0.2) (Cond +/- 5%) (O2 +/- 0.2mg/L) (Redox +/- 10mv)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>L17H005-03 A</td>
<td>10</td>
<td>10</td>
<td>8.07</td>
<td>QC: (pH +/- 0.2) (Cond +/- 5%) (O2 +/- 0.2mg/L) (Redox +/- 10mv)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>L17H005-03 A</td>
<td>918737D</td>
<td>4</td>
<td>4</td>
<td>8.07</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>L17H005-03 A</td>
<td>919355A</td>
<td>1000</td>
<td>1000</td>
<td>8.17</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>L17H005-03 A</td>
<td>918416C</td>
<td>10000</td>
<td>8869</td>
<td>8.21</td>
<td>9965</td>
<td>12:57</td>
<td>0.15</td>
</tr>
<tr>
<td>L17H005-03 A</td>
<td>918732D</td>
<td>5.72</td>
<td>4.78</td>
<td>2.54</td>
<td>4.78</td>
<td>12:59</td>
<td>0.15</td>
</tr>
<tr>
<td>L17H005-03 A</td>
<td>919355A</td>
<td>1000</td>
<td>1000</td>
<td>8.17</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>L17H005-03 A</td>
<td>918416C</td>
<td>10000</td>
<td>8869</td>
<td>8.21</td>
<td>9965</td>
<td>12:57</td>
<td>0.15</td>
</tr>
<tr>
<td>L17H005-03 A</td>
<td>918732D</td>
<td>5.72</td>
<td>4.78</td>
<td>2.54</td>
<td>4.78</td>
<td>12:59</td>
<td>0.15</td>
</tr>
<tr>
<td>L17H005-03 A</td>
<td>1A</td>
<td>10:09</td>
<td>0.53</td>
<td>0.53</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
</tr>
<tr>
<td>L17H005-03 A</td>
<td>10:01</td>
<td>0.53</td>
<td>0.53</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
</tr>
<tr>
<td>L17H005-03 A</td>
<td>10:13</td>
<td>0.53</td>
<td>0.53</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
</tr>
<tr>
<td>L17H005-03 A</td>
<td>10:03</td>
<td>0.53</td>
<td>0.53</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
</tr>
<tr>
<td>L17H005-03 A</td>
<td>1A</td>
<td>10:09</td>
<td>0.53</td>
<td>0.53</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
</tr>
<tr>
<td>L17H005-03 A</td>
<td>10:01</td>
<td>0.53</td>
<td>0.53</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
</tr>
<tr>
<td>L17H005-03 A</td>
<td>10:13</td>
<td>0.53</td>
<td>0.53</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
</tr>
<tr>
<td>L17H005-03 A</td>
<td>10:03</td>
<td>0.53</td>
<td>0.53</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
</tr>
</tbody>
</table>

**Well No.**
- **Depth (ft)**
- **Discharge (gpm)**

**Purge Method:**
- **Rate (gpm)**
- **Volume (gpm)**
- **Total Vol. (gpm)**
- **Water Depth (ft)**

**Purge Complete At:**
- **Gallons to Purge**
- **Stability Values**

**Total Time:**
- **Total Miles:**

**Notes:**
- **Level Meter:**
- **Pump:**
- **Dedicated:**
- **Tubing:**
- **Yes/No:**

---

**Sample Preparation:**
- **Pres. ID:**
- **Pres. ID:**
- **Pres. ID:**
- **Pres. ID:**

**Sample Receipt:**
- **Samples On Site:**
- **Sample Receipt:**

**Preservation:**
- **Pres. ID:**
- **Pres. ID:**
- **Pres. ID:**
- **Pres. ID:**

**Conductivity Meter Calib:**
- **Pres. ID:**
- **Pres. ID:**
- **Pres. ID:**
- **Pres. ID:**

**Turbidity Calibration:**
- **Pres. ID:**
- **Pres. ID:**
- **Pres. ID:**
- **Pres. ID:**

**ZoBell Soil ID:**
- **Pres. ID:**
- **Pres. ID:**
- **Pres. ID:**
- **Pres. ID:**

---

**Purge Method:**
- **Rate (gpm):**
- **Volume (gpm):**
- **Total Vol. (gpm):**
- **Water Depth (ft):**

**Purge Complete At:**
- **Gallons to Purge**
- **Stability Values**

---

**Comments:**
- **Total Time:**
- **Total Miles:**
### Laboratory Analysis Report

#### Sample Information
- **Site:** Big Bend
- **Date:** 08/16/17
- **File Name:**
- **Weather:**
- **Partly Cloudy & Hot**
- **Sample(s)/Initials:** 

#### LIMS Data

<table>
<thead>
<tr>
<th>LIMS #</th>
<th>Location Code</th>
<th>Time</th>
<th>PE*</th>
<th>pH (SL)</th>
<th>Temp °C</th>
<th>Cond (μS/cm)</th>
<th>DO (mg/L)</th>
<th>Turbidity (NTU)</th>
<th>Redox (mV)</th>
<th>Sulfide (mg/L)</th>
<th>Color</th>
<th>Odor</th>
<th>RAB /TECO Initials</th>
<th>NVGD</th>
</tr>
</thead>
<tbody>
<tr>
<td>L17H005-04 A</td>
<td>BBS-CRC-BW-1</td>
<td>9:32</td>
<td>-</td>
<td>6.52</td>
<td>28.08</td>
<td>4995</td>
<td>0.45</td>
<td>6.03</td>
<td>3.56</td>
<td>CLEAR</td>
<td>NONE</td>
<td>5950</td>
<td>REDOX</td>
<td>SC88W</td>
</tr>
<tr>
<td>L17H005-05 A</td>
<td>BBS-CRC-BW-2</td>
<td>9:16</td>
<td>-</td>
<td>6.68</td>
<td>27.93</td>
<td>1985</td>
<td>0.43</td>
<td>3.66</td>
<td>-</td>
<td>CLEAR</td>
<td>NONE</td>
<td>5950</td>
<td>REDOX</td>
<td>SC88W</td>
</tr>
</tbody>
</table>

#### pH Meter Calibration

<table>
<thead>
<tr>
<th>Buffer ID</th>
<th>Buffer Value</th>
<th>Cal</th>
<th>Time</th>
<th>ICV</th>
<th>CVC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buffer 1</td>
<td>1</td>
<td>9.07</td>
<td>8.07</td>
<td>7.05</td>
<td>6.11</td>
</tr>
<tr>
<td>Buffer 2</td>
<td>2</td>
<td>9.04</td>
<td>8.07</td>
<td>A checked box indicates ICV/CVC passed</td>
<td></td>
</tr>
</tbody>
</table>

#### Conductivity Meter Calibration

<table>
<thead>
<tr>
<th>Standard</th>
<th>Std Value</th>
<th>Cal</th>
<th>Time</th>
<th>ICV</th>
<th>CVC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard 1</td>
<td>1000</td>
<td>1000</td>
<td>9069</td>
<td>8.21</td>
<td>9855</td>
</tr>
<tr>
<td>Standard 2</td>
<td>4</td>
<td>4</td>
<td>4.75</td>
<td>4.28</td>
<td>5.24</td>
</tr>
</tbody>
</table>

#### Purging Information

- **Well:** BBS-CRC-BW-1
- **Volume (gal):** 3,500
- **Total Volume (gal):** 5,000
- **Water Depth (ft):** 28.74
- **Volume (gal):** 344

#### Purge Method

- **Rate (ml/min):** 1800
- **Total Volume (gal):** 28.74
- **Water Depth (ft):** 3.73

#### Purge Complete At

- **Gallons to Purge:** 0.32
- **Stability Values:** 6.52
- **Stable Indicator:** YES

#### Purge End

- **Time:** 9:45

---

#### Purge Method

- **Rate (ml/min):** 1800
- **Total Volume (gal):** 28.74
- **Water Depth (ft):** 3.73

#### Purge Complete At

- **Gallons to Purge:** 0.12
- **Stability Values:** 6.85
- **Stable Indicator:** YES

---

### Comments:

- Total Time: 1:13:43
- Total Miles: 10
ANALYTICAL REPORT
TestAmerica Laboratories, Inc.
TestAmerica Tampa
6712 Benjamin Road
Suite 100
Tampa, FL 33634
Tel: (813)885-7427
TestAmerica Job ID: 660-82456-1
Client Project/Site: L17H005
For:
Tampa Electric Company
5012 Causeway Boulevard
Tampa, Florida 33619
Attn: Ms. Peggy Penner

Authorized for release by:
8/29/2017 9:14:38 AM
Keaton Conner, Project Manager I
(813)885-7427
keaton.conner@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.
# Table of Contents

- Cover Page .......................................................... 1
- Table of Contents .................................................. 2
- Sample Summary ..................................................... 3
- Definitions ............................................................. 4
- Case Narrative ........................................................ 5
- Detection Summary .................................................. 6
- Client Sample Results ............................................... 7
- QC Sample Results .................................................. 8
- QC Association ....................................................... 9
- Chronicle ............................................................... 10
- Certification Summary ............................................. 11
- Method Summary .................................................... 12
- Chain of Custody .................................................... 13
- Receipt Checklists .................................................. 16
## Sample Summary

Client: Tampa Electric Company  
Project/Site: L17H005  
TestAmerica Job ID: 660-82456-1

<table>
<thead>
<tr>
<th>Lab Sample ID</th>
<th>Client Sample ID</th>
<th>Matrix</th>
<th>Collected</th>
<th>Received</th>
</tr>
</thead>
<tbody>
<tr>
<td>660-82456-1</td>
<td>L17H005-01</td>
<td>Water</td>
<td>08/16/17 11:24</td>
<td>08/22/17 12:15</td>
</tr>
<tr>
<td>660-82456-2</td>
<td>L17H005-02</td>
<td>Water</td>
<td>08/16/17 10:55</td>
<td>08/22/17 12:15</td>
</tr>
<tr>
<td>660-82456-3</td>
<td>L17H005-03</td>
<td>Water</td>
<td>08/16/17 10:27</td>
<td>08/22/17 12:15</td>
</tr>
<tr>
<td>660-82456-4</td>
<td>L17H005-04</td>
<td>Water</td>
<td>08/16/17 09:52</td>
<td>08/22/17 12:15</td>
</tr>
<tr>
<td>660-82456-5</td>
<td>L17H005-05</td>
<td>Water</td>
<td>08/16/17 09:18</td>
<td>08/22/17 12:15</td>
</tr>
</tbody>
</table>

TestAmerica Tampa
Definitions/Glossary

Qualifiers

Metals

<table>
<thead>
<tr>
<th>Qualifier</th>
<th>Qualifier Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.</td>
</tr>
<tr>
<td>V</td>
<td>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.</td>
</tr>
</tbody>
</table>

Glossary

These commonly used abbreviations may or may not be present in this report.

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>d</td>
<td>Listed under the “D” column to designate that the result is reported on a dry weight basis</td>
</tr>
<tr>
<td>%R</td>
<td>Percent Recovery</td>
</tr>
<tr>
<td>CFL</td>
<td>Contains Free Liquid</td>
</tr>
<tr>
<td>CNF</td>
<td>Contains No Free Liquid</td>
</tr>
<tr>
<td>DER</td>
<td>Duplicate Error Ratio (normalized absolute difference)</td>
</tr>
<tr>
<td>Dil Fac</td>
<td>Dilution Factor</td>
</tr>
<tr>
<td>DL</td>
<td>Detection Limit (DoD/DOE)</td>
</tr>
<tr>
<td>DL, RA, RE, IN</td>
<td>Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample</td>
</tr>
<tr>
<td>DLC</td>
<td>Decision Level Concentration (Radiochemistry)</td>
</tr>
<tr>
<td>EDL</td>
<td>Estimated Detection Limit (Dioxin)</td>
</tr>
<tr>
<td>LOD</td>
<td>Limit of Detection (DoD/DOE)</td>
</tr>
<tr>
<td>LOQ</td>
<td>Limit of Quantitation (DoD/DOE)</td>
</tr>
<tr>
<td>MDA</td>
<td>Minimum Detectable Activity (Radiochemistry)</td>
</tr>
<tr>
<td>MDC</td>
<td>Minimum Detectable Concentration (Radiochemistry)</td>
</tr>
<tr>
<td>MDL</td>
<td>Method Detection Limit</td>
</tr>
<tr>
<td>ML</td>
<td>Minimum Level (Dioxin)</td>
</tr>
<tr>
<td>NC</td>
<td>Not Calculated</td>
</tr>
<tr>
<td>ND</td>
<td>Not Detected at the reporting limit (or MDL or EDL if shown)</td>
</tr>
<tr>
<td>PQL</td>
<td>Practical Quantitation Limit</td>
</tr>
<tr>
<td>QC</td>
<td>Quality Control</td>
</tr>
<tr>
<td>RER</td>
<td>Relative Error Ratio (Radiochemistry)</td>
</tr>
<tr>
<td>RL</td>
<td>Reporting Limit or Requested Limit (Radiochemistry)</td>
</tr>
<tr>
<td>RPD</td>
<td>Relative Percent Difference, a measure of the relative difference between two points</td>
</tr>
<tr>
<td>TEF</td>
<td>Toxicity Equivalent Factor (Dioxin)</td>
</tr>
<tr>
<td>TEQ</td>
<td>Toxicity Equivalent Quotient (Dioxin)</td>
</tr>
</tbody>
</table>
Job ID: 660-82456-1

Laboratory: TestAmerica Tampa

Narrative

Job Narrative
660-82456-1

Receipt
The samples were received on 8/22/2017 12:15 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 1.6°C.

Metals
Method 200.7 Rev 4.4: The method blank for preparation batch 400-365468 and analytical batch 400-365789 contained Lithium 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.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.
## Detection Summary

**Client:** Tampa Electric Company  
**Project/Site:** L17H005  
**TestAmerica Job ID:** 660-82456-1

### Lithium

<table>
<thead>
<tr>
<th>Client Sample ID: L17H005-01</th>
<th>Lab Sample ID: 660-82456-1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Analyte</td>
<td>Result</td>
</tr>
<tr>
<td>Lithium</td>
<td>0.013</td>
</tr>
</tbody>
</table>

### Lithium

<table>
<thead>
<tr>
<th>Client Sample ID: L17H005-02</th>
<th>Lab Sample ID: 660-82456-2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Analyte</td>
<td>Result</td>
</tr>
<tr>
<td>Lithium</td>
<td>0.016</td>
</tr>
</tbody>
</table>

### Lithium

<table>
<thead>
<tr>
<th>Client Sample ID: L17H005-03</th>
<th>Lab Sample ID: 660-82456-3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Analyte</td>
<td>Result</td>
</tr>
<tr>
<td>Lithium</td>
<td>0.011</td>
</tr>
</tbody>
</table>

### Lithium

<table>
<thead>
<tr>
<th>Client Sample ID: L17H005-04</th>
<th>Lab Sample ID: 660-82456-4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Analyte</td>
<td>Result</td>
</tr>
<tr>
<td>Lithium</td>
<td>0.017</td>
</tr>
</tbody>
</table>

### Lithium

<table>
<thead>
<tr>
<th>Client Sample ID: L17H005-05</th>
<th>Lab Sample ID: 660-82456-5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Analyte</td>
<td>Result</td>
</tr>
<tr>
<td>Lithium</td>
<td>0.0062</td>
</tr>
</tbody>
</table>

This Detection Summary does not include radiochemical test results.
<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>Qualifier</th>
<th>PQL</th>
<th>MDL</th>
<th>Unit</th>
<th>D Prepared</th>
<th>Analyzed</th>
<th>Dil Fac</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithium</td>
<td>0.013</td>
<td>I</td>
<td>0.050</td>
<td>0.0010</td>
<td>mg/L</td>
<td>08/24/17</td>
<td>08/25/17</td>
<td>1</td>
</tr>
<tr>
<td>Lithium</td>
<td>0.016</td>
<td>I</td>
<td>0.050</td>
<td>0.0010</td>
<td>mg/L</td>
<td>08/24/17</td>
<td>08/25/17</td>
<td>1</td>
</tr>
<tr>
<td>Lithium</td>
<td>0.011</td>
<td>I</td>
<td>0.050</td>
<td>0.0010</td>
<td>mg/L</td>
<td>08/24/17</td>
<td>08/25/17</td>
<td>1</td>
</tr>
<tr>
<td>Lithium</td>
<td>0.017</td>
<td>I</td>
<td>0.050</td>
<td>0.0010</td>
<td>mg/L</td>
<td>08/24/17</td>
<td>08/25/17</td>
<td>1</td>
</tr>
<tr>
<td>Lithium</td>
<td>0.0062</td>
<td>I V</td>
<td>0.050</td>
<td>0.0010</td>
<td>mg/L</td>
<td>08/24/17</td>
<td>08/25/17</td>
<td>1</td>
</tr>
</tbody>
</table>
Client: Tampa Electric Company
Project/Site: L17H005

### Method: 200.7 Rev 4.4 - Metals (ICP)

#### Lab Sample ID: MB 400-365468/1-A
- **Matrix:** Water
- **Analysis Batch:** 365789

<table>
<thead>
<tr>
<th>Analyte</th>
<th>MB</th>
<th>Result</th>
<th>Qualifier</th>
<th>PQL</th>
<th>MDL</th>
<th>Unit</th>
<th>D</th>
<th>Prepared</th>
<th>Analyzed</th>
<th>Dil Fac</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithium</td>
<td>MB</td>
<td>0.00100</td>
<td>1</td>
<td>0.050</td>
<td>0.0010</td>
<td>mg/L</td>
<td>08/24/17 10:11</td>
<td>08/25/17 15:58</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

#### Lab Sample ID: LCS 400-365468/2-A
- **Matrix:** Water
- **Analysis Batch:** 365789

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Spike</th>
<th>LCS</th>
<th>%Rec.</th>
<th>Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithium</td>
<td>1.00</td>
<td>1.04</td>
<td>104</td>
<td>85 .115</td>
</tr>
</tbody>
</table>

#### Lab Sample ID: 660-82456-1 MS
- **Matrix:** Water
- **Analysis Batch:** 365789

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Sample Result</th>
<th>Spike</th>
<th>MS</th>
<th>%Rec.</th>
<th>Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithium</td>
<td>0.013</td>
<td>1.00</td>
<td>1.20</td>
<td>118</td>
<td>70 .130</td>
</tr>
</tbody>
</table>

#### Lab Sample ID: 660-82456-1 MSD
- **Matrix:** Water
- **Analysis Batch:** 365789

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Sample Result</th>
<th>Spike</th>
<th>MSD</th>
<th>%Rec.</th>
<th>RPD</th>
<th>Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithium</td>
<td>0.013</td>
<td>1.00</td>
<td>1.17</td>
<td>116</td>
<td>70 .130</td>
<td>2</td>
</tr>
</tbody>
</table>
## Metals

### Prep Batch: 365468

<table>
<thead>
<tr>
<th>Lab Sample ID</th>
<th>Client Sample ID</th>
<th>Prep Type</th>
<th>Matrix</th>
<th>Method</th>
<th>Prep Batch</th>
</tr>
</thead>
<tbody>
<tr>
<td>660-82456-1</td>
<td>L17H005-01</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7</td>
<td></td>
</tr>
<tr>
<td>660-82456-2</td>
<td>L17H005-02</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7</td>
<td></td>
</tr>
<tr>
<td>660-82456-3</td>
<td>L17H005-03</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7</td>
<td></td>
</tr>
<tr>
<td>660-82456-4</td>
<td>L17H005-04</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7</td>
<td></td>
</tr>
<tr>
<td>660-82456-5</td>
<td>L17H005-05</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7</td>
<td></td>
</tr>
<tr>
<td>MB 400-365468/1-A</td>
<td>Method Blank</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7</td>
<td></td>
</tr>
<tr>
<td>LCS 400-365468/2-A</td>
<td>Lab Control Sample</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7</td>
<td></td>
</tr>
<tr>
<td>660-82456-1 MS</td>
<td>L17H005-01</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7</td>
<td></td>
</tr>
<tr>
<td>660-82456-1 MSD</td>
<td>L17H005-01</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7</td>
<td></td>
</tr>
</tbody>
</table>

### Analysis Batch: 365789

<table>
<thead>
<tr>
<th>Lab Sample ID</th>
<th>Client Sample ID</th>
<th>Prep Type</th>
<th>Matrix</th>
<th>Method</th>
<th>Prep Batch</th>
</tr>
</thead>
<tbody>
<tr>
<td>660-82456-1</td>
<td>L17H005-01</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7 Rev 4.4</td>
<td>365468</td>
</tr>
<tr>
<td>660-82456-2</td>
<td>L17H005-02</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7 Rev 4.4</td>
<td>365468</td>
</tr>
<tr>
<td>660-82456-3</td>
<td>L17H005-03</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7 Rev 4.4</td>
<td>365468</td>
</tr>
<tr>
<td>660-82456-4</td>
<td>L17H005-04</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7 Rev 4.4</td>
<td>365468</td>
</tr>
<tr>
<td>660-82456-5</td>
<td>L17H005-05</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7 Rev 4.4</td>
<td>365468</td>
</tr>
<tr>
<td>MB 400-365468/1-A</td>
<td>Method Blank</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7 Rev 4.4</td>
<td>365468</td>
</tr>
<tr>
<td>LCS 400-365468/2-A</td>
<td>Lab Control Sample</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7 Rev 4.4</td>
<td>365468</td>
</tr>
<tr>
<td>660-82456-1 MS</td>
<td>L17H005-01</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7 Rev 4.4</td>
<td>365468</td>
</tr>
<tr>
<td>660-82456-1 MSD</td>
<td>L17H005-01</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7 Rev 4.4</td>
<td>365468</td>
</tr>
</tbody>
</table>
### Client Sample ID: L17H005-01
**Date Collected:** 08/16/17 11:24  
**Date Received:** 08/22/17 12:15

<table>
<thead>
<tr>
<th>Prep Type</th>
<th>Batch Type</th>
<th>Batch Method</th>
<th>Run</th>
<th>Dil Factor</th>
<th>Initial Amount</th>
<th>Final Amount</th>
<th>Batch Number</th>
<th>Prepared or Analyzed</th>
<th>Analyst</th>
<th>Lab</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total/NA</td>
<td>Prep</td>
<td>200.7</td>
<td></td>
<td>1</td>
<td>50 mL</td>
<td>50 mL</td>
<td>365468</td>
<td>08/24/17 10:11</td>
<td>KWN</td>
<td>TAL PEN</td>
</tr>
<tr>
<td>Total/NA</td>
<td>Analysis</td>
<td>200.7 Rev 4.4</td>
<td></td>
<td>1</td>
<td>50 mL</td>
<td>50 mL</td>
<td>365789</td>
<td>08/25/17 16:21</td>
<td>SEH</td>
<td>TAL PEN</td>
</tr>
</tbody>
</table>

**Matrix:** Water  
**Instrument ID:** 6500 ICP Duo

### Client Sample ID: L17H005-02
**Date Collected:** 08/16/17 10:55  
**Date Received:** 08/22/17 12:15

<table>
<thead>
<tr>
<th>Prep Type</th>
<th>Batch Type</th>
<th>Batch Method</th>
<th>Run</th>
<th>Dil Factor</th>
<th>Initial Amount</th>
<th>Final Amount</th>
<th>Batch Number</th>
<th>Prepared or Analyzed</th>
<th>Analyst</th>
<th>Lab</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total/NA</td>
<td>Prep</td>
<td>200.7</td>
<td></td>
<td>1</td>
<td>50 mL</td>
<td>50 mL</td>
<td>365468</td>
<td>08/24/17 10:11</td>
<td>KWN</td>
<td>TAL PEN</td>
</tr>
<tr>
<td>Total/NA</td>
<td>Analysis</td>
<td>200.7 Rev 4.4</td>
<td></td>
<td>1</td>
<td>50 mL</td>
<td>50 mL</td>
<td>365789</td>
<td>08/25/17 16:48</td>
<td>SEH</td>
<td>TAL PEN</td>
</tr>
</tbody>
</table>

**Matrix:** Water  
**Instrument ID:** 6500 ICP Duo

### Client Sample ID: L17H005-03
**Date Collected:** 08/16/17 10:27  
**Date Received:** 08/22/17 12:15

<table>
<thead>
<tr>
<th>Prep Type</th>
<th>Batch Type</th>
<th>Batch Method</th>
<th>Run</th>
<th>Dil Factor</th>
<th>Initial Amount</th>
<th>Final Amount</th>
<th>Batch Number</th>
<th>Prepared or Analyzed</th>
<th>Analyst</th>
<th>Lab</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total/NA</td>
<td>Prep</td>
<td>200.7</td>
<td></td>
<td>1</td>
<td>50 mL</td>
<td>50 mL</td>
<td>365468</td>
<td>08/24/17 10:11</td>
<td>KWN</td>
<td>TAL PEN</td>
</tr>
<tr>
<td>Total/NA</td>
<td>Analysis</td>
<td>200.7 Rev 4.4</td>
<td></td>
<td>1</td>
<td>50 mL</td>
<td>50 mL</td>
<td>365789</td>
<td>08/25/17 16:52</td>
<td>SEH</td>
<td>TAL PEN</td>
</tr>
</tbody>
</table>

**Matrix:** Water  
**Instrument ID:** 6500 ICP Duo

### Client Sample ID: L17H005-04
**Date Collected:** 08/16/17 09:52  
**Date Received:** 08/22/17 12:15

<table>
<thead>
<tr>
<th>Prep Type</th>
<th>Batch Type</th>
<th>Batch Method</th>
<th>Run</th>
<th>Dil Factor</th>
<th>Initial Amount</th>
<th>Final Amount</th>
<th>Batch Number</th>
<th>Prepared or Analyzed</th>
<th>Analyst</th>
<th>Lab</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total/NA</td>
<td>Prep</td>
<td>200.7</td>
<td></td>
<td>1</td>
<td>50 mL</td>
<td>50 mL</td>
<td>365468</td>
<td>08/24/17 10:11</td>
<td>KWN</td>
<td>TAL PEN</td>
</tr>
<tr>
<td>Total/NA</td>
<td>Analysis</td>
<td>200.7 Rev 4.4</td>
<td></td>
<td>1</td>
<td>50 mL</td>
<td>50 mL</td>
<td>365789</td>
<td>08/25/17 16:55</td>
<td>SEH</td>
<td>TAL PEN</td>
</tr>
</tbody>
</table>

**Matrix:** Water  
**Instrument ID:** 6500 ICP Duo

### Client Sample ID: L17H005-05
**Date Collected:** 08/16/17 09:18  
**Date Received:** 08/22/17 12:15

<table>
<thead>
<tr>
<th>Prep Type</th>
<th>Batch Type</th>
<th>Batch Method</th>
<th>Run</th>
<th>Dil Factor</th>
<th>Initial Amount</th>
<th>Final Amount</th>
<th>Batch Number</th>
<th>Prepared or Analyzed</th>
<th>Analyst</th>
<th>Lab</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total/NA</td>
<td>Prep</td>
<td>200.7</td>
<td></td>
<td>1</td>
<td>50 mL</td>
<td>50 mL</td>
<td>365468</td>
<td>08/24/17 10:11</td>
<td>KWN</td>
<td>TAL PEN</td>
</tr>
<tr>
<td>Total/NA</td>
<td>Analysis</td>
<td>200.7 Rev 4.4</td>
<td></td>
<td>1</td>
<td>50 mL</td>
<td>50 mL</td>
<td>365789</td>
<td>08/25/17 16:59</td>
<td>SEH</td>
<td>TAL PEN</td>
</tr>
</tbody>
</table>

**Matrix:** Water  
**Instrument ID:** 6500 ICP Duo

**Laboratory References:**  
TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001
### Accreditation/Certification Summary

Client: Tampa Electric Company  
Project/Site: L17H005  
TestAmerica Job ID: 660-82456-1

#### Laboratory: TestAmerica Tampa
The accreditations/certifications listed below are applicable to this report.

<table>
<thead>
<tr>
<th>Authority</th>
<th>Program</th>
<th>EPA Region</th>
<th>Identification Number</th>
<th>Expiration Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Florida</td>
<td>NELAP</td>
<td>4</td>
<td>E84282</td>
<td>06-30-18</td>
</tr>
</tbody>
</table>

#### Laboratory: TestAmerica Pensacola
The accreditations/certifications listed below are applicable to this report.

<table>
<thead>
<tr>
<th>Authority</th>
<th>Program</th>
<th>EPA Region</th>
<th>Identification Number</th>
<th>Expiration Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Florida</td>
<td>NELAP</td>
<td>4</td>
<td>E81010</td>
<td>06-30-18</td>
</tr>
</tbody>
</table>
**Method Summary**

Client: Tampa Electric Company  
Project/Site: L17H005

<table>
<thead>
<tr>
<th>Method</th>
<th>Method Description</th>
<th>Protocol</th>
<th>Laboratory</th>
</tr>
</thead>
<tbody>
<tr>
<td>200.7 Rev 4.4</td>
<td>Metals (ICP)</td>
<td>EPA</td>
<td>TAL PEN</td>
</tr>
</tbody>
</table>

**Protocol References:**
EPA = US Environmental Protection Agency

**Laboratory References:**
TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001
**SUBCONTRACT ORDER**

**Tampa Electric Company, Laboratory Services**

**L17H005**

**SENDING LABORATORY:**
Tampa Electric Company, Laboratory Services
5012 Causeway Blvd
Tampa, FL 33619
Phone: (813) 630-7490
Fax: (813) 630-7360
Project Manager: Peggy Penner

**RECEIVING LABORATORY:**
TestAmerica Laboratories, Inc. - Tampa
6712 Benjamin Rd., Suite 100
Tampa, FL 33634
Phone: (813) 885-7427
Fax: -

**Due Date:** 08/30/17 16:00

<table>
<thead>
<tr>
<th>Analysis</th>
<th>Expires</th>
<th>Laboratory ID</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample ID: L17H005-01</td>
<td>BBS-CCR-1</td>
<td>Water</td>
<td></td>
</tr>
<tr>
<td>Lithium, Total EPA 6010</td>
<td>02/12/18 11:24</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Containers Supplied:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poly HNO3 - 250mL (A)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sample ID: L17H005-02</td>
<td>BBS-CCR-2</td>
<td>Water</td>
<td></td>
</tr>
<tr>
<td>Lithium, Total EPA 6010</td>
<td>02/12/18 10:55</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Containers Supplied:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poly HNO3 - 250mL (A)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sample ID: L17H005-03</td>
<td>BBS-CCR-3</td>
<td>Water</td>
<td></td>
</tr>
<tr>
<td>Lithium, Total EPA 6010</td>
<td>02/12/18 10:27</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Containers Supplied:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poly HNO3 - 250mL (A)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sample ID: L17H005-04</td>
<td>BBS-CCR-BW1</td>
<td>Water</td>
<td></td>
</tr>
<tr>
<td>Lithium, Total EPA 6010</td>
<td>02/12/18 09:52</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Containers Supplied:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poly HNO3 - 250mL (A)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sample ID: L17H005-05</td>
<td>BBS-CCR-BW2</td>
<td>Water</td>
<td></td>
</tr>
<tr>
<td>Lithium, Total EPA 6010</td>
<td>02/12/18 09:18</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Containers Supplied:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poly HNO3 - 250mL (A)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Loc:** 660

**82456**

---

**Released By:** 8-16-17 14:00
**Date & Time:**

**Received By:** 8-22-17 12:15
**Date & Time:**

---

**Released By:**

**Date & Time:**

**Received By:** 1.4.16 CV-09

Page 13 of 17
# Chain of Custody Record

## Client Information (Sub Contract Lab)

<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Client Contact</td>
<td></td>
</tr>
<tr>
<td>Shipping/Receiving</td>
<td></td>
</tr>
<tr>
<td>Company</td>
<td>TestAmerica Laboratories, Inc.</td>
</tr>
<tr>
<td>Address</td>
<td>3355 McLemore Drive, Pensacola, FL 32514</td>
</tr>
<tr>
<td>Phone</td>
<td>850-474-1001(Tel) 850-478-2671(Fax)</td>
</tr>
<tr>
<td>Project Name</td>
<td>L17C</td>
</tr>
<tr>
<td>Project #</td>
<td>66004821</td>
</tr>
</tbody>
</table>

## Sample Identification - Client ID (Lab ID)

<table>
<thead>
<tr>
<th>Sample ID</th>
<th>Sample Date</th>
<th>Sample Time</th>
<th>Sample Type</th>
<th>Matrix</th>
<th>Total Number of Containers</th>
</tr>
</thead>
<tbody>
<tr>
<td>L17H005-01</td>
<td>8/16/17</td>
<td>11:24</td>
<td>Water</td>
<td>X</td>
<td>1</td>
</tr>
<tr>
<td>L17H005-02</td>
<td>8/16/17</td>
<td>10:55</td>
<td>Water</td>
<td>X</td>
<td>1</td>
</tr>
<tr>
<td>L17H005-03</td>
<td>8/16/17</td>
<td>10:27</td>
<td>Water</td>
<td>X</td>
<td>1</td>
</tr>
<tr>
<td>L17H005-04</td>
<td>9/16/17</td>
<td>09:52</td>
<td>Water</td>
<td>X</td>
<td>1</td>
</tr>
<tr>
<td>L17H005-05</td>
<td>9/16/17</td>
<td>09:18</td>
<td>Water</td>
<td>X</td>
<td>1</td>
</tr>
</tbody>
</table>

## Analysis Requested

- Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
- Possible Hazard Identification
- Deliverable Requested: I, II, III, IV, Other (specify): I
- Special Instructions/GC Requirements:

## Notes

- Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyze & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analytes/substances being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to TestAmerica Laboratories, Inc.

## Special Instructions/Note:

- Cooler Temperature(s) °C and Other Remarks: 0.7°C
# Login Sample Receipt Checklist

Client: Tampa Electric Company

Login Number: 82456
List Number: 1
Creator: Edwards, Erricka

<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Radioactivity wasn't checked or is ≤ background as measured by a survey meter.</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>The cooler's custody seal, if present, is intact.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Sample custody seals, if present, are intact.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>The cooler or samples do not appear to have been compromised or tampered with.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Samples were received on ice.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Cooler Temperature is acceptable.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Cooler Temperature is recorded.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>COC is present.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>COC is filled out in ink and legible.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>COC is filled out with all pertinent information.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Is the Field Sampler's name present on COC?</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>There are no discrepancies between the containers received and the COC.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Samples are received within Holding Time (excluding tests with immediate HTs)</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Sample containers have legible labels.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Containers are not broken or leaking.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Sample collection date/times are provided.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Appropriate sample containers are used.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Sample bottles are completely filled.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Sample Preservation Verified.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Containers requiring zero headspace have no headspace or bubble is &lt;6mm (1/4`).</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Multiphase samples are not present.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Samples do not require splitting or compositing.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Residual Chlorine Checked.</td>
<td>N/A</td>
<td></td>
</tr>
</tbody>
</table>
DOH Certification #E84025  
DEP COMPOAP # 870251

Report Date: August 24, 2017

TECO  
5012 Causeway Blvd.  
Tampa, FL 33619  
Attn: Peggy Penner

Field Custody:  
Client  
Client/Field ID: L17H005-01  
Sample Collection: 08-16-17/1124  
Lab ID No: 17.9669  
Lab Custody Date: 8-17-17/1010  
Sample description: Water

---

**CERTIFICATE OF ANALYSIS**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Units</th>
<th>Results</th>
<th>Analysis Date</th>
<th>Method</th>
<th>Detection Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Combined Radium (Radium-226 + Radium-228)</td>
<td>pCi/l</td>
<td>33.4 ± 1.7</td>
<td>Calc</td>
<td>Calc</td>
<td>0.7</td>
</tr>
<tr>
<td>Radium-226</td>
<td>pCi/l</td>
<td>32.0 ± 1.7</td>
<td>8-22-17/1128</td>
<td>EPA 903.0</td>
<td>0.4</td>
</tr>
<tr>
<td>Radium-228</td>
<td>pCi/l</td>
<td>1.4 ± 0.5</td>
<td>8-23-17/1218</td>
<td>EPA Ra-05</td>
<td>0.7</td>
</tr>
</tbody>
</table>

Alpha Standard: Th-230

---

James W. Hayes  
Laboratory Manager

Test results meet all requirements of the NELAC standards. Statement of estimated uncertainty available upon request. Test results refer only to sample(s) listed. Contact person: Jim Hayes (813) 229-2879.

Page 1 of 1
DOH Certification #E84025  
DEP COMPOAP # 870251

Report Date: August 24, 2017

TECO  
5012 Causeway Blvd.  
Tampa, FL 33619

Attn: Peggy Penner

Field Custody:  
Client

Client/Field ID: L17H005-02  
BBS-CCR-2

Sample Collection: 08-16-17/1055  
Lab ID No: 17.9670

Lab Custody Date: 8-17-17/1010  
Sample description: Water

---

### CERTIFICATE OF ANALYSIS

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Units</th>
<th>Results</th>
<th>Analysis Date</th>
<th>Method</th>
<th>Detection Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Combined Radium (Radium-226 + Radium 228)</td>
<td>pCi/l</td>
<td>12.1 ± 0.9</td>
<td>Calc</td>
<td>Calc</td>
<td>0.7</td>
</tr>
<tr>
<td>Radium-226</td>
<td>pCi/l</td>
<td>11.7 ± 0.9</td>
<td>8-22-17/1128</td>
<td>EPA 903.0</td>
<td>0.4</td>
</tr>
<tr>
<td>Radium-228</td>
<td>pCi/l</td>
<td>0.4 ± 0.5</td>
<td>8-23-17/1218</td>
<td>EPA Ra-05</td>
<td>0.7</td>
</tr>
</tbody>
</table>

---

Alpha Standard: T9-230

James W. Hayes  
Laboratory Manager

Test results meet all requirements of the NELAC standards. Statement of estimated uncertainty available upon request. Test results refer only to sample(s) listed. Contact person: Jim Hayes (813) 229-2879.
DOH Certification #E84025  
DEP COMPQAQ # 870251

Report Date: August 24, 2017

TECO  
5012 Causeway Blvd.  
Tampa, FL 33619  
Attn: Peggy Penner

Field Custody:  
Client  
Client/Field ID: L17H005-03  
BBS-CCR-3

Sample Collection: 08-16-17/1027  
Lab ID No: 17.9671  
Lab Custody Date: 8-17-17/1010  
Sample description: Water

### CERTIFICATE OF ANALYSIS

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Units</th>
<th>Results</th>
<th>Analysis Date</th>
<th>Method</th>
<th>Detection Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Combined Radium</td>
<td>pCi/l</td>
<td>19.6 ± 1.2</td>
<td>Calc</td>
<td>Calc</td>
<td>0.7</td>
</tr>
<tr>
<td>(Radium-226 + Radium 228)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Radium-226</td>
<td>pCi/l</td>
<td>18.0 ± 1.2</td>
<td>8-22-17/1128</td>
<td>EPA 903.0</td>
<td>0.4</td>
</tr>
<tr>
<td>Radium-228</td>
<td>pCi/l</td>
<td>1.6 ± 0.5</td>
<td>8-23-17/1218</td>
<td>EPA Ra-05</td>
<td>0.7</td>
</tr>
</tbody>
</table>

Alpha Standard: Th-230

James W. Hayes  
Laboratory Manager

Test results meet all requirements of the NELAC standards. Statement of estimated uncertainty available upon request. Test results refer only to sample(s) listed. Contact person: Jim Hayes (813) 229-2879.
TECO  
5012 Causeway Blvd.  
Tampa, FL 33619  
Attn: Peggy Penner

Field Custody:  
Client  
Client/Field ID: L17H005-04  
BBS-CCR-BW1  
Sample Collection: 08-16-17/0952  
Lab ID No: 17.9672  
Lab Custody Date: 8-17-17/1010  
Sample description: Water

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Units</th>
<th>Results</th>
<th>Analysis Date</th>
<th>Method</th>
<th>Detection Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Combined Radium</td>
<td>pCi/l</td>
<td>30.1 ± 1.4</td>
<td>Calc</td>
<td>Calc</td>
<td>0.7</td>
</tr>
<tr>
<td>(Radium-226 + Radium 228)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Radium-226</td>
<td>pCi/l</td>
<td>26.9 ± 1.4</td>
<td>8-22-17/1128</td>
<td>EPA 903.0</td>
<td>0.3</td>
</tr>
<tr>
<td>Radium-228</td>
<td>pCi/l</td>
<td>3.2 ± 0.6</td>
<td>8-23-17/1218</td>
<td>EPA Ra-05</td>
<td>0.7</td>
</tr>
</tbody>
</table>

Aloha Standard: TH-230

James W. Hayes  
Laboratory Manager

Test results meet all requirements of the NEVAC standards. Statement of estimated uncertainty available upon request. Test results refer only to sample(s) listed.  
Contact person: Jim Hayes (813) 229-2879.

Page 1 of 1
### SUBCONTRACT ORDER
Tampa Electric Company, Laboratory Services

**L17H005**

**SENDING LABORATORY:**
Tampa Electric Company, Laboratory Services
5012 Causeway Blvd
Tampa, FL 33619
Phone: (813) 630-7490
Fax: (813) 630-7360
Project Manager: Peggy Penner

**RECEIVING LABORATORY:**
KNL Laboratory Services
3202 N. Florida Ave.
Tampa, FL 33603
Phone: (813) 229-2879
Fax:

**Due Date:** 08/30/17 16:00

<table>
<thead>
<tr>
<th>Analysis</th>
<th>Expires</th>
<th>Laboratory ID</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample ID: L17H005-01 BBS-CCR-1 Water</td>
<td>17 9669</td>
<td>Level 2 Data required</td>
<td></td>
</tr>
<tr>
<td>Sample ID: L17H005-02 BBS-CCR-2 Water</td>
<td>17 9670</td>
<td>Level 2 Data required</td>
<td></td>
</tr>
<tr>
<td>Sample ID: L17H005-03 BBS-CCR-3 Water</td>
<td>17 9671</td>
<td>Level 2 Data required</td>
<td></td>
</tr>
<tr>
<td>Sample ID: L17H005-04 BBS-CCR-BW1 Water</td>
<td>17 9672</td>
<td>Level 2 Data required</td>
<td></td>
</tr>
</tbody>
</table>

**Sampled:**

<table>
<thead>
<tr>
<th>Sampled:</th>
<th>Radium 226 EPA 903.0</th>
<th>02/12/18 11:24</th>
<th>Level 2 Data required</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sampled:</td>
<td>Radium 226+228, Total</td>
<td>02/12/18 11:24</td>
<td>Level 2 Data required</td>
</tr>
<tr>
<td>Sampled:</td>
<td>Radium 228 Ra-05</td>
<td>02/12/18 11:24</td>
<td>Level 2 Data required</td>
</tr>
</tbody>
</table>

**Containers Supplied:**
RAD Poly HNO3 - 1000mL (C) RAD Poly HNO3 - 1000mL (D)

<table>
<thead>
<tr>
<th>Sampled:</th>
<th>Radium 226 EPA 903.0</th>
<th>02/12/18 10:55</th>
<th>Level 2 Data required</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sampled:</td>
<td>Radium 226+228, Total</td>
<td>02/12/18 10:55</td>
<td>Level 2 Data required</td>
</tr>
<tr>
<td>Sampled:</td>
<td>Radium 228 Ra-05</td>
<td>02/12/18 10:55</td>
<td>Level 2 Data required</td>
</tr>
</tbody>
</table>

**Containers Supplied:**
RAD Poly HNO3 - 1000mL (C) RAD Poly HNO3 - 1000mL (D)

<table>
<thead>
<tr>
<th>Sampled:</th>
<th>Radium 226+228, Total</th>
<th>02/12/18 10:27</th>
<th>Level 2 Data required</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sampled:</td>
<td>Radium 226 EPA 903.0</td>
<td>02/12/18 10:27</td>
<td>Level 2 Data required</td>
</tr>
<tr>
<td>Sampled:</td>
<td>Radium 228 Ra-05</td>
<td>02/12/18 10:27</td>
<td>Level 2 Data required</td>
</tr>
</tbody>
</table>

**Containers Supplied:**
RAD Poly HNO3 - 1000mL (C) RAD Poly HNO3 - 1000mL (D)

<table>
<thead>
<tr>
<th>Sampled:</th>
<th>Radium 226 EPA 903.0</th>
<th>02/12/18 09:52</th>
<th>Level 2 Data required</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sampled:</td>
<td>Radium 226+228, Total</td>
<td>02/12/18 09:52</td>
<td>Level 2 Data required</td>
</tr>
<tr>
<td>Sampled:</td>
<td>Radium 228 Ra-05</td>
<td>02/12/18 09:52</td>
<td>Level 2 Data required</td>
</tr>
</tbody>
</table>

**Containers Supplied:**
RAD Poly HNO3 - 1000mL (C) RAD Poly HNO3 - 1000mL (D)
### Certificate of Analysis

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Units</th>
<th>Results</th>
<th>Analysis Date</th>
<th>Method</th>
<th>Detection Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Combined Radium (Radium-226 + Radium 228)</td>
<td>pCi/l</td>
<td>4.9 ± 0.6</td>
<td>Calc</td>
<td>Calc</td>
<td>0.7</td>
</tr>
<tr>
<td>Radium-226</td>
<td>pCi/l</td>
<td>4.5 ± 0.6</td>
<td>8-22-17/1128</td>
<td>EPA 903.0</td>
<td>0.3</td>
</tr>
<tr>
<td>Radium-228</td>
<td>pCi/l</td>
<td>0.4 ± 0.5</td>
<td>8-23-17/1218</td>
<td>EPA Ra-05</td>
<td>0.7</td>
</tr>
</tbody>
</table>

Alpha Standard: Th-230

---

Test results meet all requirements of the NELAC standards. Statement of estimated uncertainty available upon request. Test results refer only to sample(s) listed. Contact person: Jim Hayes (813) 229-2879.

Page 1 of 1
<table>
<thead>
<tr>
<th>Analysis</th>
<th>Expires</th>
<th>Laboratory ID</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample ID: L17H005-05</td>
<td>08/16/17 09:18</td>
<td>BBS-CCR-BW2</td>
<td></td>
</tr>
<tr>
<td>Radium 228 Ra-05</td>
<td>02/12/18 09:18</td>
<td></td>
<td>Level 2 Data required</td>
</tr>
<tr>
<td>Radium 226 EPA 903.0</td>
<td>02/12/18 09:18</td>
<td></td>
<td>Level 2 Data required</td>
</tr>
<tr>
<td>Radium 226+228, Total</td>
<td>02/12/18 09:18</td>
<td></td>
<td>Level 2 Data required</td>
</tr>
</tbody>
</table>

Containers Supplied:
RAD Poly HNO3 - 1000mL (C)
RAD Poly HNO3 - 1000mL (D)
FL DOH Certification # E84025

QC Summary: **Radium 228 Analysis**

Client Project #: L17H005

Analysis Completion Date: 8/23/17

<table>
<thead>
<tr>
<th>Precision Data:</th>
<th>Sample #: 17.9672</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample Analysis (pCi/l)</td>
<td>Duplicate Analysis (pCi/l)</td>
</tr>
<tr>
<td>8.0</td>
<td>8.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Spike Data:</th>
<th>Sample #: 17.9672</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample Analysis (pCi/l)</td>
<td>Spike Added (pCi/l)</td>
</tr>
<tr>
<td>3.2</td>
<td>3.81</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>LCS Data:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Analytical Result (pCi/l)</td>
</tr>
</tbody>
</table>
| 4.3 | 4.23 | 102.7%

<table>
<thead>
<tr>
<th>Lab Blank:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Analytical Result (pCi/l)</td>
</tr>
<tr>
<td>Lab Blank</td>
</tr>
</tbody>
</table>
FL DOH Certification # E84025

QC Summary: **Total Radium Analysis**

Client Project #: L17H005

Analysis Completion Date: 8/22/17

### Precision Data:

<table>
<thead>
<tr>
<th>Sample Analysis (pCi/l)</th>
<th>Duplicate Analysis (pCi/l)</th>
<th>Range (pCi/l)</th>
<th>RPD (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>22.8</td>
<td>70.8</td>
<td>2.0</td>
<td>9.27</td>
</tr>
</tbody>
</table>

### Spike Data:

<table>
<thead>
<tr>
<th>Sample Analysis (pCi/l)</th>
<th>Spike Added (pCi/l)</th>
<th>Analytical Result (pCi/l)</th>
<th>Spike Rec (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>11.7</td>
<td>9.0</td>
<td>20.8</td>
<td>101.7%</td>
</tr>
</tbody>
</table>

### LCS Data:

<table>
<thead>
<tr>
<th>Analytical Result (pCi/l)</th>
<th>True Value (pCi/l)</th>
<th>% Recovery</th>
</tr>
</thead>
<tbody>
<tr>
<td>10.5</td>
<td>10.1</td>
<td>104.7%</td>
</tr>
</tbody>
</table>

### Lab Blank:

<table>
<thead>
<tr>
<th>Lab Blank</th>
<th>Analytical Result (pCi/l)</th>
<th>Analysis Date</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.1 +/- 0.1</td>
<td>8/22/17</td>
</tr>
</tbody>
</table>

KNL – Total Radium Analysis - FL DOH Certification QC Data sheet – Form #140
Revised 6/30/16
Big Bend Power Station
Terry Eastley
13031 Wyandott Rd
Apollo Beach, FL 33572
tleastley@tecoenergy.com

Report Date: 11/13/17 10:59

Work Order - L17J115
Project - CCR Wells Economizer Ash Pond

Case Narrative

5 sample(s) were received on 10/13/17 14:18.

There were no issues noted with the sample(s) associated with this workorder unless noted below.

Lithium was subcontracted to Test America Labs. The report is attached.

Radiological analysis was subcontracted to KNL Labs. The report is attached.

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier Code</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chloride</td>
<td>716</td>
<td>mg/L</td>
<td>2.00</td>
<td>50.0</td>
<td>100 EPA 300.0</td>
<td>TMH</td>
<td>10/24/17 18:51</td>
<td></td>
</tr>
<tr>
<td>Specific Conductance</td>
<td>4260</td>
<td>umhos/cm</td>
<td>100</td>
<td>100</td>
<td>1 FDEP SOP FT 1200</td>
<td>RAB</td>
<td>10/13/17 11:50</td>
<td></td>
</tr>
<tr>
<td>Dissolved Oxygen</td>
<td>0.240</td>
<td>mg/L</td>
<td>0.100</td>
<td>0.100</td>
<td>1 FDEP SOP FT 1500</td>
<td>RAB</td>
<td>10/13/17 11:50</td>
<td></td>
</tr>
<tr>
<td>Fluoride</td>
<td>0.201</td>
<td>mg/L</td>
<td>0.0100</td>
<td>0.0500</td>
<td>1 EPA 300.0</td>
<td>TMH</td>
<td>10/24/17 18:42</td>
<td></td>
</tr>
<tr>
<td>pH</td>
<td>6.83</td>
<td>pH Units</td>
<td>1.00</td>
<td>1.00</td>
<td>1 FDEP SOP FT 1100</td>
<td>RAB</td>
<td>10/13/17 11:50</td>
<td></td>
</tr>
<tr>
<td>REDOX Potential</td>
<td>-83.3</td>
<td>mV</td>
<td>-999</td>
<td>-999</td>
<td>1 SM 2580B</td>
<td>RAB</td>
<td>10/13/17 11:50</td>
<td></td>
</tr>
<tr>
<td>Total Dissolved Solids</td>
<td>3470</td>
<td>mg/L</td>
<td>24.0</td>
<td>40.0</td>
<td>2 SM 2540C</td>
<td>RFL</td>
<td>10/18/17 15:55</td>
<td></td>
</tr>
<tr>
<td>Sulfate</td>
<td>1230</td>
<td>mg/L</td>
<td>50.0</td>
<td>200</td>
<td>100 EPA 300.0</td>
<td>TMH</td>
<td>10/24/17 18:51</td>
<td></td>
</tr>
<tr>
<td>Turbidity</td>
<td>0.890</td>
<td>NTU</td>
<td>0.100</td>
<td>0.100</td>
<td>1 FDEP SOP FT 1600</td>
<td>RAB</td>
<td>10/13/17 11:50</td>
<td></td>
</tr>
<tr>
<td><strong>Total Mercury by SW846 Method 7470/7471</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mercury</td>
<td>0.0500</td>
<td>ug/L</td>
<td>0.0500</td>
<td>0.200</td>
<td>U 1 EPA 7470A</td>
<td>MCR</td>
<td>10/19/17 9:34</td>
<td></td>
</tr>
<tr>
<td><strong>Total Recoverable Metals by 200 Series</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Antimony</td>
<td>0.600</td>
<td>ug/L</td>
<td>0.600</td>
<td>2.00</td>
<td>U 1 EPA 200.8</td>
<td>MCR</td>
<td>10/16/17 12:23</td>
<td></td>
</tr>
<tr>
<td>Arsenic</td>
<td>9.03</td>
<td>ug/L</td>
<td>0.320</td>
<td>2.00</td>
<td>U 1 EPA 200.8</td>
<td>MCR</td>
<td>10/16/17 12:23</td>
<td></td>
</tr>
<tr>
<td>Cadmium</td>
<td>0.100</td>
<td>ug/L</td>
<td>0.100</td>
<td>0.500</td>
<td>U 1 EPA 200.8</td>
<td>MCR</td>
<td>10/16/17 12:23</td>
<td></td>
</tr>
<tr>
<td>Cobalt</td>
<td>0.453</td>
<td>ug/L</td>
<td>0.0400</td>
<td>2.00</td>
<td>I 1 EPA 200.8</td>
<td>MCR</td>
<td>10/16/17 12:23</td>
<td></td>
</tr>
<tr>
<td>Lead</td>
<td>8.00E-5</td>
<td>mg/L</td>
<td>8.00E-5</td>
<td>0.00200</td>
<td>U 1 EPA 200.8</td>
<td>MCR</td>
<td>10/16/17 12:23</td>
<td></td>
</tr>
<tr>
<td>Selenium</td>
<td>0.990</td>
<td>ug/L</td>
<td>0.200</td>
<td>2.00</td>
<td>I 1 EPA 200.8</td>
<td>MCR</td>
<td>10/16/17 12:23</td>
<td></td>
</tr>
<tr>
<td>Thallium</td>
<td>0.100</td>
<td>ug/L</td>
<td>0.100</td>
<td>0.500</td>
<td>U 1 EPA 200.8</td>
<td>MCR</td>
<td>10/16/17 12:23</td>
<td></td>
</tr>
<tr>
<td><strong>Total Recoverable Metals by SW846 Method 6010B</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Barium</td>
<td>0.129</td>
<td>mg/L</td>
<td>0.000500</td>
<td>0.0200</td>
<td>1 EPA 6010B</td>
<td>RLC</td>
<td>10/16/17 16:44</td>
<td></td>
</tr>
<tr>
<td>Beryllium</td>
<td>0.200</td>
<td>ug/L</td>
<td>0.200</td>
<td>2.00</td>
<td>U 1 EPA 6010B</td>
<td>RLC</td>
<td>10/16/17 16:44</td>
<td></td>
</tr>
<tr>
<td>Boron</td>
<td>19.9</td>
<td>mg/L</td>
<td>0.0100</td>
<td>0.0500</td>
<td>1 EPA 6010B</td>
<td>RLC</td>
<td>10/16/17 16:44</td>
<td></td>
</tr>
<tr>
<td>Calcium</td>
<td>596</td>
<td>mg/L</td>
<td>0.0300</td>
<td>1.00</td>
<td>U 1 EPA 6010B</td>
<td>RLC</td>
<td>10/17/17 9:25</td>
<td></td>
</tr>
<tr>
<td>Chromium</td>
<td>1.60</td>
<td>ug/L</td>
<td>1.60</td>
<td>12.00</td>
<td>U 1 EPA 6010B</td>
<td>RLC</td>
<td>10/16/17 16:44</td>
<td></td>
</tr>
<tr>
<td>Molybdenum</td>
<td>82.5</td>
<td>ug/L</td>
<td>1.00</td>
<td>20.00</td>
<td>U 1 EPA 6010B</td>
<td>RLC</td>
<td>10/16/17 16:44</td>
<td></td>
</tr>
</tbody>
</table>

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
### Sample Information

<table>
<thead>
<tr>
<th>Client:</th>
<th>Big Bend Power Station</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lab Sample ID:</td>
<td>L17J115-02</td>
</tr>
<tr>
<td>Sample Description:</td>
<td>BBS-CCR-2</td>
</tr>
<tr>
<td>Sample Collection Method:</td>
<td>Grab</td>
</tr>
<tr>
<td>Sampled By:</td>
<td>Robert Barthelette</td>
</tr>
<tr>
<td>Date and Time Collected:</td>
<td>10/13/17 11:10</td>
</tr>
<tr>
<td>Date of Sample Receipt:</td>
<td>10/13/17 14:18</td>
</tr>
</tbody>
</table>

### Laboratory Results

#### Sample Qualifier:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Code</th>
<th>Dil</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>General Chemistry Parameters</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chloride</td>
<td>70.9</td>
<td>mg/L</td>
<td>0.0200</td>
<td>0.500</td>
<td>1</td>
<td>EPA 300.0</td>
<td>TMH</td>
<td>10/24/17 19:10</td>
<td></td>
</tr>
<tr>
<td>Specific Conductance</td>
<td>1350</td>
<td>uoh/cm</td>
<td>100</td>
<td>100</td>
<td>1</td>
<td>FDEP SOP FT 1200</td>
<td>RAB</td>
<td>10/13/17 11:10</td>
<td></td>
</tr>
<tr>
<td>Dissolved Oxygen</td>
<td>0.200</td>
<td>mg/L</td>
<td>0.100</td>
<td>0.100</td>
<td>1</td>
<td>FDEP SOP FT 1500</td>
<td>RAB</td>
<td>10/13/17 11:10</td>
<td></td>
</tr>
<tr>
<td>Fluoride</td>
<td>0.182</td>
<td>mg/L</td>
<td>0.0100</td>
<td>0.0500</td>
<td>1</td>
<td>EPA 300.0</td>
<td>TMH</td>
<td>10/24/17 19:10</td>
<td></td>
</tr>
<tr>
<td>pH</td>
<td>6.87</td>
<td>pH Units</td>
<td>1.00</td>
<td>1.00</td>
<td>1</td>
<td>FDEP SOP FT 1100</td>
<td>RAB</td>
<td>10/13/17 11:10</td>
<td></td>
</tr>
<tr>
<td>REDOX Potential</td>
<td>-188</td>
<td>mV</td>
<td>-999</td>
<td>-999</td>
<td>1</td>
<td>SM 2580B</td>
<td>RAB</td>
<td>10/13/17 11:10</td>
<td></td>
</tr>
<tr>
<td>Total Dissolved Solids</td>
<td>1030</td>
<td>mg/L</td>
<td>24.0</td>
<td>40.0</td>
<td>2</td>
<td>SM 2540C</td>
<td>RFL</td>
<td>10/18/17 15:55</td>
<td></td>
</tr>
<tr>
<td>Sulfate</td>
<td>432</td>
<td>mg/L</td>
<td>5.00</td>
<td>20.0</td>
<td>10</td>
<td>EPA 300.0</td>
<td>TMH</td>
<td>10/24/17 19:10</td>
<td></td>
</tr>
<tr>
<td>Turbidity</td>
<td>3.03</td>
<td>NTU</td>
<td>0.100</td>
<td>0.100</td>
<td>1</td>
<td>FDEP SOP FT 1600</td>
<td>RAB</td>
<td>10/13/17 11:10</td>
<td></td>
</tr>
<tr>
<td><strong>Total Mercury by SW846 Method 7470/7471</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mercury</td>
<td>0.0500</td>
<td>ug/L</td>
<td>0.0500</td>
<td>0.200</td>
<td>U</td>
<td>1</td>
<td>EPA 7470A</td>
<td>MCR</td>
<td>10/19/17 9:38</td>
</tr>
<tr>
<td><strong>Total Recoverable Metals by 200 Series</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Antimony</td>
<td>0.600</td>
<td>ug/L</td>
<td>0.600</td>
<td>2.00</td>
<td>U</td>
<td>1</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>10/16/17 12:27</td>
</tr>
<tr>
<td>Arsenic</td>
<td>1.14</td>
<td>ug/L</td>
<td>0.320</td>
<td>2.00</td>
<td>I</td>
<td>1</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>10/16/17 12:27</td>
</tr>
<tr>
<td>Cadmium</td>
<td>0.100</td>
<td>ug/L</td>
<td>0.100</td>
<td>0.500</td>
<td>U</td>
<td>1</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>10/16/17 12:27</td>
</tr>
<tr>
<td>Cobalt</td>
<td>0.115</td>
<td>ug/L</td>
<td>0.0400</td>
<td>2.00</td>
<td>I</td>
<td>1</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>10/16/17 12:27</td>
</tr>
<tr>
<td>Lead</td>
<td>0.000150</td>
<td>mg/L</td>
<td>8.00E-5</td>
<td>0.00200</td>
<td>I</td>
<td>1</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>10/16/17 12:27</td>
</tr>
<tr>
<td>Selenium</td>
<td>0.474</td>
<td>ug/L</td>
<td>0.200</td>
<td>2.00</td>
<td>I</td>
<td>1</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>10/16/17 12:27</td>
</tr>
<tr>
<td>Thallium</td>
<td>0.100</td>
<td>ug/L</td>
<td>0.100</td>
<td>0.500</td>
<td>U</td>
<td>1</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>10/16/17 12:27</td>
</tr>
<tr>
<td><strong>Total Recoverable Metals by SW846 Method 6010B</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Barium</td>
<td>0.0533</td>
<td>mg/L</td>
<td>0.000500</td>
<td>0.0200</td>
<td>1</td>
<td>EPA 6010B</td>
<td>RLC</td>
<td>10/16/17 16:47</td>
<td></td>
</tr>
<tr>
<td>Beryllium</td>
<td>0.200</td>
<td>ug/L</td>
<td>0.200</td>
<td>2.00</td>
<td>U</td>
<td>1</td>
<td>EPA 6010B</td>
<td>RLC</td>
<td>10/16/17 16:47</td>
</tr>
<tr>
<td>Boron</td>
<td>0.888</td>
<td>mg/L</td>
<td>0.0100</td>
<td>0.0500</td>
<td>1</td>
<td>EPA 6010B</td>
<td>RLC</td>
<td>10/16/17 16:47</td>
<td></td>
</tr>
<tr>
<td>Calcium</td>
<td>169</td>
<td>mg/L</td>
<td>0.0300</td>
<td>1.00</td>
<td>1</td>
<td>EPA 6010B</td>
<td>RLC</td>
<td>10/16/17 16:47</td>
<td></td>
</tr>
<tr>
<td>Chromium</td>
<td>1.60</td>
<td>ug/L</td>
<td>1.60</td>
<td>12.0</td>
<td>U</td>
<td>1</td>
<td>EPA 6010B</td>
<td>RLC</td>
<td>10/16/17 16:47</td>
</tr>
<tr>
<td>Molybdenum</td>
<td>1.99</td>
<td>ug/L</td>
<td>1.00</td>
<td>20.0</td>
<td>I</td>
<td>1</td>
<td>EPA 6010B</td>
<td>RLC</td>
<td>10/16/17 16:47</td>
</tr>
</tbody>
</table>

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
### Sample Information

<table>
<thead>
<tr>
<th>Client:</th>
<th>Big Bend Power Station</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lab Sample ID:</td>
<td>L17J115-03</td>
</tr>
<tr>
<td>Sample Description:</td>
<td>BBS-CCR-3</td>
</tr>
<tr>
<td>Sample Collection Method</td>
<td>Grab</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sample Collection Method</th>
<th>Sampled By:</th>
<th>Date and Time Collected:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grab</td>
<td>Robert Barthelette</td>
<td>10/13/17 10:42</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Date of Sample Receipt:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>10/13/17 14:18</td>
<td></td>
</tr>
</tbody>
</table>

### Laboratory Results

#### Sample Qualifier:

### General Chemistry Parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier Code</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chloride</td>
<td>153</td>
<td>mg/L</td>
<td>0.200</td>
<td>5.00</td>
<td>10</td>
<td>EPA 300.0</td>
<td>TMH</td>
<td>10/24/17 20:08</td>
</tr>
<tr>
<td>Specific Conductance</td>
<td>1750</td>
<td>umhos/cm</td>
<td>100</td>
<td>100</td>
<td>1</td>
<td>FDEP SOP FT 1200</td>
<td>RAB</td>
<td>10/13/17 10:42</td>
</tr>
<tr>
<td>Dissolved Oxygen</td>
<td>0.370</td>
<td>mg/L</td>
<td>0.100</td>
<td>0.100</td>
<td>1</td>
<td>FDEP SOP FT 1500</td>
<td>RAB</td>
<td>10/13/17 10:42</td>
</tr>
<tr>
<td>Fluoride</td>
<td>0.333</td>
<td>mg/L</td>
<td>0.0100</td>
<td>0.0500</td>
<td>1</td>
<td>EPA 300.0</td>
<td>TMH</td>
<td>10/24/17 19:58</td>
</tr>
<tr>
<td>pH</td>
<td>6.44</td>
<td>pH Units</td>
<td>1.00</td>
<td>1.00</td>
<td>1</td>
<td>FDEP SOP FT 1100</td>
<td>RAB</td>
<td>10/13/17 10:42</td>
</tr>
<tr>
<td>REDOX Potential</td>
<td>-249</td>
<td>mV</td>
<td>-999</td>
<td>-999</td>
<td>1</td>
<td>SM 2580B</td>
<td>RAB</td>
<td>10/13/17 10:42</td>
</tr>
<tr>
<td>Total Dissolved Solids</td>
<td>1310</td>
<td>mg/L</td>
<td>24.0</td>
<td>40.0</td>
<td>2</td>
<td>SM 2540C</td>
<td>RFL</td>
<td>10/18/17 15:55</td>
</tr>
<tr>
<td>Sulfate</td>
<td>503</td>
<td>mg/L</td>
<td>5.00</td>
<td>20.0</td>
<td>10</td>
<td>EPA 300.0</td>
<td>TMH</td>
<td>10/24/17 20:08</td>
</tr>
<tr>
<td>Turbidity</td>
<td>2.39</td>
<td>NTU</td>
<td>0.100</td>
<td>0.100</td>
<td>1</td>
<td>FDEP SOP FT 1600</td>
<td>RAB</td>
<td>10/13/17 10:42</td>
</tr>
</tbody>
</table>

### Total Mercury by SW846 Method 7470/7471

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier Code</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mercury</td>
<td>0.0500</td>
<td>ug/L</td>
<td>0.050</td>
<td>0.200</td>
<td>U</td>
<td>EPA 7470A</td>
<td>MCR</td>
<td>10/19/17 9:41</td>
</tr>
</tbody>
</table>

### Total Recoverable Metals by 200 Series

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier Code</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antimony</td>
<td>0.600</td>
<td>ug/L</td>
<td>0.600</td>
<td>2.00</td>
<td>U</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>10/16/17 12:30</td>
</tr>
<tr>
<td>Arsenic</td>
<td>0.665</td>
<td>ug/L</td>
<td>0.320</td>
<td>2.00</td>
<td>I</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>10/16/17 12:30</td>
</tr>
<tr>
<td>Cadmium</td>
<td>0.100</td>
<td>ug/L</td>
<td>0.100</td>
<td>0.500</td>
<td>U</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>10/16/17 12:30</td>
</tr>
<tr>
<td>Cobalt</td>
<td>0.155</td>
<td>ug/L</td>
<td>0.040</td>
<td>2.00</td>
<td>I</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>10/16/17 12:30</td>
</tr>
<tr>
<td>Lead</td>
<td>8.00E-5</td>
<td>mg/L</td>
<td>8.00E-5</td>
<td>0.00200</td>
<td>U</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>10/16/17 12:30</td>
</tr>
<tr>
<td>Selenium</td>
<td>0.285</td>
<td>ug/L</td>
<td>0.200</td>
<td>2.00</td>
<td>I</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>10/16/17 12:30</td>
</tr>
<tr>
<td>Thallium</td>
<td>0.100</td>
<td>ug/L</td>
<td>0.100</td>
<td>0.500</td>
<td>U</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>10/16/17 12:30</td>
</tr>
</tbody>
</table>

### Total Recoverable Metals by SW846 Method 6010B

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier Code</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barium</td>
<td>0.0593</td>
<td>mg/L</td>
<td>0.000500</td>
<td>0.0200</td>
<td>1</td>
<td>EPA 6010B</td>
<td>RLC</td>
<td>10/16/17 16:50</td>
</tr>
<tr>
<td>Beryllium</td>
<td>0.200</td>
<td>ug/L</td>
<td>0.200</td>
<td>2.00</td>
<td>U</td>
<td>EPA 6010B</td>
<td>RLC</td>
<td>10/16/17 16:50</td>
</tr>
<tr>
<td>Boron</td>
<td>0.373</td>
<td>mg/L</td>
<td>0.0100</td>
<td>0.0500</td>
<td>1</td>
<td>EPA 6010B</td>
<td>RLC</td>
<td>10/16/17 16:50</td>
</tr>
<tr>
<td>Calcium</td>
<td>190</td>
<td>mg/L</td>
<td>0.0300</td>
<td>1.00</td>
<td>1</td>
<td>EPA 6010B</td>
<td>RLC</td>
<td>10/17/17 9:30</td>
</tr>
<tr>
<td>Chromium</td>
<td>1.60</td>
<td>ug/L</td>
<td>1.60</td>
<td>12.0</td>
<td>U</td>
<td>EPA 6010B</td>
<td>RLC</td>
<td>10/16/17 16:50</td>
</tr>
<tr>
<td>Molybdenum</td>
<td>3.82</td>
<td>ug/L</td>
<td>1.00</td>
<td>20.0</td>
<td>I</td>
<td>EPA 6010B</td>
<td>RLC</td>
<td>10/16/17 16:50</td>
</tr>
</tbody>
</table>

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
### Sample Information

**Client:** Big Bend Power Station  
**Lab Sample ID:** L17J115-04  
**Sample Description:** BBS-CCR-BW1  
**Sample Collection Method:** Grab  
**Sampled By:** Robert Barthelette  
**Date and Time Collected:** 10/13/17 10:04  
**Date of Sample Receipt:** 10/13/17 14:18

### Laboratory Results

#### Sample Qualifier:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier</th>
<th>Code</th>
<th>Dil</th>
<th>Test Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>General Chemistry Parameters</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chloride</td>
<td>809</td>
<td>mg/L</td>
<td>0.200</td>
<td>5.00</td>
<td>10</td>
<td>EPA</td>
<td>300.0</td>
<td>TMH</td>
<td>10/24/17</td>
<td>19:49</td>
</tr>
<tr>
<td>Specific Conductance</td>
<td>4570</td>
<td>umhos/cm</td>
<td>100</td>
<td>100</td>
<td>1</td>
<td>FDEP SOP FT 1200</td>
<td>RAB</td>
<td>10/13/17 10:04</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dissolved Oxygen</td>
<td>0.400</td>
<td>mg/L</td>
<td>0.100</td>
<td>0.100</td>
<td>1</td>
<td>FDEP SOP FT 1500</td>
<td>RAB</td>
<td>10/13/17 10:04</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fluoride</td>
<td>0.334</td>
<td>mg/L</td>
<td>0.0100</td>
<td>0.0500</td>
<td>1</td>
<td>EPA</td>
<td>300.0</td>
<td>TMH</td>
<td>10/24/17</td>
<td>19:49</td>
</tr>
<tr>
<td>pH</td>
<td>6.55</td>
<td>pH Units</td>
<td>1.00</td>
<td>1.00</td>
<td>1</td>
<td>FDEP SOP FT 1100</td>
<td>RAB</td>
<td>10/13/17 10:04</td>
<td></td>
<td></td>
</tr>
<tr>
<td>REDOX Potential</td>
<td>-18.4</td>
<td>mV</td>
<td>.999</td>
<td>.999</td>
<td>1</td>
<td>SM</td>
<td>2580B</td>
<td>RAB</td>
<td>10/13/17</td>
<td>10:04</td>
</tr>
<tr>
<td>Total Dissolved Solids</td>
<td>3890</td>
<td>mg/L</td>
<td>24.0</td>
<td>40.0</td>
<td>2</td>
<td>SM</td>
<td>2540C</td>
<td>RFL</td>
<td>10/18/17</td>
<td>15:55</td>
</tr>
<tr>
<td>Sulfate</td>
<td>217</td>
<td>mg/L</td>
<td>50.0</td>
<td>200</td>
<td>100</td>
<td>EPA</td>
<td>300.0</td>
<td>TMH</td>
<td>10/25/17</td>
<td>16:30</td>
</tr>
<tr>
<td>Turbidity</td>
<td>2.51</td>
<td>NTU</td>
<td>0.100</td>
<td>0.100</td>
<td>1</td>
<td>FDEP SOP FT 1600</td>
<td>RAB</td>
<td>10/13/17 10:04</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total Mercury by SW846 Method 7470/7471</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mercury</td>
<td>0.0500</td>
<td>ug/L</td>
<td>0.0500</td>
<td>0.200</td>
<td>U</td>
<td>1</td>
<td>EPA</td>
<td>7470A</td>
<td>MCR</td>
<td>10/19/17 9:45</td>
</tr>
<tr>
<td><strong>Total Recoverable Metals by 200 Series</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Antimony</td>
<td>0.600</td>
<td>ug/L</td>
<td>0.600</td>
<td>2.00</td>
<td>U</td>
<td>1</td>
<td>EPA</td>
<td>200.8</td>
<td>MCR</td>
<td>10/16/17 12:34</td>
</tr>
<tr>
<td>Arsenic</td>
<td>9.06</td>
<td>ug/L</td>
<td>0.320</td>
<td>2.00</td>
<td>U</td>
<td>1</td>
<td>EPA</td>
<td>200.8</td>
<td>MCR</td>
<td>10/16/17 12:34</td>
</tr>
<tr>
<td>Cadmium</td>
<td>0.100</td>
<td>ug/L</td>
<td>0.100</td>
<td>0.500</td>
<td>U</td>
<td>1</td>
<td>EPA</td>
<td>200.8</td>
<td>MCR</td>
<td>10/16/17 12:34</td>
</tr>
<tr>
<td>Cobalt</td>
<td>1.86</td>
<td>ug/L</td>
<td>0.0400</td>
<td>2.00</td>
<td>I</td>
<td>1</td>
<td>EPA</td>
<td>200.8</td>
<td>MCR</td>
<td>10/16/17 12:34</td>
</tr>
<tr>
<td>Lead</td>
<td>0.000103</td>
<td>mg/L</td>
<td>8.00E-5</td>
<td>0.00200</td>
<td>I</td>
<td>1</td>
<td>EPA</td>
<td>200.8</td>
<td>MCR</td>
<td>10/16/17 12:34</td>
</tr>
<tr>
<td>Selenium</td>
<td>2.14</td>
<td>ug/L</td>
<td>0.200</td>
<td>2.00</td>
<td>U</td>
<td>1</td>
<td>EPA</td>
<td>200.8</td>
<td>MCR</td>
<td>10/16/17 12:34</td>
</tr>
<tr>
<td>Thallium</td>
<td>0.100</td>
<td>ug/L</td>
<td>0.100</td>
<td>0.500</td>
<td>U</td>
<td>1</td>
<td>EPA</td>
<td>200.8</td>
<td>MCR</td>
<td>10/16/17 12:34</td>
</tr>
<tr>
<td><strong>Total Recoverable Metals by SW846 Method 6010B</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Barium</td>
<td>0.0558</td>
<td>mg/L</td>
<td>0.000500</td>
<td>0.0200</td>
<td>1</td>
<td>EPA</td>
<td>6010B</td>
<td>RLC</td>
<td>10/16/17</td>
<td>16:54</td>
</tr>
<tr>
<td>Beryllium</td>
<td>0.200</td>
<td>ug/L</td>
<td>0.200</td>
<td>2.00</td>
<td>U</td>
<td>1</td>
<td>EPA</td>
<td>6010B</td>
<td>RLC</td>
<td>10/16/17 16:54</td>
</tr>
<tr>
<td>Boron</td>
<td>44.2</td>
<td>mg/L</td>
<td>0.0100</td>
<td>0.0500</td>
<td>1</td>
<td>EPA</td>
<td>6010B</td>
<td>RLC</td>
<td>10/16/17</td>
<td>16:54</td>
</tr>
<tr>
<td>Calcium</td>
<td>691</td>
<td>mg/L</td>
<td>0.0300</td>
<td>1.00</td>
<td>1</td>
<td>EPA</td>
<td>6010B</td>
<td>RLC</td>
<td>10/17/17</td>
<td>9:32</td>
</tr>
<tr>
<td>Chromium</td>
<td>1.60</td>
<td>ug/L</td>
<td>1.60</td>
<td>12.0</td>
<td>U</td>
<td>1</td>
<td>EPA</td>
<td>6010B</td>
<td>RLC</td>
<td>10/16/17 16:54</td>
</tr>
<tr>
<td>Molybdenium</td>
<td>4.27</td>
<td>ug/L</td>
<td>1.00</td>
<td>20.0</td>
<td>I</td>
<td>1</td>
<td>EPA</td>
<td>6010B</td>
<td>RLC</td>
<td>10/16/17 16:54</td>
</tr>
</tbody>
</table>

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
**Sample Information**

- **Client:** Big Bend Power Station
- **Lab Sample ID:** L17J115-05
- **Sample Description:** BBS-CCR-BW2
- **Sample Collection Method:** Grab
- **Sampled By:** Robert Barthelette
- **Date and Time Collected:** 10/13/17 9:40
- **Date of Sample Receipt:** 10/13/17 14:18

**Laboratory Results**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Units</th>
<th>MDL</th>
<th>PQL</th>
<th>Qualifier</th>
<th>Test Code</th>
<th>Dil</th>
<th>Method</th>
<th>Analyst</th>
<th>Analysis Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>General Chemistry Parameters</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chloride</td>
<td>84.9</td>
<td>mg/L</td>
<td>0.0200</td>
<td>0.500</td>
<td>1</td>
<td>EPA 300.0</td>
<td>TMH</td>
<td>10/24/17 20:17</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Specific Conductance</td>
<td>1700</td>
<td>umhos/cm</td>
<td>100</td>
<td>100</td>
<td>1</td>
<td>FDEP SOP FT 1200</td>
<td>RAB</td>
<td>10/13/17 9:40</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dissolved Oxygen</td>
<td>0.280</td>
<td>mg/L</td>
<td>0.100</td>
<td>0.100</td>
<td>1</td>
<td>FDEP SOP FT 1500</td>
<td>RAB</td>
<td>10/13/17 9:40</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fluoride</td>
<td>0.513</td>
<td>mg/L</td>
<td>0.0100</td>
<td>0.0500</td>
<td>1</td>
<td>EPA 300.0</td>
<td>TMH</td>
<td>10/24/17 20:17</td>
<td></td>
<td></td>
</tr>
<tr>
<td>pH</td>
<td>6.70</td>
<td>pH Units</td>
<td>1.00</td>
<td>1.00</td>
<td>1</td>
<td>FDEP SOP FT 1100</td>
<td>RAB</td>
<td>10/13/17 9:40</td>
<td></td>
<td></td>
</tr>
<tr>
<td>REDOX Potential</td>
<td>-72.1</td>
<td>mV</td>
<td>-999</td>
<td>-999</td>
<td>1</td>
<td>SM 2580B</td>
<td>RAB</td>
<td>10/13/17 9:40</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Dissolved Solids</td>
<td>1330</td>
<td>mg/L</td>
<td>24.0</td>
<td>40.0</td>
<td>2</td>
<td>SM 2540C</td>
<td>RFL</td>
<td>10/18/17 15:55</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sulfate</td>
<td>632</td>
<td>mg/L</td>
<td>5.00</td>
<td>20.0</td>
<td>10</td>
<td>EPA 300.0</td>
<td>TMH</td>
<td>10/24/17 20:27</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Turbidity</td>
<td>3.96</td>
<td>NTU</td>
<td>0.100</td>
<td>0.100</td>
<td>1</td>
<td>FDEP SOP FT 1600</td>
<td>RAB</td>
<td>10/13/17 9:40</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total Mercury by SW846 Method 7470/7471</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mercury</td>
<td>0.0500</td>
<td>ug/L</td>
<td>0.0500</td>
<td>0.200</td>
<td>U</td>
<td>EPA 7470A</td>
<td>MCR</td>
<td>10/19/17 9:48</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total Recoverable Metals by 200 Series</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Antimony</td>
<td>0.600</td>
<td>ug/L</td>
<td>0.600</td>
<td>2.00</td>
<td>U</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>10/16/17 12:38</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arsenic</td>
<td>2.01</td>
<td>ug/L</td>
<td>0.320</td>
<td>2.00</td>
<td>1</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>10/16/17 12:38</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cadmium</td>
<td>0.100</td>
<td>ug/L</td>
<td>0.100</td>
<td>0.500</td>
<td>U</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>10/16/17 12:38</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cobalt</td>
<td>0.129</td>
<td>ug/L</td>
<td>0.0400</td>
<td>2.00</td>
<td>I</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>10/16/17 12:38</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lead</td>
<td>8.00E-5</td>
<td>mg/L</td>
<td>8.00E-5</td>
<td>0.00200</td>
<td>U</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>10/16/17 12:38</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Selenium</td>
<td>0.523</td>
<td>ug/L</td>
<td>0.200</td>
<td>2.00</td>
<td>I</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>10/16/17 12:38</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thallium</td>
<td>0.100</td>
<td>ug/L</td>
<td>0.100</td>
<td>0.500</td>
<td>U</td>
<td>EPA 200.8</td>
<td>MCR</td>
<td>10/16/17 12:38</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total Recoverable Metals by SW846 Method 6010B</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Barium</td>
<td>0.0562</td>
<td>mg/L</td>
<td>0.00500</td>
<td>0.200</td>
<td>1</td>
<td>EPA 6010B</td>
<td>RLC</td>
<td>10/16/17 16:57</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beryllium</td>
<td>0.254</td>
<td>ug/L</td>
<td>0.200</td>
<td>2.00</td>
<td>I</td>
<td>EPA 6010B</td>
<td>RLC</td>
<td>10/16/17 16:57</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Boron</td>
<td>4.08</td>
<td>mg/L</td>
<td>0.0100</td>
<td>0.0500</td>
<td>1</td>
<td>EPA 6010B</td>
<td>RLC</td>
<td>10/16/17 16:57</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Calcium</td>
<td>321</td>
<td>mg/L</td>
<td>0.0300</td>
<td>1.00</td>
<td>1</td>
<td>EPA 6010B</td>
<td>RLC</td>
<td>10/17/17 9:35</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chromium</td>
<td>1.60</td>
<td>ug/L</td>
<td>1.60</td>
<td>12.0</td>
<td>U</td>
<td>EPA 6010B</td>
<td>RLC</td>
<td>10/16/17 16:57</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Molybdenum</td>
<td>2.51</td>
<td>ug/L</td>
<td>1.00</td>
<td>20.0</td>
<td>I</td>
<td>EPA 6010B</td>
<td>RLC</td>
<td>10/16/17 16:57</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Comments**

- U Indicates that the compound was analyzed for but not detected.
- J- The reported value is an estimated value, see the case narrative for specifics.
- I Estimated value

**Subcontract Laboratories:**

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
# Total Recoverable Metals by SW846 Method 6010B - Quality Control

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>MDL</th>
<th>PQL</th>
<th>Units</th>
<th>Spike Level</th>
<th>Source</th>
<th>%Rec Limits</th>
<th>RPD Limit</th>
<th>Qualifier</th>
</tr>
</thead>
</table>

**Batch 17J0144 - EPA 6010B**

**Blank (17J0144-BLK1)**
Prepared & Analyzed: 10/16/17

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>MDL</th>
<th>PQL</th>
<th>Units</th>
<th>Spike Level</th>
<th>Source</th>
<th>%Rec Limits</th>
<th>RPD Limit</th>
<th>Qualifier</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barium</td>
<td>0.000500</td>
<td>0.000500</td>
<td>0.0200</td>
<td>mg/L</td>
<td>U</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beryllium</td>
<td>0.200</td>
<td>0.200</td>
<td>2.00</td>
<td>ug/L</td>
<td>U</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Boron</td>
<td>0.0100</td>
<td>0.0100</td>
<td>0.0500</td>
<td>mg/L</td>
<td>U</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Calcium</td>
<td>0.0300</td>
<td>0.0300</td>
<td>1.00</td>
<td>mg/L</td>
<td>U</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chromium</td>
<td>1.60</td>
<td>1.60</td>
<td>12.0</td>
<td>ug/L</td>
<td>U</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Molybdenum</td>
<td>1.00</td>
<td>1.00</td>
<td>20.0</td>
<td>ug/L</td>
<td>U</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**LCS (17J0144-BS1)**
Prepared & Analyzed: 10/16/17

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>MDL</th>
<th>PQL</th>
<th>Units</th>
<th>Spike Level</th>
<th>Source</th>
<th>%Rec Limits</th>
<th>RPD Limit</th>
<th>Qualifier</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barium</td>
<td>0.993</td>
<td>0.000500</td>
<td>0.0200</td>
<td>mg/L</td>
<td>1.0000</td>
<td>99.3</td>
<td>80-120</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beryllium</td>
<td>959</td>
<td>0.200</td>
<td>2.00</td>
<td>ug/L</td>
<td>1000.0</td>
<td>95.9</td>
<td>80-120</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Boron</td>
<td>1.00</td>
<td>0.0100</td>
<td>0.0500</td>
<td>mg/L</td>
<td>1.0000</td>
<td>100</td>
<td>80-120</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chromium</td>
<td>984</td>
<td>1.60</td>
<td>12.0</td>
<td>ug/L</td>
<td>1000.0</td>
<td>98.4</td>
<td>80-120</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Molybdenum</td>
<td>963</td>
<td>1.00</td>
<td>20.0</td>
<td>ug/L</td>
<td>1000.0</td>
<td>96.3</td>
<td>80-120</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Matrix Spike (17J0144-MS1)**
Source: L17J013-01
Prepared & Analyzed: 10/16/17

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>MDL</th>
<th>PQL</th>
<th>Units</th>
<th>Spike Level</th>
<th>Source</th>
<th>%Rec Limits</th>
<th>RPD Limit</th>
<th>Qualifier</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barium</td>
<td>1.05</td>
<td>0.000500</td>
<td>0.0200</td>
<td>mg/L</td>
<td>1.0000</td>
<td>0.0677</td>
<td>97.8</td>
<td>75-125</td>
<td></td>
</tr>
<tr>
<td>Beryllium</td>
<td>949</td>
<td>0.200</td>
<td>2.00</td>
<td>ug/L</td>
<td>1000.0</td>
<td>U</td>
<td>94.9</td>
<td>75-125</td>
<td></td>
</tr>
<tr>
<td>Boron</td>
<td>1.03</td>
<td>0.0100</td>
<td>0.0500</td>
<td>mg/L</td>
<td>1.0000</td>
<td>0.0247</td>
<td>101</td>
<td>75-125</td>
<td></td>
</tr>
<tr>
<td>Chromium</td>
<td>965</td>
<td>1.60</td>
<td>12.0</td>
<td>ug/L</td>
<td>1000.0</td>
<td>U</td>
<td>96.5</td>
<td>75-125</td>
<td></td>
</tr>
<tr>
<td>Molybdenum</td>
<td>973</td>
<td>1.00</td>
<td>20.0</td>
<td>ug/L</td>
<td>1000.0</td>
<td>9.51</td>
<td>96.4</td>
<td>75-125</td>
<td></td>
</tr>
</tbody>
</table>

**Matrix Spike (17J0144-MS2)**
Source: L17J116-02
Prepared & Analyzed: 10/16/17

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>MDL</th>
<th>PQL</th>
<th>Units</th>
<th>Spike Level</th>
<th>Source</th>
<th>%Rec Limits</th>
<th>RPD Limit</th>
<th>Qualifier</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barium</td>
<td>1.02</td>
<td>0.000500</td>
<td>0.0200</td>
<td>mg/L</td>
<td>1.0000</td>
<td>0.0420</td>
<td>97.7</td>
<td>75-125</td>
<td></td>
</tr>
<tr>
<td>Beryllium</td>
<td>949</td>
<td>0.200</td>
<td>2.00</td>
<td>ug/L</td>
<td>1000.0</td>
<td>U</td>
<td>94.9</td>
<td>75-125</td>
<td></td>
</tr>
<tr>
<td>Boron</td>
<td>1.09</td>
<td>0.0100</td>
<td>0.0500</td>
<td>mg/L</td>
<td>1.0000</td>
<td>0.0552</td>
<td>103</td>
<td>75-125</td>
<td></td>
</tr>
<tr>
<td>Chromium</td>
<td>964</td>
<td>1.60</td>
<td>12.0</td>
<td>ug/L</td>
<td>1000.0</td>
<td>U</td>
<td>96.4</td>
<td>75-125</td>
<td></td>
</tr>
<tr>
<td>Molybdenum</td>
<td>971</td>
<td>1.00</td>
<td>20.0</td>
<td>ug/L</td>
<td>1000.0</td>
<td>1.46</td>
<td>97.0</td>
<td>75-125</td>
<td></td>
</tr>
</tbody>
</table>

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>MDL</th>
<th>PQL</th>
<th>Units</th>
<th>Spike Level</th>
<th>Source</th>
<th>%Rec</th>
<th>%Rec Limits</th>
<th>RPD Limit</th>
<th>Qualifier</th>
</tr>
</thead>
<tbody>
<tr>
<td>Batch 17J0144 - EPA 6010B</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Matrix Spike Dup (17J0144-MSD1)</strong></td>
<td>Source: L17J013-01</td>
<td>Prepared &amp; Analyzed: 10/16/17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Barium</td>
<td>1.06</td>
<td>0.000500</td>
<td>0.0200</td>
<td>mg/L</td>
<td>1.0000</td>
<td>0.0677</td>
<td>99.3</td>
<td>75-125</td>
<td>1.40</td>
<td>20</td>
</tr>
<tr>
<td>Beryllium</td>
<td>979</td>
<td>0.200</td>
<td>2.00</td>
<td>ug/L</td>
<td>1000.0</td>
<td>U</td>
<td>97.9</td>
<td>75-125</td>
<td>3.10</td>
<td>20</td>
</tr>
<tr>
<td>Boron</td>
<td>1.05</td>
<td>0.01000</td>
<td>0.0500</td>
<td>mg/L</td>
<td>1.0000</td>
<td>0.0247</td>
<td>103</td>
<td>75-125</td>
<td>1.64</td>
<td>20</td>
</tr>
<tr>
<td>Chromium</td>
<td>983</td>
<td>1.60</td>
<td>12.0</td>
<td>ug/L</td>
<td>1000.0</td>
<td>U</td>
<td>98.3</td>
<td>75-125</td>
<td>1.85</td>
<td>20</td>
</tr>
<tr>
<td>Molybdenum</td>
<td>983</td>
<td>1.00</td>
<td>20.0</td>
<td>ug/L</td>
<td>1000.0</td>
<td>9.51</td>
<td>97.3</td>
<td>75-125</td>
<td>0.967</td>
<td>20</td>
</tr>
<tr>
<td><strong>Matrix Spike Dup (17J0144-MSD2)</strong></td>
<td>Source: L17J116-02</td>
<td>Prepared &amp; Analyzed: 10/16/17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Barium</td>
<td>1.03</td>
<td>0.000500</td>
<td>0.0200</td>
<td>mg/L</td>
<td>1.0000</td>
<td>0.0420</td>
<td>99.2</td>
<td>75-125</td>
<td>1.43</td>
<td>20</td>
</tr>
<tr>
<td>Beryllium</td>
<td>957</td>
<td>0.200</td>
<td>2.00</td>
<td>ug/L</td>
<td>1000.0</td>
<td>U</td>
<td>95.7</td>
<td>75-125</td>
<td>0.889</td>
<td>20</td>
</tr>
<tr>
<td>Boron</td>
<td>1.10</td>
<td>0.01000</td>
<td>0.0500</td>
<td>mg/L</td>
<td>1.0000</td>
<td>0.0552</td>
<td>105</td>
<td>75-125</td>
<td>1.53</td>
<td>20</td>
</tr>
<tr>
<td>Chromium</td>
<td>983</td>
<td>1.60</td>
<td>12.0</td>
<td>ug/L</td>
<td>1000.0</td>
<td>U</td>
<td>98.3</td>
<td>75-125</td>
<td>1.94</td>
<td>20</td>
</tr>
<tr>
<td>Molybdenum</td>
<td>995</td>
<td>1.00</td>
<td>20.0</td>
<td>ug/L</td>
<td>1000.0</td>
<td>1.46</td>
<td>99.4</td>
<td>75-125</td>
<td>2.44</td>
<td>20</td>
</tr>
</tbody>
</table>

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
## Total Mercury by SW846 Method 7470/7471 - Quality Control

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>MDL</th>
<th>PQL</th>
<th>Units</th>
<th>Spike Level</th>
<th>Source</th>
<th>%Rec Limits</th>
<th>%Rec</th>
<th>RPD Limit</th>
<th>RPD Limit Qualifier</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Batch 17J0184 - EPA 7470A</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blank (17J0184-BLK1)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mercury</td>
<td>0.0500</td>
<td>0.0500</td>
<td>0.200</td>
<td>ug/L</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prepared: 10/18/17  Analyzed: 10/19/17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>LCS (17J0184-BS1)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mercury</td>
<td>0.976</td>
<td>0.0500</td>
<td>0.200</td>
<td>ug/L</td>
<td>1.0000</td>
<td></td>
<td>97.6</td>
<td></td>
<td>80-120</td>
<td></td>
</tr>
<tr>
<td>Prepared: 10/18/17  Analyzed: 10/19/17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Matrix Spike (17J0184-MS1)</strong></td>
<td>Source: L17J115-02</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mercury</td>
<td>0.790</td>
<td>0.0500</td>
<td>0.200</td>
<td>ug/L</td>
<td>1.0000</td>
<td>U</td>
<td></td>
<td>79.0</td>
<td>75-125</td>
<td></td>
</tr>
<tr>
<td>Prepared: 10/18/17  Analyzed: 10/19/17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Matrix Spike Dup (17J0184-MSD1)</strong></td>
<td>Source: L17J115-02</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mercury</td>
<td>0.764</td>
<td>0.0500</td>
<td>0.200</td>
<td>ug/L</td>
<td>1.0000</td>
<td>U</td>
<td></td>
<td>76.4</td>
<td>75-125</td>
<td>3.26 20</td>
</tr>
<tr>
<td>Prepared: 10/18/17  Analyzed: 10/19/17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>MDL</th>
<th>PQL</th>
<th>Units</th>
<th>Spike Level</th>
<th>Source Result</th>
<th>%Rec Limits</th>
<th>RPD Limit</th>
<th>Qualifier</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antimony</td>
<td>0.600</td>
<td>0.600</td>
<td>2.00</td>
<td>ug/L</td>
<td>U</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arsenic</td>
<td>0.320</td>
<td>0.320</td>
<td>2.00</td>
<td>ug/L</td>
<td>U</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cadmium</td>
<td>0.100</td>
<td>0.100</td>
<td>0.500</td>
<td>ug/L</td>
<td>U</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cobalt</td>
<td>0.0400</td>
<td>0.0400</td>
<td>2.00</td>
<td>ug/L</td>
<td>U</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lead</td>
<td>8.00E-5</td>
<td>8.00E-5</td>
<td>0.00200</td>
<td>mg/L</td>
<td>U</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Selenium</td>
<td>0.200</td>
<td>0.200</td>
<td>2.00</td>
<td>ug/L</td>
<td>U</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thallium</td>
<td>0.100</td>
<td>0.100</td>
<td>0.500</td>
<td>ug/L</td>
<td>U</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Batch 17J0116 - EPA 200.8**

**Blank (17J0116-BLK1)**
Prepared: 10/13/17  Analyzed: 10/16/17

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>MDL</th>
<th>PQL</th>
<th>Units</th>
<th>Spike Level</th>
<th>Source Result</th>
<th>%Rec Limits</th>
<th>RPD Limit</th>
<th>Qualifier</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antimony</td>
<td>96.0</td>
<td>0.600</td>
<td>2.00</td>
<td>ug/L</td>
<td>100.00</td>
<td>96.0</td>
<td>85-115</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arsenic</td>
<td>101</td>
<td>0.320</td>
<td>2.00</td>
<td>ug/L</td>
<td>100.00</td>
<td>101</td>
<td>85-115</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cadmium</td>
<td>102</td>
<td>0.100</td>
<td>0.500</td>
<td>ug/L</td>
<td>100.00</td>
<td>102</td>
<td>85-115</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cobalt</td>
<td>98.6</td>
<td>0.0400</td>
<td>2.00</td>
<td>ug/L</td>
<td>100.00</td>
<td>98.6</td>
<td>85-115</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lead</td>
<td>0.0958</td>
<td>8.00E-5</td>
<td>0.00200</td>
<td>mg/L</td>
<td>0.10000</td>
<td>95.8</td>
<td>85-115</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Selenium</td>
<td>108</td>
<td>0.200</td>
<td>2.00</td>
<td>ug/L</td>
<td>100.00</td>
<td>108</td>
<td>85-115</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thallium</td>
<td>95.9</td>
<td>0.100</td>
<td>0.500</td>
<td>ug/L</td>
<td>100.00</td>
<td>95.9</td>
<td>85-115</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**LCS (17J0116-BS1)**
Prepared: 10/13/17  Analyzed: 10/16/17

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>MDL</th>
<th>PQL</th>
<th>Units</th>
<th>Spike Level</th>
<th>Source Result</th>
<th>%Rec Limits</th>
<th>RPD Limit</th>
<th>Qualifier</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antimony</td>
<td>103</td>
<td>3.00</td>
<td>10.0</td>
<td>ug/L</td>
<td>100.00</td>
<td>U</td>
<td>103</td>
<td>70-130</td>
<td></td>
</tr>
<tr>
<td>Arsenic</td>
<td>96.3</td>
<td>1.60</td>
<td>10.0</td>
<td>ug/L</td>
<td>100.00</td>
<td>U</td>
<td>96.3</td>
<td>70-130</td>
<td></td>
</tr>
<tr>
<td>Cadmium</td>
<td>99.5</td>
<td>0.500</td>
<td>2.50</td>
<td>ug/L</td>
<td>100.00</td>
<td>U</td>
<td>99.5</td>
<td>70-130</td>
<td></td>
</tr>
<tr>
<td>Cobalt</td>
<td>96.2</td>
<td>0.200</td>
<td>10.0</td>
<td>ug/L</td>
<td>100.00</td>
<td>U</td>
<td>96.2</td>
<td>70-130</td>
<td></td>
</tr>
<tr>
<td>Lead</td>
<td>0.0906</td>
<td>0.000400</td>
<td>0.01000</td>
<td>mg/L</td>
<td>0.10000</td>
<td>90.6</td>
<td>70-130</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Selenium</td>
<td>98.1</td>
<td>1.00</td>
<td>10.0</td>
<td>ug/L</td>
<td>100.00</td>
<td>U</td>
<td>98.1</td>
<td>70-130</td>
<td></td>
</tr>
<tr>
<td>Thallium</td>
<td>90.3</td>
<td>0.500</td>
<td>2.50</td>
<td>ug/L</td>
<td>100.00</td>
<td>U</td>
<td>90.3</td>
<td>70-130</td>
<td></td>
</tr>
</tbody>
</table>

**Matrix Spike (17J0116-MS1)**
Source: L17J002-01
Prepared: 10/13/17  Analyzed: 10/16/17

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>MDL</th>
<th>PQL</th>
<th>Units</th>
<th>Spike Level</th>
<th>Source Result</th>
<th>%Rec Limits</th>
<th>RPD Limit</th>
<th>Qualifier</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antimony</td>
<td>100.0</td>
<td>0.600</td>
<td>2.00</td>
<td>ug/L</td>
<td>100.00</td>
<td>U</td>
<td>100</td>
<td>70-130</td>
<td></td>
</tr>
<tr>
<td>Arsenic</td>
<td>100.0</td>
<td>0.320</td>
<td>2.00</td>
<td>ug/L</td>
<td>100.00</td>
<td>U</td>
<td>100</td>
<td>70-130</td>
<td></td>
</tr>
<tr>
<td>Cadmium</td>
<td>100.0</td>
<td>0.100</td>
<td>0.500</td>
<td>ug/L</td>
<td>100.00</td>
<td>U</td>
<td>100</td>
<td>70-130</td>
<td></td>
</tr>
<tr>
<td>Cobalt</td>
<td>100.0</td>
<td>0.0400</td>
<td>2.00</td>
<td>ug/L</td>
<td>100.00</td>
<td>U</td>
<td>100</td>
<td>70-130</td>
<td></td>
</tr>
<tr>
<td>Lead</td>
<td>0.0906</td>
<td>8.00E-5</td>
<td>0.00200</td>
<td>mg/L</td>
<td>0.10000</td>
<td>U</td>
<td>83.7</td>
<td>70-130</td>
<td></td>
</tr>
<tr>
<td>Selenium</td>
<td>100.0</td>
<td>0.200</td>
<td>2.00</td>
<td>ug/L</td>
<td>100.00</td>
<td>U</td>
<td>100</td>
<td>70-130</td>
<td></td>
</tr>
<tr>
<td>Thallium</td>
<td>100.0</td>
<td>0.100</td>
<td>0.500</td>
<td>ug/L</td>
<td>100.00</td>
<td>U</td>
<td>100</td>
<td>70-130</td>
<td></td>
</tr>
</tbody>
</table>

**Matrix Spike (17J0116-MS2)**
Source: L17J115-01
Prepared: 10/13/17  Analyzed: 10/16/17

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>MDL</th>
<th>PQL</th>
<th>Units</th>
<th>Spike Level</th>
<th>Source Result</th>
<th>%Rec Limits</th>
<th>RPD Limit</th>
<th>Qualifier</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antimony</td>
<td>98.6</td>
<td>0.600</td>
<td>2.00</td>
<td>ug/L</td>
<td>100.00</td>
<td>U</td>
<td>98.6</td>
<td>70-130</td>
<td></td>
</tr>
<tr>
<td>Arsenic</td>
<td>95.6</td>
<td>0.320</td>
<td>2.00</td>
<td>ug/L</td>
<td>100.00</td>
<td>9.03</td>
<td>86.6</td>
<td>70-130</td>
<td></td>
</tr>
<tr>
<td>Cadmium</td>
<td>80.5</td>
<td>0.100</td>
<td>0.500</td>
<td>ug/L</td>
<td>100.00</td>
<td>U</td>
<td>80.5</td>
<td>70-130</td>
<td></td>
</tr>
<tr>
<td>Cobalt</td>
<td>89.4</td>
<td>0.0400</td>
<td>2.00</td>
<td>ug/L</td>
<td>100.00</td>
<td>0.453</td>
<td>89.0</td>
<td>70-130</td>
<td></td>
</tr>
<tr>
<td>Lead</td>
<td>0.0837</td>
<td>8.00E-5</td>
<td>0.00200</td>
<td>mg/L</td>
<td>0.10000</td>
<td>U</td>
<td>83.7</td>
<td>70-130</td>
<td></td>
</tr>
<tr>
<td>Selenium</td>
<td>81.0</td>
<td>0.200</td>
<td>2.00</td>
<td>ug/L</td>
<td>100.00</td>
<td>0.990</td>
<td>80.0</td>
<td>70-130</td>
<td></td>
</tr>
<tr>
<td>Thallium</td>
<td>87.7</td>
<td>0.100</td>
<td>0.500</td>
<td>ug/L</td>
<td>100.00</td>
<td>U</td>
<td>87.7</td>
<td>70-130</td>
<td></td>
</tr>
</tbody>
</table>

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
Tampa Electric Laboratory Services  
5012 Causeway Blvd Tampa Fl. 33619 * Ph (813)630-7490 * Fax (813)630-7360 * DOH #E54272  

Total Recoverable Metals by 200 Series - Quality Control

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>MDL</th>
<th>PQL</th>
<th>Units</th>
<th>Spike Level</th>
<th>Source</th>
<th>%Rec</th>
<th>%Rec Limits</th>
<th>RPD</th>
<th>RPD Limit</th>
<th>Qualifier</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Matrix Spike Dup (17J0116-MSD1)</strong></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>Antimony</td>
<td>100</td>
<td>3.00</td>
<td>10.0</td>
<td>mg/L</td>
<td>100.00</td>
<td>U</td>
<td>100</td>
<td>70-130</td>
<td>2.63</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Arsenic</td>
<td>98.4</td>
<td>1.60</td>
<td>10.0</td>
<td>mg/L</td>
<td>100.00</td>
<td>U</td>
<td>98.4</td>
<td>70-130</td>
<td>2.14</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Cadmium</td>
<td>103</td>
<td>0.50</td>
<td>2.50</td>
<td>mg/L</td>
<td>100.00</td>
<td>U</td>
<td>103</td>
<td>70-130</td>
<td>3.64</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Cobalt</td>
<td>101</td>
<td>0.20</td>
<td>10.0</td>
<td>mg/L</td>
<td>100.00</td>
<td>U</td>
<td>101</td>
<td>70-130</td>
<td>4.37</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Lead</td>
<td>0.0959</td>
<td>0.000400</td>
<td>0.0100</td>
<td>mg/L</td>
<td>0.10000</td>
<td>U</td>
<td>95.9</td>
<td>70-130</td>
<td>5.68</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Selenium</td>
<td>103</td>
<td>1.00</td>
<td>10.0</td>
<td>mg/L</td>
<td>100.00</td>
<td>U</td>
<td>103</td>
<td>70-130</td>
<td>4.36</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Thallium</td>
<td>95.3</td>
<td>0.50</td>
<td>2.50</td>
<td>mg/L</td>
<td>100.00</td>
<td>U</td>
<td>95.3</td>
<td>70-130</td>
<td>5.33</td>
<td>20</td>
<td></td>
</tr>
</tbody>
</table>

| **Matrix Spike Dup (17J0116-MSD2)** |        |     |     |       |             |        |      |             |     |           |           |
| Antimony           | 100    | 0.600| 2.00| mg/L  | 100.00      | U      | 100  | 70-130      | 1.91| 20        |           |
| Arsenic            | 96.8   | 0.320| 2.00| mg/L  | 100.00      | 9.03   | 87.8 | 70-130      | 1.30| 20        |           |
| Cadmium            | 80.2   | 0.100| 0.500| mg/L | 100.00      | U      | 80.2 | 70-130      | 0.392| 20        |           |
| Cobalt             | 91.4   | 0.0400| 2.00| mg/L  | 100.00      | 0.453 | 90.9 | 70-130      | 2.19| 20        |           |
| Lead               | 0.0830 | 0.000200| 0.000200| mg/L | 0.10000    | U      | 83.0 | 70-130      | 0.740| 20        |           |
| Selenium           | 83.1   | 0.200| 2.00| mg/L  | 100.00      | 0.990 | 82.1 | 70-130      | 2.51| 20        |           |
| Thallium           | 87.2   | 0.100| 0.500| mg/L | 100.00      | U      | 87.2 | 70-130      | 0.629| 20        |           |

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
### General Chemistry Parameters - Quality Control

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>MDL</th>
<th>PQL</th>
<th>Units</th>
<th>Spike Level</th>
<th>Source</th>
<th>%Rec Limits</th>
<th>RPD Limit</th>
<th>Qualifier</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Batch 17J0212 - SM 2540C</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blank (17J0212-BLK1)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Dissolved Solids</td>
<td>12.0</td>
<td>12.0</td>
<td>20.0</td>
<td>mg/L</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>U</td>
</tr>
<tr>
<td>LCS (17J0212-BS1)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Dissolved Solids</td>
<td>994</td>
<td>12.0</td>
<td>20.0</td>
<td>mg/L</td>
<td>10000.0</td>
<td>99.4</td>
<td>80-120</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Duplicate (17J0212-DUP1)</td>
<td>Source: L17J013-01</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Dissolved Solids</td>
<td>202</td>
<td>12.0</td>
<td>20.0</td>
<td>mg/L</td>
<td>201</td>
<td>0.496</td>
<td>10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Duplicate (17J0212-DUP2)</td>
<td>Source: L17J014-01</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Dissolved Solids</td>
<td>3740</td>
<td>120</td>
<td>200</td>
<td>mg/L</td>
<td>3860</td>
<td>3.16</td>
<td>10</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Batch 17J0255 - EPA 300.0</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blank (17J0255-BLK1)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chloride</td>
<td>0.0200</td>
<td>0.0200</td>
<td>0.500</td>
<td>mg/L</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>U</td>
</tr>
<tr>
<td>Fluoride</td>
<td>0.0100</td>
<td>0.0100</td>
<td>0.0500</td>
<td>mg/L</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>U</td>
</tr>
<tr>
<td>Sulfate</td>
<td>0.500</td>
<td>0.500</td>
<td>2.00</td>
<td>mg/L</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>U</td>
</tr>
<tr>
<td>LCS (17J0255-BS1)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chloride</td>
<td>4.96</td>
<td>0.0200</td>
<td>0.500</td>
<td>mg/L</td>
<td>5.0000</td>
<td>99.3</td>
<td>90-110</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fluoride</td>
<td>5.00</td>
<td>0.0100</td>
<td>0.0500</td>
<td>mg/L</td>
<td>5.0000</td>
<td>100</td>
<td>90-110</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sulfate</td>
<td>5.15</td>
<td>0.500</td>
<td>2.00</td>
<td>mg/L</td>
<td>5.0000</td>
<td>103</td>
<td>90-110</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Matrix Spike (17J0255-MS1)</td>
<td>Source: L17J013-04</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chloride</td>
<td>2660</td>
<td>2.00</td>
<td>50.0</td>
<td>mg/L</td>
<td>500.00</td>
<td>2070</td>
<td>119</td>
<td>90-110</td>
<td>J-</td>
</tr>
<tr>
<td>Fluoride</td>
<td>560</td>
<td>1.00</td>
<td>5.00</td>
<td>mg/L</td>
<td>500.00</td>
<td>3.03</td>
<td>111</td>
<td>90-110</td>
<td>J-</td>
</tr>
<tr>
<td>Sulfate</td>
<td>3250</td>
<td>50.0</td>
<td>200</td>
<td>mg/L</td>
<td>500.00</td>
<td>2750</td>
<td>99.5</td>
<td>90-110</td>
<td></td>
</tr>
</tbody>
</table>

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
### General Chemistry Parameters - Quality Control

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>MDL</th>
<th>PQL</th>
<th>Units</th>
<th>Spike Level</th>
<th>Source</th>
<th>%Rec</th>
<th>%Rec Limits</th>
<th>RPD Limit</th>
<th>Qualifier</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Batch 17J0255 - EPA 300.0</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chloride (17J0255-MS2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prepared &amp; Analyzed: 10/24/17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Source: L17J026-04</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chloride</td>
<td>74.7</td>
<td>0.0200</td>
<td>0.500</td>
<td>mg/L</td>
<td>5.0000</td>
<td>73.8</td>
<td>18.8</td>
<td>90-110</td>
<td>J-</td>
<td></td>
</tr>
<tr>
<td>Fluoride</td>
<td>5.44</td>
<td>0.0100</td>
<td>0.0500</td>
<td>mg/L</td>
<td>5.0000</td>
<td>0.395</td>
<td>101</td>
<td>90-110</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sulfate</td>
<td>5.26</td>
<td>0.500</td>
<td>2.00</td>
<td>mg/L</td>
<td>5.0000</td>
<td>U</td>
<td>105</td>
<td>90-110</td>
<td></td>
<td></td>
</tr>
<tr>
<td>**Matrix Spike Dup (17J0255-MSD1)</td>
<td>Source: L17J013-04</td>
<td>Prepared &amp; Analyzed: 10/24/17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chloride</td>
<td>2630</td>
<td>2.00</td>
<td>50.0</td>
<td>mg/L</td>
<td>500.00</td>
<td>2070</td>
<td>112</td>
<td>90-110</td>
<td>1.25</td>
<td>20</td>
</tr>
<tr>
<td>Fluoride</td>
<td>557</td>
<td>1.00</td>
<td>5.00</td>
<td>mg/L</td>
<td>500.00</td>
<td>3.03</td>
<td>111</td>
<td>90-110</td>
<td>0.528</td>
<td>20</td>
</tr>
<tr>
<td>Sulfate</td>
<td>3210</td>
<td>50.0</td>
<td>200</td>
<td>mg/L</td>
<td>500.00</td>
<td>2750</td>
<td>92.6</td>
<td>90-110</td>
<td>1.08</td>
<td>20</td>
</tr>
<tr>
<td>**Matrix Spike Dup (17J0255-MSD2)</td>
<td>Source: L17J026-04</td>
<td>Prepared &amp; Analyzed: 10/24/17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chloride</td>
<td>74.7</td>
<td>0.0200</td>
<td>0.500</td>
<td>mg/L</td>
<td>5.0000</td>
<td>73.8</td>
<td>18.7</td>
<td>90-110</td>
<td>0.00695</td>
<td>20</td>
</tr>
<tr>
<td>Fluoride</td>
<td>5.52</td>
<td>0.0100</td>
<td>0.0500</td>
<td>mg/L</td>
<td>5.0000</td>
<td>0.395</td>
<td>102</td>
<td>90-110</td>
<td>1.37</td>
<td>20</td>
</tr>
<tr>
<td>Sulfate</td>
<td>5.30</td>
<td>0.500</td>
<td>2.00</td>
<td>mg/L</td>
<td>5.0000</td>
<td>U</td>
<td>106</td>
<td>90-110</td>
<td>0.661</td>
<td>20</td>
</tr>
<tr>
<td><strong>Batch 17J0272 - EPA 300.0</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blank (17J0272-BLK1)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prepared &amp; Analyzed: 10/25/17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sulfate</td>
<td>0.500</td>
<td>0.500</td>
<td>2.00</td>
<td>mg/L</td>
<td>5.0000</td>
<td>0.500</td>
<td>U</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>**LCS (17J0272-BS1)</td>
<td>Source: L17J002-11</td>
<td>Prepared &amp; Analyzed: 10/25/17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sulfate</td>
<td>5.06</td>
<td>0.500</td>
<td>2.00</td>
<td>mg/L</td>
<td>5.0000</td>
<td>U</td>
<td>101</td>
<td>90-110</td>
<td></td>
<td></td>
</tr>
<tr>
<td>**Matrix Spike (17J0272-MS1)</td>
<td>Source: L17J002-11</td>
<td>Prepared &amp; Analyzed: 10/25/17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sulfate</td>
<td>1320</td>
<td>5.00</td>
<td>20.0</td>
<td>mg/L</td>
<td>50.000</td>
<td>NR</td>
<td>90-110</td>
<td></td>
<td>J-</td>
<td></td>
</tr>
<tr>
<td>**Matrix Spike Dup (17J0272-MSD1)</td>
<td>Source: L17J002-11</td>
<td>Prepared &amp; Analyzed: 10/25/17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sulfate</td>
<td>1390</td>
<td>5.00</td>
<td>20.0</td>
<td>mg/L</td>
<td>50.000</td>
<td>NR</td>
<td>90-110</td>
<td>5.13</td>
<td>20</td>
<td>J-</td>
</tr>
</tbody>
</table>

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Peggy Penner, Manager, Laboratory Services

Laboratory Services certifies that the test result in this report meet all requirements of the NELAC standards, unless indicated otherwise in the body of the report. Unless otherwise noted, all methods followed are per the most current published version of 40 CFR Part 136, Table B. Results reported on this report pertain to the above referenced sample only.
### Purging Data

<table>
<thead>
<tr>
<th>Time (min)</th>
<th>VOLUME PURGED (gallons)</th>
<th>DEPTH TO WATER (feet)</th>
<th>PH (standard units)</th>
<th>TEMP. (°C)</th>
<th>TEMP. % DEVIATION</th>
<th>COND. (µmhos/cm or µS/cm)</th>
<th>TEMP. % DEVIATION</th>
<th>SUSPENDED ORGANIC SOLID (TOC) (mg/L)</th>
<th>DISSOLVED OXYGEN (circle mg/L or % saturation)</th>
<th>TURBIDITY (NTUs)</th>
<th>COLOR (describe)</th>
<th>ODOR (describe)</th>
</tr>
</thead>
<tbody>
<tr>
<td>11:28</td>
<td>1.10</td>
<td>7.41</td>
<td>6.83</td>
<td>26.47</td>
<td>0.20</td>
<td>4268</td>
<td>0.20</td>
<td>1.86</td>
<td>Clear</td>
<td>None</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11:30</td>
<td>0.21</td>
<td>7.40</td>
<td>6.83</td>
<td>26.53</td>
<td>0.24</td>
<td>4261</td>
<td>0.24</td>
<td>0.97</td>
<td>Clear</td>
<td>None</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11:32</td>
<td>0.20</td>
<td>7.41</td>
<td>6.83</td>
<td>26.57</td>
<td>0.24</td>
<td>4258</td>
<td>0.24</td>
<td>0.89</td>
<td>Clear</td>
<td>None</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Sampling Data

**Sampled by (Print):** RAB
**Sampler (s) Signatures:**
**Sampling Equipment Code:** PE/S
**Sampled at:** 11:32
**Sampled at:** 11:50
**Pump or Tubing Depth in Well (feet):** 17.3
**Sampled Flow Rate:** 383 mL per minute
**Tubing Material Code:** PE/S

**Field Decontamination:** Field Filtered: Y
**Filtration Equipment Type:** N
**Filter Size:** µm
**Duplicate:** Y

**Sample Container Specification**
- **Sample ID Code:** @Ino-500
  - Material Code: PE
  - Volume: 500ml
  - Preservative Used: NONE
  - Total Vol. Added in Field (mL): N/A
  - Final pH: Inorganics
  - Intended Analysis/Method: PP

- **Sample ID Code:** @Met-250
  - Material Code: PE
  - Volume: 250mL
  - Preservative Used: HNO3
  - Total Vol. Added in Field (mL): 1mL
  - Final pH: Metals
  - Intended Analysis/Method: PP

- **Sample ID Code:** @Rad-1L
  - Material Code: PE
  - Volume: 1L
  - Preservative Used: HNO3
  - Total Vol. Added in Field (mL): 5mL
  - Final pH: Radiologica
  - Intended Analysis/Method: PP

**Remarks:**
- Sample bottles pre-preserved at laboratory prior to sample collection.

**Material Codes:**
- AG: Amber Glass
- CG: Clear Glass
- PE: Polyethylene
- PP: Polypropylene
- S: Silicone
- T: Teflon
- O: Other (Specify)

**Sampling/Purging Equipment Codes:**
- APP: After Peristaltic Pump
- B: Bailer
- BP: Bladder Pump
- ES: Electric Submersible Pump
- PP: Peristaltic Pump
- RFPP: Reverse Flow Peristaltic Pump
- SM: Straw Method (tubing Gravity Drain)
- VT: Vacuum Trap
- O: Other (Specify)

**Notes:**
1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.
2. Stabilization Criteria for Range of Variation of Last Three Consecutive Readings (See FS 2212, Section 3)
   - pH: ± 0.2 units
   - Temperature: ± 0.2 °C
   - Specific Conductance: ± 5% Dissolved Oxygen: all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater)
   - Turbidity: all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)
### GROUNDWATER SAMPLING LOG

#### Big Bend

**SITE NAME:** Big Bend  
**SITE LOCATION:** Apollo Beach, FL.

#### WELL NO: BBS-CCR-2

**SAMPLE ID:** L17J115-02 A  
**DATE:** 10/13/17

#### PURGING DATA

<table>
<thead>
<tr>
<th>TIME</th>
<th>VOLUME PURGED (GALLONS)</th>
<th>PUMPING DEPTH (FEET)</th>
<th>pH (standard units)</th>
<th>TEMP. (ºC)</th>
<th>COND. (µmhos/cm OR µS/cm)</th>
<th>DISSOLVED OXYGEN (circled % saturation)</th>
<th>TURBIDITY (NTUs)</th>
<th>COLOR (describe)</th>
<th>ODOR (describe)</th>
</tr>
</thead>
<tbody>
<tr>
<td>10:56</td>
<td>0.80</td>
<td>0.80</td>
<td>0.10</td>
<td>6.94</td>
<td>6.87</td>
<td>26.44</td>
<td>1348</td>
<td>Lt. Yellow</td>
<td>None</td>
</tr>
<tr>
<td>10:58</td>
<td>0.20</td>
<td>1.00</td>
<td>0.10</td>
<td>6.94</td>
<td>6.86</td>
<td>26.45</td>
<td>1350</td>
<td>Lt. Yellow</td>
<td>None</td>
</tr>
<tr>
<td>11:00</td>
<td>0.20</td>
<td>1.20</td>
<td>0.10</td>
<td>6.95</td>
<td>6.87</td>
<td>26.46</td>
<td>1350</td>
<td>Lt. Yellow</td>
<td>None</td>
</tr>
</tbody>
</table>

#### EQUIPMENT VOLUME PURGED: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME

#### WELL CAPACITY (Gallons Per Foot): 0.75° = 0.02; 1° = 0.04; 1.25° = 0.06; 2° = 0.16; 3° = 0.37; 4° = 0.65; 5° = 1.02; 6° = 1.47; 12° = 5.88

#### TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.00006; 3/16" = 0.0014; 1/4" = 0.0026; 5/32" = 0.004; 3/32" = 0.006; 1/16" = 0.010; 3/16" = 0.016

#### Table of Contents

- **SITE NAME:** Big Bend
- **SITE LOCATION:** Apollo Beach, FL.
- **WELL NO:** BBS-CCR-2
- **SAMPLE ID:** L17J115-02 A
- **DATE:** 10/13/17

#### Sampling Data

<table>
<thead>
<tr>
<th>SAMPLED BY (PRINT) / AFFILIATION:</th>
<th>RAB</th>
<th>TECO</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAMPLER(S) SIGNATURES:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SAMPLING INITIATED AT:</td>
<td>11:00</td>
<td></td>
</tr>
<tr>
<td>SAMPLING ENDED AT:</td>
<td>11:10</td>
<td></td>
</tr>
</tbody>
</table>

#### Field Decontamination:

<table>
<thead>
<tr>
<th>FIELD DECONTAMINATION:</th>
<th>Y</th>
<th>N</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIELD-FILTERED:</td>
<td>N</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>FILTER SIZE:</td>
<td>µm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DUPLICATE:</td>
<td>Y</td>
<td>N</td>
<td>N</td>
</tr>
</tbody>
</table>

#### Sample Container Specification

<table>
<thead>
<tr>
<th>SAMPLE ID CODE</th>
<th>CONTAINERS</th>
<th>MATERIAL CODE</th>
<th>VOLUME</th>
<th>PRESERVATIVE USED</th>
<th>TOTAL VOL. ADDED IN FIELD (mL)</th>
<th>FINAL pH</th>
<th>INTENDED ANALYSIS AND/OR METHOD</th>
<th>SAMPLING EQUIPMENT CODE</th>
</tr>
</thead>
<tbody>
<tr>
<td>@Ino-500</td>
<td>1</td>
<td>PE</td>
<td>500ml</td>
<td>NONE</td>
<td>NONE</td>
<td>N/A</td>
<td>Inorganics</td>
<td>PP</td>
</tr>
<tr>
<td>@Met-250</td>
<td>2</td>
<td>PE</td>
<td>250ml</td>
<td>HNO3</td>
<td>1ml</td>
<td>&lt;2</td>
<td>Metals</td>
<td>PP</td>
</tr>
<tr>
<td>@Rad-1L</td>
<td>2</td>
<td>PE</td>
<td>1L</td>
<td>HNO3</td>
<td>5ml</td>
<td>&lt;2</td>
<td>Radiologicals</td>
<td>PP</td>
</tr>
</tbody>
</table>

### Remarks

1. Sample bottles pre-preserved at laboratory prior to sample collection.

### Notes

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

---

**MATERIAL CODES:**  
- AG = Amber Glass;  
- CG = Clear Glass;  
- PE = Polyethylene;  
- PP = Polypropylene;  
- S = Silicone;  
- T = Teflon;  
- O = Other (Specify)

**SAMPLING/PURGING EQUIPMENT CODES:**  
- APP = After Peristaltic Pump;  
- B = Bailer;  
- BP = Bladder Pump;  
- ESP = Electric Submersible Pump;  
- PP = Peristaltic Pump  
- RFPP = Reverse Flow Peristaltic Pump;  
- SM = Straw Method (tubing Gravity Drain);  
- VT = Vacuum Trap;  
- O = Other (Specify)

**NOTES:**

- Option(ally), ± 0.2 mg/L or ± 10% (whichever is greater) Turbidity: all readings ≤ 20 NTU; optionally ± 5 NTU or 10% (whichever is greater)
### PURGING DATA

<table>
<thead>
<tr>
<th>Time</th>
<th>Volume Purged (Gallons)</th>
<th>Cumul. Volume Purged (Gallons)</th>
<th>Rate (GPM)</th>
<th>Depth to Water (Feet)</th>
<th>Temp. (°C)</th>
<th>Cond. (µmhos/cm or µS/cm)</th>
<th>Dissolved Oxygen (circle mg/l or % saturation)</th>
<th>Turbidity (NTUs)</th>
<th>Color (describe)</th>
<th>Odor (describe)</th>
</tr>
</thead>
<tbody>
<tr>
<td>10:22</td>
<td>0.43</td>
<td>0.43</td>
<td>0.05</td>
<td>6.72</td>
<td>6.47</td>
<td>27.31</td>
<td>1785</td>
<td>0.36</td>
<td>Yellow</td>
<td>Mild</td>
</tr>
<tr>
<td>10:24</td>
<td>0.10</td>
<td>0.53</td>
<td>0.05</td>
<td>6.72</td>
<td>6.45</td>
<td>27.20</td>
<td>1763</td>
<td>0.50</td>
<td>Yellow</td>
<td>Mild</td>
</tr>
<tr>
<td>10:26</td>
<td>0.10</td>
<td>0.63</td>
<td>0.05</td>
<td>6.71</td>
<td>6.44</td>
<td>27.18</td>
<td>1747</td>
<td>0.37</td>
<td>Yellow</td>
<td>Mild</td>
</tr>
</tbody>
</table>

### SAMPLING DATA

- **Sampled by (Print) / Affiliation:** RAB
- **Sampler (S) Signatures:** TECO
- **Sampling Equipment Code:** PE/S
- **Pump or Tubing Depth in Well (feet):** 18.2
- **Sample Pump Flow Rate (mL per minute):** 187
- **Tubing Material Code:** PE/S
- **Field Decontamination:** Y
- **Filter Size:** µm
- **Duplicate:** Y
- **Sample Container Specification:**
  - @Ino-500: 1 PE, 500ml, NONE, N/A, Inorganics, PP
  - @Met-250: 2 PE, 250ml, HNO3, 1ml, <2, Metals, PP
  - @Rad-1L: 2 PE, 1L, HNO3, 5ml, <2, Radiologicals, PP

### REMARKS

1. Sample bottles pre-preserved at laboratory prior to sample collection.
**GROUNDWATER SAMPLING LOG**

### WELL DATA

- **WELL NO:** BBS-CCR-BW-1
- **SAMPLE ID:** L17J115-04 A
- **DATE:** 10/13/17

### PURGING DATA

<table>
<thead>
<tr>
<th>TIME</th>
<th>VOLUME PURGED (GALLONS)</th>
<th>PURGE RATE (GPM)</th>
<th>DEPTH TO WATER (FEET)</th>
<th>pH</th>
<th>TEMP. (ºC)</th>
<th>COND. (µmhos/cm OR µS/cm)</th>
<th>DISSOLVED OXYGEN (circle mg/l or % saturation)</th>
<th>TURBIDITY (NTUs)</th>
<th>COLOR (describe)</th>
<th>ODOR (describe)</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:57</td>
<td>5.49</td>
<td>0.69</td>
<td>30.43</td>
<td>6.55</td>
<td>27.81</td>
<td>4384</td>
<td>0.87</td>
<td>7.30</td>
<td>Clear</td>
<td>None</td>
</tr>
<tr>
<td>9:59</td>
<td>1.37</td>
<td>0.69</td>
<td>30.42</td>
<td>6.55</td>
<td>27.81</td>
<td>4499</td>
<td>0.57</td>
<td>4.40</td>
<td>Clear</td>
<td>None</td>
</tr>
<tr>
<td>10:01</td>
<td>1.37</td>
<td>0.69</td>
<td>30.41</td>
<td>6.55</td>
<td>27.86</td>
<td>4570</td>
<td>0.40</td>
<td>2.51</td>
<td>Clear</td>
<td>None</td>
</tr>
</tbody>
</table>

**WELL CAPACITY** (Gallons Per Foot):
- 0.75" = 0.02
- 1" = 0.04
- 1.25" = 0.06
- 2" = 0.16
- 3" = 0.37
- 4" = 0.65
- 5" = 1.02
- 6" = 1.47
- 12" = 6.88

**TUBING INSIDE DIA. CAPACITY** (Gallons/Feet):
- 1/8" = 0.00006
- 3/16" = 0.00014
- 1/4" = 0.00026
- 5/16" = 0.0004
- 3/8" = 0.0006
- 1/2" = 0.0010
- 5/8" = 0.0016

### SAMPLING DATA

- **SAMPLED BY (PRINT) / AFFILIATION:** RAB
- **TECO**
- **SAMPLED (s) SIGNATURES:**
- **SAMPLING INITIATED AT:** 10:01
- **SAMPLING ENDED AT:** 10:04

### FIELD DECONTAMINATION:
- **FIELD-FILTERED:** Y
- **FILTER EQUIPMENT TYPE:**
- **FILTER SIZE:**
- **DUPLICATE:** Y

### SAMPLE CONTAINER SPECIFICATION

<table>
<thead>
<tr>
<th>SAMPLE ID CODE</th>
<th># CONTAINERS</th>
<th>MATERIAL CODE</th>
<th>VOLUME</th>
<th>PRESERVATIVE USED</th>
<th>TOTAL VOL. ADDED IN FIELD (mL)</th>
<th>FINAL pH</th>
<th>INTENDED ANALYSIS AND/OR METHOD</th>
<th>SAMPLING EQUIPMENT CODE</th>
</tr>
</thead>
<tbody>
<tr>
<td>@Ino-500</td>
<td>1</td>
<td>PE</td>
<td>500ml</td>
<td>NONE</td>
<td>NONE</td>
<td>N/A</td>
<td>Inorganics</td>
<td>ESP</td>
</tr>
<tr>
<td>@Met-250</td>
<td>2</td>
<td>PE</td>
<td>250ml</td>
<td>HNO3</td>
<td>1ml</td>
<td>&lt;2</td>
<td>Metals</td>
<td>ESP</td>
</tr>
<tr>
<td>@Rad-1L</td>
<td>2</td>
<td>PE</td>
<td>1L</td>
<td>HNO3</td>
<td>5ml</td>
<td>&lt;2</td>
<td>Radiologics</td>
<td>ESP</td>
</tr>
</tbody>
</table>

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

**WELL VOLUME PURGE:**

1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY

**EQUIPMENT VOLUME PURGE:**

1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME

<table>
<thead>
<tr>
<th>TIME</th>
<th>VOLUME PURGED (GALLONS)</th>
<th>DEPTH TO WATER (FEET)</th>
<th>pH</th>
<th>TEMPERATURE</th>
<th>COND. (µMhos/cm or µS/cm)</th>
<th>DISSOLVED OXYGEN (circle mg/L or % saturation)</th>
<th>TURBIDITY (NTUs)</th>
<th>COLOR (describe)</th>
<th>ODOR (describe)</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:28</td>
<td>1.75</td>
<td>0.13</td>
<td>7.61</td>
<td>6.88</td>
<td>27.92</td>
<td>0.39</td>
<td>1706</td>
<td>Lt. Yellow</td>
<td>None</td>
</tr>
<tr>
<td>9:30</td>
<td>0.26</td>
<td>0.13</td>
<td>7.62</td>
<td>6.69</td>
<td>27.95</td>
<td>0.31</td>
<td>1702</td>
<td>Lt. Yellow</td>
<td>None</td>
</tr>
<tr>
<td>9:32</td>
<td>0.26</td>
<td>0.13</td>
<td>7.62</td>
<td>6.70</td>
<td>27.98</td>
<td>0.28</td>
<td>1699</td>
<td>Lt. Yellow</td>
<td>None</td>
</tr>
</tbody>
</table>

### WELL CAPACITY (Gallons Per Foot):

<table>
<thead>
<tr>
<th>Diameter (inches)</th>
<th>Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.75</td>
<td>0.02</td>
</tr>
<tr>
<td>1</td>
<td>0.04</td>
</tr>
<tr>
<td>1.25</td>
<td>0.06</td>
</tr>
<tr>
<td>2</td>
<td>0.16</td>
</tr>
<tr>
<td>3</td>
<td>0.37</td>
</tr>
<tr>
<td>4</td>
<td>0.65</td>
</tr>
<tr>
<td>5</td>
<td>1.02</td>
</tr>
<tr>
<td>6</td>
<td>1.47</td>
</tr>
<tr>
<td>12</td>
<td>5.88</td>
</tr>
</tbody>
</table>

### TUBING INSIDE DIA. CAPACITY (Gal./Ft.):

<table>
<thead>
<tr>
<th>Diameter (inches)</th>
<th>Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/8</td>
<td>0.00006</td>
</tr>
<tr>
<td>3/16</td>
<td>0.0014</td>
</tr>
<tr>
<td>1/4</td>
<td>0.0026</td>
</tr>
<tr>
<td>5/16</td>
<td>0.004</td>
</tr>
<tr>
<td>3/8</td>
<td>0.006</td>
</tr>
<tr>
<td>1/2</td>
<td>0.010</td>
</tr>
<tr>
<td>5/8</td>
<td>0.016</td>
</tr>
</tbody>
</table>

### SAMPLING DATA

<table>
<thead>
<tr>
<th>SAMPLED BY (PRINT) / AFFILIATION</th>
<th>RAB</th>
<th>TECO</th>
<th>SAMPLER (s) SIGNATURES</th>
<th>SAMPLING INITIATED AT</th>
<th>TUBING MATERIAL CODE</th>
<th>FIELD DECONTAMINATION</th>
<th>FILTER SIZE</th>
<th>DUPLICATE</th>
<th>SAMPLE CONTAINER SPECIFICATION</th>
<th>INTENDED ANALYSIS AND/OR METHOD</th>
<th>SAMPLING EQUIPMENT CODE</th>
</tr>
</thead>
<tbody>
<tr>
<td>PUMP OR TUBING DEPTH IN WELL (feet)</td>
<td>18.5</td>
<td>503</td>
<td>PE/S</td>
<td>9:32</td>
<td>9:40</td>
<td>Y</td>
<td>µm</td>
<td>Y</td>
<td>@Ino-500 1 PE 500ml NONE NONE N/A inorganics PP</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SAMPLED BY (PRINT) / AFFILIATION</td>
<td>RAB</td>
<td>TECO</td>
<td>SAMPLER (s) SIGNATURES</td>
<td>SAMPLING INITIATED AT</td>
<td>TUBING MATERIAL CODE</td>
<td>FIELD DECONTAMINATION</td>
<td>FILTER SIZE</td>
<td>DUPLICATE</td>
<td>SAMPLE CONTAINER SPECIFICATION</td>
<td>INTENDED ANALYSIS AND/OR METHOD</td>
<td>SAMPLING EQUIPMENT CODE</td>
</tr>
<tr>
<td>PUMP OR TUBING DEPTH IN WELL (feet)</td>
<td>18.5</td>
<td>503</td>
<td>PE/S</td>
<td>9:32</td>
<td>9:40</td>
<td>Y</td>
<td>µm</td>
<td>Y</td>
<td>@Met-250 2 PE 250ml HNO3 1ml &lt;2 Metals PP</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PUMP OR TUBING DEPTH IN WELL (feet)</td>
<td>18.5</td>
<td>503</td>
<td>PE/S</td>
<td>9:32</td>
<td>9:40</td>
<td>Y</td>
<td>µm</td>
<td>Y</td>
<td>@Rad-1L 2 PE 1L HNO3 5ml &lt;2 Radioligicals PP</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### REMARKS:

1. Sample bottles pre-preserved at laboratory prior to sample collection.

### MATERIAL CODES:

- AG = Amber Glass
- CG = Clear Glass
- PE = Polyethylene
- PP = Polypropylene
- B = Silicone
- T = Teflon
- O = Other (Specify)

### NOTES:

1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212. SECTION 3)
   - pH: ± 0.2 units
   - Temperature: ± 0.2 °C
   - Specific Conductance: ± 5%
   - Dissolved Oxygen: all readings ≤ 20% saturation (see Table FS 2200-2)
   - optionally, ± 0.2 mg/L or ± 10% (whichever is greater)
   - Turbidity: all readings ≤ 20 NTU; optionally ± 5 NTU or 10% (whichever is greater)
<table>
<thead>
<tr>
<th>LIMS #</th>
<th>Location Code</th>
<th>Time</th>
<th>FE</th>
<th>pH (SU)</th>
<th>Temp. °C</th>
<th>Cond (µS/HOS)</th>
<th>DO (mg/L)</th>
<th>Turbidity (NTU)</th>
<th>Redox (mv)</th>
<th>Sulfate (mg/L)</th>
<th>Color</th>
<th>Odor</th>
<th>Time</th>
<th>NGVD</th>
</tr>
</thead>
<tbody>
<tr>
<td>L17J15-01 A</td>
<td>BBS-CCR-1</td>
<td>11:50</td>
<td>6.83</td>
<td>26.57</td>
<td>4258</td>
<td>0.24</td>
<td>0.89</td>
<td>-83.3</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>L17J15-02 A</td>
<td>BBS-CCR-2</td>
<td>11:10</td>
<td>6.87</td>
<td>26.46</td>
<td>1350</td>
<td>0.20</td>
<td>3.03</td>
<td>-188.5</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>LIMS #</th>
<th>Time</th>
<th>250ml Cyan (3)</th>
<th>1L Irrig (1)</th>
<th>500ml Irrig (2)</th>
<th>250ml Irrig (3)</th>
<th>1L Mill (1)</th>
<th>250ml Mill (3)</th>
<th>1L Rads (1)</th>
<th>500ml Sulfate (2)</th>
<th>500ml Mill (2)</th>
<th>250ml Rads (3)</th>
<th>400ml Vial (6)</th>
<th>500 ml Nuts (2)</th>
<th>1L Rads Diss. (1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>L17J15-01 A</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>8</td>
<td>1</td>
<td></td>
<td>500 ml nuts</td>
<td></td>
<td>250 ml Nuts (3)</td>
<td>400ml Vials (6)</td>
</tr>
</tbody>
</table>

### Purging Information

**Well #**: BBS-CCR-1
- **Diam/ Comp**: 2
- **Screen Int (ft)**: 10
- **Intake Depth (ft)**: 17.32
- **Well Depth (ft)**: 22.32
- **Depth to Water (ft)**: 7.32
- **Water Column (ft)**: 15.00
- **Water Column (gal)**: 2.40
- **Well Capacity (gal)**: 0.0026
- **Tubing Capacity (gal)**: 23.3
- **Tubing Volume (gal)**: 0.06
- **Equipment ID**: 12

**Purge Meth**: Time (min) 11:32
- **Rate (gpm)**: 380
- **Volume (gal)**: 2.40
- **DO (mg/L)**: 2428
- **Temp. °C**: 26.47
- **Cond (µS/HOS)**: 4268
- **Purge Time**: 0.2
- **Equipment ID**: WLM08

**Purge End**: 11:32
- **Tubing**: PE/S
- **Tubing**: PE/S

**Purge Complete At**: 11:18
- **Gallons to Purge**: 0.12
- **Stability Values**: 0.63 2428 0.24 0.89

**Well #**: BBS-CCR-2
- **Diam/ Comp**: 2
- **Screen Int (ft)**: 10
- **Intake Depth (ft)**: 16.84
- **Well Depth (ft)**: 21.84
- **Depth to Water (ft)**: 6.88
- **Water Column (ft)**: 14.96
- **Water Column (gal)**: 2.39
- **Well Capacity (gal)**: 0.0026
- **Tubing Capacity (gal)**: 22.84
- **Tubing Volume (gal)**: 0.06

**Purge Meth**: Time (min) 10:06
- **Rate (gpm)**: 380
- **Volume (gal)**: 2.39
- **DO (mg/L)**: 2428
- **Temp. °C**: 26.47
- **Cond (µS/HOS)**: 4268
- **Purge Time**: 0.2
- **Equipment ID**: WLM08

**Purge End**: 10:48
- **Tubing**: PE/S
- **Tubing**: PE/S

**Purge Complete At**: 10:49
- **Gallons to Purge**: 0.12
- **Stability Values**: 0.63 2428 0.24 0.89

**Comments**: None
### Purging Information

<table>
<thead>
<tr>
<th>Well #</th>
<th>Diam/ Comp</th>
<th>Screen Interval (ft)</th>
<th>Intake Depth (ft)</th>
<th>Depth to Water (ft)</th>
<th>Water Depth (ft)</th>
<th>pH (SU)</th>
<th>Cond (µMHO)</th>
<th>DO (mg/L)</th>
<th>Turbidity (NTU)</th>
<th>Redox (mv)</th>
<th>Turbidity (NTU)</th>
<th>Purge Criteria</th>
<th>Status</th>
<th>Equipment ID</th>
<th>Equil. Table</th>
</tr>
</thead>
<tbody>
<tr>
<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>Purge Meth</td>
<td>Time</td>
<td>Rate (ml/min)</td>
<td>Volume (gal)</td>
<td>Total Vol. (gal)</td>
<td>Water Depth (ft)</td>
<td>pH (SU)</td>
<td>Cond (µMHO)</td>
<td>DO (mg/L)</td>
<td>Turbidity (NTU)</td>
<td>Redox (mv)</td>
<td>Purge Criteria</td>
<td>Status</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<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>1A</td>
<td>10:22</td>
<td>180</td>
<td>0.43</td>
<td>0.43</td>
<td>6.7</td>
<td>6.47</td>
<td>27.31</td>
<td>1785</td>
<td>0.36</td>
<td>1.59</td>
<td>0.2</td>
<td>Stable</td>
<td>No</td>
<td>WLM08</td>
<td></td>
</tr>
<tr>
<td>Purge Start</td>
<td>10:24</td>
<td>190</td>
<td>0.10</td>
<td>0.53</td>
<td>6.7</td>
<td>6.47</td>
<td>27.30</td>
<td>1763</td>
<td>0.50</td>
<td>1.13</td>
<td>0.2</td>
<td>Pump</td>
<td>Yes</td>
<td>PE/S</td>
<td></td>
</tr>
<tr>
<td>Purge End</td>
<td>10:26</td>
<td>190</td>
<td>0.10</td>
<td>0.63</td>
<td>6.7</td>
<td>6.44</td>
<td>27.18</td>
<td>1747</td>
<td>0.37</td>
<td>2.39</td>
<td>0.2</td>
<td>Stable</td>
<td>Yes</td>
<td>PE/S</td>
<td></td>
</tr>
</tbody>
</table>

**Purge Complete At:** 10:16

**Gallons to Purge:** 0.12

**Stability Values:** 6.44, 27.18, 1747, 0.37, 2.39

---

### Purging Information

| Well #     | Diam/ Comp | Screen Interval (ft) | Intake Depth (ft) | Depth to Water (ft) | Water Depth (ft) | pH (SU) | Cond (µMHO) | DO (mg/L) | Turbidity (NTU) | Redox (mv) | Purge Criteria | Status         |        |              |             |
|------------|------------|---------------------|------------------|--------------------|-----------------|---------|------------|-----------|----------------|------------|                |                |        |              |             |
|            |            |                     |                  |                    |                 |         |            |           |                |            |                |                |        |              |             |
| Purge Meth | Time       | Rate (ml/min)       | Volume (gal)     | Total Vol. (gal)   | Water Depth (ft)| pH (SU) | Cond (µMHO) | DO (mg/L) | Turbidity (NTU) | Redox (mv) | Purge Criteria | Status         |        |              |             |
|            |            |                     |                  |                    |                 |         |            |           |                |            |                |                |        |              |             |
| 2          | 10         | 14                  | 18                | 18.00              | 0.16            | 2.88    | 0.0026     | 100       | 0.06           | 0.32       | 0.2            | Stable         | No     | WLM08        |             |
| Purge Meth | Time       | Rate (ml/min)       | Volume (gal)     | Total Vol. (gal)   | Water Depth (ft)| pH (SU) | Cond (µMHO) | DO (mg/L) | Turbidity (NTU) | Redox (mv) | Purge Criteria | Status         |        |              |             |
|            |            |                     |                  |                    |                 |         |            |           |                |            |                |                |        |              |             |
|           |            |                     |                  |                    |                 |         |            |           |                |            |                |                |        |              |             |

**Purge Complete At:** Gallons to Purge 0.32

**Stability Values:** 6.44, 27.18, 1747, 0.37, 2.39
### Purging Information

**Well Capacities (gallons/ft):** 2 = 0.16  4 = 0.65  
**Tubing Inside Diam. Capacities Gallons/ft:** 14" = 0.0026  38" = 0.006

<table>
<thead>
<tr>
<th>Well #</th>
<th>Diam/Comp</th>
<th>Screen Interval (ft)</th>
<th>Intake Depth (ft)</th>
<th>- Depth to Water (ft)</th>
<th>Water Volume (gal)</th>
<th>Water Capacity (gal)</th>
<th>1 Well Volume (gal)</th>
<th>(Tubing Capacity (gal)</th>
<th>+ Pump Volume (gal)</th>
<th>+ Cell Volume (gal)</th>
<th>1 Equist Volume (gal)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BBS-CCR-BW-1</td>
<td>2</td>
<td>10</td>
<td>39.3</td>
<td>44.3</td>
<td>29.60</td>
<td>14.70</td>
<td>0.16</td>
<td>2.35</td>
<td>0.0026</td>
<td>100</td>
<td>0</td>
</tr>
</tbody>
</table>

**Purging Method:**

- **1A** 9:57 2600 5.49 5.49 30.43 6.55 27.81 4384 0.87 7.30 ph<+/- 0.2 STABLE Level Meter: WLM08
- **1A** 9:57 2600 1.37 6.86 30.42 6.55 27.81 4499 0.57 4.40 Cond % <+/- 5 STABLE Tubing: PE
- **1A** 10:01 2600 1.37 8.31 30.42 6.55 27.86 4570 0.40 2.51 DO % Sat < 20 STABLE Dedicated Yes Turb, NTU < 20 STABLE Tubing? No

**Purge Complete At:**

- **9:49** Gallons to Purge: 0.32 Stability Value = 6.55 27.86 4570 0.40 2.51

<table>
<thead>
<tr>
<th>Well #</th>
<th>Diam/Comp</th>
<th>Screen Interval (ft)</th>
<th>Intake Depth (ft)</th>
<th>- Depth to Water (ft)</th>
<th>Water Volume (gal)</th>
<th>Water Capacity (gal)</th>
<th>1 Well Volume (gal)</th>
<th>(Tubing Capacity (gal)</th>
<th>+ Pump Volume (gal)</th>
<th>+ Cell Volume (gal)</th>
<th>1 Equist Volume (gal)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BBS-CCR-BW-2</td>
<td>2</td>
<td>10</td>
<td>18.49</td>
<td>23.84</td>
<td>16.46</td>
<td>0.16</td>
<td>2.63</td>
<td>0.0026</td>
<td>24.64</td>
<td>0</td>
<td>0.06</td>
</tr>
</tbody>
</table>

**Purging Method:**

- **1A** 9:28 510 1.75 1.75 7.61 6.68 27.92 1706 0.39 4.98 ph<+/- 0.2 STABLE Level Meter: WLM08
- **9:15** 3200 0.26 2.01 7.62 6.69 27.95 1702 0.31 6.12 Cond % <+/- 5 STABLE Tubing: PE
- **9:32** 3200 0.26 2.27 7.62 6.70 27.98 1699 0.28 3.96 DO % Sat < 20 STABLE Dedicated Yes Turb, NTU < 20 STABLE Tubing? No

**Purge Complete At:**

- **9:16** Gallons to Purge: 0.12 Stability Value = 6.70 27.98 1699 0.28 3.96

**Comments:**

---

**Site:** Big Bend  
**Date:** 10/13/17  
**File Name:** 101317_Wells_RAB  
**Weather:** Partly Cloudy & Warm
ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Tampa
6712 Benjamin Road
Suite 100
Tampa, FL 33634
Tel: (813)885-7427

TestAmerica Job ID: 660-83441-1
Client Project/Site: L17J115

For:
Tampa Electric Company
5012 Causeway Boulevard
Tampa, Florida 33619

Attn: Ms. Peggy Penner

Authorized for release by:
10/23/2017 3:29:41 PM
Keaton Conner, Project Manager I
(813)885-7427
keaton.conner@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.
Table of Contents

Cover Page ........................................................................ 1
Table of Contents .............................................................. 2
Sample Summary ............................................................... 3
Definitions ................................................................. 4
Case Narrative ................................................................. 5
Detection Summary .......................................................... 6
Client Sample Results ...................................................... 7
QC Sample Results .......................................................... 8
QC Association ............................................................... 9
Chronicle ................................................................. 10
Certification Summary ..................................................... 11
Method Summary ............................................................ 12
Chain of Custody .............................................................. 13
Receipt Checklists ........................................................... 16
# Sample Summary

**Client:** Tampa Electric Company  
**Project/Site:** L17J115  
**TestAmerica Job ID:** 660-83441-1  

<table>
<thead>
<tr>
<th>Lab Sample ID</th>
<th>Client Sample ID</th>
<th>Matrix</th>
<th>Collected</th>
<th>Received</th>
</tr>
</thead>
<tbody>
<tr>
<td>660-83441-1</td>
<td>L17J115-01</td>
<td>Water</td>
<td>10/13/17 11:50</td>
<td>10/17/17 09:10</td>
</tr>
<tr>
<td>660-83441-2</td>
<td>L17J115-02</td>
<td>Water</td>
<td>10/13/17 11:10</td>
<td>10/17/17 09:10</td>
</tr>
<tr>
<td>660-83441-3</td>
<td>L17J115-03</td>
<td>Water</td>
<td>10/13/17 10:42</td>
<td>10/17/17 09:10</td>
</tr>
<tr>
<td>660-83441-4</td>
<td>L17J115-04</td>
<td>Water</td>
<td>10/13/17 10:04</td>
<td>10/17/17 09:10</td>
</tr>
<tr>
<td>660-83441-5</td>
<td>L17J115-05</td>
<td>Water</td>
<td>10/13/17 09:40</td>
<td>10/17/17 09:10</td>
</tr>
</tbody>
</table>
### Qualifiers

#### Metals

<table>
<thead>
<tr>
<th>Qualifier</th>
<th>Qualifier Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.</td>
</tr>
<tr>
<td>V</td>
<td>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.</td>
</tr>
</tbody>
</table>

### Glossary

These commonly used abbreviations may or may not be present in this report.

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>%R</td>
<td>Percent Recovery</td>
</tr>
<tr>
<td>CFL</td>
<td>Contains Free Liquid</td>
</tr>
<tr>
<td>CNF</td>
<td>Contains No Free Liquid</td>
</tr>
<tr>
<td>DER</td>
<td>Duplicate Error Ratio (normalized absolute difference)</td>
</tr>
<tr>
<td>Dil Fac</td>
<td>Dilution Factor</td>
</tr>
<tr>
<td>DL</td>
<td>Detection Limit (DoD/DOE)</td>
</tr>
<tr>
<td>DL, RA, RE, IN</td>
<td>Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample</td>
</tr>
<tr>
<td>DLC</td>
<td>Decision Level Concentration (Radiochemistry)</td>
</tr>
<tr>
<td>EDL</td>
<td>Estimated Detection Limit (Dioxin)</td>
</tr>
<tr>
<td>LOD</td>
<td>Limit of Detection (DoD/DOE)</td>
</tr>
<tr>
<td>LOQ</td>
<td>Limit of Quantitation (DoD/DOE)</td>
</tr>
<tr>
<td>MDA</td>
<td>Minimum Detectable Activity (Radiochemistry)</td>
</tr>
<tr>
<td>MDC</td>
<td>Minimum Detectable Concentration (Radiochemistry)</td>
</tr>
<tr>
<td>MDL</td>
<td>Method Detection Limit</td>
</tr>
<tr>
<td>ML</td>
<td>Minimum Level (Dioxin)</td>
</tr>
<tr>
<td>NC</td>
<td>Not Calculated</td>
</tr>
<tr>
<td>ND</td>
<td>Not Detected at the reporting limit (or MDL or EDL if shown)</td>
</tr>
<tr>
<td>PQL</td>
<td>Practical Quantitation Limit</td>
</tr>
<tr>
<td>QC</td>
<td>Quality Control</td>
</tr>
<tr>
<td>RER</td>
<td>Relative Error Ratio (Radiochemistry)</td>
</tr>
<tr>
<td>RL</td>
<td>Reporting Limit or Requested Limit (Radiochemistry)</td>
</tr>
<tr>
<td>RPD</td>
<td>Relative Percent Difference, a measure of the relative difference between two points</td>
</tr>
<tr>
<td>TEF</td>
<td>Toxicity Equivalent Factor (Dioxin)</td>
</tr>
<tr>
<td>TEQ</td>
<td>Toxicity Equivalent Quotient (Dioxin)</td>
</tr>
</tbody>
</table>
With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In the event of interference or analytes present at high concentrations, samples may be diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

**RECEIPT**
The samples were received on 10/17/2017; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 2.6 C.

**TOTAL METALS (ICP)**
Samples L17J115-01 (660-83441-1), L17J115-02 (660-83441-2), L17J115-03 (660-83441-3), L17J115-04 (660-83441-4) and L17J115-05 (660-83441-5) were analyzed for total metals (ICP) in accordance with EPA Method 200.7. The samples were prepared on 10/19/2017 and analyzed on 10/20/2017.

The method blank for preparation batch 400-372467 and analytical batch 400-372725 contained Lithium 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.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.
## Detection Summary

**Client:** Tampa Electric Company  
**Project/Site:** L17J115  
**TestAmerica Job ID:** 660-83441-1

**Client Sample ID:** L17J115-01  
**Lab Sample ID:** 660-83441-1

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result Qualifier</th>
<th>PQL</th>
<th>MDL</th>
<th>Unit</th>
<th>Dil Fac</th>
<th>D</th>
<th>Method</th>
<th>Prep Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithium</td>
<td>0.015 V</td>
<td>0.050</td>
<td>0.0010</td>
<td>mg/L</td>
<td>1</td>
<td></td>
<td>200.7 Rev 4.4</td>
<td>Total/NA</td>
</tr>
</tbody>
</table>

**Client Sample ID:** L17J115-02  
**Lab Sample ID:** 660-83441-2

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result Qualifier</th>
<th>PQL</th>
<th>MDL</th>
<th>Unit</th>
<th>Dil Fac</th>
<th>D</th>
<th>Method</th>
<th>Prep Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithium</td>
<td>0.016 V</td>
<td>0.050</td>
<td>0.0010</td>
<td>mg/L</td>
<td>1</td>
<td></td>
<td>200.7 Rev 4.4</td>
<td>Total/NA</td>
</tr>
</tbody>
</table>

**Client Sample ID:** L17J115-03  
**Lab Sample ID:** 660-83441-3

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result Qualifier</th>
<th>PQL</th>
<th>MDL</th>
<th>Unit</th>
<th>Dil Fac</th>
<th>D</th>
<th>Method</th>
<th>Prep Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithium</td>
<td>0.011 V</td>
<td>0.050</td>
<td>0.0010</td>
<td>mg/L</td>
<td>1</td>
<td></td>
<td>200.7 Rev 4.4</td>
<td>Total/NA</td>
</tr>
</tbody>
</table>

**Client Sample ID:** L17J115-04  
**Lab Sample ID:** 660-83441-4

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result Qualifier</th>
<th>PQL</th>
<th>MDL</th>
<th>Unit</th>
<th>Dil Fac</th>
<th>D</th>
<th>Method</th>
<th>Prep Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithium</td>
<td>0.017 V</td>
<td>0.050</td>
<td>0.0010</td>
<td>mg/L</td>
<td>1</td>
<td></td>
<td>200.7 Rev 4.4</td>
<td>Total/NA</td>
</tr>
</tbody>
</table>

**Client Sample ID:** L17J115-05  
**Lab Sample ID:** 660-83441-5

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result Qualifier</th>
<th>PQL</th>
<th>MDL</th>
<th>Unit</th>
<th>Dil Fac</th>
<th>D</th>
<th>Method</th>
<th>Prep Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithium</td>
<td>0.0082 V</td>
<td>0.050</td>
<td>0.0010</td>
<td>mg/L</td>
<td>1</td>
<td></td>
<td>200.7 Rev 4.4</td>
<td>Total/NA</td>
</tr>
</tbody>
</table>

This Detection Summary does not include radiochemical test results.

TestAmerica Tampa  
Page 6 of 17  
10/23/2017
<table>
<thead>
<tr>
<th>Client Sample ID: L17J115-01</th>
<th>Lab Sample ID: 660-83441-1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date Collected: 10/13/17 11:50</td>
<td>Matrix: Water</td>
</tr>
<tr>
<td>Date Received: 10/17/17 09:10</td>
<td></td>
</tr>
<tr>
<td><strong>Method: 200.7 Rev 4.4 - Metals (ICP)</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Analyte</strong></td>
<td><strong>Result</strong></td>
</tr>
<tr>
<td>Lithium</td>
<td>0.015</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Client Sample ID: L17J115-02</th>
<th>Lab Sample ID: 660-83441-2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date Collected: 10/13/17 11:10</td>
<td>Matrix: Water</td>
</tr>
<tr>
<td>Date Received: 10/17/17 09:10</td>
<td></td>
</tr>
<tr>
<td><strong>Method: 200.7 Rev 4.4 - Metals (ICP)</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Analyte</strong></td>
<td><strong>Result</strong></td>
</tr>
<tr>
<td>Lithium</td>
<td>0.016</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Client Sample ID: L17J115-03</th>
<th>Lab Sample ID: 660-83441-3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date Collected: 10/13/17 10:42</td>
<td>Matrix: Water</td>
</tr>
<tr>
<td>Date Received: 10/17/17 09:10</td>
<td></td>
</tr>
<tr>
<td><strong>Method: 200.7 Rev 4.4 - Metals (ICP)</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Analyte</strong></td>
<td><strong>Result</strong></td>
</tr>
<tr>
<td>Lithium</td>
<td>0.011</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Client Sample ID: L17J115-04</th>
<th>Lab Sample ID: 660-83441-4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date Collected: 10/13/17 10:04</td>
<td>Matrix: Water</td>
</tr>
<tr>
<td>Date Received: 10/17/17 09:10</td>
<td></td>
</tr>
<tr>
<td><strong>Method: 200.7 Rev 4.4 - Metals (ICP)</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Analyte</strong></td>
<td><strong>Result</strong></td>
</tr>
<tr>
<td>Lithium</td>
<td>0.017</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Client Sample ID: L17J115-05</th>
<th>Lab Sample ID: 660-83441-5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date Collected: 10/13/17 09:40</td>
<td>Matrix: Water</td>
</tr>
<tr>
<td>Date Received: 10/17/17 09:10</td>
<td></td>
</tr>
<tr>
<td><strong>Method: 200.7 Rev 4.4 - Metals (ICP)</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Analyte</strong></td>
<td><strong>Result</strong></td>
</tr>
<tr>
<td>Lithium</td>
<td>0.0082</td>
</tr>
</tbody>
</table>
## QC Sample Results

**Client:** Tampa Electric Company  
**Project/Site:** L17J115

---

### Method: 200.7 Rev 4.4 - Metals (ICP)

<table>
<thead>
<tr>
<th>Analyte</th>
<th>MB Sample ID</th>
<th>MB Prep Lab Sample ID</th>
<th>Client Sample ID: Method Blank</th>
<th>Prep Type: Total/NA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithium</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>Qualifier</th>
<th>PQL</th>
<th>MDL</th>
<th>Unit</th>
<th>D</th>
<th>Prepared</th>
<th>Analyzed</th>
<th>Dil Fac</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithium</td>
<td>0.00274</td>
<td>1</td>
<td>0.050</td>
<td>0.0010</td>
<td>mg/L</td>
<td>10/19/17 09:37</td>
<td>10/20/17 13:04</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Spike Added</th>
<th>LCS Result</th>
<th>LCS Qualifier</th>
<th>Unit</th>
<th>D</th>
<th>%Rec.</th>
<th>%Rec. Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithium</td>
<td>1.00</td>
<td>1.05</td>
<td></td>
<td>mg/L</td>
<td>-</td>
<td>105</td>
<td>85 - 115</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Sample Result</th>
<th>Sample Qualifier</th>
<th>Spike Added</th>
<th>MS Result</th>
<th>MS Qualifier</th>
<th>Unit</th>
<th>D</th>
<th>%Rec.</th>
<th>Limits</th>
<th>%Rec.</th>
<th>RPD</th>
<th>Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithium</td>
<td>0.015</td>
<td>IV</td>
<td>1.00</td>
<td>1.16</td>
<td></td>
<td>mg/L</td>
<td>-</td>
<td>115</td>
<td>70 - 130</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

### Lab Sample ID: MB 400-372467/1-A

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>Qualifier</th>
<th>PQL</th>
<th>MDL</th>
<th>Unit</th>
<th>D</th>
<th>Prepared</th>
<th>Analyzed</th>
<th>Dil Fac</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithium</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Spike Added</th>
<th>LCS Result</th>
<th>LCS Qualifier</th>
<th>Unit</th>
<th>D</th>
<th>%Rec.</th>
<th>%Rec. Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithium</td>
<td></td>
<td>1.00</td>
<td>1.05</td>
<td>mg/L</td>
<td>-</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Lab Sample ID: LCS 400-372467/2-A

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Spike Added</th>
<th>LCS Result</th>
<th>LCS Qualifier</th>
<th>Unit</th>
<th>D</th>
<th>%Rec.</th>
<th>%Rec. Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithium</td>
<td></td>
<td>1.00</td>
<td>1.05</td>
<td>mg/L</td>
<td>-</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

### Lab Sample ID: 660-83441-1 MS

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Sample Result</th>
<th>Sample Qualifier</th>
<th>Spike Added</th>
<th>MS Result</th>
<th>MS Qualifier</th>
<th>Unit</th>
<th>D</th>
<th>%Rec.</th>
<th>Limits</th>
<th>%Rec.</th>
<th>RPD</th>
<th>Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithium</td>
<td>0.015</td>
<td>IV</td>
<td>1.00</td>
<td>1.16</td>
<td></td>
<td>mg/L</td>
<td>-</td>
<td>117</td>
<td>70 - 130</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Lab Sample ID: 660-83441-1 MSD

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Sample Result</th>
<th>Sample Qualifier</th>
<th>Spike Added</th>
<th>MSD Result</th>
<th>MSD Qualifier</th>
<th>Unit</th>
<th>D</th>
<th>%Rec.</th>
<th>Limits</th>
<th>RPD</th>
<th>Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithium</td>
<td>0.015</td>
<td>IV</td>
<td>1.00</td>
<td>1.18</td>
<td></td>
<td>mg/L</td>
<td>-</td>
<td>117</td>
<td>70 - 130</td>
<td>1</td>
<td>25</td>
</tr>
</tbody>
</table>

---

TestAmerica Tampa
### QC Association Summary

**Client:** Tampa Electric Company  
**Project/Site:** L17J115  
**Job ID:** 660-83441-1  
**Prep Batch:** 372467  
**Analysis Batch:** 372725

#### Metals

<table>
<thead>
<tr>
<th>Lab Sample ID</th>
<th>Client Sample ID</th>
<th>Prep Type</th>
<th>Matrix</th>
<th>Method</th>
<th>Prep Batch</th>
</tr>
</thead>
<tbody>
<tr>
<td>660-83441-1</td>
<td>L17J115-01</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7</td>
<td></td>
</tr>
<tr>
<td>660-83441-2</td>
<td>L17J115-02</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7</td>
<td></td>
</tr>
<tr>
<td>660-83441-3</td>
<td>L17J115-03</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7</td>
<td></td>
</tr>
<tr>
<td>660-83441-4</td>
<td>L17J115-04</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7</td>
<td></td>
</tr>
<tr>
<td>660-83441-5</td>
<td>L17J115-05</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7</td>
<td></td>
</tr>
<tr>
<td>MB 400-372467/1-A</td>
<td>Method Blank</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7</td>
<td></td>
</tr>
<tr>
<td>LCS 400-372467/2-A</td>
<td>Lab Control Sample</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7</td>
<td></td>
</tr>
<tr>
<td>660-83441-1 MS</td>
<td>L17J115-01</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7</td>
<td></td>
</tr>
<tr>
<td>660-83441-1 MSD</td>
<td>L17J115-01</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Lab Sample ID</th>
<th>Client Sample ID</th>
<th>Prep Type</th>
<th>Matrix</th>
<th>Method</th>
<th>Prep Batch</th>
</tr>
</thead>
<tbody>
<tr>
<td>660-83441-1</td>
<td>L17J115-01</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7 Rev 4.4</td>
<td>372467</td>
</tr>
<tr>
<td>660-83441-2</td>
<td>L17J115-02</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7 Rev 4.4</td>
<td>372467</td>
</tr>
<tr>
<td>660-83441-3</td>
<td>L17J115-03</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7 Rev 4.4</td>
<td>372467</td>
</tr>
<tr>
<td>660-83441-4</td>
<td>L17J115-04</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7 Rev 4.4</td>
<td>372467</td>
</tr>
<tr>
<td>660-83441-5</td>
<td>L17J115-05</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7 Rev 4.4</td>
<td>372467</td>
</tr>
<tr>
<td>MB 400-372467/1-A</td>
<td>Method Blank</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7 Rev 4.4</td>
<td>372467</td>
</tr>
<tr>
<td>LCS 400-372467/2-A</td>
<td>Lab Control Sample</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7 Rev 4.4</td>
<td>372467</td>
</tr>
<tr>
<td>660-83441-1 MS</td>
<td>L17J115-01</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7 Rev 4.4</td>
<td>372467</td>
</tr>
<tr>
<td>660-83441-1 MSD</td>
<td>L17J115-01</td>
<td>Total/NA</td>
<td>Water</td>
<td>200.7 Rev 4.4</td>
<td>372467</td>
</tr>
</tbody>
</table>
## Lab Chronicle

Client: Tampa Electric Company  
Project/Site: L17J115

### Client Sample ID: L17J115-01

**Date Collected:** 10/13/17 11:50  
**Date Received:** 10/17/17 09:10

<table>
<thead>
<tr>
<th>Prep Type</th>
<th>Batch Type</th>
<th>Batch Method</th>
<th>Run</th>
<th>Dil Factor</th>
<th>Initial Amount</th>
<th>Final Amount</th>
<th>Batch Number</th>
<th>Prepared or Analyzed</th>
<th>Analyst</th>
<th>Lab</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total/NA</td>
<td>Prep 200.7</td>
<td>200.7 Rev 4,4</td>
<td>1</td>
<td>1</td>
<td>50 mL</td>
<td>50 mL</td>
<td>372467</td>
<td>10/19/17 09:37</td>
<td>KWN</td>
<td>TAL PEN</td>
</tr>
<tr>
<td>Total/NA</td>
<td>Analysis</td>
<td>6500 ICP Duo</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>372725</td>
<td>10/20/17 13:10</td>
<td>GESP</td>
<td>TAL PEN</td>
</tr>
</tbody>
</table>

### Client Sample ID: L17J115-02

**Date Collected:** 10/13/17 11:10  
**Date Received:** 10/17/17 09:10

<table>
<thead>
<tr>
<th>Prep Type</th>
<th>Batch Type</th>
<th>Batch Method</th>
<th>Run</th>
<th>Dil Factor</th>
<th>Initial Amount</th>
<th>Final Amount</th>
<th>Batch Number</th>
<th>Prepared or Analyzed</th>
<th>Analyst</th>
<th>Lab</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total/NA</td>
<td>Prep 200.7</td>
<td>200.7 Rev 4,4</td>
<td>1</td>
<td>1</td>
<td>50 mL</td>
<td>50 mL</td>
<td>372467</td>
<td>10/19/17 09:37</td>
<td>KWN</td>
<td>TAL PEN</td>
</tr>
<tr>
<td>Total/NA</td>
<td>Analysis</td>
<td>6500 ICP Duo</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>372725</td>
<td>10/20/17 13:27</td>
<td>GESP</td>
<td>TAL PEN</td>
</tr>
</tbody>
</table>

### Client Sample ID: L17J115-03

**Date Collected:** 10/13/17 10:42  
**Date Received:** 10/17/17 09:10

<table>
<thead>
<tr>
<th>Prep Type</th>
<th>Batch Type</th>
<th>Batch Method</th>
<th>Run</th>
<th>Dil Factor</th>
<th>Initial Amount</th>
<th>Final Amount</th>
<th>Batch Number</th>
<th>Prepared or Analyzed</th>
<th>Analyst</th>
<th>Lab</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total/NA</td>
<td>Prep 200.7</td>
<td>200.7 Rev 4,4</td>
<td>1</td>
<td>1</td>
<td>50 mL</td>
<td>50 mL</td>
<td>372467</td>
<td>10/19/17 09:37</td>
<td>KWN</td>
<td>TAL PEN</td>
</tr>
<tr>
<td>Total/NA</td>
<td>Analysis</td>
<td>6500 ICP Duo</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>372725</td>
<td>10/20/17 13:40</td>
<td>GESP</td>
<td>TAL PEN</td>
</tr>
</tbody>
</table>

### Client Sample ID: L17J115-04

**Date Collected:** 10/13/17 10:04  
**Date Received:** 10/17/17 09:10

<table>
<thead>
<tr>
<th>Prep Type</th>
<th>Batch Type</th>
<th>Batch Method</th>
<th>Run</th>
<th>Dil Factor</th>
<th>Initial Amount</th>
<th>Final Amount</th>
<th>Batch Number</th>
<th>Prepared or Analyzed</th>
<th>Analyst</th>
<th>Lab</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total/NA</td>
<td>Prep 200.7</td>
<td>200.7 Rev 4,4</td>
<td>1</td>
<td>1</td>
<td>50 mL</td>
<td>50 mL</td>
<td>372467</td>
<td>10/19/17 09:37</td>
<td>KWN</td>
<td>TAL PEN</td>
</tr>
<tr>
<td>Total/NA</td>
<td>Analysis</td>
<td>6500 ICP Duo</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>372725</td>
<td>10/20/17 13:43</td>
<td>GESP</td>
<td>TAL PEN</td>
</tr>
</tbody>
</table>

### Client Sample ID: L17J115-05

**Date Collected:** 10/13/17 09:40  
**Date Received:** 10/17/17 09:10

<table>
<thead>
<tr>
<th>Prep Type</th>
<th>Batch Type</th>
<th>Batch Method</th>
<th>Run</th>
<th>Dil Factor</th>
<th>Initial Amount</th>
<th>Final Amount</th>
<th>Batch Number</th>
<th>Prepared or Analyzed</th>
<th>Analyst</th>
<th>Lab</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total/NA</td>
<td>Prep 200.7</td>
<td>200.7 Rev 4,4</td>
<td>1</td>
<td>1</td>
<td>50 mL</td>
<td>50 mL</td>
<td>372467</td>
<td>10/19/17 09:37</td>
<td>KWN</td>
<td>TAL PEN</td>
</tr>
<tr>
<td>Total/NA</td>
<td>Analysis</td>
<td>6500 ICP Duo</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>372725</td>
<td>10/20/17 13:47</td>
<td>GESP</td>
<td>TAL PEN</td>
</tr>
</tbody>
</table>

Laboratory References:

TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001
## Accreditation/Certification Summary

Client: Tampa Electric Company  
Project/Site: L17J115  
TestAmerica Job ID: 660-83441-1

### Laboratory: TestAmerica Tampa
The accreditations/certifications listed below are applicable to this report.

<table>
<thead>
<tr>
<th>Authority</th>
<th>Program</th>
<th>EPA Region</th>
<th>Identification Number</th>
<th>Expiration Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Florida</td>
<td>NELAP</td>
<td>4</td>
<td>E84282</td>
<td>06-30-18</td>
</tr>
</tbody>
</table>

### Laboratory: TestAmerica Pensacola
The accreditations/certifications listed below are applicable to this report.

<table>
<thead>
<tr>
<th>Authority</th>
<th>Program</th>
<th>EPA Region</th>
<th>Identification Number</th>
<th>Expiration Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Florida</td>
<td>NELAP</td>
<td>4</td>
<td>E81010</td>
<td>06-30-18</td>
</tr>
</tbody>
</table>
## Method Summary

**Client:** Tampa Electric Company  
**Project/Site:** L17J115

<table>
<thead>
<tr>
<th>Method</th>
<th>Method Description</th>
<th>Protocol</th>
<th>Laboratory</th>
</tr>
</thead>
<tbody>
<tr>
<td>200.7 Rev 4.4</td>
<td>Metals (ICP)</td>
<td>EPA</td>
<td>TAL PEN</td>
</tr>
</tbody>
</table>

**Protocol References:**

EPA = US Environmental Protection Agency

**Laboratory References:**

TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001
### SUBCONTRACT ORDER
**Tampa Electric Company, Laboratory Services**

**L17J115**

#### SENDING LABORATORY:
Tampa Electric Company, Laboratory Services  
5012 Causeway Blvd  
Tampa, FL 33619  
Phone: (813) 630-7490  
Fax: (813) 630-7360  
Project Manager: Peggy Penner

#### RECEIVING LABORATORY:
TestAmerica Laboratories, Inc. - Tampa  
6712 Benjamin Rd., Suite 100  
Tampa, FL 33634  
Phone: (813) 885-7427  
Fax: -

**Due Date:** 10/26/17 16:00

<table>
<thead>
<tr>
<th>Analysis</th>
<th>Expires</th>
<th>Laboratory ID</th>
<th>Comments</th>
<th>Loc: 660 83441 Chain of Custody</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample ID: L17J115-01 BBS-CCR-1</td>
<td>Lithium, Total EPA 6010 04/11/18 11:50</td>
<td>Water</td>
<td></td>
<td>3.2/2.6e Cu-U8</td>
</tr>
<tr>
<td>Sample ID: L17J115-02 BBS-CCR-2</td>
<td>Lithium, Total EPA 6010 04/11/18 11:10</td>
<td>Water</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sample ID: L17J115-03 BBS-CCR-3</td>
<td>Lithium, Total EPA 6010 04/11/18 10:42</td>
<td>Water</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sample ID: L17J115-04 BBS-CCR-BW1</td>
<td>Lithium, Total EPA 6010 04/11/18 10:04</td>
<td>Water</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sample ID: L17J115-05 BBS-CCR-BW2</td>
<td>Lithium, Total EPA 6010 04/11/18 09:40</td>
<td>Water</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**660-83441 Chain of Custody**

**Released By:** [Signature]  
**Date & Time:** 10/13/17 14:50  
**Received By:**  
**Date & Time:**  
**Released By:** [Signature]  
**Date & Time:**  
**Received By:**  
**Date & Time:**  
**Page 3 of 3**

10/23/2017
### Chain of Custody Record

#### Client Information (Sub Contract Lab)
- **Company**: TestAmerica Laboratories, Inc.
- **Address**: 3355 McLemore Drive, Pensacola, FL, 32514
- **Phone**: 850-478-1001(Tel) 850-478-2071(Fax)
- **E-Mail**: keaton.conner@testamericainc.com
- **State of Origin**: Florida

#### Analytical Request
- **Preservation Codes**:
  - A: HCL
  - B: NaOH
  - C: Zn Acetate
  - D: Nitric Acid
  - E: NaHSO4
  - F: MeOH
  - G: Ammonia
  - H: Acetic Acid
  - I: DI Water
  - J: MCA
  - K: EDTA
  - L: EDA
  - M: N-Hexane
  - N: None
  - O: NaNO2
  - P: Na2O2
  - Q: Na2SO3
  - R: Na2S2O3
  - S: H2SO4
  - T: TSP Dodecylglycine
  - U: Acetone
  - V: MCA
  - W: pH 4.5
  - Z: Other (specify)

#### Sample Identification - Client ID (Lab ID)

<table>
<thead>
<tr>
<th>Sample ID</th>
<th>Sample Date</th>
<th>Sample Time</th>
<th>Sample Type (1/3/4, G or grab)</th>
<th>Preservation Code</th>
<th>Cational Filled Samples (Yes or No)</th>
<th>Field Filtered Samples (Yes or No)</th>
<th>Matrix</th>
<th>Total Number of Collectors</th>
</tr>
</thead>
<tbody>
<tr>
<td>L17J15-01 (660-83441-1)</td>
<td>10/13/17</td>
<td>11:50 Eastern</td>
<td>Water</td>
<td>X</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>L17J15-02 (660-83441-2)</td>
<td>10/13/17</td>
<td>11:10 Eastern</td>
<td>Water</td>
<td>X</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>L17J15-03 (660-83441-3)</td>
<td>10/13/17</td>
<td>10:42 Eastern</td>
<td>Water</td>
<td>X</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>L17J15-04 (660-83441-4)</td>
<td>10/13/17</td>
<td>10:04 Eastern</td>
<td>Water</td>
<td>X</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>L17J15-05 (660-83441-5)</td>
<td>10/13/17</td>
<td>09:40 Eastern</td>
<td>Water</td>
<td>X</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Note**: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyze & accreditation compliance upon subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analytes/test in which being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes in accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to TestAmerica Laboratories, Inc.

**Possible Hazard Identification**

**Unconfirmed**
- **Deliverable Requested**: I, II, III, IV. Other (specify)
- **Primary Deliverable Rank**: 2

**Special Instructions/QC Requirements**

**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**: [Signature]
- **Date/Time**: 10/17/17 1200

**Relinquished by**: [Signature]
- **Date/Time**: 10/17/17 0823

**Custody Seals Intact**: [Yes] [No]

**Custody Seal No**: [Signature]

**Cooler Temperature(s) °C and Other Remarks**:
### Login Sample Receipt Checklist

Client: Tampa Electric Company

Login Number: 83441
List Number: 1
Creator: Southers, Kristin B

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

**Client:** Tampa Electric Company  
**Login Number:** 83441  
**List Number:** 2  
**Creator:** Johnson, Jeremy N

<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Radioactivity wasn’t checked or is $\leq$ background as measured by a survey meter.</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>The cooler’s custody seal, if present, is intact.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Sample custody seals, if present, are intact.</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>The cooler or samples do not appear to have been compromised or tampered with.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Samples were received on ice.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Cooler Temperature is acceptable.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Cooler Temperature is recorded.</td>
<td>True</td>
<td>0.0°C IR7</td>
</tr>
<tr>
<td>COC is present.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>COC is filled out in ink and legible.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>COC is filled out with all pertinent information.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Is the Field Sampler’s name present on COC?</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>There are no discrepancies between the containers received and the COC.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Samples are received within Holding Time (excluding tests with immediate HTs)</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Sample containers have legible labels.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Containers are not broken or leaking.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Sample collection date/times are provided.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Appropriate sample containers are used.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Sample bottles are completely filled.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Sample Preservation Verified.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Containers requiring zero headspace have no headspace or bubble is $&lt;6$mm (1/4&quot;).</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Multiphasic samples are not present.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Samples do not require splitting or compositing.</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Residual Chlorine Checked.</td>
<td>N/A</td>
<td></td>
</tr>
</tbody>
</table>
DOH Certification #E84025
DEP COMPOAP # 870251

Report Date: October 31, 2017

TECO
5012 Causeway Blvd.
Tampa, FL 33619

Attn: Peggy Penner

Field Custody:Client
Client/Field ID: L17J115-01
BBS-CCR-1
Sample Collection: 10-13-17/1150
Lab ID No: 17.12008
Lab Custody Date: 10-19-17/0925
Sample description: Water

CERTIFICATE OF ANALYSIS

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Units</th>
<th>Results</th>
<th>Analysis Date</th>
<th>Method</th>
<th>Detection Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Combined Radium (Radium-226 + Radium 228)</td>
<td>pCi/l</td>
<td>35.6 ± 1.8</td>
<td>Calc</td>
<td>Calc</td>
<td>0.7</td>
</tr>
<tr>
<td>Radium-226</td>
<td>pCi/l</td>
<td>33.9 ± 1.8</td>
<td>10-30-17/1307</td>
<td>EPA 903.0</td>
<td>0.4</td>
</tr>
<tr>
<td>Radium-228</td>
<td>pCi/l</td>
<td>1.7 ± 0.6</td>
<td>10-30-17/1233</td>
<td>EPA Ra-05</td>
<td>0.7</td>
</tr>
</tbody>
</table>

Alpha Standard: Th-230

James W. Hayes
Laboratory Manager

Test results meet all requirements of the NELAC standards. Statement of estimated uncertainty available upon request. Test results refer only to sample(s) listed. Contact person: Jim Hayes (813) 229-2879.
DOH Certification #E84025  
DEP COMPQAP # 870251

Report Date: October 31, 2017

TECO  
5012 Causeway Blvd.  
Tampa, FL 33619  

Attn: Peggy Penner

Field Custody:  
Client

Client/Field ID:  
L17J115-02  
BBS-CCR-2

Sample Collection:  
10-13-17/1110

Lab ID No:  
17.12009

Lab Custody Date:  
10-19-17/0925

Sample description:  
Water

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Units</th>
<th>Results</th>
<th>Analysis Date</th>
<th>Method</th>
<th>Detection Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Combined Radium</td>
<td>pCi/l</td>
<td>13.5 ± 1.1</td>
<td>Calc</td>
<td>Calc</td>
<td>0.8</td>
</tr>
<tr>
<td>(Radium-226 + Radium 228)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Radium-226</td>
<td>pCi/l</td>
<td>13.0 ± 1.1</td>
<td>10-30-17/1307</td>
<td>EPA 903.0</td>
<td>0.4</td>
</tr>
<tr>
<td>Radium-228</td>
<td>pCi/l</td>
<td>0.5 ± 0.5</td>
<td>10-30-17/1233</td>
<td>EPA Ra-05</td>
<td>0.8</td>
</tr>
</tbody>
</table>

Alpha Standard: Th-230

James W. Hayes  
Laboratory Manager

Test results meet all requirements of the NELAC standards. Statement of estimated uncertainty available upon request. Test results refer only to sample(s) listed. Contact person: Jim Hayes (813) 229-2879.
DOH Certification #E84025
DEP COMPOAP # 870251

Report Date: October 31, 2017

TECO
5012 Causeway Blvd.
Tampa, FL 33619

Attn: Peggy Penner

Field Custody: Client
Client/Field ID: L17J115-03
Sample Collection: 10-13-17/1042
Lab ID No: 17.12010
Lab Custody Date: 10-19-17/0925
Sample description: Water

### CERTIFICATE OF ANALYSIS

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Units</th>
<th>Results</th>
<th>Analysis Date</th>
<th>Method</th>
<th>Detection Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Combined Radium (Radium-226 + Radium 228)</td>
<td>pCi/l</td>
<td>20.0 ± 1.3</td>
<td>Calc</td>
<td>Calc</td>
<td>0.7</td>
</tr>
<tr>
<td>Radium-226</td>
<td>pCi/l</td>
<td>18.1 ± 1.3</td>
<td>10-30-17/1307</td>
<td>EPA 903.0</td>
<td>0.3</td>
</tr>
<tr>
<td>Radium-228</td>
<td>pCi/l</td>
<td>1.9 ± 0.6</td>
<td>10-30-17/1233</td>
<td>EPA Ra-05</td>
<td>0.7</td>
</tr>
</tbody>
</table>

Alpha Standard: Th-230

---

Test results meet all requirements of the NELAC standards. Statement of estimated uncertainty available upon request. Test results refer only to sample(s) listed. Contact person: Jim Hayes (813) 229-2879.

James W. Hayes
Laboratory Manager

Page 1 of 1
TECO
5012 Causeway Blvd.
Tampa, FL 33619

Attn: Peggy Penner

Field Custody: Client
Client/Field ID: L17J115-04
BBS-CCR-BW1
Sample Collection: 10-13-17/1004
Lab ID No: 17.12011
Lab Custody Date: 10-19-17/0925
Sample description: Water

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Units</th>
<th>Results</th>
<th>Analysis Date</th>
<th>Method</th>
<th>Detection Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Combined Radium (Radium-226 +</td>
<td>pCi/l</td>
<td>22.1 ± 1.2</td>
<td>Calc</td>
<td>Calc</td>
<td>0.7</td>
</tr>
<tr>
<td>Radium 228)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Radium-226</td>
<td>pCi/l</td>
<td>19.2 ± 1.2</td>
<td>10-26-17/1133</td>
<td>EPA 903.0</td>
<td>0.4</td>
</tr>
<tr>
<td>Radium-228</td>
<td>pCi/l</td>
<td>2.9 ± 0.6</td>
<td>10-30-17/1233</td>
<td>EPA Ra-05</td>
<td>0.7</td>
</tr>
</tbody>
</table>

Alpha Standard: Th-230

James W. Hayes
Laboratory Manager

Test results meet all requirements of the NELAC standards. Statement of estimated uncertainty available upon request. Test results refer only to sample(s) listed. Contact person: Jim Hayes (813) 229-2879.
DOH Certification #E84025  
DEP COMPOAP # 870251

Report Date: October 31, 2017

TECO  
5012 Causeway Blvd.  
Tampa, FL 33619  
Attn: Peggy Penner

Field Custody:  
Client:  
Client/Field ID: L17J115-05  
BBS-CCR-BW2

Sample Collection: 10-13-17/0904  
Lab ID No: 17.12012  
Lab Custody Date: 10-19-17/0925  
Sample description: Water

---

**CERTIFICATE OF ANALYSIS**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Units</th>
<th>Results ± Uncertainty</th>
<th>Analysis Date</th>
<th>Method</th>
<th>Detection Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Combined Radium (Radium-226 + Radium 228)</td>
<td>pCi/l</td>
<td>4.9 ± 0.7</td>
<td>Calc</td>
<td>Calc</td>
<td>0.8</td>
</tr>
<tr>
<td>Radium-226</td>
<td>pCi/l</td>
<td>4.9 ± 0.7</td>
<td>10-30-17/1307</td>
<td>EPA 903.0</td>
<td>0.6</td>
</tr>
<tr>
<td>Radium-228</td>
<td>pCi/l</td>
<td>0.0 ± 0.5</td>
<td>10-30-17/1233</td>
<td>EPA Ra-05</td>
<td>0.8</td>
</tr>
</tbody>
</table>

Alpha Standard: Th-230

---

James W. Hayes  
Laboratory Manager

Test results meet all requirements of the NELAC standards. Statement of estimated uncertainty available upon request. Test results refer only to sample(s) listed.  
Contact person: Jim Hayes (813) 229-2879.

Page 1 of 1
TECO  
5012 Causeway Blvd.
Tampa, FL 33619
Attn: Peggy Penner

Field Custody:  
Client  
Client/Field ID: L17J116-01  
Sample Collection: 10-13-17/0858  
Lab ID No: 17.12013  
Lab Custody Date: 10-19-17/0925  
Sample description: Water

CERTIFICATE OF ANALYSIS

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Units</th>
<th>Results</th>
<th>Analysis Date</th>
<th>Method</th>
<th>Detection Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Combined Radium (Radium-226 + Radium 228)</td>
<td>pCi/l</td>
<td>0.6 ± 0.4</td>
<td>Calc</td>
<td>Calc</td>
<td>0.8</td>
</tr>
<tr>
<td>Radium-226</td>
<td>pCi/l</td>
<td>0.6 ± 0.3</td>
<td>10-30-17/1307</td>
<td>EPA 903.0</td>
<td>0.4</td>
</tr>
<tr>
<td>Radium-228</td>
<td>pCi/l</td>
<td>0.0 ± 0.4</td>
<td>10-30-17/1233</td>
<td>EPA Ra-05</td>
<td>0.8</td>
</tr>
</tbody>
</table>

Alpha Standard: Th-230

James W. Hayes  
Laboratory Manager

Test results meet all requirements of the NELAC standards. Statement of estimated uncertainty available upon request. Test results refer only to sample(s) listed. Contact person: Jim Hayes (813) 229-2879.
DOH Certification #E84025  
DEP COMPOAP # 870251

Report Date: October 31, 2017

TECO  
5012 Causeway Blvd.  
Tampa, FL 33619

Attn: Peggy Penner

Field Custody:  
Client/Focus ID: L17J116-02 B-39
Sample Collection: 10-13-17/1332
Lab ID No: 17.12014
Lab Custody Date: 10-19-17/0925
Sample Description: Water

**CERTIFICATE OF ANALYSIS**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Units</th>
<th>Results</th>
<th>Analysis Date</th>
<th>Method</th>
<th>Detection Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Combined Radium (Radium-226 + Radium 228)</td>
<td>pCi/l</td>
<td>9.7 ± 0.8 Calc</td>
<td>Calc</td>
<td>0.7</td>
<td></td>
</tr>
<tr>
<td>Radium-226</td>
<td>pCi/l</td>
<td>8.9 ± 0.8</td>
<td>10-30-17/1307</td>
<td>EPA 903.0</td>
<td>0.4</td>
</tr>
<tr>
<td>Radium-228</td>
<td>pCi/l</td>
<td>0.8 ± 0.5</td>
<td>10-30-17/1233</td>
<td>EPA Ra-05</td>
<td>0.7</td>
</tr>
</tbody>
</table>

Alpha Standard: Th-230

James W. Hayes  
Laboratory Manager

Test results meet all requirements of the NELAC standards. Statement of estimated uncertainty available upon request. Test results refer only to sample(s) listed.  
Contact person: Jim Hayes (813) 229-2879.

Page 1 of 1
<table>
<thead>
<tr>
<th>Analysis</th>
<th>Expires</th>
<th>Laboratory ID</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample ID: L17J115-01</td>
<td>BBS-CCR-1</td>
<td>Water</td>
<td></td>
</tr>
<tr>
<td>Sampled: 10/13/17 11:50</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Radium 228 Ra-05</td>
<td>04/11/18 11:50</td>
<td>Level 2 Data required</td>
<td></td>
</tr>
<tr>
<td>Radium 226 EPA 903.0</td>
<td>04/11/18 11:50</td>
<td>Level 2 Data required</td>
<td></td>
</tr>
<tr>
<td>Radium 226+228, Total</td>
<td>04/11/18 11:50</td>
<td>Level 2 Data required</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Containers Supplied:</th>
</tr>
</thead>
<tbody>
<tr>
<td>RAD Poly HNO3 - 1000mL (C)</td>
</tr>
<tr>
<td>RAD Poly HNO3 - 1000mL (D)</td>
</tr>
</tbody>
</table>

| Sample ID: L17J115-02 | BBS-CCR-2  | Water         |                   |
| Sampled: 10/13/17 11:10 |            |               |                   |
| Radium 226 EPA 903.0 | 04/11/18 11:10 | Level 2 Data required |
| Radium 226+228, Total | 04/11/18 11:10 | Level 2 Data required |
| Radium 228 Ra-05 | 04/11/18 11:10 | Level 2 Data required |

<table>
<thead>
<tr>
<th>Containers Supplied:</th>
</tr>
</thead>
<tbody>
<tr>
<td>RAD Poly HNO3 - 1000mL (C)</td>
</tr>
<tr>
<td>RAD Poly HNO3 - 1000mL (D)</td>
</tr>
</tbody>
</table>

| Sample ID: L17J115-03 | BBS-CCR-3  | Water         |                   |
| Sampled: 10/13/17 10:42 |            |               |                   |
| Radium 226+228, Total | 04/11/18 10:42 | Level 2 Data required |
| Radium 226 EPA 903.0 | 04/11/18 10:42 | Level 2 Data required |
| Radium 228 Ra-05 | 04/11/18 10:42 | Level 2 Data required |

<table>
<thead>
<tr>
<th>Containers Supplied:</th>
</tr>
</thead>
<tbody>
<tr>
<td>RAD Poly HNO3 - 1000mL (C)</td>
</tr>
<tr>
<td>RAD Poly HNO3 - 1000mL (D)</td>
</tr>
</tbody>
</table>

| Sample ID: L17J115-04 | BBS-CCR-BW1 | Water         |                   |
| Sampled: 10/13/17 10:04 |            |               |                   |
| Radium 226 EPA 903.0 | 04/11/18 10:04 | Level 2 Data required |
| Radium 226+228, Total | 04/11/18 10:04 | Level 2 Data required |
| Radium 228 Ra-05 | 04/11/18 10:04 | Level 2 Data required |

<table>
<thead>
<tr>
<th>Containers Supplied:</th>
</tr>
</thead>
<tbody>
<tr>
<td>RAD Poly HNO3 - 1000mL (C)</td>
</tr>
<tr>
<td>RAD Poly HNO3 - 1000mL (D)</td>
</tr>
</tbody>
</table>
### Analysis Table

<table>
<thead>
<tr>
<th>Sample ID</th>
<th>Expires</th>
<th>Laboratory ID</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>L17J115-05</td>
<td>04/11/18 09:40</td>
<td>Water</td>
<td>17.12.12</td>
</tr>
<tr>
<td>Sampled:</td>
<td>10/13/17 09:40</td>
<td>RAD Poly HNO3 - 1000mL (D)</td>
<td>Level 2 Data required</td>
</tr>
<tr>
<td>Radium 228 Ra-05</td>
<td>04/11/18 09:40</td>
<td>BBS-CCR-BW2</td>
<td>Level 2 Data required</td>
</tr>
<tr>
<td>Radium 226 EPA 903.0</td>
<td>04/11/18 09:40</td>
<td></td>
<td>Level 2 Data required</td>
</tr>
<tr>
<td>Radium 226+228, Total</td>
<td>04/11/18 09:40</td>
<td></td>
<td>Level 2 Data required</td>
</tr>
</tbody>
</table>

**Containers Supplied:**
- RAD Poly HNO3 - 1000mL (C)
- RAD Poly HNO3 - 1000mL (D)
## SUBCONTRACT ORDER
Tampa Electric Company, Laboratory Services
L17J116

### SENDING LABORATORY:
Tampa Electric Company, Laboratory Services
5012 Causeway Blvd
Tampa, FL 33619
Phone: (813) 630-7490
Fax: (813) 630-7360
Project Manager: Peggy Penner

### RECEIVING LABORATORY:
KNL Laboratory Services
3202 N. Florida Ave.
Tampa, FL 33603
Phone: (813) 229-2879
Fax: -

### Due Date: 10/27/17 16:00

<table>
<thead>
<tr>
<th>Analysis</th>
<th>Expires</th>
<th>Laboratory ID</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample ID: L17J116-01</td>
<td>B-4R</td>
<td>Water</td>
<td>Level 2 Data required</td>
</tr>
<tr>
<td>Sampled: 10/13/17 08:58</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Radium 228 Ra-05</td>
<td>04/11/18 08:58</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Radium 226+228, Total</td>
<td>04/11/18 08:58</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Radium 226 EPA 903.0</td>
<td>04/11/18 08:58</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Containers Supplied:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RAD Poly HNO3 - 1000mL (C)</td>
<td>RAD Poly HNO3 - 1000mL (D)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sample ID: L17J116-02</td>
<td>B-39</td>
<td>Water</td>
<td>Level 2 Data required</td>
</tr>
<tr>
<td>Sampled: 10/13/17 13:32</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Radium 228 Ra-05</td>
<td>04/11/18 13:32</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Radium 226+228, Total</td>
<td>04/11/18 13:32</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Radium 226 EPA 903.0</td>
<td>04/11/18 13:32</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Containers Supplied:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RAD Poly HNO3 - 1000mL (C)</td>
<td>RAD Poly HNO3 - 1000mL (D)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

 Released By: [Signature]
 Date & Time: 10-19-17

 Received By: [Signature]
 Date & Time: D1917

 Released By: [Signature]
 Date & Time: 

 Received By: [Signature]
 Date & Time: 

Page 1 of 2
**FL DOH Certification # E84025**

**QC Summary:**  **Total Radium Analysis**

Client Project #: 171715

Analysis Completion Date: 10/30/17

### Precision Data:

<table>
<thead>
<tr>
<th>Sample Analysis (pCi/l)</th>
<th>Duplicate Analysis (pCi/l)</th>
<th>Range (pCi/l)</th>
<th>RPD (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.4</td>
<td>8.3</td>
<td>0.1</td>
<td>1.2</td>
</tr>
</tbody>
</table>

### Spike Data:

<table>
<thead>
<tr>
<th>Sample Analysis (pCi/l)</th>
<th>Spike Added (pCi/l)</th>
<th>Analytical Result (pCi/l)</th>
<th>Spike Rec (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.9</td>
<td>4.5</td>
<td>8.4</td>
<td>78%</td>
</tr>
</tbody>
</table>

### LCS Data:

<table>
<thead>
<tr>
<th>Analytical Result (pCi/l)</th>
<th>True Value (pCi/l)</th>
<th>% Recovery</th>
</tr>
</thead>
<tbody>
<tr>
<td>10.4</td>
<td>10.1</td>
<td>1037%</td>
</tr>
</tbody>
</table>

### Lab Blank:

<table>
<thead>
<tr>
<th>Lab Blank</th>
<th>Analytical Result (pCi/l)</th>
<th>Analysis Date</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.2 ± 0.1</td>
<td>10/30/17</td>
</tr>
</tbody>
</table>
FL DOH Certification # E84025

QC Summary: Radium 228 Analysis

Client Project #: 175115

Analysis Completion Date: 10/30/17

Precision Data:

<table>
<thead>
<tr>
<th>Sample Analysis (pCi/l)</th>
<th>Duplicate Analysis (pCi/l)</th>
<th>Range (pCi/l)</th>
<th>RPD (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.7</td>
<td>5.5</td>
<td>0.2</td>
<td>3.6</td>
</tr>
</tbody>
</table>

Spike Data:

<table>
<thead>
<tr>
<th>Sample Analysis (pCi/l)</th>
<th>Spike Added (pCi/l)</th>
<th>Analytical Result (pCi/l)</th>
<th>Spike Rec (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.7</td>
<td>4.0</td>
<td>5.7</td>
<td>100</td>
</tr>
</tbody>
</table>

LCS Data:

<table>
<thead>
<tr>
<th>Analytical Result (pCi/l)</th>
<th>True Value (pCi/l)</th>
<th>% Recovery</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.3</td>
<td>4.44</td>
<td>97%</td>
</tr>
</tbody>
</table>

Lab Blank:

<table>
<thead>
<tr>
<th>Analytical Result (pCi/l)</th>
<th>Analysis Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lab Blank 0.0 +/- 0.2</td>
<td>10/30/17</td>
</tr>
</tbody>
</table>
APPENDIX B

Geosyntec Data Validation Reports
Memorandum

Date: 13 September 2016
To: Todd Kafka
From: Chris Pracheil
CC: J. Caprio
Subject: Stage 2A Data Validation – Level II Data Deliverable – Tampa Electric Laboratory Services #L16F174 & L16G005, TestAmerica #660-74676-1 & 660-75265-1 and KNL Environmental Testing #L16F174 & L16G005

SITE: Big Bend Power Station, Apollo Beach, Florida

INTRODUCTION

This report summarizes the findings of the Stage 2A data validation of 16 water samples, collected on 24 June 2016 and 27 July 2016 as part of the Big Bend Power Station coal combustion residuals (CCR) groundwater monitoring program plan. The lithium analyses were performed by TestAmerica Tampa, Tampa, Florida (TestAmerica). The radium analyses were performed by KNL Environmental Testing, Tampa, Florida (KNL). The rest of the analyses were performed by Tampa Electric Laboratory Services, Tampa, Florida (TELS). The samples were analyzed for the following:

- Metals by EPA Method 200.7, 200.8 and 6010B
- Mercury by EPA Method 7470A
- Radium-226 by EPA Method 903.0
- Radium-228 by EPA Method Ra-05
- Chloride, Fluoride and Sulfate by EPA Method 300.0
- Total Dissolved Solids by SM 2540C

EXECUTIVE SUMMARY

The samples were handled, prepared, and measured in the same manner under similar prescribed conditions.
Overall, 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 qualifications.

The inorganic data were reviewed based on the following: CCR Groundwater Monitoring Program Plan, Big Bend Power Station, Apollo Beach, Florida, September 2016, USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, August 2014 (OSWER 9355.0-131, EPA 540-R-013-001), as well as by the pertinent methods referenced by the data package and professional and technical judgment.

The following samples were analyzed and validated at a Stage 2A level in the data set:

<table>
<thead>
<tr>
<th>Laboratory ID</th>
<th>Client ID</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>L16F174-01</td>
<td>PZ1 (6/24/2016)</td>
<td></td>
</tr>
<tr>
<td>L16F174-02</td>
<td>PZ2 (6/24/2016)</td>
<td></td>
</tr>
<tr>
<td>L16F174-03</td>
<td>PZ3 (6/24/2016)</td>
<td></td>
</tr>
<tr>
<td>L16F174-04</td>
<td>PZ4 (6/24/2016)</td>
<td></td>
</tr>
<tr>
<td>L16F174-05</td>
<td>PZ5 (6/24/2016)</td>
<td></td>
</tr>
<tr>
<td>L16F174-06</td>
<td>PZ6 (6/24/2016)</td>
<td></td>
</tr>
<tr>
<td>L16F174-07</td>
<td>MWB-35 (6/24/2016)</td>
<td></td>
</tr>
<tr>
<td>L16F174-08</td>
<td>MWB-36 (6/24/2016)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Laboratory ID</th>
<th>Client ID</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>L16G005-01</td>
<td>PZ1 (7/27/2016)</td>
<td></td>
</tr>
<tr>
<td>L16G005-02</td>
<td>PZ2 (7/27/2016)</td>
<td></td>
</tr>
<tr>
<td>L16G005-03</td>
<td>PZ3 (7/27/2016)</td>
<td></td>
</tr>
<tr>
<td>L16G005-04</td>
<td>PZ4 (7/27/2016)</td>
<td></td>
</tr>
<tr>
<td>L16G005-05</td>
<td>PZ5 (7/27/2016)</td>
<td></td>
</tr>
<tr>
<td>L16G005-06</td>
<td>PZ6 (7/27/2016)</td>
<td></td>
</tr>
<tr>
<td>L16G005-07</td>
<td>MWB-35 (7/27/2016)</td>
<td></td>
</tr>
<tr>
<td>L16G005-08</td>
<td>MWB-36 (7/27/2016)</td>
<td></td>
</tr>
</tbody>
</table>

The samples were received at TestAmerica Tampa outside the temperature criteria of 4±2°C; the samples were received at 0.0°C. Based on professional and technical judgment, no qualifications were applied to the data due to the temperatures outside the criteria. No sample preservation issues were noted by the laboratories.

1.0 TOTAL METALS

The samples were analyzed for total metals per EPA Methods 200.7, 200.8 and 6010B.

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 the impact on data quality and usability.

✓ Overall Assessment
✓ Holding Times
✓ Method Blank
1.1 **Overall Assessment**

The metals data reported in this package are considered to be usable for meeting project objectives. The results are considered valid; 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 analysis for the project, is 100%.

1.2 **Holding Times**

The holding time for the metals analysis of waters 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). Seven method blanks were reported, three for the method 200.7 data (batches 16F0213, 312424, and 316923), two for the method 200.8 data (batches 16F0212 and 16H0004), and two for the method 6010B data (batches 16F0213 and 16H0014). Metals were not detected in the method blanks above the method detection limit (MDL).

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 pair per batch of 20 samples). Two sample set specific MS/MSD pairs were reported for the 200.7, 200.8 and 6010B data, using samples PZ2(6/24/2016) and PZ1(7/27/2016), PZ1(6/24/2016) and MWB-36(7/27/2016), and PZ2(6/24/2016) and PZ2(7/27/2016), respectively. The recovery and relative percent difference (RPD) results were within the laboratory specified acceptance criteria, with the following exceptions.
The recoveries of cadmium and the recoveries of selenium were low and outside of the laboratory specified acceptance criteria in the MS/MSDs using samples PZ1(6/24/2016) and MWB-36(7/27/2016), respectively. Therefore, the non-detect result for cadmium in sample PZ1(6/24/2016) was UJ qualified as estimated less than the MDL, and the concentrations of selenium in sample MWB-36(7/27/2016) was J- qualified as estimated with a low bias.

<table>
<thead>
<tr>
<th>Client Sample ID</th>
<th>Compound</th>
<th>Laboratory Result (µg/L)</th>
<th>Laboratory Flag</th>
<th>Validation Result (µg/L)</th>
<th>Validation Qualifier*</th>
<th>Reason Code**</th>
</tr>
</thead>
<tbody>
<tr>
<td>PZ1 (6/24/2016)</td>
<td>Cadmium</td>
<td>0.10</td>
<td>J-,U</td>
<td>0.10</td>
<td>UJ</td>
<td>4</td>
</tr>
<tr>
<td>MWB-36 (7/27/2016)</td>
<td>Selenium</td>
<td>0.58</td>
<td>J-,I</td>
<td>0.58</td>
<td>J-</td>
<td>4</td>
</tr>
</tbody>
</table>

µg/L-micrograms per liter
J--laboratory flag indicating the MS/MSD recovery was low
U- laboratory flag indicating the compound was analyzed for but not detected
I-laboratory flag indicating an estimated concentration, less than the RL
* 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

One batch MS/MSD pair was also reported for the 200.7 data. Since these are batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.

1.5 **Laboratory Control Sample (LCS)**

LCSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Seven LCSs were reported, three for the 200.7 data, two for the 200.8 data and two for the 6010B data. The recovery results were within the laboratory specified acceptance criteria.

1.6 **Serial Dilution**

Serial dilutions were not reported.

1.7 **Equipment Blank**

Equipment blanks were not reported with the sample sets.

1.8 **Field Duplicate**

Field duplicates were not reported with the sample sets.
1.9 **Sensitivity**

The samples were reported to the MDLs. No elevated non-detect results were reported. The MDLs met the limits listed in Table 4 of the CCR Groundwater Monitoring Plan.

1.10 **Electronic Data Deliverable Review**

The results and sample identifications (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. The non-detect results were reported at the MDL in the laboratory reports and reported as ND in the EDD. No other discrepancies were identified between the level II report and the EDD.

2.0 **MERCURY**

The samples were analyzed for mercury per 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 the 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 Deliverable Review

2.1 **Overall Assessment**

The mercury data reported in this package are considered to be usable for meeting project objectives. The results are considered valid; 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 analysis for the project, is 100%.
2.2  **Holding Times**

The holding time for the mercury analysis 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). Two method blanks were reported (batches 16G0021 and 16H0035). Mercury was not detected in the method blanks above the MDL.

2.4  **Matrix Spike/Matrix Spike Duplicate**

MS/MSD pairs 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, using samples MWB-36(6/24/2016) and PZ1(7/27/2016), were reported. The recovery and RPD results were within the laboratory specified acceptance criteria.

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). Two LCSs were reported. The recovery results were within the laboratory specified acceptance criteria.

2.6  **Equipment Blank**

Equipment blanks were not reported with the sample sets.

2.7  **Field Duplicate**

Field duplicates were not reported with the sample sets.

2.8  **Sensitivity**

The samples were reported to the MDL. No elevated non-detect results were reported. The MDLs for mercury met the limits listed in Table 4 of the CCR Groundwater Monitoring Plan.
2.9 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. The non-detect results were reported at the MDL in the laboratory reports and reported as ND in the EDD. No other discrepancies were identified between the level II report and the EDD.

3.0 RADIUM-226 AND RADIUM-228

The samples were analyzed for radium 226 and radium 228 per EPA Methods 903.0 and RA-05, respectively.

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 the impact on data quality and usability.

✔ Overall Assessment
✔ Holding Times
⊗ Method Blank
✔ Matrix Spike/Matrix Spike Duplicate
✔ Laboratory Control Sample
✔ Surrogates
✔ Field Blank
✔ Equipment Blank
✔ Field Duplicate
✔ Sensitivity
✔ Electronic Data Deliverable Review

3.1 Overall Assessment

The radium-226 and radium-228 data reported in this package are considered to be 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 analysis for the project, is 100%.
3.2 **Holding Times**

The holding times for radium-226 and radium-228 analysis of waters are 180 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). Two method blanks were reported for radium-226 and radium-228 data (batches L16F174 and L16G005). Radium-228 was not detected in the method blanks above the minimum detectable concentration (MDC); however, radium-226 was detected above the MDC in the method blanks associated with batch L16G005. Therefore, the detections of radium-226 and combined radium (radium-226 + radium-228) with concentrations less than 10x the blank concentration were J qualified as estimated.

<table>
<thead>
<tr>
<th>Client Sample ID</th>
<th>Compound</th>
<th>Laboratory Result (pCi/L)</th>
<th>Laboratory Flag</th>
<th>Validation Result (pCi/L)</th>
<th>Validation Qualifier</th>
<th>Reason Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>PZ6 (7/27/2016)</td>
<td>Radium-226</td>
<td>4.6</td>
<td>NA</td>
<td>4.6</td>
<td>J</td>
<td>3</td>
</tr>
<tr>
<td>PZ6 (7/27/2016)</td>
<td>Radium-226 + Radium-228</td>
<td>5.1</td>
<td>NA</td>
<td>5.1</td>
<td>J</td>
<td>3</td>
</tr>
<tr>
<td>MWB-35 (7/27/2016)</td>
<td>Radium-226</td>
<td>1.6</td>
<td>NA</td>
<td>1.6</td>
<td>J</td>
<td>3</td>
</tr>
<tr>
<td>MWB-35 (7/27/2016)</td>
<td>Radium-226 + Radium-228</td>
<td>1.9</td>
<td>NA</td>
<td>1.9</td>
<td>J</td>
<td>3</td>
</tr>
<tr>
<td>MWB-36 (7/27/2016)</td>
<td>Radium-226</td>
<td>3.2</td>
<td>NA</td>
<td>3.2</td>
<td>J</td>
<td>3</td>
</tr>
<tr>
<td>MWB-36 (7/27/2016)</td>
<td>Radium-226 + Radium-228</td>
<td>4.1</td>
<td>NA</td>
<td>4.1</td>
<td>J</td>
<td>3</td>
</tr>
</tbody>
</table>

pCi/L-picocuries per liter
NA-not applicable

3.4 **Matrix Spike/Matrix Spike Duplicate**

MS/MSD pairs were not reported.

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). Two LCS were reported for radium-226 and radium-228. The recovery results were within the laboratory specified acceptance criteria.
3.6 **Equipment Blank**

Equipment blanks were not reported with the sample sets.

3.7 **Laboratory Duplicate**

Two laboratory duplicates for radium-226 and radium-228 were reported with the sample sets. The RPD results were within the laboratory specified acceptance criteria.

3.8 **Sensitivity**

The samples were reported to the MDCs. The MDCs reported met the limits listed in Table 4 of the CCR Groundwater Monitoring Plan.

3.9 **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. The non-detect results were reported at the MDL in the laboratory reports and reported as ND in the EDD. No other discrepancies were identified between the level II report and the EDD.

4.0 **WET CHEMISTRY PARAMETERS**

The samples were analyzed for chloride, fluoride and sulfate by EPA Method 300.0 and total dissolved solids 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.
4.1 Overall Assessment

The wet chemistry data reported in this package are considered to be usable for meeting project objectives. The results are considered to be 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 analysis, for the project is 100%.

4.1.1 Analysis Anomaly

The narrative sections of laboratory reports L16F174 and L16G005 stated that constant weight could not be achieved during the total dissolved solids analysis of samples PZ1 (6/24/2016), PZ2 (6/24/2016), PZ5 (6/24/2016), PZ6 (6/24/2016), and PZ2 (7/27/2016), respectively. Therefore, the concentrations of total dissolved solids in these samples were J qualified as estimated.

<table>
<thead>
<tr>
<th>Client Sample ID</th>
<th>Compound</th>
<th>Laboratory Result (mg/L)</th>
<th>Laboratory Flag</th>
<th>Validation Result (µg/L)</th>
<th>Validation Qualifier</th>
<th>Reason Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>PZ1 (6/24/2016)</td>
<td>Total Dissolved Solids</td>
<td>3060</td>
<td>J-</td>
<td>3060</td>
<td>J</td>
<td>13</td>
</tr>
<tr>
<td>PZ5 (6/24/2016)</td>
<td>Total Dissolved Solids</td>
<td>5050</td>
<td>J-</td>
<td>5050</td>
<td>J</td>
<td>13</td>
</tr>
<tr>
<td>PZ6 (6/24/2016)</td>
<td>Total Dissolved Solids</td>
<td>1230</td>
<td>J-</td>
<td>1230</td>
<td>J</td>
<td>13</td>
</tr>
</tbody>
</table>

mg/L-milligrams per liter
J--laboratory flag indicating the result is estimated
4.2 **Holding Times**

The holding times for chloride, fluoride and sulfate by EPA method 300.0 are 28 days from sample collection to analysis and the holding time for total dissolved solids by SM 2540C is 7 days. The holding times were met for the sample analyses.

4.3 **Method Blanks**

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Method blanks were reported for each analysis as appropriate. The wet chemistry parameters were not detected in the method blanks above the MDLs.

4.4 **Matrix Spike/Matrix Spike Duplicate**

Sample set specific MS/MSD pairs were reported for chloride, fluoride, sulfate using samples PZ5 (6/24/2016), MWB-35 (6/24/2016) and PZ1 (7/27/2016). The recovery and RPD results were within the laboratory specified acceptance criteria, with the following exceptions.

The recoveries of chloride and sulfate were low and outside of the laboratory specified acceptance criteria in the MS/MSDs using samples PZ5 (6/24/2016) and PZ1 (7/27/2016). Therefore, the concentrations of chloride and sulfate in samples PZ5 (6/24/2016) and PZ1 (7/27/2016) were J-qualified as estimated with a low bias.

<table>
<thead>
<tr>
<th>Client Sample ID</th>
<th>Compound</th>
<th>Laboratory Result (mg/L)</th>
<th>Laboratory Flag</th>
<th>Validation Result (µg/L)</th>
<th>Validation Qualifier</th>
<th>Reason Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>PZ1 (7/27/2016)</td>
<td>Chloride</td>
<td>742</td>
<td>J-</td>
<td>742</td>
<td>J-</td>
<td>4</td>
</tr>
<tr>
<td>PZ1 (7/27/2016)</td>
<td>Sulfate</td>
<td>1320</td>
<td>J-</td>
<td>1320</td>
<td>J-</td>
<td>4</td>
</tr>
<tr>
<td>PZ5 (6/24/2016)</td>
<td>Chloride</td>
<td>1140</td>
<td>J-</td>
<td>1140</td>
<td>J-</td>
<td>4</td>
</tr>
<tr>
<td>PZ5 (6/24/2016)</td>
<td>Sulfate</td>
<td>1440</td>
<td>J-</td>
<td>1440</td>
<td>J-</td>
<td>4</td>
</tr>
</tbody>
</table>

mg/L-milligrams per liter
J--laboratory flag indicating the MS/MSD recovery was low

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). LCSs were reported for each analysis as appropriate. The recovery results were within the laboratory specified acceptance criteria.
4.6 **Laboratory Duplicate**

Two batch laboratory duplicates were reported for the total dissolved solids analyses. Since this was batch QC there was no impact on the data.

4.7 **Equipment Blank**

Equipment blanks were not reported with the sample sets.

4.8 **Field Duplicate**

Field duplicates were not reported with the sample sets.

4.9 **Sensitivity**

The samples were reported to the MDLs. The MDLs reported met the limits listed in Table 4 of the CCR Groundwater Monitoring Plan.

4.10 **Electronic Data Deliverables Review**

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. The non-detect results were reported at the MDL in the laboratory reports and reported as ND in the EDD. No other 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

DATA QUALIFIER DEFINITIONS

U The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

J The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

J+ The analyte was positively identified; however, the associated numerical value is likely to be higher than the concentration of the analyte in the sample due to positive bias of associated QC or calibration data or attributable to matrix interference.

J- The analyte was positively identified; however, the associated numerical value is likely to be lower than the concentration of the analyte in the sample due to negative bias of associated QC or calibration data or attributable to matrix interference.

UJ The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

R The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.
### ATTACHMENT 2
**DATA VALIDATION REASON CODES**
Assigned by Geosyntec’s Data Validation Team

<table>
<thead>
<tr>
<th>Valid Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Preservation requirement not met</td>
</tr>
<tr>
<td>2</td>
<td>Analysis holding time exceeded</td>
</tr>
<tr>
<td>3</td>
<td>Blank contamination (i.e., method, trip, equipment, etc.)</td>
</tr>
<tr>
<td>4</td>
<td>Matrix spike/matrix spike duplicate recovery or RPD outside limits</td>
</tr>
<tr>
<td>5</td>
<td>LCS or RPD recovery outside limits (LCS/LCSD)</td>
</tr>
<tr>
<td>6</td>
<td>Surrogate recovery outside limits</td>
</tr>
<tr>
<td>7</td>
<td>Field Duplicate RPD exceeded</td>
</tr>
<tr>
<td>8</td>
<td>Serial dilution percent difference exceeded</td>
</tr>
<tr>
<td>9</td>
<td>Calibration criteria not met</td>
</tr>
<tr>
<td>10</td>
<td>Linear range exceeded</td>
</tr>
<tr>
<td>11</td>
<td>Internal standard criteria not met</td>
</tr>
<tr>
<td>12</td>
<td>Lab duplicates RPD exceeded</td>
</tr>
<tr>
<td>13</td>
<td>Other</td>
</tr>
</tbody>
</table>
Memorandum

Date: 24 October 2016
To: Todd Kafka
From: Chris Pracheil
CC: J. Caprio

Subject: Stage 2A Data Validation – Level II Data Deliverable – Tampa Electric Laboratory Services #L16H075, TestAmerica #660-75848-1 and KNL Environmental Testing # L16H075

SITE: Big Bend Power Station, Apollo Beach, Florida

INTRODUCTION

This report summarizes the findings of the Stage 2A data validation of 5 water samples, collected on August 26, 2016 as part of the Big Bend Power Station coal combustion residuals (CCR) groundwater monitoring program plan. The lithium analyses were performed by TestAmerica Tampa, Tampa, Florida (TestAmerica). The radium analyses were performed by KNL Environmental Testing, Tampa, Florida (KNL). The rest of the analyses were performed by Tampa Electric Laboratory Services, Tampa, Florida (TELS). The samples were analyzed for the following:

- Metals by EPA Method 200.7, 200.8 and 6010B
- Mercury by EPA Method 7470A
- Radium-226 by EPA Method 903.0
- Radium-228 by EPA Method Ra-05
- Chloride, Fluoride and Sulfate by EPA Method 300.0
- Total Dissolved Solids by SM 2540C

EXECUTIVE SUMMARY

The samples were handled, prepared, and measured in the same manner under similar prescribed conditions.

Overall, 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 qualifications.
The inorganic data were reviewed based on the following: CCR Groundwater Monitoring Program Plan, Big Bend Power Station, Apollo Beach, Florida, September 2016, USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, August 2014 (OSWER 9355.0-131, EPA 540-R-013-001), as well as by the pertinent methods referenced by the data package and professional and technical judgment.

The following samples were analyzed and validated at a Stage 2A level in the data set:

<table>
<thead>
<tr>
<th>Laboratory ID</th>
<th>Client ID</th>
</tr>
</thead>
<tbody>
<tr>
<td>L16H075-01</td>
<td>PZ1</td>
</tr>
<tr>
<td>L16H075-02</td>
<td>PZ2</td>
</tr>
<tr>
<td>L16H075-03</td>
<td>PZ3</td>
</tr>
</tbody>
</table>

The samples were received at TestAmerica Tampa outside the temperature criteria of 4±2°C; the samples were received at 1.0°C. Based on professional and technical judgment, no qualifications were applied to the data due to the temperatures outside the criteria. No sample preservation issues were noted by the laboratories.

1.0 TOTAL METALS

The samples were analyzed for total metals per EPA Methods 200.7, 200.8 and 6010B.

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 the impact on data quality and usability.

✓ Overall Assessment
✓ Holding Times
✓ Method Blank
✓ Matrix Spike/Matrix Spike Duplicate
✓ Laboratory Control Sample
✓ Serial Dilution
✓ Field Blank
✓ Equipment Blank
✓ Field Duplicate
✓ Sensitivity
✓ Electronic Data Deliverable Review
1.1 **Overall Assessment**

The metals data reported in this package are considered to be usable for meeting project objectives. The results are considered valid; 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 analysis for the project, is 100%.

1.2 **Holding Times**

The holding time for the metals analysis of waters 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). Four method blanks were reported, one for the method 200.7 data (batch 321282), one for the method 200.8 data (batch 16H0242), and two for the method 6010B data (batches 16H0239 and 16H0254). Metals were not detected in the method blanks above the method detection limit (MDL), with the following exception.

Boron was detected at an estimated concentration in the method blank associated with batch 16H0254. Since boron was detected above the reporting limit (RL) in the associated samples, no qualifications were applied to the data.

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 pair per batch of 20 samples). One sample set specific MS/MSD pair was reported for the 6010B data, using samples PZ6, and one sample set specific MS/MSD pair was reported for the 200.7 data, using samples PZ1. The recovery and relative percent difference (RPD) results were within the laboratory specified acceptance criteria.

Batch MS/MSD pairs were also reported for the 200.8 and 6010B data. Since these are batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.

1.5 **Laboratory Control Sample (LCS)**

LCSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Four LCSs were reported, one for the 200.7 data, one for the 200.8 data
and two for the 6010B data. The recovery results were within the laboratory specified acceptance criteria.

1.6 **Serial Dilution**

Serial dilutions were not reported.

1.7 **Field Duplicate**

Field duplicates were not reported with the sample sets.

1.8 **Sensitivity**

The samples were reported to the MDLs. No elevated non-detect results were reported. The MDLs met the limits listed in Table 4 of the CCR Groundwater Monitoring Plan.

1.9 **Electronic Data Deliverable Review**

The results and sample identifications (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 **MERCURY**

The samples were analyzed for mercury per 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 the 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
2.1 Overall Assessment

The mercury data reported in this package are considered to be usable for meeting project objectives. The results are considered valid; 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 analysis for the project, is 100%.

2.2 Holding Times

The holding time for the mercury analysis of a water sample is 28 days from sample collection to analysis. The holding times were met for the sample analyses.

2.3 Method Blank

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). One method blank was reported (batch 16H0256). Mercury was not detected in the method blank above the MDL.

2.4 Matrix Spike/Matrix Spike Duplicate

MS/MSD pairs 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, using sample PZ5, was reported. The recovery and RPD results were within the laboratory specified acceptance criteria.

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). One LCS was reported. The recovery results were within the laboratory specified acceptance criteria.

2.6 Field Duplicate

Field duplicates were not reported with the sample sets.
2.7 Sensitivity

The samples were reported to the MDL. No elevated non-detect results were reported. The MDL for mercury met the limits listed in Table 4 of the CCR Groundwater Monitoring Plan.

2.8 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 RADIUM-226 AND RADIUM-228

The samples were analyzed for radium 226 and radium 228 per EPA Methods 903.0 and RA-05, respectively.

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 the impact on data quality and usability.

✓ Overall Assessment
✓ Holding Times
✓ Method Blank
✓ Matrix Spike/Matrix Spike Duplicate
✓ Laboratory Control Sample
✓ Surrogates
✓ Field Blank
✓ Equipment Blank
✓ Field Duplicate
✓ Sensitivity
✓ Electronic Data Deliverable Review

3.1 Overall Assessment

The radium-226 and radium-228 data reported in this package are considered to be 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 analysis for the project, is 100%.

3.2 **Holding Times**

The holding times for radium-226 and radium-228 analysis of waters are 180 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). Two method blanks were reported, one for the radium-226 data and one for the radium-228 data (both reported in batch L16H075). Radium-228 was not detected in the method blank above the minimum detectable concentration (MDC); however, radium-226 was detected above the MDC in the method blank associated with batch L16H075. Since, the detections of radium-226 and combined radium (radium-226 + radium-228) had concentrations greater than 10x the blank concentration no qualifications were applied to the data.

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). One sample set specific MS/MSD pair, using sample PZ6, was reported for the radium-228 data. The MSD recovery of radium-228 was low and outside of laboratory specified acceptance criteria in the MS/MSD pair, using sample PZ6; therefore, the non-detect result of radium-228 in sample PZ6 was J qualified as estimated.

<table>
<thead>
<tr>
<th>Client Sample ID</th>
<th>Compound</th>
<th>Laboratory Result (pCi/L)</th>
<th>Laboratory Flag</th>
<th>Validation Result (pCi/L)</th>
<th>Validation Qualifier*</th>
<th>Reason Code**</th>
</tr>
</thead>
<tbody>
<tr>
<td>PZ6</td>
<td>Radium-228</td>
<td>0.7</td>
<td>U</td>
<td>0.7</td>
<td>UJ</td>
<td>4</td>
</tr>
</tbody>
</table>

pCi/L-picocuries per liter

U- laboratory flag indicating the analytes was not detected above the MDL in the associated sample

* 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

A batch MS/MSD pair was reported for the radium-226 data. Since these are 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). Two LCS were reported for radium-226 and radium-228. The recovery results were within the laboratory specified acceptance criteria.

3.6 **Laboratory Duplicate**

A laboratory duplicate was not reported with the sample set.

3.7 **Sensitivity**

The samples were reported to the MDCs. The reported MDCs met the limits listed in Table 4 of the CCR Groundwater Monitoring Plan.

3.8 **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 **WET CHEMISTRY PARAMETERS**

The samples were analyzed for chloride, fluoride and sulfate by EPA Method 300.0 and total dissolved solids 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.
4.1 Overall Assessment

The wet chemistry data reported in this package are considered to be usable for meeting project objectives. The results are considered to be 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 analysis, for the project is 100%.

4.2 Holding Times

The holding times for chloride, fluoride and sulfate by EPA method 300.0 are 28 days from sample collection to analysis and the holding time for total dissolved solids by SM 2540C is 7 days. The holding times were met for the sample analyses.

4.3 Method Blanks

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Method blanks were reported for each analysis as appropriate. The wet chemistry parameters were not detected in the method blanks above the MDLs.

4.4 Matrix Spike/Matrix Spike Duplicate

Batch MS/MSD pairs were reported for the wet chemistry data. Since these are batch QC, the results do not affect the samples in this data set and qualifications were not applied to 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). LCSs were reported for each analysis as appropriate. The recovery results were within the laboratory specified acceptance criteria.

4.6 **Laboratory Duplicate**

One batch laboratory duplicate was reported for the total dissolved solids analyses. Since this was batch QC there was no impact on the data.

4.7 **Field Duplicate**

Field duplicates were not reported with the sample sets.

4.8 **Sensitivity**

The samples were reported to the MDLs. The MDLs reported met the limits listed in Table 4 of the CCR Groundwater Monitoring Plan.

4.9 **Electronic Data Deliverables Review**

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 report and the EDD.

* * * * *
ATTACHMENT 1
DATA VALIDATION QUALIFIER DEFINITIONS
AND INTERPRETATION KEY
Assigned by Geosyntec’s Data Validation Team

DATA QUALIFIER DEFINITIONS

U  The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

J  The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

J+ The analyte was positively identified; however, the associated numerical value is likely to be higher than the concentration of the analyte in the sample due to positive bias of associated QC or calibration data or attributable to matrix interference.

J- The analyte was positively identified; however, the associated numerical value is likely to be lower than the concentration of the analyte in the sample due to negative bias of associated QC or calibration data or attributable to matrix interference.

UJ The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

R  The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.
## ATTACHMENT 2
### DATA VALIDATION REASON CODES
Assigned by Geosyntec’s Data Validation Team

<table>
<thead>
<tr>
<th>Valid Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Preservation requirement not met</td>
</tr>
<tr>
<td>2</td>
<td>Analysis holding time exceeded</td>
</tr>
<tr>
<td>3</td>
<td>Blank contamination (i.e., method, trip, equipment, etc.)</td>
</tr>
<tr>
<td>4</td>
<td>Matrix spike/matrix spike duplicate recovery or RPD outside limits</td>
</tr>
<tr>
<td>5</td>
<td>LCS or RPD recovery outside limits (LCS/LCSD)</td>
</tr>
<tr>
<td>6</td>
<td>Surrogate recovery outside limits</td>
</tr>
<tr>
<td>7</td>
<td>Field Duplicate RPD exceeded</td>
</tr>
<tr>
<td>8</td>
<td>Serial dilution percent difference exceeded</td>
</tr>
<tr>
<td>9</td>
<td>Calibration criteria not met</td>
</tr>
<tr>
<td>10</td>
<td>Linear range exceeded</td>
</tr>
<tr>
<td>11</td>
<td>Internal standard criteria not met</td>
</tr>
<tr>
<td>12</td>
<td>Lab duplicates RPD exceeded</td>
</tr>
<tr>
<td>13</td>
<td>Other</td>
</tr>
</tbody>
</table>
Date: 17 January 2017
To: Todd Kafka
From: Chris Pracheil
CC: J. Caprio
Subject: Stage 2A Data Validation – Level II Data Deliverable – Tampa Electric Laboratory Services #L16J027 and #L16K034, TestAmerica #660-77026-1 and #660-77306-1 and KNL Environmental Testing #L16J027 and #L16K034

SITE: Big Bend Power Station, Apollo Beach, Florida

INTRODUCTION

This report summarizes the findings of the Stage 2A data validation of 10 water samples, collected on October 28, 2016 and November 10, 2016 as part of the Big Bend Power Station coal combustion residuals (CCR) groundwater monitoring program plan. The lithium analyses were performed by TestAmerica Tampa, Tampa, Florida (TestAmerica). The radium analyses were performed by KNL Environmental Testing, Tampa, Florida (KNL). The rest of the analyses were performed by Tampa Electric Laboratory Services, Tampa, Florida (TELS). The samples were analyzed for the following:

- Metals by EPA Method 200.7, 200.8 and 6010B
- Mercury by EPA Method 7470A
- Radium-226 by EPA Method 903.0
- Radium-228 by EPA Method Ra-05
- Chloride, Flouride and Sulfate by EPA Method 300.0
- Total Dissolved Solids by SM 2540C

EXECUTIVE SUMMARY

The samples were handled, prepared, and measured in the same manner under similar prescribed conditions.
Overall, 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 qualifications.

The inorganic data were reviewed based on the following: CCR Groundwater Monitoring Program Plan, Big Bend Power Station, Apollo Beach, Florida, September 2016, USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, August 2014 (OSWER 9355.0-131, EPA 540-R-013-001), as well as by the pertinent methods referenced by the data package and professional and technical judgment.

The following samples were analyzed and validated at a Stage 2A level in the data set:

<table>
<thead>
<tr>
<th>Laboratory ID</th>
<th>Client ID</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>L16J027-01</td>
<td>BBS-CCR-1</td>
<td>10/28/16</td>
</tr>
<tr>
<td>L16J027-02</td>
<td>BBS-CCR-2</td>
<td>10/28/16</td>
</tr>
<tr>
<td>L16J027-03</td>
<td>BBS-CCR-3</td>
<td>10/28/16</td>
</tr>
<tr>
<td>L16J027-04</td>
<td>BBS-CCR-BW-1</td>
<td>10/28/16</td>
</tr>
<tr>
<td>L16J027-05</td>
<td>BBS-CCR-BW-2</td>
<td>10/28/16</td>
</tr>
<tr>
<td>L16K034-01</td>
<td>BBS-CCR-1</td>
<td>11/10/16</td>
</tr>
<tr>
<td>L16K034-02</td>
<td>BBS-CCR-2</td>
<td>11/10/16</td>
</tr>
<tr>
<td>L16K034-03</td>
<td>BBS-CCR-3</td>
<td>11/10/16</td>
</tr>
<tr>
<td>L16K034-04</td>
<td>BBS-CCR-BW-1</td>
<td>11/10/16</td>
</tr>
<tr>
<td>L16K034-05</td>
<td>BBS-CCR-BW-2</td>
<td>11/10/16</td>
</tr>
</tbody>
</table>

The samples collected on 10/28/2016 were received at TestAmerica Tampa outside the temperature criteria of 4±2°C; the samples were received at 0.4°C. Based on professional and technical judgment, no qualifications were applied to the data due to the temperatures outside the criteria. No sample preservation issues were noted by the laboratories.

1.0 TOTAL METALS

The samples were analyzed for total metals per EPA Methods 200.7, 200.8 and 6010B.

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 the impact on data quality and usability.

✓ Overall Assessment
✓ Holding Times
✓ Method Blank
✓ Matrix Spike/Matrix Spike Duplicate
✓ Laboratory Control Sample
✓ Serial Dilution
1.1 **Overall Assessment**

The metals data reported in this package are considered usable for meeting project objectives. The results are considered valid; 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 analysis for the project, is 100%.

1.2 **Holding Times**

The holding time for the metals analysis of waters 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). Six method blanks were reported, two for the method 200.7 data (batches 329861 and 331677), two for the method 200.8 data (batches 16J0235 and 16K0095), and two for the method 6010B data (batches 16J0236 and 16K0104). Metals were not detected in the method blanks above the method detection limit (MDL), with the following exception.

Calcium was detected at an estimated concentration, greater than the MDL and less than the reporting limit (RL), in the method blank associated with batch 16J0236. Since calcium was detected above the RL in the associated samples, no qualifications were applied to the data.

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 pair per batch of 20 samples). One sample set specific MS/MSD pair was reported for the Method 6010B data, using sample BBS-CCR-BW-2(10/28/16), and one sample set specific MS/MSD pair was reported for the Method 200.8 data, using sample BBS-CCR-1(10/28/16). The recovery and relative percent difference (RPD) results were within the laboratory specified acceptance criteria.
Batch MS/MSD pairs were also reported for Methods 200.7, 200.8 and 6010B data. Since these are batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.

1.5 **Laboratory Control Sample (LCS)**

LCSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Six LCSs were reported, two for the Method 200.7 data, two for the Method 200.8 data and two for the Method 6010B data. The recovery results were within the laboratory specified acceptance criteria.

1.6 **Serial Dilution**

Serial dilutions were not reported.

1.7 **Field Duplicate**

Field duplicates were not reported with the sample sets.

1.8 **Sensitivity**

The samples were reported to the MDLs. Elevated non-detect results were reported for sample BBS-CCR-BW-1 (10/28/16) due to the sample being analyzed at dilution. The MDLs met the limits listed in Table 4 of the CCR Groundwater Monitoring Plan.

1.9 **Electronic Data Deliverable Review**

The results and sample identifications (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 **MERCURY**

The samples were analyzed for mercury per 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 the impact on data quality and usability.

✓ Overall Assessment
2.1 **Overall Assessment**

The mercury data reported in this package are considered to be usable for meeting project objectives. The results are considered valid; 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 analysis for the project, is 100%.

2.2 **Holding Times**

The holding time for the mercury analysis of a water sample is 28 days from sample collection to analysis. The holding times were met for the sample analyses.

2.3 **Method Blank**

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Two method blanks were reported (batches 16K0037 and 16K0106). Mercury was not detected in the method blanks above the MDL.

2.4 **Matrix Spike/Matrix Spike Duplicate**

MS/MSD pairs 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, using sample BBS-CCR-1(11/10/16), was reported. The recovery and RPD results were within the laboratory specified acceptance criteria.

A batch MS/MSD pair was also reported for the mercury data. Since these are 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). Two LCSs were reported. The recovery results were within the laboratory specified acceptance criteria.

2.6 **Field Duplicate**

Field duplicates were not reported with the sample sets.

2.7 **Sensitivity**

The samples were reported to the MDL. No elevated non-detect results were reported. The MDL for mercury met the limits listed in Table 4 of the CCR Groundwater Monitoring Plan.

2.8 **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 **Radium-226 and Radium-228**

The samples were analyzed for radium 226 and radium 228 per EPA Methods 903.0 and RA-05, respectively.

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 the impact on data quality and usability.

- ✓ Overall Assessment
- ✓ Holding Times
- ⊗ Method Blank
- ✓ Matrix Spike/Matrix Spike Duplicate
- ✓ Laboratory Control Sample
- ✓ Surrogates
- ✓ Field Blank
- ✓ Equipment Blank
- ✓ Field Duplicate
3.1 **Overall Assessment**

The radium-226 and radium-228 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 analysis for the project, is 100%.

3.2 **Holding Times**

The holding times for radium-226 and radium-228 analysis of waters are 180 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). Four method blanks were reported, two for the radium-226 data and two for the radium-228 data. Radium-228 was detected in the method blank above the minimum detectable concentration (MDC) in batch L16K034 and radium-226 was detected above the MDC in the method blank associated with batches L16J027 and L16K034. Therefore, the detections of radium-228 with concentrations less than 10x the blank concentrations were qualified as estimated. No qualifications were applied to the radium-226 and combined radium data (radium-226 + radium-228) since the concentrations were greater than 10x the blank concentration.

<table>
<thead>
<tr>
<th>Client Sample ID</th>
<th>Compound</th>
<th>Laboratory Result (pCi/L)</th>
<th>Laboratory Flag</th>
<th>Validation Result (pCi/L)</th>
<th>Validation Qualifier*</th>
<th>Reason Code**</th>
</tr>
</thead>
<tbody>
<tr>
<td>BBS-CCR-1 (11/10/16)</td>
<td>Radium-228</td>
<td>2.3</td>
<td>NA</td>
<td>2.3</td>
<td>J</td>
<td>3</td>
</tr>
<tr>
<td>BBS-CCR-2 (11/10/16)</td>
<td>Radium-228</td>
<td>0.9</td>
<td>NA</td>
<td>0.9</td>
<td>J</td>
<td>3</td>
</tr>
<tr>
<td>BBS-CCR-3 (11/10/16)</td>
<td>Radium-228</td>
<td>1.9</td>
<td>NA</td>
<td>1.9</td>
<td>J</td>
<td>3</td>
</tr>
<tr>
<td>BBS-CCR-BW1 (11/10/16)</td>
<td>Radium-228</td>
<td>3.6</td>
<td>NA</td>
<td>3.6</td>
<td>J</td>
<td>3</td>
</tr>
</tbody>
</table>

pCi/L-picocuries per liter
NA-not applicable

* 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
3.4 **Matrix Spike**

MSs 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, using sample BBS-CCR-BW1 (11/10/16), was reported for the radium-228 data. The recovery results were within the laboratory specified acceptance criteria.

Batch MSs were also reported for the radium-226 and radium-228 data. Since these are 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). Two LCSs were reported for radium-226 and two for radium-228. The recovery results were within the laboratory specified acceptance criteria.

3.6 **Laboratory Duplicate**

Laboratory duplicates were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). One sample set specific laboratory duplicate, using sample BBS-CCR-BW1 (11/10/16), was reported for the radium-228 data. The RPD result was within the validation specified acceptance criteria.

Batch laboratory duplicates were also reported for the radium-226 and radium-228 data. Since these are batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.

3.7 **Sensitivity**

The samples were reported to the MDCs. The reported MDCs met the limits listed in Table 4 of the CCR Groundwater Monitoring Plan.

3.8 **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 WET CHEMISTRY PARAMETERS

The samples were analyzed for chloride, fluoride and sulfate by EPA Method 300.0 and total dissolved solids 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
✓ Laboratory Duplicate
✓ Equipment Blank
✓ Field Duplicate
✓ Sensitivity
✓ Electronic Data Deliverables Review

4.1 Overall Assessment

The wet chemistry data reported in this package are considered usable for meeting project objectives. The results are considered to be 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 analysis, for the project is 100%.

4.2 Holding Times

The holding times for chloride, fluoride and sulfate by EPA method 300.0 are 28 days from sample collection to analysis and the holding time for total dissolved solids by SM 2540C is 7 days. The holding times were met for the sample analyses.

4.3 Method Blanks

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Method blanks were reported for each analysis as
appropriate. The wet chemistry parameters were not detected in the method blanks above the MDLs, with the following exceptions.

Chloride was detected at estimated concentrations, greater than the MDLs and less than the RLs, in the method blanks associated with batches 16K0007 and 16K0150. Since chloride was detected above the RL in the associated samples, no qualifications were applied to the data.

4.4 **Matrix Spike/Matrix Spike Duplicate**

MS/MSD pairs were reported for the wet chemistry data. Sample set specific MS/MSD pairs were reported for chloride, fluoride and sulfate, using sample BBS-CCR-1 (10/28/16). The MS recoveries of chloride and sulfate were low and outside of laboratory specified acceptance criteria; therefore the concentrations of chloride and sulfate in sample BBS-CCR-1 (10/28/16) were J-qualified as estimated with a low bias.

<table>
<thead>
<tr>
<th>Client Sample ID</th>
<th>Compound</th>
<th>Laboratory Result (mg/L)</th>
<th>Laboratory Flag</th>
<th>Validation Result (mg/L)</th>
<th>Validation Qualifier</th>
<th>Reason Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>BBS-CCR-1 (10/28/16)</td>
<td>Chloride</td>
<td>743</td>
<td>J-V</td>
<td>743</td>
<td>J</td>
<td>4</td>
</tr>
<tr>
<td>BBS-CCR-1 (10/28/16)</td>
<td>Sulfate</td>
<td>1230</td>
<td>J</td>
<td>1230</td>
<td>J</td>
<td>4</td>
</tr>
</tbody>
</table>

mg/L-milligrams per liter
J- laboratory flag indicating the reported value is estimated
V-laboratory flag indication the analyte was detected in the method blank

Batch MS/MSD were also reported for the wet chemistry parameters. Since these are batch QC, the results do not affect the samples in this data set and qualifications were not applied to 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). LCSs were reported for each analysis as appropriate. The recovery results were within the laboratory specified acceptance criteria.

4.6 **Laboratory Duplicate**

Laboratory duplicates were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Two sample set specific laboratory duplicates were reported for total dissolved solids using samples BBS-CCR-1 (10/28/16) and BBS-CCR-1 (11/10/16). The RPD results were within the laboratory specified acceptance criteria.
Two batch laboratory duplicates were also reported for the total dissolved solids analyses. Since these were batch QC there was no impact on the data.

4.7 **Field Duplicate**

Field duplicates were not reported with the sample sets.

4.8 **Sensitivity**

The samples were reported to the MDLs. The MDLs reported met the limits listed in Table 4 of the CCR Groundwater Monitoring Plan.

4.9 **Electronic Data Deliverables Review**

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 report and the EDD.

* * * * *

* * * * *
DATA QUALIFIER DEFINITIONS

U  The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

J  The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

J+ The analyte was positively identified; however, the associated numerical value is likely to be higher than the concentration of the analyte in the sample due to positive bias of associated QC or calibration data or attributable to matrix interference.

J- The analyte was positively identified; however, the associated numerical value is likely to be lower than the concentration of the analyte in the sample due to negative bias of associated QC or calibration data or attributable to matrix interference.

UJ The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

R  The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.
**ATTACHMENT 2**
DATA VALIDATION REASON CODES
Assigned by Geosyntec’s Data Validation Team

<table>
<thead>
<tr>
<th>Valid Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Preservation requirement not met</td>
</tr>
<tr>
<td>2</td>
<td>Analysis holding time exceeded</td>
</tr>
<tr>
<td>3</td>
<td>Blank contamination (i.e., method, trip, equipment, etc.)</td>
</tr>
<tr>
<td>4</td>
<td>Matrix spike/matrix spike duplicate recovery or RPD outside limits</td>
</tr>
<tr>
<td>5</td>
<td>LCS or RPD recovery outside limits (LCS/LCSD)</td>
</tr>
<tr>
<td>6</td>
<td>Surrogate recovery outside limits</td>
</tr>
<tr>
<td>7</td>
<td>Field Duplicate RPD exceeded</td>
</tr>
<tr>
<td>8</td>
<td>Serial dilution percent difference exceeded</td>
</tr>
<tr>
<td>9</td>
<td>Calibration criteria not met</td>
</tr>
<tr>
<td>10</td>
<td>Linear range exceeded</td>
</tr>
<tr>
<td>11</td>
<td>Internal standard criteria not met</td>
</tr>
<tr>
<td>12</td>
<td>Lab duplicates RPD exceeded</td>
</tr>
<tr>
<td>13</td>
<td>Other</td>
</tr>
</tbody>
</table>
Memorandum

Date: 12 May 2017
To: Todd Kafka
From: Chris Pracheil
CC: J. Caprio
Subject: Stage 2A Data Validation – Level II Data Deliverable – Tampa Electric Laboratory Services #L17A041 and #L17D013, TestAmerica #660-78617-1 and #660-80222-1 and KNL Environmental Testing # L17A041 and # L17D013

SITE: Big Bend Power Station, Apollo Beach, Florida

INTRODUCTION

This report summarizes the findings of the Stage 2A data validation of 10 water samples, collected on January 26, 2017 and April 13, 2017 as part of the Big Bend Power Station coal combustion residuals (CCR) groundwater monitoring program plan. The lithium analyses were performed by TestAmerica Tampa, Tampa, Florida (TA). The radium analyses were performed by KNL Environmental Testing, Tampa, Florida (KNL). The rest of the analyses were performed by Tampa Electric Laboratory Services, Tampa, Florida (TELS). The samples were analyzed for the following:

- Metals by EPA Methods 200.7, 200.8 and 6010B
- Mercury by EPA Method 7470A
- Radium-226 by EPA Method 903.0
- Radium-228 by EPA Method Ra-05
- Chloride, Fluoride and Sulfate by EPA Method 300.0
- Total Dissolved Solids by Standard Method 2540C

EXECUTIVE SUMMARY

The samples were handled, prepared, and measured in the same manner under similar prescribed conditions.
Overall, 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 qualifications.

The inorganic data were reviewed based on the following: CCR Groundwater Monitoring Program Plan, Big Bend Power Station, Apollo Beach, Florida, September 2016, USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, January 2017 (OLEM 9355.0-135, EPA 540-R-2017-001), as well as by the pertinent methods referenced by the data package and professional and technical judgment.

The following samples were analyzed and validated at a Stage 2A level in the data set:

<table>
<thead>
<tr>
<th>Laboratory ID</th>
<th>Client ID</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>L17A041-01</td>
<td>BBS-CCR-1</td>
<td>1/26/17</td>
</tr>
<tr>
<td>L17A041-02</td>
<td>BBS-CCR-2</td>
<td>1/26/17</td>
</tr>
<tr>
<td>L17A041-03</td>
<td>BBS-CCR-3</td>
<td>1/26/17</td>
</tr>
<tr>
<td>L17A041-04</td>
<td>BBS-CCR-BW-1</td>
<td>1/26/17</td>
</tr>
<tr>
<td>L17A041-05</td>
<td>BBS-CCR-BW-2</td>
<td>1/26/17</td>
</tr>
<tr>
<td>L17D013-01</td>
<td>BBS-CCR-1</td>
<td>4/13/17</td>
</tr>
<tr>
<td>L17D013-02</td>
<td>BBS-CCR-2</td>
<td>4/13/17</td>
</tr>
<tr>
<td>L17D013-03</td>
<td>BBS-CCR-3</td>
<td>4/13/17</td>
</tr>
<tr>
<td>L17D013-04</td>
<td>BBS-CCR-BW-1</td>
<td>4/13/17</td>
</tr>
<tr>
<td>L17D013-05</td>
<td>BBS-CCR-BW-2</td>
<td>4/13/17</td>
</tr>
</tbody>
</table>

The samples collected on 1/26/2017 were received at TestAmerica Tampa outside the temperature criteria of 4±2°C; the samples were received at 15.0°C. Based on professional and technical judgment, no qualifications were applied to the data due to the temperatures outside the criteria. No sample preservation issues were noted by the laboratories.

It was noted that the chain of custody (COC) for TA report 660-78617 listed the sample collection date as 1/25/2017, instead of the correct sample collection date of 1/26/2017. Therefore, the samples have the incorrect sampling date listed in TA report 660-78617. This did not impact the data and no qualifications were applied to the data.

1.0 TOTAL METALS

The samples were analyzed for total metals per EPA Methods 200.7, 200.8 and 6010B.

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 the impact on data quality and usability.

✓ Overall Assessment
✓ Holding Times
1.1 **Overall Assessment**

The metals data reported in this package are considered usable for meeting project objectives. The results are considered valid; 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 analysis for the project, is 100%.

1.2 **Holding Times**

The holding time for the metals analysis of waters 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). Six method blanks were reported (method 200.7 batches 340211 and 350739, method 200.8 batches 17A0263 and 17D0123, and method 6010B batches 17A0279 and 17D0115). Metals were not detected in the method blanks above the method detection limits (MDLs), with the following exceptions.

Cobalt was detected at an estimated concentration, greater than the MDL and less than the reporting limit (RL), in the method blank associated with batch 17D0123. Therefore, the estimated concentrations of cobalt in the associated samples were qualified as not detected at the RL.

<table>
<thead>
<tr>
<th>Client Sample ID</th>
<th>Compound</th>
<th>Laboratory Result (µg/L)</th>
<th>Laboratory Flag</th>
<th>Validation Result (µg/L)</th>
<th>Validation Qualifier*</th>
<th>Reason Code**</th>
</tr>
</thead>
<tbody>
<tr>
<td>BBS-CCR-1 (4/13/17)</td>
<td>Cobalt</td>
<td>0.505</td>
<td>I,V</td>
<td>2.0</td>
<td>U</td>
<td>3</td>
</tr>
<tr>
<td>BBS-CCR-2 (4/13/17)</td>
<td>Cobalt</td>
<td>0.114</td>
<td>I,V</td>
<td>2.0</td>
<td>U</td>
<td>3</td>
</tr>
<tr>
<td>BBS-CCR-3 (4/13/17)</td>
<td>Cobalt</td>
<td>0.110</td>
<td>I,V</td>
<td>2.0</td>
<td>U</td>
<td>3</td>
</tr>
<tr>
<td>BBS-CCR-BW1 (4/13/17)</td>
<td>Cobalt</td>
<td>1.69</td>
<td>I,V</td>
<td>2.0</td>
<td>U</td>
<td>3</td>
</tr>
<tr>
<td>BBS-CCR-BW2 (4/13/17)</td>
<td>Cobalt</td>
<td>0.129</td>
<td>I,V</td>
<td>2.0</td>
<td>U</td>
<td>3</td>
</tr>
</tbody>
</table>
μg/L-micrograms per liter
I- laboratory flag indicating the reported value is estimated, greater than MDL and less than RL
V- Analyte detected in the method blank
* Validation qualifiers are defined in Attachment 1 at the end of this report
**Reason codes are defined in Attachment 2 at the end of this report

1.4 Matrix Spike/Matrix Spike Duplicate (MS/MSD)

MS/MSDs were analyzed at the proper frequency for the number and types of samples analyzed (one pair per batch of 20 samples). Sample set specific MS/MSD pairs were reported for 6010B using sample BBS-CCR-1 (1/26/17) and 200.8 using samples BBS-CCR-1 (1/26/17) and BBS-CCR-BW-2 (4/13/17). The recovery and relative percent difference (RPD) results were within the laboratory specified acceptance criteria, with the following exception.

The recovery of boron in the MSD using sample BBS-CCR-1 (1/26/17) was high, outside the laboratory specified acceptance criteria. Since the boron concentration in sample BBS-CCR-1 (1/26/17) was greater than four times the spiked amount, no qualifications were applied to the boron data.

Batch MS/MSD pairs were also reported for Methods 200.7 and 6010B data. Since these are batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.

1.5 Laboratory Control Sample (LCS)

LCSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Six LCSs were reported. The recovery results were within the laboratory specified acceptance criteria.

1.6 Serial Dilution

Serial dilutions were not reported.

1.7 Field Duplicate

Field duplicates were not reported with the sample sets.
1.8 **Sensitivity**

The samples were reported to the MDLs. Elevated non-detect results were reported for sample BBS-CCR-1(4/13/17) due to the sample being analyzed at dilution. The MDLs met the limits listed in Table 4 of the CCR Groundwater Monitoring Plan.

1.9 **Electronic Data Deliverable (EDD) Review**

The results and sample identifications (IDs) in the EDD 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 EDD.

2.0 **MERCURY**

The samples were analyzed for mercury per 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 the impact on data quality and usability.

- ✓ Overall Assessment
- ✓ Holding Times
- ✓ Method Blank
- ✓ Matrix Spike/Matrix Spike Duplicate
- ✓ Laboratory Control Sample
- ✓ Field Duplicate
- ✓ Sensitivity
- ✓ Electronic Data Deliverable Review

2.1 **Overall Assessment**

The mercury data reported in this package are considered to be usable for meeting project objectives. The results are considered valid; 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 analysis for the project, is 100%.
2.2  **Holding Times**

The holding time for the mercury analysis of a water sample is 28 days from sample collection to analysis. The holding times were met for the sample analyses.

2.3  **Method Blank**

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Two method blanks were reported (batches 17A0273 and 17D0122). Mercury was not detected in the method blanks above the MDL.

2.4  **Matrix Spike/Matrix Spike Duplicate**

MS/MSD pairs 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, using samples BBS-CCR-2 (1/26/17) and BBS-CCR-1 (4/13/17), were reported. The recoveries and RPD results were within the laboratory specified acceptance criteria.

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). Two LCSs were reported. The recovery results were within the laboratory specified acceptance criteria.

2.6  **Field Duplicate**

Field duplicates were not reported with the sample sets.

2.7  **Sensitivity**

The samples were reported to the MDL. No elevated non-detect results were reported. The MDL for mercury met the limit listed in Table 4 of the CCR Groundwater Monitoring Plan.

2.8  **Electronic Data Deliverable Review**

The results and sample IDs in the EDD 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 EDD.
3.0  RADIUM-226 AND RADIUM-228

The samples were analyzed for radium 226 and radium 228 per EPA Methods 903.0 and RA-05, respectively.

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 the impact on data quality and usability.

✓  Overall Assessment
✓  Holding Times
⊗  Method Blank
✓  Matrix Spike
✓  Laboratory Control Sample
✓  Laboratory Duplicate
✓  Sensitivity
✓  Electronic Data Deliverable Review

3.1  Overall Assessment

The radium-226 and radium-228 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 analysis for the project, is 100%.

3.2  Holding Times

The holding times for radium-226 and radium-228 analysis of waters are 180 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). Six method blanks were reported (three for the radium-226 and three for the radium-228). The method blanks were within validation criteria with the following exceptions.
Radium-226 was detected at concentrations greater than 1.65 times the combined standard uncertainty (CSU) in batches L17A041 and L17D013. Therefore, the detections of radium-226 and combined radium data (radium-226 + radium-228) with concentrations less than 10 times the blank concentrations were J qualified as estimated.

<table>
<thead>
<tr>
<th>Client Sample ID</th>
<th>Compound</th>
<th>Laboratory Result (pCi/L)</th>
<th>Laboratory Flag</th>
<th>Validation Result (pCi/L)</th>
<th>Validation Qualifier</th>
<th>Reason Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>BBS-CCR-2 (1/26/17)</td>
<td>Radium-226</td>
<td>3.7</td>
<td>NA</td>
<td>3.7</td>
<td>J</td>
<td>3</td>
</tr>
<tr>
<td>BBS-CCR-2 (1/26/17)</td>
<td>Radium-226 + Radium-228</td>
<td>4.8</td>
<td>NA</td>
<td>4.8</td>
<td>J</td>
<td>3</td>
</tr>
</tbody>
</table>

pCi/L-picocuries per liter
NA-not applicable

3.4 Matrix Spike

MSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Two sample set specific MSs, using samples BBS-CCR-BW1 (1/26/17) and BBS-CCR-BW1 (4/13/17) for radium-228 and one sample set specific MS using sample BBS-CCR-BW2 (4/13/17) were reported for the radium-226 data. The recovery results were within the laboratory specified acceptance criteria.

Batch MSs were also reported for the radium-226 and radium-228 data. Since these are 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). Three LCSs were reported for radium-226 and three for radium-228. The recovery results were within the laboratory specified acceptance criteria.

3.6 Laboratory Duplicate

Laboratory duplicates were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Two sample set specific laboratory duplicates, using samples BBS-CCR-BW1 (1/26/17) and BBS-CCR-BW1 (4/13/17) for radium-228 and one sample set specific laboratory duplicate using sample BBS-CCR-BW2 (4/13/17) were reported for the radium-226 data.
Batch laboratory duplicates were also reported for the radium-226 and radium-228 data. Since these are batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.

### 3.7 Sensitivity

The samples were reported to the MDCs. The reported MDCs met the limits listed in Table 4 of the CCR Groundwater Monitoring Plan.

### 3.8 Electronic Data Deliverable Review

The results and sample IDs in the EDD 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 EDD.

### 4.0 WET CHEMISTRY PARAMETERS

The samples were analyzed for chloride, fluoride and sulfate by EPA Method 300.0 and total dissolved solids 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
✓ Laboratory Duplicate
✓ Field Duplicate
✓ Sensitivity
✓ Electronic Data Deliverables Review

### 4.1 Overall Assessment

The wet chemistry data reported in this package are considered usable for meeting project objectives. The results are considered to be 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 analysis, for the project is 100%.

4.1.1 Assessment Anomalies

The case narratives for laboratory reports L17A041 and L17D013 noted that a constant weight could not be achieved after three consecutive weighing and drying cycles for the total dissolved solids analysis of samples BBS-CCR-1 (1/26/17) and BBS-CCR-BW-1 (1/26/17); and BBS-CCR-1 (4/13/17) and BBS-CCR-BW-1 (4/13/17). Therefore, the concentrations of total dissolved solids in these samples were J qualified as estimated.

<table>
<thead>
<tr>
<th>Client Sample ID</th>
<th>Compound</th>
<th>Laboratory Result (mg/L)</th>
<th>Laboratory Flag</th>
<th>Validation Result (mg/L)</th>
<th>Validation Qualifier</th>
<th>Reason Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>BBS-CCR-1 (1/26/17)</td>
<td>Total Dissolved Solids</td>
<td>3670</td>
<td>J-</td>
<td>3670</td>
<td>J</td>
<td>13</td>
</tr>
<tr>
<td>BBS-CCR-BW1 (1/26/17)</td>
<td>Total Dissolved Solids</td>
<td>4510</td>
<td>J-</td>
<td>4510</td>
<td>J</td>
<td>13</td>
</tr>
</tbody>
</table>

mg/L-milligrams per liter
J-laboratory flag indicating the reported value is an estimated value

4.2 Holding Times

The holding times for chloride, fluoride and sulfate by EPA method 300.0 are 28 days from sample collection to analysis and the holding time for total dissolved solids by SM 2540C is 7 days from sample collection to analysis. The holding times were met for the sample analyses.

4.3 Method Blanks

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Method blanks were reported for each analysis as appropriate. The wet chemistry parameters were not detected in the method blanks above the MDLs, with the following exceptions.

Chloride was detected at an estimated concentration, greater than the MDL and less than the RL, in the method blank associated with batch 17A0275. Since chloride was detected above the RL in the associated samples, no qualifications were applied to the data.
4.4 **Matrix Spike/Matrix Spike Duplicate**

MS/MSD pairs were reported for the wet chemistry data. Sample set specific MS/MSD pairs were reported for chloride, fluoride and sulfate using samples BBS-CCR-2 (1/26/17) and BBS-CCR-2 (4/13/17). The recoveries and RPD results were within the laboratory specified acceptance criteria, with the following exceptions.

The recoveries of chloride, fluoride and sulfate were high, outside laboratory specified acceptance criteria in the MS/MSD pair using sample BBS-CCR-2 (1/26/17) and the recoveries of sulfate were low and outside laboratory specified acceptance criteria in the MS/MSD pair using sample BBS-CCR-2 (4/13/17). Therefore the concentrations of chloride and fluoride in sample BBS-CCR-2 (1/26/17) were J+ qualified as estimated with a high bias. Since the concentrations of sulfate were more than four times the spike in samples BBS-CCR-2 (1/26/17) and BBS-CCR-2 (4/13/17), no qualifications were applied to the sulfate data.

<table>
<thead>
<tr>
<th>Client Sample ID</th>
<th>Compound</th>
<th>Laboratory Result (mg/L)</th>
<th>Laboratory Flag</th>
<th>Validation Result (mg/L)</th>
<th>Validation Qualifier</th>
<th>Reason Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>BBS-CCR-2 (1/26/17)</td>
<td>Chloride</td>
<td>115</td>
<td>J-, V</td>
<td>115</td>
<td>J+</td>
<td>4</td>
</tr>
<tr>
<td>BBS-CCR-2 (1/26/17)</td>
<td>Fluoride</td>
<td>0.248</td>
<td>J-</td>
<td>0.248</td>
<td>J+</td>
<td>4</td>
</tr>
</tbody>
</table>

mg/L-milligrams per liter  
J- laboratory flag indicating the reported value is estimated  
V-laboratory flag indication the analyte was detected in the method blank

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). LCSs were reported for each analysis as appropriate. The recovery results were within the laboratory specified acceptance criteria.

4.6 **Laboratory Duplicate**

Laboratory duplicates were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Two sample set specific laboratory duplicates were reported for total dissolved solids using samples BBS-CCR-1 (1/26/17) and BBS-CCR-1 (4/13/17). The RPD results were within the laboratory specified acceptance criteria.

4.7 **Field Duplicate**

Field duplicates were not reported with the sample sets.
4.8 **Sensitivity**

The samples were reported to the MDLs. The MDLs reported met the limits listed in Table 4 of the CCR Groundwater Monitoring Plan.

4.9 **Electronic Data Deliverables Review**

The results and sample IDs in the EDD 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 EDD.

* * * * *
DATA QUALIFIER DEFINITIONS

U  The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

J  The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

J+ The analyte was positively identified; however, the associated numerical value is likely to be higher than the concentration of the analyte in the sample due to positive bias of associated QC or calibration data or attributable to matrix interference.

J- The analyte was positively identified; however, the associated numerical value is likely to be lower than the concentration of the analyte in the sample due to negative bias of associated QC or calibration data or attributable to matrix interference.

UJ The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

R  The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.
ATTACHMENT 2  
DATA VALIDATION REASON CODES  
Assigned by Geosyntec’s Data Validation Team

<table>
<thead>
<tr>
<th>Valid Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Preservation requirement not met</td>
</tr>
<tr>
<td>2</td>
<td>Analysis holding time exceeded</td>
</tr>
<tr>
<td>3</td>
<td>Blank contamination (i.e., method, trip, equipment, etc.)</td>
</tr>
<tr>
<td>4</td>
<td>Matrix spike/matrix spike duplicate recovery or RPD outside limits</td>
</tr>
<tr>
<td>5</td>
<td>LCS or RPD recovery outside limits (LCS/LCSD)</td>
</tr>
<tr>
<td>6</td>
<td>Surrogate recovery outside limits</td>
</tr>
<tr>
<td>7</td>
<td>Field Duplicate RPD exceeded</td>
</tr>
<tr>
<td>8</td>
<td>Serial dilution percent difference exceeded</td>
</tr>
<tr>
<td>9</td>
<td>Calibration criteria not met</td>
</tr>
<tr>
<td>10</td>
<td>Linear range exceeded</td>
</tr>
<tr>
<td>11</td>
<td>Internal standard criteria not met</td>
</tr>
<tr>
<td>12</td>
<td>Lab duplicates RPD exceeded</td>
</tr>
<tr>
<td>13</td>
<td>Other</td>
</tr>
</tbody>
</table>
Date: 25 August 2017
To: Todd Kafka
From: Chris Pracheil
CC: J. Caprio
Subject: Stage 2A Data Validation – Level II Data Deliverable – Tampa Electric Laboratory Services #L17F009 and #L17G024, TestAmerica #660-81511-1 and #660-81885-1 and KNL Environmental Testing # L17F009 and # L17G024

SITE: Big Bend Power Station, Apollo Beach, Florida

INTRODUCTION

This report summarizes the findings of the Stage 2A data validation of 10 water samples, collected on June 28, 2017 and July 20, 2017 as part of the Big Bend Power Station coal combustion residuals (CCR) groundwater monitoring program plan. The lithium analyses were performed by TestAmerica Tampa, Tampa, Florida (TA). The radium analyses were performed by KNL Environmental Testing, Tampa, Florida (KNL). The rest of the analyses were performed by Tampa Electric Laboratory Services, Tampa, Florida (TELS). The samples were analyzed for the following:

- Metals by EPA Methods 200.7, 200.8 and 6010B
- Mercury by EPA Method 7470A
- Radium-226 by EPA Method 903.0
- Radium-228 by EPA Method Ra-05
- Chloride, Fluoride and Sulfate by EPA Method 300.0
- Total Dissolved Solids by Standard Method 2540C

EXECUTIVE SUMMARY

The samples were handled, prepared, and measured in the same manner under similar prescribed conditions.
Overall, 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 qualifications.

The inorganic data were reviewed based on the following: CCR Groundwater Monitoring Program Plan, Big Bend Power Station, Apollo Beach, Florida, September 2016 (GWMP), USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, January 2017 (OLEM 9355.0-135, EPA 540-R-2017-001), as well as by the pertinent methods referenced by the data package and professional and technical judgment.

The following samples were analyzed and validated at a Stage 2A level in the data set:

<table>
<thead>
<tr>
<th>Laboratory ID</th>
<th>Client ID</th>
<th>Laboratory ID</th>
<th>Client ID</th>
</tr>
</thead>
<tbody>
<tr>
<td>L17F009-01</td>
<td>BBS-CCR-1 (6/28/17)</td>
<td>L17G024-01</td>
<td>BBS-CCR-1 (7/20/17)</td>
</tr>
<tr>
<td>L17F009-03</td>
<td>BBS-CCR-3 (6/28/17)</td>
<td>L17G024-03</td>
<td>BBS-CCR-3 (7/20/17)</td>
</tr>
</tbody>
</table>

The samples were received at the laboratories at 1.3 °C, 2.0 °C, 2.4 °C and 3.4 °C within the criteria of 0-6 °C. No sample preservation or sample receipt issues were noted by the laboratories.

1.0 TOTAL METALS

The samples were analyzed for total metals per EPA Methods 200.7, 200.8 and 6010B.

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 the impact on data quality and usability.

✓ Overall Assessment
✓ Holding Times
⊗ Method Blank
✓ Matrix Spike/Matrix Spike Duplicate
✓ Laboratory Control Sample
✓ Serial Dilution
✓ Field Duplicate
✓ Sensitivity
1.1 **Overall Assessment**

The metals data reported in this package are considered usable for meeting project objectives. The results are considered valid; 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 analysis for the data set is 100%.

1.2 **Holding Times**

The holding time for the metals analysis of waters 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). Eight method blanks were reported (method 200.7 batches 359159 and 361570, method 200.8 batches 17F0201 and 17G0141 and method 6010B batches 17F0185, 17F0216, 17G0203 and 17G0232). Metals were not detected in the method blanks above the method detection limits (MDLs), with the following exceptions.

Molybdenum in the method blank associated with batch 17F0216 and beryllium and calcium in the method blank associated with batch 17G0203 were detected at estimated concentrations, greater than the MDLs and less than the reporting limits (RLs). Therefore, the estimated concentrations of molybdenum and beryllium in the associated samples were qualified as not detected at the RL. Since calcium was detected above the RL in the associated samples, no qualifications were applied to the calcium data.

<table>
<thead>
<tr>
<th>Client Sample ID</th>
<th>Compound</th>
<th>Laboratory Result (µg/L)</th>
<th>Laboratory Flag</th>
<th>Validation Result (µg/L)</th>
<th>Validation Qualifier*</th>
<th>Reason Code**</th>
</tr>
</thead>
<tbody>
<tr>
<td>BBS-CCR-3 (6/28/17)</td>
<td>Molybdenum</td>
<td>11.9</td>
<td>I,V</td>
<td>20.0</td>
<td>U</td>
<td>3</td>
</tr>
<tr>
<td>Client Sample ID</td>
<td>Compound</td>
<td>Laboratory Result (µg/L)</td>
<td>Laboratory Flag</td>
<td>Validation Result (µg/L)</td>
<td>Validation Qualifier*</td>
<td>Reason Code**</td>
</tr>
<tr>
<td>------------------------</td>
<td>-------------</td>
<td>--------------------------</td>
<td>-----------------</td>
<td>--------------------------</td>
<td>------------------------</td>
<td>---------------</td>
</tr>
<tr>
<td>BBS-CCR-2 (7/20/17)</td>
<td>Beryllium</td>
<td>0.423</td>
<td>I,V</td>
<td>2.00</td>
<td>U</td>
<td>3</td>
</tr>
<tr>
<td>BBS-CCR-3 (7/20/17)</td>
<td>Beryllium</td>
<td>0.356</td>
<td>I,V</td>
<td>2.00</td>
<td>U</td>
<td>3</td>
</tr>
<tr>
<td>BBS-CCR-BW2 (7/20/17)</td>
<td>Beryllium</td>
<td>0.220</td>
<td>I,V</td>
<td>2.00</td>
<td>U</td>
<td>3</td>
</tr>
</tbody>
</table>

µg/L—micrograms per liter
I—laboratory flag indicating the reported value is estimated, greater than MDL and less than RL
V—Analyte detected in the method blank
* Validation qualifiers are defined in Attachment 1 at the end of this report
**Reason codes are defined in Attachment 2 at the end of this report

1.4 **Matrix Spike/Matrix Spike Duplicate (MS/MSD)**

MS/MSDs were analyzed at the proper frequency for the number and types of samples analyzed (one pair per batch of 20 samples). Sample set specific MS/MSD pairs were reported for method 6010B using samples BBS-CCR-BW-2 (6/28/17), BBS-CCR-1 (7/20/17) and BBS-CCR-3 (7/20/17); for method 200.7 using sample BBS-CCR-1 (7/20/17); and for method 200.8 using samples BBS-CCR-1 (6/28/17) and BBS-CCR-1 (7/20/17). The recovery and relative percent difference (RPD) results were within the laboratory specified acceptance criteria, with the following exceptions.
The recovery of boron in the MSD using sample BBS-CCR-BW2 (6/28/17) was high, outside the laboratory specified acceptance criteria. Since the concentration of boron in sample BBS-CCR-BW2 (6/28/17) was greater than four times the spiked amount, no qualifications were applied to the boron data. Additionally, the laboratory narrative for report 660-81885-1 noted that the spiking compound was inadvertently omitted during the extraction process for the MS associated with batch 361570. Therefore, the MS recovery and RPD results for batch 361570 were not considered for this validation.

Batch MS/MSD pairs were also reported for Methods 200.7 and 6010B data. Since these are batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.

1.5 **Laboratory Control Sample (LCS)**

LCSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Eight LCSs were reported; two for method 200.7, two for method 200.8 and four for method 6010B. The recovery results were within the laboratory specified acceptance criteria.

1.6 **Serial Dilution**

Serial dilutions were not reported.

1.7 **Field Duplicate**

Field duplicates were not reported with the sample sets.

1.8 **Sensitivity**

The samples were reported to the MDLs. Elevated non-detect results were reported for samples BBS-CCR-1 (7/20/2017), BBS-CCR-3 (7/20/2017), BBS-CCR-BW1 (7/20/2017) and BBS-CCR-BW2 (7/20/2017) due to the dilutions analyzed. The MDLs met the limits listed in Table 4 of the CCR Groundwater Monitoring Plan.

1.9 **Electronic Data Deliverable (EDD) Review**

The results and sample identifications (IDs) in the EDD 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 EDD.
2.0 MERCURY

The samples were analyzed for mercury per 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 the impact on data quality and usability.

✓ Overall Assessment
✓ Holding Times
✓ Method Blank
✓ Matrix Spike/Matrix Spike Duplicate
✓ Laboratory Control Sample
✓ Field Duplicate
✓ Sensitivity
✓ Electronic Data Deliverable Review

2.1 Overall Assessment

The mercury data reported in this package are considered to be usable for meeting project objectives. The results are considered valid; 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 analysis for the data set is 100%.

2.2 Holding Times

The holding time for the mercury analysis of a water sample is 28 days from sample collection to analysis. The holding times were met for the sample analyses.

2.3 Method Blank

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Two method blanks were reported (batches 17G0011 and 17G0170). Mercury was not detected in the method blanks above the MDL.
2.4 **Matrix Spike/Matrix Spike Duplicate**

MS/MSD pairs 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, using samples BBS-CCR-3 (6/28/17) and BBS-CCR-BW1 (7/20/17), were reported. The recoveries and RPD results were within the laboratory specified acceptance criteria.

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). Two LCSs were reported. The recovery results were within the laboratory specified acceptance criteria.

2.6 **Field Duplicate**

Field duplicates were not reported with the sample sets.

2.7 **Sensitivity**

The samples were reported to the MDL. No elevated non-detect results were reported. The MDL for mercury met the limit listed in Table 4 of the CCR Groundwater Monitoring Plan.

2.8 **Electronic Data Deliverable Review**

The results and sample IDs in the EDD 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 EDD.

3.0 **RADIUM-226 AND RADIUM-228**

The samples were analyzed for radium 226 and radium 228 per EPA Methods 903.0 and RA-05, respectively.

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 the impact on data quality and usability.

✓ Overall Assessment
✓ Holding Times
3.1 **Overall Assessment**

The radium-226 and radium-228 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 analysis for the data set is 100%.

3.2 **Holding Times**

The holding times for radium-226 and radium-228 analysis of waters are 180 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). Six method blanks were reported (three for the radium-226 and three for the radium-228). The method blanks were within validation criteria with the following exceptions.

Radium-226 was detected at concentrations greater than 1.65 times the combined standard uncertainty (CSU) in batches L17F009 and L17G024. Since the detections of radium-226 and combined radium data (radium-226 + radium-228) were greater than 10 times the blank concentrations in the associated samples, no qualifications were applied to the data.

3.4 **Matrix Spike**

MSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Two sample set specific MSs, using samples BBS-CCR-BW1 (6/28/17) and BBS-CCR-1 (7/20/17) for radium-228 and three sample set specific MSs, using samples BBS-CCR-2 (6/28/17), BBS-CCR-2 (7/20/17) and BBS-CCR-BW1 (7/2-/2017) were reported for the radium-226 data. The recovery results were within the laboratory specified acceptance criteria.
Batch MSs were also reported for the radium-226 and radium-228 data. Since these are 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). Three LCSs were reported for radium-226 and three for radium-228. The recovery results were within the laboratory specified acceptance criteria.

### 3.6 Laboratory Duplicate

Laboratory duplicates were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Two sample set specific laboratory duplicates, using samples BBS-CCR-BW1 (6/28/17) and BBS-CCR-1 (7/20/17) for radium-228 and three sample set specific laboratory duplicate using sample BBS-CCR-2 (6/28/17), BBS-CCR-2 (7/20/17) and BBS-CCR-BW1 (7/2/2017) were reported for the radium-226 data.

Batch laboratory duplicates were also reported for the radium-226 and radium-228 data. Since these are batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.

### 3.7 Sensitivity

The samples were reported to the minimum detectable concentrations (MDCs). The reported MDCs met the limits listed in Table 4 of the CCR Groundwater Monitoring Plan.

### 3.8 Electronic Data Deliverable Review

The results and sample IDs in the EDD 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 EDD.

### 4.0 WET CHEMISTRY PARAMETERS

The samples were analyzed for chloride, fluoride and sulfate by EPA Method 300.0 and total dissolved solids 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
✓ Laboratory Duplicate
✓ Field Duplicate
✓ Sensitivity
✓ Electronic Data Deliverables Review

4.1 Overall Assessment

The wet chemistry data reported in this package are considered usable for meeting project objectives. The results are considered to be 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 analysis, for the data set 100%.

4.1.1 Assessment Anomalies

The case narratives for laboratory report L17G024 noted that a constant weight could not be achieved after three consecutive weighing and drying cycles for the total dissolved solids analysis of sample BBS-CCR-BW-1 (7/20/17). Therefore, the concentration of total dissolved solids in this sample was J qualified as estimated.

<table>
<thead>
<tr>
<th>Client Sample ID</th>
<th>Compound</th>
<th>Laboratory Result (mg/L)</th>
<th>Laboratory Flag</th>
<th>Validation Result (mg/L)</th>
<th>Validation Qualifier</th>
<th>Reason Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>BBS-CCR-BW-1 (7/20/17)</td>
<td>Total Dissolved Solids</td>
<td>4160</td>
<td>J</td>
<td>4160</td>
<td>J</td>
<td>13</td>
</tr>
</tbody>
</table>

mg/L-milligrams per liter
J-laboratory flag indicating the reported value is an estimated value

4.2 Holding Times

The holding times for chloride, fluoride and sulfate by EPA method 300.0 are 28 days from sample collection to analysis and the holding time for total dissolved solids by SM 2540C is 7 days from...
sample collection to analysis. The holding times were met for the sample analyses, with the following exception.

The laboratory narrative for report L17G024 stated that the initial total dissolved solids result for sample BBS-CCR-1 (7/20/17) was below the expected result and the sample was reanalyzed outside of the method holding time. The reanalyzed total dissolved solids result was within the expected range and was reported. Since the reported total dissolved solids result for sample BBS-CCR-1 (7/20/17) was analyzed outside holding time the result was J qualified as estimated.

<table>
<thead>
<tr>
<th>Client Sample ID</th>
<th>Compound</th>
<th>Laboratory Result (mg/L)</th>
<th>Laboratory Flag</th>
<th>Validation Result (mg/L)</th>
<th>Validation Qualifier</th>
<th>Reason Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>BBS-CCR-1 (7/20/17)</td>
<td>Total Dissolved Solids</td>
<td>3400</td>
<td>Q</td>
<td>3400</td>
<td>J</td>
<td>2</td>
</tr>
</tbody>
</table>

mg/L—milligrams per liter
Q-sample held beyond the method holding time

### 4.3 Method Blanks

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Method blanks were reported for each analysis as appropriate. The wet chemistry parameters were not detected in the method blanks above the MDLs, with the following exceptions.

Chloride and fluoride were detected above the RL, in the method blank associated with batch 17H0125. Therefore, the concentrations of fluoride in the associated samples that were less than ten times the blank concentration were J+ qualified as estimated with a high bias. Since the concentrations of chloride in the associated samples were more than ten times the blank concentration, no qualifications were applied to the data.

<table>
<thead>
<tr>
<th>Client Sample ID</th>
<th>Compound</th>
<th>Laboratory Result (mg/L)</th>
<th>Laboratory Flag</th>
<th>Validation Result (mg/L)</th>
<th>Validation Qualifier</th>
<th>Reason Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>BBS-CCR-1 (7/20/17)</td>
<td>Fluoride</td>
<td>0.157</td>
<td>J, V</td>
<td>0.157</td>
<td>J</td>
<td>3</td>
</tr>
<tr>
<td>BBS-CCR-2 (7/20/17)</td>
<td>Fluoride</td>
<td>0.166</td>
<td>J, V</td>
<td>0.166</td>
<td>J</td>
<td>3</td>
</tr>
<tr>
<td>BBS-CCR-3 (7/20/17)</td>
<td>Fluoride</td>
<td>0.230</td>
<td>J, V</td>
<td>0.230</td>
<td>J</td>
<td>3</td>
</tr>
<tr>
<td>BBS-CCR-BW1 (7/20/17)</td>
<td>Fluoride</td>
<td>0.255</td>
<td>J, V</td>
<td>0.255</td>
<td>J</td>
<td>3</td>
</tr>
<tr>
<td>BBS-CCR-BW1 (7/20/17)</td>
<td>Fluoride</td>
<td>0.319</td>
<td>J, V</td>
<td>0.319</td>
<td>J</td>
<td>3</td>
</tr>
</tbody>
</table>

mg/L—milligrams per liter
J—laboratory flag indicating the reported value is an estimated value
V—analyte detected in the method blank
4.4 **Matrix Spike/Matrix Spike Duplicate**

MS/MSD pairs were reported for the wet chemistry data. Sample set specific MS/MSD pairs were reported for chloride, fluoride and sulfate using sample BBS-CCR-2 (6/28/17). The recoveries and RPD results were within the laboratory specified acceptance criteria, with the following exceptions.

The recoveries of sulfate were high, outside laboratory specified acceptance criteria in the MS/MSD pair using sample BBS-CCR-2 (6/28/17). Since the concentration of sulfate in sample BBS-CCR-2 (6/28/17) was more than four times the spike amount, no qualifications were applied to the sulfate data.

Batch MS/MSD pairs were also reported for the chloride, fluoride and sulfate data. Since these are batch QC, the results do not affect the samples in this data set and qualifications were not applied to 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). LCSs were reported for each analysis as appropriate. The recovery results were within the laboratory specified acceptance criteria.

4.6 **Laboratory Duplicate**

Laboratory duplicates were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). One sample set specific laboratory duplicate was reported for total dissolved solids using sample BBS-CCR-1 (6/28/17). The RPD results were within the laboratory specified acceptance criteria.

4.7 **Field Duplicate**

Field duplicates were not reported with the sample sets.

4.8 **Sensitivity**

The samples were reported to the MDLs. The MDLs reported met the limits listed in Table 4 of the CCR Groundwater Monitoring Plan.

4.9 **Electronic Data Deliverables Review**
The results and sample IDs in the EDD 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 EDD.

* * * * *

* * * * *
ATTACHMENT 1
DATA VALIDATION QUALIFIER DEFINITIONS
AND INTERPRETATION KEY
Assigned by Geosyntec’s Data Validation Team

DATA QUALIFIER DEFINITIONS

U   The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

J   The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

J+  The analyte was positively identified; however, the associated numerical value is likely to be higher than the concentration of the analyte in the sample due to positive bias of associated QC or calibration data or attributable to matrix interference.

J-  The analyte was positively identified; however, the associated numerical value is likely to be lower than the concentration of the analyte in the sample due to negative bias of associated QC or calibration data or attributable to matrix interference.

UJ  The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

R   The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.
### ATTACHMENT 2
### DATA VALIDATION REASON CODES
Assigned by Geosyntec’s Data Validation Team

<table>
<thead>
<tr>
<th>Valid Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Preservation requirement not met</td>
</tr>
<tr>
<td>2</td>
<td>Analysis holding time exceeded</td>
</tr>
<tr>
<td>3</td>
<td>Blank contamination (i.e., method, trip, equipment, etc.)</td>
</tr>
<tr>
<td>4</td>
<td>Matrix spike/matrix spike duplicate recovery or RPD outside limits</td>
</tr>
<tr>
<td>5</td>
<td>LCS or RPD recovery outside limits (LCS/LCSD)</td>
</tr>
<tr>
<td>6</td>
<td>Surrogate recovery outside limits</td>
</tr>
<tr>
<td>7</td>
<td>Field Duplicate RPD exceeded</td>
</tr>
<tr>
<td>8</td>
<td>Serial dilution percent difference exceeded</td>
</tr>
<tr>
<td>9</td>
<td>Calibration criteria not met</td>
</tr>
<tr>
<td>10</td>
<td>Linear range exceeded</td>
</tr>
<tr>
<td>11</td>
<td>Internal standard criteria not met</td>
</tr>
<tr>
<td>12</td>
<td>Lab duplicates RPD exceeded</td>
</tr>
<tr>
<td>13</td>
<td>Other</td>
</tr>
</tbody>
</table>
DATE: 30 November 2017

TO: Todd Kafka

FROM: Chris Pracheil

CC: J. Caprio

SUBJECT: Stage 2A Data Validation – Level II Data Deliverable – Tampa Electric Laboratory Services #L17H005 and L17J115, TestAmerica #660-82456-1 and #660-83441-1 and KNL Environmental Testing #L17H005 and L17J115

SITE: Big Bend Power Station, Apollo Beach, Florida

INTRODUCTION

This report summarizes the findings of the Stage 2A data validation of 10 water samples, collected on August 16, 2017 and October 13, 2017 as part of the Big Bend Power Station coal combustion residuals (CCR) groundwater monitoring program plan. The lithium analyses were performed by TestAmerica Tampa, Tampa, Florida (TA). The radium analyses were performed by KNL Environmental Testing, Tampa, Florida (KNL). The rest of the analyses were performed by Tampa Electric Laboratory Services, Tampa, Florida (TELS). The samples were analyzed for the following:

- Metals by EPA Methods 200.7, 200.8 and 6010B
- Mercury by EPA Method 7470A
- Radium-226 by EPA Method 903.0
- Radium-228 by EPA Method Ra-05
- Chloride, Fluoride and Sulfate by EPA Method 300.0
- Total Dissolved Solids by Standard Method 2540C

EXECUTIVE SUMMARY

The samples were handled, prepared, and measured in the same manner under similar prescribed conditions.
Overall, 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 qualifications.

The inorganic data were reviewed based on the following: CCR Groundwater Monitoring Program Plan, Big Bend Power Station, Apollo Beach, Florida, September 2016 (GWMP), USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, January 2017 (OLEM 9355.0-135, EPA 540-R-2017-001), as well as by the pertinent methods referenced by the data package and professional and technical judgment.

The following samples were analyzed and validated at a Stage 2A level in the data set:

<table>
<thead>
<tr>
<th>Laboratory ID</th>
<th>Client ID</th>
<th>Client ID</th>
</tr>
</thead>
<tbody>
<tr>
<td>L17H005-01</td>
<td>BBS-CCR-1 (8/16/17)</td>
<td>L17H005-01</td>
</tr>
<tr>
<td>L17H005-02</td>
<td>BBS-CCR-2 (8/16/17)</td>
<td>L17H005-02</td>
</tr>
<tr>
<td>L17H005-03</td>
<td>BBS-CCR-3 (8/16/17)</td>
<td>L17H005-03</td>
</tr>
<tr>
<td>L17H005-04</td>
<td>BBS-CCR-BW-1 (8/16/17)</td>
<td>L17H005-04</td>
</tr>
<tr>
<td>L17H005-05</td>
<td>BBS-CCR-BW-2 (8/16/17)</td>
<td>L17H005-05</td>
</tr>
</tbody>
</table>

The samples were received at the laboratories at 1.6°C and 2.6°C within the criteria of 0-6°C. No sample preservation or sample receipt issues were noted by the laboratories.

1.0 TOTAL METALS

The samples were analyzed for total metals per EPA Methods 200.7, 200.8 and 6010B.

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 the impact on data quality and usability.

✓ Overall Assessment
✓ Holding Times
⊗ Method Blank
✓ Matrix Spike/Matrix Spike Duplicate
✓ Laboratory Control Sample
✓ Serial Dilution
✓ Field Duplicate
✓ Sensitivity
Electronic Data Deliverable Review

1.1 Overall Assessment

The metals data reported in this package are considered usable for meeting project objectives. The results are considered valid; 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 analysis for the data set is 100%.

1.2 Holding Times

The holding time for the metals analysis of waters 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). Six method blanks were reported (method 200.7 batches 365468 and 372467, method 200.8 batches 17H0157 and 17J0116 and method 6010B batches 17H0161 and 17J0144). Metals were not detected in the method blanks above the method detection limits (MDLs), with the following exceptions.

Lithium was detected at an estimated concentration, greater than the MDL and less than the reporting limits (RL) in the method blanks associated with batches 365468 and 372467. Therefore, the estimated concentrations of lithium in the associated samples were U qualified as not detected at the RL.

<table>
<thead>
<tr>
<th>Client Sample ID</th>
<th>Compound</th>
<th>Laboratory Result (µg/L)</th>
<th>Laboratory Flag</th>
<th>Validation Result (µg/L)</th>
<th>Validation Qualifier*</th>
<th>Reason Code**</th>
</tr>
</thead>
<tbody>
<tr>
<td>BBS-CCR-1 (8/16/17)</td>
<td>Lithium</td>
<td>0.013</td>
<td>I</td>
<td>0.050</td>
<td>U</td>
<td>3</td>
</tr>
<tr>
<td>BBS-CCR-2 (8/16/17)</td>
<td>Lithium</td>
<td>0.016</td>
<td>I</td>
<td>0.050</td>
<td>U</td>
<td>3</td>
</tr>
<tr>
<td>BBS-CCR-3 (8/16/17)</td>
<td>Lithium</td>
<td>0.011</td>
<td>I</td>
<td>0.050</td>
<td>U</td>
<td>3</td>
</tr>
<tr>
<td>BBS-CCR-BW-1 (8/16/17)</td>
<td>Lithium</td>
<td>0.017</td>
<td>I</td>
<td>0.050</td>
<td>U</td>
<td>3</td>
</tr>
<tr>
<td>BBS-CCR-BW-2 (8/16/17)</td>
<td>Lithium</td>
<td>0.0062</td>
<td>I,V</td>
<td>0.050</td>
<td>U</td>
<td>3</td>
</tr>
<tr>
<td>BBS-CCR-1 (10/13/17)</td>
<td>Lithium</td>
<td>0.015</td>
<td>I,V</td>
<td>0.050</td>
<td>U</td>
<td>3</td>
</tr>
<tr>
<td>BBS-CCR-2 (10/13/17)</td>
<td>Lithium</td>
<td>0.016</td>
<td>I,V</td>
<td>0.050</td>
<td>U</td>
<td>3</td>
</tr>
<tr>
<td>BBS-CCR-3 (10/13/17)</td>
<td>Lithium</td>
<td>0.011</td>
<td>I,V</td>
<td>0.050</td>
<td>U</td>
<td>3</td>
</tr>
<tr>
<td>BBS-CCR-BW-1 (10/13/17)</td>
<td>Lithium</td>
<td>0.017</td>
<td>I,V</td>
<td>0.050</td>
<td>U</td>
<td>3</td>
</tr>
<tr>
<td>BBS-CCR-BW-2 (10/13/17)</td>
<td>Lithium</td>
<td>0.0082</td>
<td>I,V</td>
<td>0.050</td>
<td>U</td>
<td>3</td>
</tr>
</tbody>
</table>
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 pair per batch of 20 samples). Sample set specific MS/MSD pairs were reported for method 6010B using sample BBS-CCR-BW-1 (8/16/17); for method 200.7 using samples BBS-CCR-1 (8/16/17) and BBS-CCR-1 (10/13/17); and for method 200.8 using samples BBS-CCR-1 (8/16/17) and BBS-CCR-1 (10/13/17). The recovery and relative percent difference (RPD) results were within the laboratory specified acceptance criteria, with the following exceptions.

The recoveries of boron and calcium in the MS/MSD pair using sample BBS-CCR-BW-1 (8/16/17) were high, outside the laboratory specified acceptance criteria. Since the concentration of boron in sample BBS-CCR-BW-1 (8/16/17) was greater than four times the spiked amount, no qualification was applied to the boron data.

Batch MS/MSD pairs were also reported for Methods 200.8 and 6010B data. Since these are batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.

1.5 Laboratory Control Sample (LCS)

LCSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Six LCSs were reported; two for method 200.7, two for method 200.8 and two for method 6010B. The recovery results were within the laboratory specified acceptance criteria.

1.6 Serial Dilution

Serial dilutions were not reported.

1.7 Field Duplicate

Field duplicates were not reported with the sample sets.
1.8 Sensitivity

The samples were reported to the MDLs. Elevated non-detect results were reported for sample BBS-CCR-2 (8/16/17) due to the dilutions analyzed. The MDLs met the limits listed in Table 4 of the CCR Groundwater Monitoring Plan.

1.9 Electronic Data Deliverable (EDD) Review

The results and sample identifications (IDs) in the EDD 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 EDD.

2.0 MERCURY

The samples were analyzed for mercury per 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 the impact on data quality and usability.

✓ Overall Assessment
✓ Holding Times
✓ Method Blank
✓ Matrix Spike/Matrix Spike Duplicate
✓ Laboratory Control Sample
✓ Field Duplicate
✓ Sensitivity
✓ Electronic Data Deliverable Review

2.1 Overall Assessment

The mercury data reported in this package are considered usable for meeting project objectives. The results are considered valid; 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 analysis for the data set is 100%.
2.2 **Holding Times**

The holding time for the mercury analysis of a water sample is 28 days from sample collection to analysis. The holding times were met for the sample analyses.

2.3 **Method Blank**

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Two method blanks were reported (batches 17H0163 and 17J0184). Mercury was not detected in the method blanks above the MDL.

2.4 **Matrix Spike/Matrix Spike Duplicate**

MS/MSD pairs 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, using samples BBS-CCR-BW-2 (8/16/17) and BBS-CCR-2 (10/13/17), were reported. The recoveries and RPD results were within the laboratory specified acceptance criteria.

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). Two LCSs were reported. The recovery results were within the laboratory specified acceptance criteria.

2.6 **Field Duplicate**

Field duplicates were not reported with the sample sets.

2.7 **Sensitivity**

The samples were reported to the MDL. No elevated non-detect results were reported. The MDL for mercury met the limit listed in Table 4 of the CCR Groundwater Monitoring Plan.

2.8 **Electronic Data Deliverable Review**

The results and sample IDs in the EDD 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 EDD.
3.0 RADIUM-226 AND RADIUM-228

The samples were analyzed for radium 226 and radium 228 per EPA Methods 903.0 and RA-05, respectively.

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 the impact on data quality and usability.

✓ Overall Assessment
✓ Holding Times
✓ Method Blank
✓ Matrix Spike
✓ Laboratory Control Sample
✓ Laboratory Duplicate
✓ Sensitivity
✓ Electronic Data Deliverable Review

3.1 Overall Assessment

The radium-226 and radium-228 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 analysis for the data set is 100%.

3.2 Holding Times

The holding times for radium-226 and radium-228 analysis of waters are 180 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). Four method blanks were reported (two for the radium-226 and two for the radium-228). The method blanks were within validation criteria with the following exceptions.
Radium-226 was detected at concentrations greater than 1.65 times the combined standard uncertainty (CSU) in batch L17J115. Since the detections of radium-226 and combined radium data (radium-226 + radium-228) were greater than 10 times the blank concentrations in the associated samples, no qualifications were applied to the data.

3.4 **Matrix Spike**

MSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Two sample set specific MSs, using samples BBS-CCR-BW1 (8/16/17) and BBS-CCR-1 (10/13/17) were reported for radium-228 and two sample set specific MSs, using samples BBS-CCR-2 (8/16/17) and BBS-CCR-BW2 (10/13/2017) were reported for the radium-226 data. The recovery results were within the laboratory specified acceptance criteria.

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). Two LCSs were reported for radium-226 and two for radium-228. The recovery results were within the laboratory specified acceptance criteria.

3.6 **Laboratory Duplicate**

Laboratory duplicates were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Two sample set specific laboratory duplicates, using samples BBS-CCR-BW1 (8/16/17) and BBS-CCR-1 (10/13/17) were reported for radium-228 and two sample set specific laboratory duplicates using samples BBS-CCR-2 (8/16/17) and BBS-CCR-BW2 (10/13/2017) were reported for the radium-226 data. The RPD results for the laboratory duplicates were within the laboratory acceptance criteria.

3.7 **Sensitivity**

The samples were reported to the minimum detectable concentrations (MDCs). The reported MDCs met the limits listed in Table 4 of the CCR Groundwater Monitoring Plan.

3.8 **Electronic Data Deliverable Review**

The results and sample IDs in the EDD 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 EDD.
4.0  WET CHEMISTRY PARAMETERS

The samples were analyzed for chloride, fluoride and sulfate by EPA Method 300.0 and total dissolved solids 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
✔ Laboratory Duplicate
✔ Field Duplicate
✔ Sensitivity
✔ Electronic Data Deliverables Review

4.1  Overall Assessment

The wet chemistry data reported in this package are considered usable for meeting project objectives. The results are considered to be 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 analysis, for the data set 100%.

4.1.1  Analytical Anomalies

The case narratives for laboratory report L17H005 noted that a constant weight could not be achieved after three consecutive weighing and drying cycles for the total dissolved solids analysis of samples BBS-CCR-1 (8/16/17) and BBS-CCR-BW-2 (8/16/17). Therefore, the concentrations of total dissolved solids in these samples were J qualified as estimated.
Big Bend Power Plant, CCR Data Validation
30 November 2017
Page 10

<table>
<thead>
<tr>
<th>Client Sample ID</th>
<th>Compound</th>
<th>Laboratory Result (mg/L)</th>
<th>Laboratory Flag</th>
<th>Validation Result (mg/L)</th>
<th>Validation Qualifier</th>
<th>Reason Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>BBS-CCR-1 (8/16/17)</td>
<td>Total Dissolved Solids</td>
<td>2960</td>
<td>J</td>
<td>2960</td>
<td>J</td>
<td>13</td>
</tr>
<tr>
<td>BBS-CCR-BW-2 (8/16/17)</td>
<td>Total Dissolved Solids</td>
<td>1180</td>
<td>J</td>
<td>1180</td>
<td>J</td>
<td>13</td>
</tr>
</tbody>
</table>

mg/L—milligrams per liter
J—laboratory flag indicating the reported value is an estimated value

4.2 **Holding Times**

The holding times for chloride, fluoride and sulfate by EPA method 300.0 are 28 days from sample collection to analysis and the holding time for total dissolved solids by SM 2540C is 7 days from sample collection to analysis. The holding times were met for the sample analyses.

4.3 **Method Blanks**

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Method blanks were reported for each analysis as appropriate. The wet chemistry parameters were not detected in the method blanks above the MDLs.

4.4 **Matrix Spike/Matrix Spike Duplicate**

MS/MSD pairs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Batch MS/MSD pairs were reported for the chloride, fluoride and sulfate data. Since these are batch QC, the results do not affect the samples in this data set and qualifications were not applied to 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). LCSs were reported for each analysis as appropriate. The recovery results were within the laboratory specified acceptance criteria.

4.6 **Laboratory Duplicate**

Laboratory duplicates were reported for the total dissolved solids data. One sample set specific laboratory duplicate was reported for total dissolved solids using sample BBS-CCR-1 (8/16/17). The RPD results were within the laboratory specified acceptance criteria.
Batch laboratory duplicates were also reported for the total dissolved solids data. Since these are batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.

4.7 **Field Duplicate**

Field duplicates were not reported with the sample sets.

4.8 **Sensitivity**

The samples were reported to the MDLs. The MDLs reported met the limits listed in Table 4 of the CCR Groundwater Monitoring Plan.

4.9 **Electronic Data Deliverables Review**

The results and sample IDs in the EDD 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 EDD.

* * * * *
ATTACHMENT 1
DATA VALIDATION QUALIFIER DEFINITIONS
AND INTERPRETATION KEY
Assigned by Geosyntec’s Data Validation Team

DATA QUALIFIER DEFINITIONS

U  The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

J  The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

J+ The analyte was positively identified; however, the associated numerical value is likely to be higher than the concentration of the analyte in the sample due to positive bias of associated QC or calibration data or attributable to matrix interference.

J- The analyte was positively identified; however, the associated numerical value is likely to be lower than the concentration of the analyte in the sample due to negative bias of associated QC or calibration data or attributable to matrix interference.

UJ The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

R  The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.
ATTACHMENT 2
DATA VALIDATION REASON CODES
Assigned by Geosyntec’s Data Validation Team

<table>
<thead>
<tr>
<th>Valid Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Preservation requirement not met</td>
</tr>
<tr>
<td>2</td>
<td>Analysis holding time exceeded</td>
</tr>
<tr>
<td>3</td>
<td>Blank contamination (i.e., method, trip, equipment, etc.)</td>
</tr>
<tr>
<td>4</td>
<td>Matrix spike/matrix spike duplicate recovery or RPD outside limits</td>
</tr>
<tr>
<td>5</td>
<td>LCS or RPD recovery outside limits (LCS/LCSD)</td>
</tr>
<tr>
<td>6</td>
<td>Surrogate recovery outside limits</td>
</tr>
<tr>
<td>7</td>
<td>Field Duplicate RPD exceeded</td>
</tr>
<tr>
<td>8</td>
<td>Serial dilution percent difference exceeded</td>
</tr>
<tr>
<td>9</td>
<td>Calibration criteria not met</td>
</tr>
<tr>
<td>10</td>
<td>Linear range exceeded</td>
</tr>
<tr>
<td>11</td>
<td>Internal standard criteria not met</td>
</tr>
<tr>
<td>12</td>
<td>Lab duplicates RPD exceeded</td>
</tr>
<tr>
<td>13</td>
<td>Other</td>
</tr>
</tbody>
</table>