

# Gainesville Regional Utilities Deerhaven Generating Station

## Coal Combustion Residuals Units 2018 Annual Groundwater Monitoring and Corrective Action Report



**Prepared for:**

Gainesville Regional Utilities  
Gainesville, Florida



**Prepared by:**

Innovative Waste Consulting Services, LLC  
Gainesville, Florida



29 January 2019

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**TABLE OF CONTENTS**

**1.0 Introduction .....5**

**2.0 Well Installation and/or Decommissioning.....5**

**3.0 Key Actions Completed.....6**

**4.0 Summary of Statistical Analysis Results .....8**

    4.1 Appendix III Parameters..... 8

    4.2 Appendix IV Parameters..... 8

**5.0 Groundwater Monitoring Program Status of CCR Units .....12**

**6.0 Upcoming Activities.....12**

**7.0 Rate and Direction of Groundwater Flow .....12**

**8.0 References .....14**

**9.0 Professional Engineer Certification .....15**

**LIST OF TABLES**

Table 2-1. Summary of Well IDs, Coordinates and Upgradient/Downgradient Designation for Each CCR Unit ..... 6

Table 3-1. Sampling Dates and Total Samples Collected from Each CCR Unit Groundwater Monitoring Well ..... 7

Table 4-1. Appendix III Parameters Observed at the Surface Impoundment System Wells. .... 8

Table 4-2. Appendix III Parameters Observed at the Landfill Wells. .... 8

Table 4-3. Appendix IV Parameters Statistical Analysis Results at Surface Impoundment System Wells..... 10

Table 4-4. Appendix IV Parameters with an SSI Observed at Landfill Wells..... 11

## **ATTACHMENTS**

- Attachment A. Background Sampling Laboratory Analysis Reports
- Attachment B. Background Sampling Field and Calibration Logs
- Attachment C. Potentiometric Contours and Site-Wide Groundwater Flow Direction, January and July, 2018
- Attachment D. Alternative Source Demonstration for Lithium and Molybdenum for the CCR Landfill.

## List of Abbreviations

|      |                                      |
|------|--------------------------------------|
| AMP  | Assessment Monitoring Program        |
| CCR  | Coal Combustion Residuals            |
| GWPS | Groundwater Protection Standard      |
| GRU  | Gainesville Regional Utilities       |
| IWCS | Innovative Waste Consulting Services |
| SSI  | Statistically Significant Increase   |

## **1.0 Introduction**

The Deerhaven Generating Station (site) has two coal combustion residuals (CCR) units: a surface impoundment system and a landfill. The surface impoundment system is comprised of two ash ponds (i.e., Ash Cell #1, Ash Cell #2) located within the same slurry wall containment system. These ponds receive cooling tower blowdown and bottom ash sluice water from the site's coal-fired combustion unit (i.e., Unit #2) through a piping network which allows discharge to either pond. The CCR landfill primarily accepts flue gas desulfurization byproduct from the Unit #2 scrubbing process. The landfill also accepts the bottom ash that is periodically (i.e., approximately every 5 years) excavated from the surface impoundment system and lime sludge that is periodically dredged from front-end treatment sludge ponds. Occasionally, fly ash is also deposited in the landfill when it is not hauled offsite for beneficial use.

The management of CCR is regulated by Title 40 of the Code of Federal Regulations, Part 257, Subpart D – Standards for the Disposal of Coal Combustion Residuals in Landfills and Surface Impoundments. These regulations include specific requirements for groundwater monitoring of CCR units. Specific details on the required content of this annual groundwater monitoring and corrective action report are enumerated in §257.90(e). As of January 10, 2018, the facility entered into an Assessment Monitoring Program (AMP) due to detection of Appendix III parameters at concentrations above the respective background levels as discussed in the previous report.

## **2.0 Well Installation and Decommissioning**

No new wells have been added or decommissioned in 2018. The installation of 8 groundwater monitoring wells (i.e., 1 upgradient and 3 downgradient wells for each CCR unit) was completed on 7 March 2017 (UES 2017). These wells are used to supplement existing wells to develop an independent groundwater monitoring network for each CCR unit. Table 3-1 below provides a summary of each well's ID, coordinates, and whether the well is considered upgradient (denoted with a "U") or downgradient (denoted with a "D") from its respective CCR unit. Please note that the coordinates are referenced to the North American Datum of 1983, Florida North 0903.

**Table 2-1. Summary of Well IDs, Coordinates and Upgradient/Downgradient Designation for Each CCR Unit**

| <b>CCR Surface Impoundment System</b> |                 |                |            |
|---------------------------------------|-----------------|----------------|------------|
| <b>Well ID</b>                        | <b>Northing</b> | <b>Easting</b> | <b>U/D</b> |
| SIS-1                                 | 285,024         | 2,637,081      | U          |
| R6T4                                  | 285,074         | 2,636,502      | U          |
| R4T5                                  | 284,200         | 2,637,137      | D          |
| SIS-2                                 | 284,334         | 2,637,307      | D          |
| SIS-3                                 | 284,141         | 2,636,920      | D          |
| SIS-4                                 | 284,335         | 2,636,709      | D          |
| <b>CCR Landfill</b>                   |                 |                |            |
| <b>Well ID</b>                        | <b>Northing</b> | <b>Easting</b> | <b>U/D</b> |
| LF-1                                  | 284,852         | 2,635,464      | U          |
| LF-2                                  | 284,004         | 2,635,874      | D          |
| LF-3                                  | 284,002         | 2,635,482      | D          |
| LF-4                                  | 284,004         | 2,634,884      | D          |

### **3.0 Key Actions Completed**

The following key actions associated with groundwater monitoring of the CCR units have been completed since the initiation of the AMP in January 2018:

- Initial sampling of Appendix III and Appendix IV parameters under the AMP. To establish statistical confidence for prediction limits for Appendix IV parameters, 4 sampling events were conducted from January through April 2018. An additional 5<sup>th</sup> sampling event was conducted in July 2018 as a 90-day follow up to the initial sampling. A table summarizing the number of samples collected from each well, the date each sample was collected over the period covered by this report, and the period used to establish Appendix III prediction limits are included in Table 3-1 below. It should be noted that historical groundwater monitoring data are incorporated into the dataset for wells R6T4 and R4T5.
- Development of groundwater protection standards (GWPS) for Appendix IV parameters
- Statistical analysis of the downgradient measurements of Appendix IV parameters for each CCR unit for the initial AMP sampling events as well as the 90-day follow-up sampling event. A summary of this analysis is presented in the next section.
- Soil sampling and testing for alternative source demonstration for lithium and molybdenum exceedances at the CCR landfill as described in Attachment D.

**Table 3-1. Sampling Dates and Total Samples Collected from Each CCR Unit Groundwater Monitoring Well**

| Date                           | Surface Impoundment System |           |           |           |           |           | Landfill  |           |           |           |
|--------------------------------|----------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
|                                | SIS-1                      | R6T4      | R4T5      | SIS-2     | SIS-3     | SIS-4     | LF-1      | LF-2      | LF-3      | LF-4      |
| 10/7/2015                      |                            | X         | X         |           |           |           |           |           |           |           |
| 1/25/2016                      |                            | X         | X         |           |           |           |           |           |           |           |
| 4/4/2016                       |                            | X         | X         |           |           |           |           |           |           |           |
| 7/27/2016                      |                            | X         |           |           |           |           |           |           |           |           |
| 7/28/2016                      |                            |           | X         |           |           |           |           |           |           |           |
| 10/18/2016                     |                            | X         |           |           |           |           |           |           |           |           |
| 10/20/2016                     |                            |           | X         |           |           |           |           |           |           |           |
| 11/28/2016                     |                            |           | X         |           |           |           |           |           |           |           |
| 1/9/2017                       |                            | X         | X         |           |           |           |           |           |           |           |
| 4/2/2017                       |                            | X         |           |           |           |           |           |           |           |           |
| 4/5/2017                       |                            |           | X         |           |           |           |           |           |           |           |
| 4/17/2017                      | X                          |           |           |           | X         | X         | X         |           |           |           |
| 4/18/2017                      |                            |           |           | X         |           |           |           | X         | X         | X         |
| 5/15/2017                      | X                          |           |           | X         |           |           | X         | X         | X         |           |
| 5/16/2017                      |                            |           |           |           | X         | X         |           |           |           | X         |
| 5/30/2017                      | X                          |           |           |           |           | X         | X         | X         | X         | X         |
| 5/31/2017                      |                            |           |           | X         | X         |           |           |           |           |           |
| 6/19/2017                      | X                          |           |           | X         | X         | X         | X         |           |           |           |
| 6/20/2017                      |                            |           |           |           |           |           |           | X         | X         | X         |
| 7/9/2017                       | X                          | X         |           |           |           |           | X         |           |           |           |
| 7/10/2017                      |                            |           | X         |           |           |           |           |           |           |           |
| 7/11/2017                      |                            |           |           | X         | X         | X         |           | X         | X         | X         |
| 7/31/2017                      | X                          |           |           | X         | X         | X         | X         | X         | X         | X         |
| 8/21/2017                      | X                          |           |           |           | X         | X         | X         |           |           |           |
| 8/22/2017                      |                            |           |           | X         |           |           |           | X         | X         | X         |
| 9/18/2017                      | X                          |           |           |           |           |           | X         |           | X         | X         |
| 9/19/2017                      |                            |           |           | X         | X         | X         |           | X         |           |           |
| 1/23/2018                      | X                          | X         |           |           |           |           | X         |           |           |           |
| 1/24/2018                      |                            |           | X         | X         | X         | X         |           |           |           | X         |
| 1/25/2018                      |                            |           |           |           |           |           |           | X         | X         |           |
| 2/14/2018                      | X                          | X         | X         |           | X         |           | X         |           |           |           |
| 2/15/2018                      |                            |           |           | X         |           | X         |           | X         | X         | X         |
| 3/7/2018                       | X                          | X         |           |           | X         | X         | X         |           |           |           |
| 3/8/2018                       |                            |           | X         | X         |           |           |           | X         | X         | X         |
| 4/3/2018                       | X                          | X         | X         | X         |           |           | X         |           |           |           |
| 4/4/2018                       |                            |           |           |           | X         | X         |           | X         | X         | X         |
| 7/17/2018                      | X                          | X         |           |           |           |           | X         |           |           |           |
| 7/18/2018                      |                            |           | X         | X         |           | X         |           | X         | X         | X         |
| 7/19/2018                      |                            |           |           |           | X         |           |           |           |           |           |
| <b>Total Samples Collected</b> | <b>13</b>                  | <b>13</b> | <b>14</b> | <b>13</b> | <b>13</b> | <b>13</b> | <b>13</b> | <b>13</b> | <b>13</b> | <b>13</b> |

## 4.0 Summary of Statistical Analysis Results

### 4.1 Appendix III Parameters

Prediction intervals developed in the previous year were used to evaluate whether Appendix III parameters in downgradient wells samples for each CCR unit were measured at a statistically significant increase (SSI) above the respective background well concentration. These prediction limits defined in 2017 are updated every two years according to the groundwater monitoring plan and will be reevaluated again in 2019. Table 4-1 and 4-2 summarizes this analysis for Appendix III parameters. While the SIS previously had an exceedance of total dissolved solids and fluoride, only fluoride continued to occur above the background level. The landfill wells had all of the same exceedances as the previous year, with the addition of pH exceeding background level in one well. The Site will remain in assessment monitoring so long as any Appendix III parameters remain above background level.

**Table 4-1. Appendix III Parameters Observed Statistically above Background at the Surface Impoundment System Wells.**

| Appendix III Parameter | Retest Strategy | Prediction Limit (mg/L) | Wells with an SSI |       |       |      |
|------------------------|-----------------|-------------------------|-------------------|-------|-------|------|
|                        |                 |                         | SIS-2             | SIS-3 | SIS-4 | R9T5 |
| Fluoride               | 1-of-2          | 0.34                    | X                 |       |       |      |

**Table 4-2. Appendix III Parameters Observed Statistically Above Background at the Landfill Wells.**

| Appendix III Parameter | Retest Strategy | Prediction Limit (mg/L) | Wells with an SSI |      |      |
|------------------------|-----------------|-------------------------|-------------------|------|------|
|                        |                 |                         | LF-2              | LF-3 | LF-4 |
| Boron                  | 1-of-3          | 0.33                    | X                 | X    | X    |
| Calcium                | 1-of-3          | 114                     | X                 |      | X    |
| Chloride               | 1-of-3          | 21.8                    | X                 | X    |      |
| pH                     | 1-of-3          | 5.10 to 6.42            |                   |      | X    |
| Sulfate                | 1-of-3          | 21.4                    | X                 | X    | X    |
| TDS                    | 1-of-3          | 385                     | X                 | X    | X    |
| Fluoride               | 1-of-4          | 0.12                    | X                 | X    | X    |

### 4.2 Appendix IV Parameters

None of the Appendix IV parameters were detected above the respective GWPS for the impoundment system monitoring wells. For the CCR landfill, lithium, molybdenum, and antimony were detected at least once above the respective GPWS for LF-4 during 2018



monitoring events. Antimony concentration for the three most recent sampling events have been below the GWPS for LF-3. Molybdenum and radium 226 and 228 combined were detected above the respective GWPS for LF-3 for at least one sampling event during 2018. Radium 226 and 228 concentration for the most recent sampling event was below the respective GWPS. Table 4-3 and Table 4-4 summarize the statistical analysis of Appendix IV parameters above background for the surface impoundment system and landfill, respectively. The tables also present the GWPS, and GWPS type. For parameters for which at least one reading exceeded the GWPS, the statistical method used to evaluate whether there is a statistically significant exceedance is shown, and retest frequency, if applicable. Lithium and molybdenum were found to exceed GWPS at the CCR landfill for well LF-4 and LF-3 respectively. However, the surface soil around the western and southern sides of the landfill was found to contain lithium and molybdenum at much higher level than the subsurface soils. The surface soil can be an alternative source of these parameters as described in Attachment D.

As required by §257.90(e)(3), the laboratory results for all background groundwater sampling events are included with this report as Attachment A. Field logs including pH readings (i.e., an Appendix III parameter) and the depth-to-liquid measurements for all background sampling events (and for a quarterly sampling event used to estimate average site-wide groundwater flow rate and direction, as described in Section 7.0) are included in this report as Attachment B.

**Table 4-3. Appendix IV Parameters Statistical Analysis Results at Surface Impoundment System Wells**

| Parameter          | Detected in Downgradient Wells? | GWPS  |       | GWPS Type  | Statistical Method to Assess Statistically Significant Exceedance Above the GWPS | Statistically Significant Exceedance Above the GWPS? |
|--------------------|---------------------------------|-------|-------|------------|--|--|
|                    |                                 | Value | Units |            |  |  |
| Antimony           | Yes                             | 6     | ug/L  | MCL        | -  | NO   |
| Lithium            | Yes                             | 40    | ug/L  | MCL        | -  | NO   |
| Thallium           | Yes                             | 3     | ug/L  | Background | Non-Parametric Prediction Limit with 1-of-4 Retest Frequency                     | NO   |
| Fluoride           | Yes                             | 4     | mg/L  | MCL        | -  | NO   |
| Arsenic            | Yes                             | 10    | ug/L  | MCL        | Non-Parametric LCL for Median  | NO   |
| Barium             | Yes                             | 2000  | ug/L  | MCL        | -  | NO   |
| Beryllium          | No                              | -     | -     | -          | -  | NO   |
| Cadmium            | Yes                             | 5     | ug/L  | MCL        | -  | NO   |
| Chromium           | Yes                             | 100   | ug/L  | MCL        | -  | NO   |
| Cobalt             | Yes                             | 6     | ug/L  | MCL        | Non-Parametric LCL for Median  | NO   |
| Lead               | Yes                             | 15    | ug/L  | MCL        | -  | NO   |
| Molybdenum         | Yes                             | 100   | ug/L  | MCL        | -  | NO   |
| Selenium           | Yes                             | 50    | ug/L  | MCL        | -  | NO   |
| Mercury            | No                              | 2     | ug/L  | MCL        | -  | NO   |
| Radium 226 and 228 | Yes                             | 5     | pCi/L | MCL        | Parametric 95% LCL   | NO   |

**Table 4-4. Appendix IV Parameters with an SSI Observed at Landfill Wells**

| Parameter          | Detected in Downgradient Wells? | GWPS  |       | GWPS Type  | Statistical Method to Assess Statistically Significant Exceedance Above the GWPS | Statistically Significant Exceedance Above the GWPS? |
|--------------------|---------------------------------|-------|-------|------------|--|--|
|                    |                                 | Value | Units |            |  |  |
| Antimony           | Yes                             | 6     | ug/L  | MCL        | Non-Parametric LCL for Median  | NO   |
| Lithium            | Yes                             | 40    | ug/L  | MCL        | Parametric 95% LCL for Mean  | YES  |
| Thallium           | Yes                             | 3     | ug/L  | Background | -  | NO   |
| Fluoride           | Yes                             | 4     | mg/L  | MCL        | -  | NO   |
| Arsenic            | Yes                             | 10    | ug/L  | MCL        | -  | NO   |
| Barium             | Yes                             | 2000  | ug/L  | MCL        | -  | NO   |
| Beryllium          | Yes                             | 4     | ug/L  | MCL        | -  | NO   |
| Cadmium            | No                              | -     | ug/L  | -          | -  | NO   |
| Chromium           | Yes                             | 100   | ug/L  | MCL        | -  | NO   |
| Cobalt             | Yes                             | 6     | ug/L  | MCL        | -  | NO   |
| Lead               | Yes                             | 15    | ug/L  | MCL        | -  | NO   |
| Molybdenum         | Yes                             | 100   | ug/L  | MCL        | Parametric and Non-Parametric 95% LCL  | YES  |
| Selenium           | Yes                             | 50    | ug/L  | MCL        | -  | NO   |
| Mercury            | No                              | 2     | ug/L  | MCL        | -  | NO   |
| Radium 226 and 228 | Yes                             | 5     | pCi/L | MCL        | Parametric 95% LCL for Mean  | NO   |

## **5.0 Groundwater Monitoring Program Status of CCR Units**

The final set of sampling results from the 90-day follow-up sampling event were received from the laboratory in August 2018. The results show no statistically significant exceedances for the SIS. For the two downgradient wells at the CCR landfill, there are two parameters which have been found to be statistically above groundwater protection standards. These are potentially due to another source of contaminants as explained by the Alternative Source Demonstration. Because Appendix III and IV parameters were detected at levels showing a SSI over background concentrations, though not above the GWPS, for both CCR units, the program remains under the assessment monitoring program (AMP), which was initially established on 10 January 2018 (i.e., within the 90 days provided by §257.94(e)(1)). Therefore, as of the date of this report, both CCR units are being monitored under an AMP.

## **6.0 Upcoming Activities**

Groundwater sampling will continue under the AMP, including a semi-annual sampling of all previously detected Appendix III/IV parameters in January and July 2019 and annual sampling of all other Appendix III/IV parameters in July 2019. Monitoring of Appendix III/IV parameters under the AMP will continue until occurrence of two subsequent sampling events with no SSI above background concentrations, in which case, the site will be returned to detection monitoring. Mercury and beryllium were not detected in the SIS wells, and mercury and cadmium were not detected in the landfill wells, and therefore, these parameters will be monitored annually.

As discussed in Section 4, an alternative source of lithium and molybdenum was identified (see Attachment D). GRU plans to relocate the surface soils within the landfill. These parameters will continue to be monitored to assess the impact of surface soil relocation.

## **7.0 Rate and Direction of Groundwater Flow**

The CCR landfill and surface impoundment system (and adjacent process ponds) are surrounded by a slurry wall containment system keyed into an existing natural clay layer – the CCR units were designed to be hydraulically isolated from the surrounding surficial aquifer. Therefore, it is not possible to use the groundwater monitoring wells located outside the slurry wall of each CCR unit to estimate the groundwater flow rate and direction of the uppermost aquifer beneath each CCR unit.

An existing site (non-CCR) groundwater monitoring well network (including 12 wells) is currently being monitored on a quarterly basis. Depth-to-liquid readings from the January and July monitoring events (i.e., 16-18 July 2018) were used to develop a recent estimate

of the rate and direction of groundwater flow at the site. Potentiometric contour maps developed from this data is presented in Attachment C. 2013 AutoCAD Civil 3D software was used to find the average gradient of the potentiometric surface developed from this dataset. The average gradient was estimated to be 0.0022 ft/ft for the July sampling event.

As described in the Groundwater Sampling and Analysis Program for the CCR Units (IWCS 2017), the rate of groundwater flow can be calculated using the following equation:

$$V = \frac{K * i}{N_e}$$

Where:

- V is equal to the groundwater velocity,
- K is the hydraulic conductivity of aquifer,
- i the hydraulic gradient,
- N<sub>e</sub> is the effective porosity of the aquifer

The effective porosity and hydraulic conductivity of native, in-place surficial silty-sandy soils of the site were estimated by UES (2017). The effective porosity is estimated as the midpoint of the fillable porosity range provided: 17.5%. The hydraulic conductivity is estimated as the midpoint of values provided for the horizontal hydraulic conductivity: 3.0 feet per day. Therefore, the estimated average groundwater velocity at the site is approximately 0.038 feet per day.

## **8.0 References**

IWCS (2017). Groundwater Sampling and Analysis Program for the Coal Combustion Residuals Units. Prepared for Gainesville Regional Utilities, Deerhaven Generating Station by Innovative Waste Consulting Services, September 2017.

UES (2017). Geotechnical Consulting Services – Coal Combustion Residuals (CCR) Surface Impoundment System and Landfill Groundwater Monitoring Systems Design and Construction. Prepared by Universal Engineering Sciences for Innovative Waste Consulting Services, LLC. 6 April 2017.

## 9.0 Professional Engineer Certification

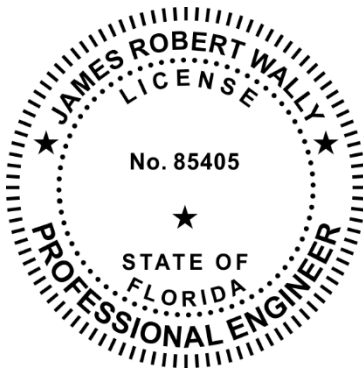
This plan was prepared under the supervision, direction and control of the undersigned, registered professional engineer (PE). The undersigned PE is familiar with and has prepared this annual groundwater monitoring and correction action report in accordance with the requirements of 40 CFR 257.90(e).

Name of Professional Engineer: James R. Wally

Company: Innovative Waste Consulting Services, LLC

PE Registration State: Florida

PE License No.: 85405



This item has been electronically signed and sealed by James Robert Wally, PE, on January 29<sup>th</sup>, 2019 using a SHA authentication code.

Printed copies of this document are not considered signed and sealed and the SHA authentication code must be validated on any electronic copies,

Attachment A  
Sampling Laboratory Analysis Reports





March 27, 2018

Service Request No:J1800754

Jeffery Boudreau  
Gainesville Regional Utilities  
10001 NW 13th St  
Gainesville, FL 32653

**Laboratory Results for: D18A032**

Dear Jeffery,

Enclosed are the results of the sample(s) submitted to our laboratory January 30, 2018  
For your reference, these analyses have been assigned our service request number **J1800754**.

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and ALS Environmental is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report. In accordance to the NELAC 2003 Standard, a statement on the estimated uncertainty of measurement of any quantitative analysis will be supplied upon request.

Respectfully submitted,

**ALS Group USA, Corp. dba ALS Environmental**

Gina Bondani  
Project Manager

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ALS Group USA, Corp.  
dba ALS Environmental



# Narrative Documents

**ALS Environmental—Jacksonville Laboratory**  
9143 Philips Highway, Suite 200, Jacksonville, FL 32256  
Phone (904) 739-2277 Fax (904) 739-2011  
[www.alsglobal.com](http://www.alsglobal.com)



**Client:** Gainesville Regional Utilities  
**Project:** D18A032  
**Sample Matrix:** Water

**Service Request:** J1800754  
**Date Received:** 1/30/18

### CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier II data deliverables, including results of QC samples analyzed from this delivery group. When appropriate to the procedure, method blank results have been reported with each analytical test. Analytical procedures performed by the lab are validated in accordance with NELAC standards. Parameters that are included in the NELAC Fields of Testing but are not included in the lab's NELAC accreditation are identified in the discussion of each analytical procedure.

#### Sample Receipt

1 water samples were received for analysis at ALS Environmental on 1/30/18. The samples were received in good condition and consistent with the accompanying chain of custody form. Samples are refrigerated at  $\leq 6^{\circ}\text{C}$  upon receipt at the lab except for aqueous samples designated for metals analyses, which are stored at room temperature.

#### Metals Analyses:

No significant data anomalies were noted with this analysis.

#### Revision Notes:

This revised report replaces the original report generated on 2/5/18 at 1:53pm. The revised report includes additional metals analytes per client request.

This second revised report replaces the original report generated on 3/21/18 at 9:26am. The second revised report includes additional required data qualifiers, not originally included.

Approved by  Date 3/27/2018

**SAMPLE DETECTION SUMMARY**
**CLIENT ID: D18A032-01**
**Lab ID: J1800754-001**

| <b>Analyte</b>  | <b>Results</b> | <b>Flag</b> | <b>MDL</b> | <b>PQL</b> | <b>Units</b> | <b>Method</b> |
|-----------------|----------------|-------------|------------|------------|--------------|---------------|
| Chromium, Total | 0.001          | I           | 0.0004     | 0.010      | mg/L         | 200.7         |
| Copper, Total   | 0.001          | IV          | 0.0008     | 0.010      | mg/L         | 200.7         |
| Iron, Total     | 0.006          | IV          | 0.005      | 0.10       | mg/L         | 200.7         |
| Nickel, Total   | 0.001          | IV          | 0.0009     | 0.010      | mg/L         | 200.7         |
| Silver, Total   | 0.001          | IV          | 0.0006     | 0.010      | mg/L         | 200.7         |
| Zinc, Total     | 0.002          | IV          | 0.002      | 0.020      | mg/L         | 200.7         |



## Sample Receipt Information

**ALS Environmental—Jacksonville Laboratory**  
9143 Philips Highway, Suite 200, Jacksonville, FL 32256  
Phone (904) 739-2277 Fax (904) 739-2011  
[www.alsglobal.com](http://www.alsglobal.com)

**Client:** Gainesville Regional Utilities  
**Project:** D18A032

**Service Request:**J1800754

**SAMPLE CROSS-REFERENCE**

| <u>SAMPLE #</u> | <u>CLIENT SAMPLE ID</u> | <u>DATE</u> | <u>TIME</u> |
|-----------------|-------------------------|-------------|-------------|
| J1800754-001    | D18A032-01              | 1/19/2018   | 0843        |

**Cooler Receipt Form**

Client: GRU Service Request #: 51800754  
 Project: S18 A032 Shipping paid by ALS? Yes  No  N/A  
 Cooler received on 01/30/18 and opened on 01/30/18 by MRD  
 COURIER: ALS  UPS  FEDEX  DHL Client Other \_\_\_\_\_ Airbill # 812783248056

- 1 Were custody seals on outside of cooler? Yes  No   
 If yes, how many and where? #: \_\_\_ on lid other \_\_\_\_\_
- 2 Were seals intact and signature and date correct? Yes  No  N/A
- 3 Were custody papers properly filled out?  Yes  No N/A
- 4 Temperature of cooler(s) upon receipt (Should be 0°C and ≤ 6°C) Ambient \_\_\_\_\_
- 5 Thermometer ID N/A \_\_\_\_\_
- 6 Temperature Blank Present? Yes  No
- 7 Were Ice or Ice Packs present Ice  Ice Packs  N/A
- 8 Did all bottles arrive in good condition (unbroken, etc....)?  Yes  No N/A
- 9 Type of packing material present  
 Netting  Vial Holder  Bubble Wrap   
 Paper  Styrofoam  Other  N/A
- 10 Were all bottle labels complete (sample ID, preservation, etc....)?  Yes  No N/A
- 11 Did all bottle labels and tags agree with custody papers?  Yes  No N/A
- 12 Were the correct bottles used for the tests indicated?  Yes  No N/A
- 13 Were all of the preserved bottles received with the appropriate preservative?  
HNO3 pH<2 H2SO4 pH<2 ZnAc2/NaOH pH>9 NaOH pH>12 HCl pH<2  
Preservative additions noted below  Yes  No N/A
- 14 Were all samples received within analysis holding times?  Yes  No N/A
- 15 Were VOA vials free of air bubbles greater than 6mm? If present, note below Yes  No  N/A
- 16 Where did the bottles originate? ALS  Client

| Sample ID | Reagent | Lot # | ml added | Initials Date/Time |
|-----------|---------|-------|----------|--------------------|
|           |         |       |          |                    |
|           |         |       |          |                    |
|           |         |       |          |                    |
|           |         |       |          |                    |
|           |         |       |          |                    |
|           |         |       |          |                    |
|           |         |       |          |                    |
|           |         |       |          |                    |
|           |         |       |          |                    |
|           |         |       |          |                    |

Additional comments and/or explanation of all discrepancies noted above:  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Client approval to run samples if discrepancies noted: \_\_\_\_\_ Date: \_\_\_\_\_



**SUBCONTRACT ORDER**  
**Deerhaven Generating Station**  
**D18A032**

51800754

**SENDING LABORATORY:**

Gainesville Regional Utilities  
 Deerhaven Generating Station  
 10001 NW 13th Street  
 Gainesville, FL 32653  
 Phone: 352-334-3434  
 Fax: 352-334-3149  
 Project Manager: Jeff Boudreau

**RECEIVING LABORATORY:**

ALS Global  
 9143 Philips Highway, Suite 200  
 Jacksonville, FL 32256  
 Phone : (904) 394-4426  
 Fax: (904) 739-2011

**J1800754**      **5**  
Gainesville Regional Utilities  
 D18A032



| Analysis                             | Expires         | Laboratory ID                   | Comments |
|--------------------------------------|-----------------|---------------------------------|----------|
| <b>Sample Name: Barnstead</b>        |                 |                                 |          |
| <b>Sample ID: D18A032-01</b>         | <b>Water</b>    | <b>Sampled: 19-Jan-18 08:43</b> |          |
| D_Thallium by 200.8                  | 18-Jul-18 08:43 |                                 |          |
| D_Lithium by 200.7                   | 18-Jul-18 08:43 |                                 |          |
| D_Lead by 200.8                      | 18-Jul-18 08:43 |                                 |          |
| D_Boron by 200.7                     | 18-Jul-18 08:43 |                                 |          |
| D_Arsenic by 200.8                   | 18-Jul-18 08:43 |                                 |          |
| D_Antimony by 200.8                  | 18-Jul-18 08:43 |                                 |          |
| <i>Containers Supplied:</i>          |                 |                                 |          |
| D_HDPE, HNO3 pH<2 - 250mL extra2 (D) |                 |                                 |          |

|                      |                |                  |                    |                      |
|----------------------|----------------|------------------|--------------------|----------------------|
| <i>Shelly Phelps</i> | <i>1-29-18</i> | <i>Via FedEx</i> | <i>[Signature]</i> | <i>01/30/18 0925</i> |
| Released By          | Date           |                  | Received By        | Date                 |
| Released By          | Date           |                  | Received By        | Date                 |





## Miscellaneous Forms

**ALS Environmental—Jacksonville Laboratory**  
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[www.alsglobal.com](http://www.alsglobal.com)



## **FLORIDA DEP DATA QUALIFIERS**

- B Results based upon colony counts outside the acceptable range.
- D Measurement was made in the field.
- H Value based on field kit determination; results may not be accurate.
- I The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
- J Estimated value (one of the following reasons is discussed in the project case narrative).
1. The result may be inaccurate because the surrogate recovery limits have been exceeded.
  2. No known quality control criteria exists for the component.
  3. The reported value failed to meet the established quality control criteria for either precision or accuracy.
  4. The sample matrix interfered with the ability to make any accurate determination (e.g., primary and confirmation results show greater than 40% RPD).
  5. The data is questionable because of improper laboratory or field protocols (e.g., GC/MS Tune did not meet method criteria).
- K Off scale low. The value is less than the lowest calibration standard but greater than the method reporting limit (MRL).
- L Off scale high. The analyte is above the upper limit of the linear calibration range.
- M The MDL/MRL has been elevated because the analyte could not be accurately quantified due to matrix interference.
- N Presumptive evidence of the analyte. Confirmation was not performed.
- Q Sample held beyond the accepted holding time.
- T Value reported is less than the laboratory method detection limit. The value is reported for informational purposes only.
- U Indicates that the compound was analyzed for but not detected.
- V Indicates that the analyte was detected in both the sample and the associated method blank.
- Y The laboratory analysis was from an improperly preserved sample.
- Z Too many colonies were present (TNTC). The numeric value represents the filtration volume.



**Jacksonville Lab ID # for State Certifications<sup>1</sup>**

| <b>Agency</b>  | <b>Number</b>   | <b>Expiration Date</b> |
|--|-----------------|------------------------|
| Department of Defense  | 66206           | 7/31/2018              |
| Florida Department of Health                                   | E82502          | 6/30/2018              |
| Georgia Department of Natural Resources                        | 958             | 6/30/2018              |
| Kentucky Division of Waste Management                          | 123042          | 6/30/2018              |
| Louisiana Department of Environmental Quality                  | 02086           | 6/30/2018              |
| Maine Department of Health and Human Services                  | 2015002         | 2/3/2019               |
| North Carolina Department of Environment and Natural Resources | 527             | 12/31/2018             |
| Pennsylvania Department of Environmental Protection            | 68-04835        | 8/31/2018              |
| South Carolina Department of Health and Environmental Control  | 96021001        | 6/30/2018              |
| Texas Commission on Environmental Quality                      | T104704197-16-8 | 5/31/2018              |
| Virginia Environmental Accreditation Program                   | 460191          | 12/14/2018             |

<sup>1</sup> Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state or agency requirements. The test results meet requirements of the current NELAP/TNI standards or state or agency requirements, where applicable, except as noted in the laboratory case narrative provided. For a specific list of accredited analytes, refer to <http://www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads/North-America-Downloads>



## ACRONYMS

|            |  |
|------------|--|
| ASTM       | American Society for Testing and Materials   |
| A2LA       | American Association for Laboratory Accreditation  |
| CARB       | California Air Resources Board   |
| CAS Number | Chemical Abstract Service registry Number  |
| CFC        | Chlorofluorocarbon   |
| CFU        | Colony-Forming Unit  |
| DEC        | Department of Environmental Conservation   |
| DEQ        | Department of Environmental Quality  |
| DHS        | Department of Health Services  |
| DOE        | Department of Ecology  |
| DOH        | Department of Health   |
| EPA        | U. S. Environmental Protection Agency  |
| ELAP       | Environmental Laboratory Accreditation Program   |
| GC         | Gas Chromatography   |
| GC/MS      | Gas Chromatography/Mass Spectrometry   |
| LUFT       | Leaking Underground Fuel Tank  |
| M          | Modified   |
| MCL        | Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA. |
| MDL        | Method Detection Limit   |
| MPN        | Most Probable Number   |
| MRL        | Method Reporting Limit   |
| NA         | Not Applicable   |
| NC         | Not Calculated   |
| NCASI      | National Council of the Paper Industry for Air and Stream Improvement  |
| ND         | Not Detected   |
| NIOSH      | National Institute for Occupational Safety and Health  |
| PQL        | Practical Quantitation Limit   |
| RCRA       | Resource Conservation and Recovery Act   |
| SIM        | Selected Ion Monitoring  |
| TPH        | Total Petroleum Hydrocarbons   |
| tr         | Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.                           |

**ALS Group USA, Corp.**  
dba ALS Environmental

Analyst Summary report

**Client:** Gainesville Regional Utilities  
**Project:** D18A032

**Service Request:** J1800754

**Sample Name:** D18A032-01  
**Lab Code:** J1800754-001  
**Sample Matrix:** Water

**Date Collected:** 01/19/18  
**Date Received:** 01/30/18

**Analysis Method**

200.7  
200.8

**Extracted/Digested By**

EGARDNER  
CSULLIVAN

**Analyzed By**

EGARDNER  
CSULLIVAN



# Sample Results

**ALS Environmental—Jacksonville Laboratory**  
9143 Philips Highway, Suite 200, Jacksonville, FL 32256  
Phone (904) 739-2277 Fax (904) 739-2011  
[www.alsglobal.com](http://www.alsglobal.com)



# Metals

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Phone (904)739-2277 Fax (904)739-2011  
[www.alsglobal.com](http://www.alsglobal.com)

ALS Group USA, Corp.  
dba ALS Environmental

Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A032  
**Sample Matrix:** Water  
**Sample Name:** D18A032-01  
**Lab Code:** J1800754-001

**Service Request:** J1800754  
**Date Collected:** 01/19/18 08:43  
**Date Received:** 01/30/18 09:25  
**Basis:** NA

Inorganic Parameters

| Analyte Name      | Analysis Method | Result          | Units | PQL    | MDL    | Dil. | Date Analyzed  | Date Extracted | Q |
|-------------------|-----------------|-----------------|-------|--------|--------|------|----------------|----------------|---|
| Aluminum, Total   | 200.7           | 0.02 U          | mg/L  | 0.10   | 0.02   | 1    | 02/02/18 20:07 | 02/02/18       |   |
| Antimony, Total   | 200.8           | 0.04 U          | ug/L  | 1.0    | 0.04   | 1    | 02/01/18 20:09 | 02/01/18       |   |
| Arsenic, Total    | 200.8           | 0.10 U          | ug/L  | 1.0    | 0.10   | 1    | 02/01/18 20:09 | 02/01/18       |   |
| Barium, Total     | 200.7           | 0.0003 U        | mg/L  | 0.010  | 0.0003 | 1    | 02/02/18 20:08 | 02/02/18       |   |
| Beryllium, Total  | 200.7           | 0.0003 U        | mg/L  | 0.0040 | 0.0003 | 1    | 02/02/18 20:08 | 02/02/18       |   |
| Boron, Total      | 200.7           | 0.010 U         | mg/L  | 0.050  | 0.010  | 1    | 02/02/18 20:08 | 02/02/18       |   |
| Cadmium, Total    | 200.7           | 0.0002 U        | mg/L  | 0.0050 | 0.0002 | 1    | 02/02/18 20:08 | 02/02/18       |   |
| Calcium, Total    | 200.7           | 0.02 U          | mg/L  | 0.10   | 0.02   | 1    | 02/02/18 20:07 | 02/02/18       |   |
| Chromium, Total   | 200.7           | <b>0.001 I</b>  | mg/L  | 0.010  | 0.0004 | 1    | 02/02/18 20:08 | 02/02/18       |   |
| Cobalt, Total     | 200.7           | 0.002 U         | mg/L  | 0.010  | 0.002  | 1    | 02/02/18 20:08 | 02/02/18       |   |
| Copper, Total     | 200.7           | <b>0.001 IV</b> | mg/L  | 0.010  | 0.0008 | 1    | 02/02/18 20:08 | 02/02/18       |   |
| Iron, Total       | 200.7           | <b>0.006 IV</b> | mg/L  | 0.10   | 0.005  | 1    | 02/02/18 20:07 | 02/02/18       |   |
| Lead, Total       | 200.8           | 0.03 U          | ug/L  | 0.50   | 0.03   | 1    | 02/01/18 20:09 | 02/01/18       |   |
| Lithium, Total    | 200.7           | 0.002 U         | mg/L  | 0.10   | 0.002  | 1    | 02/02/18 20:06 | 02/02/18       |   |
| Magnesium, Total  | 200.7           | 0.02 U          | mg/L  | 0.10   | 0.02   | 1    | 02/02/18 20:07 | 02/02/18       |   |
| Manganese, Total  | 200.7           | 0.0003 U        | mg/L  | 0.010  | 0.0003 | 1    | 02/02/18 20:08 | 02/02/18       |   |
| Molybdenum, Total | 200.7           | 0.0006 U        | mg/L  | 0.010  | 0.0006 | 1    | 02/02/18 20:08 | 02/02/18       |   |
| Nickel, Total     | 200.7           | <b>0.001 IV</b> | mg/L  | 0.010  | 0.0009 | 1    | 02/02/18 20:08 | 02/02/18       |   |
| Potassium, Total  | 200.7           | 0.06 U          | mg/L  | 2.0    | 0.06   | 1    | 02/02/18 20:06 | 02/02/18       |   |
| Selenium, Total   | 200.7           | 0.003 U         | mg/L  | 0.010  | 0.003  | 1    | 02/02/18 20:08 | 02/02/18       |   |
| Silver, Total     | 200.7           | <b>0.001 IV</b> | mg/L  | 0.010  | 0.0006 | 1    | 02/02/18 20:08 | 02/02/18       |   |
| Sodium, Total     | 200.7           | 0.04 U          | mg/L  | 0.50   | 0.04   | 1    | 02/02/18 20:06 | 02/02/18       |   |
| Strontium, Total  | 200.7           | 0.0003 U        | mg/L  | 0.010  | 0.0003 | 1    | 02/02/18 20:06 | 02/02/18       |   |
| Thallium, Total   | 200.8           | 0.02 U          | ug/L  | 0.20   | 0.02   | 1    | 02/01/18 20:09 | 02/01/18       |   |
| Vanadium, Total   | 200.7           | 0.0010 U        | mg/L  | 0.020  | 0.0010 | 1    | 02/02/18 20:08 | 02/02/18       |   |
| Zinc, Total       | 200.7           | <b>0.002 IV</b> | mg/L  | 0.020  | 0.002  | 1    | 02/02/18 20:08 | 02/02/18       |   |





## QC Summary Forms

**ALS Environmental - Jacksonville Laboratory**  
9143 Philips Highway, Suite 200, Jacksonville, FL 32256  
Phone (904) 739-2277 Fax (904) 739-2011  
[www.alsglobal.com](http://www.alsglobal.com)



# Metals

**ALS Environmental—Jacksonville Laboratory**  
9143 Philips Highway, Suite 200, Jacksonville, FL 32256  
Phone (904)739-2277 Fax (904)739-2011  
[www.alsglobal.com](http://www.alsglobal.com)

ALS Group USA, Corp.  
dba ALS Environmental

Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A032  
**Sample Matrix:** Water  
**Sample Name:** Method Blank  
**Lab Code:** J1800754-MB

**Service Request:** J1800754  
**Date Collected:** NA  
**Date Received:** NA  
**Basis:** NA

Inorganic Parameters

| Analyte Name      | Analysis Method | Result         | Units | PQL    | MDL    | Dil. | Date Analyzed  | Date Extracted | Q |
|-------------------|-----------------|----------------|-------|--------|--------|------|----------------|----------------|---|
| Aluminum, Total   | 200.7           | 0.02 U         | mg/L  | 0.10   | 0.02   | 1    | 02/02/18 17:04 | 02/02/18       |   |
| Antimony, Total   | 200.8           | 0.04 U         | ug/L  | 1.0    | 0.04   | 1    | 02/01/18 19:27 | 02/01/18       |   |
| Arsenic, Total    | 200.8           | 0.10 U         | ug/L  | 1.0    | 0.10   | 1    | 02/01/18 19:27 | 02/01/18       |   |
| Barium, Total     | 200.7           | 0.0003 U       | mg/L  | 0.010  | 0.0003 | 1    | 02/02/18 17:05 | 02/02/18       |   |
| Beryllium, Total  | 200.7           | 0.0003 U       | mg/L  | 0.0040 | 0.0003 | 1    | 02/02/18 17:05 | 02/02/18       |   |
| Boron, Total      | 200.7           | 0.010 U        | mg/L  | 0.050  | 0.010  | 1    | 02/02/18 17:05 | 02/02/18       |   |
| Cadmium, Total    | 200.7           | 0.0002 U       | mg/L  | 0.0050 | 0.0002 | 1    | 02/02/18 17:05 | 02/02/18       |   |
| Calcium, Total    | 200.7           | 0.02 U         | mg/L  | 0.10   | 0.02   | 1    | 02/02/18 17:04 | 02/02/18       |   |
| Chromium, Total   | 200.7           | 0.0004 U       | mg/L  | 0.010  | 0.0004 | 1    | 02/02/18 17:05 | 02/02/18       |   |
| Cobalt, Total     | 200.7           | 0.002 U        | mg/L  | 0.010  | 0.002  | 1    | 02/02/18 17:05 | 02/02/18       |   |
| Copper, Total     | 200.7           | <b>0.002 I</b> | mg/L  | 0.010  | 0.0008 | 1    | 02/02/18 17:05 | 02/02/18       |   |
| Iron, Total       | 200.7           | <b>0.01 I</b>  | mg/L  | 0.10   | 0.005  | 1    | 02/02/18 17:04 | 02/02/18       |   |
| Lead, Total       | 200.8           | <b>0.03 I</b>  | ug/L  | 0.50   | 0.03   | 1    | 02/01/18 19:27 | 02/01/18       |   |
| Lithium, Total    | 200.7           | 0.002 U        | mg/L  | 0.10   | 0.002  | 1    | 02/02/18 17:04 | 02/02/18       |   |
| Magnesium, Total  | 200.7           | 0.02 U         | mg/L  | 0.10   | 0.02   | 1    | 02/02/18 17:04 | 02/02/18       |   |
| Manganese, Total  | 200.7           | 0.0003 U       | mg/L  | 0.010  | 0.0003 | 1    | 02/02/18 17:05 | 02/02/18       |   |
| Molybdenum, Total | 200.7           | 0.0006 U       | mg/L  | 0.010  | 0.0006 | 1    | 02/02/18 17:05 | 02/02/18       |   |
| Nickel, Total     | 200.7           | <b>0.002 I</b> | mg/L  | 0.010  | 0.0009 | 1    | 02/02/18 17:05 | 02/02/18       |   |
| Potassium, Total  | 200.7           | 0.06 U         | mg/L  | 2.0    | 0.06   | 1    | 02/02/18 17:04 | 02/02/18       |   |
| Selenium, Total   | 200.7           | 0.003 U        | mg/L  | 0.010  | 0.003  | 1    | 02/02/18 17:05 | 02/02/18       |   |
| Silver, Total     | 200.7           | <b>0.001 I</b> | mg/L  | 0.010  | 0.0006 | 1    | 02/02/18 17:05 | 02/02/18       |   |
| Sodium, Total     | 200.7           | 0.04 U         | mg/L  | 0.50   | 0.04   | 1    | 02/02/18 17:04 | 02/02/18       |   |
| Strontium, Total  | 200.7           | 0.0003 U       | mg/L  | 0.010  | 0.0003 | 1    | 02/02/18 17:04 | 02/02/18       |   |
| Thallium, Total   | 200.8           | 0.02 U         | ug/L  | 0.20   | 0.02   | 1    | 02/01/18 19:27 | 02/01/18       |   |
| Vanadium, Total   | 200.7           | 0.0010 U       | mg/L  | 0.020  | 0.0010 | 1    | 02/02/18 17:05 | 02/02/18       |   |
| Zinc, Total       | 200.7           | <b>0.002 I</b> | mg/L  | 0.020  | 0.002  | 1    | 02/02/18 17:05 | 02/02/18       |   |

ALS Group USA, Corp.  
dba ALS Environmental

QA/QC Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A032  
**Sample Matrix:** Water

**Service Request:** J1800754  
**Date Analyzed:** 02/02/18

**Lab Control Sample Summary**  
**Inorganic Parameters**

**Units:**mg/L  
**Basis:**NA

**Lab Control Sample**  
J1800754-LCS

| <b>Analyte Name</b> | <b>Analytical Method</b> | <b>Result</b> | <b>Spike Amount</b> | <b>% Rec</b> | <b>% Rec Limits</b> |
|---------------------|--------------------------|---------------|---------------------|--------------|---------------------|
| Aluminum, Total     | 200.7                    | 5.13          | 5.00                | 103          | 85-115              |
| Barium, Total       | 200.7                    | 0.508         | 0.500               | 102          | 85-115              |
| Beryllium, Total    | 200.7                    | 0.205         | 0.200               | 103          | 85-115              |
| Boron, Total        | 200.7                    | 2.57          | 2.50                | 103          | 85-115              |
| Cadmium, Total      | 200.7                    | 0.259         | 0.250               | 104          | 85-115              |
| Calcium, Total      | 200.7                    | 5.19          | 5.00                | 104          | 85-115              |
| Chromium, Total     | 200.7                    | 0.510         | 0.500               | 102          | 85-115              |
| Cobalt, Total       | 200.7                    | 0.506         | 0.500               | 101          | 85-115              |
| Copper, Total       | 200.7                    | 0.510         | 0.500               | 102          | 85-115              |
| Iron, Total         | 200.7                    | 5.29          | 5.00                | 106          | 85-115              |
| Lithium, Total      | 200.7                    | 5.18          | 5.00                | 104          | 85-115              |
| Magnesium, Total    | 200.7                    | 5.25          | 5.00                | 105          | 85-115              |
| Manganese, Total    | 200.7                    | 0.513         | 0.500               | 103          | 85-115              |
| Molybdenum, Total   | 200.7                    | 0.508         | 0.500               | 102          | 85-115              |
| Nickel, Total       | 200.7                    | 0.530         | 0.500               | 106          | 85-115              |
| Potassium, Total    | 200.7                    | 103           | 100                 | 103          | 85-115              |
| Selenium, Total     | 200.7                    | 0.525         | 0.500               | 105          | 85-115              |
| Silver, Total       | 200.7                    | 0.504         | 0.500               | 101          | 85-115              |
| Sodium, Total       | 200.7                    | 25.8          | 25.0                | 103          | 85-115              |
| Strontium, Total    | 200.7                    | 0.512         | 0.500               | 102          | 85-115              |
| Vanadium, Total     | 200.7                    | 0.989         | 1.00                | 99           | 85-115              |
| Zinc, Total         | 200.7                    | 1.04          | 1.00                | 104          | 85-115              |

ALS Group USA, Corp.  
dba ALS Environmental

QA/QC Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A032  
**Sample Matrix:** Water

**Service Request:** J1800754  
**Date Analyzed:** 02/01/18

**Lab Control Sample Summary**  
**Inorganic Parameters**

**Units:**ug/L  
**Basis:**NA

**Lab Control Sample**  
J1800754-LCS

| <b>Analyte Name</b> | <b>Analytical Method</b> | <b>Result</b> | <b>Spike Amount</b> | <b>% Rec</b> | <b>% Rec Limits</b> |
|---------------------|--------------------------|---------------|---------------------|--------------|---------------------|
| Antimony, Total     | 200.8                    | 48.6          | 50.0                | 97           | 85-115              |
| Arsenic, Total      | 200.8                    | 49.8          | 50.0                | 100          | 85-115              |
| Lead, Total         | 200.8                    | 25.8          | 25.0                | 103          | 85-115              |
| Thallium, Total     | 200.8                    | 10.2          | 10.0                | 102          | 85-115              |

Rev 2



March 27, 2018

Jeffery Boudreau  
Gainesville Regional Utilities  
10001 NW 13th St  
Gainesville, FL 32653

CCR #1  
Results for  
R4T5  
R6T4  
Eblank

Service Request No: J1800752

**Laboratory Results for: D18A024**

Dear Jeffery,

Enclosed are the results of the sample(s) submitted to our laboratory January 30, 2018  
For your reference, these analyses have been assigned our service request number **J1800752**.

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and ALS Environmental is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report. In accordance to the NELAC 2003 Standard, a statement on the estimated uncertainty of measurement of any quantitative analysis will be supplied upon request.

Respectfully submitted,

**ALS Group USA, Corp. dba ALS Environmental**

Gina Bondani  
Project Manager

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PHONE +1 904 739 2277 | FAX +1 904 739 2011  
ALS Group USA, Corp.  
dba ALS Environmental



---

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## Table of Contents

|                            |    |
|----------------------------|----|
| CoverLetter                | 1  |
| Table of Contents          | 2  |
| Narrative Documents        | 4  |
| Narrative Documents        | 5  |
| Hit Summary List           | 6  |
| Sample Receipt Information | 12 |
| Sample Cross-Reference     | 13 |
| Chain Of Custody           | 14 |
| Miscellaneous Forms        | 18 |
| Qualifiers                 | 19 |
| Acronyms                   | 21 |
| Analyst Summary            | 22 |
| Sample Results             | 26 |
| Metals                     | 27 |
| D18A024-01 - Metals        | 28 |
| D18A024-02 - Metals        | 29 |
| D18A024-03 - Metals        | 30 |
| D18A024-04 - Metals        | 31 |
| D18A024-05 - Metals        | 32 |
| D18A024-06 - Metals        | 33 |
| D18A024-07 - Metals        | 34 |
| D18A024-08 - Metals        | 35 |

## Table of Contents (continued)

|   |    |
|---|----|
| D18A024-09 - Metals                     | 36 |
| D18A024-10 - Metals                     | 37 |
| D18A024-11 - Metals                     | 38 |
| D18A024-12 - Metals                     | 39 |
| D18A024-13 - Metals                     | 40 |
| D18A024-14 - Metals                     | 41 |
| QC Summary Forms                        | 42 |
| Metals                                  | 43 |
| 200.7 - Inorganic Parameters            |    |
| Method Blank - Metals                   | 44 |
| J1800752-LCS - LCS Metals               | 45 |
| J1800752-007DMS D18A024-07 - DMS Metals | 47 |
| J1800752-012DMS D18A024-12 - DMS Metals | 48 |
| 200.8 - Inorganic Parameters            |    |
| J1800752-011DMS D18A024-11 - DMS Metals | 49 |





## Narrative Documents

**ALS Environmental—Jacksonville Laboratory**  
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[www.alsglobal.com](http://www.alsglobal.com)

RIGHT WAYS HOME - RIGHT PARTNER



**Client:** Gainesville Regional Utilities  
**Project:** D18A024  
**Sample Matrix:** Water

**Service Request:** J1800752  
**Date Received:** 1/30/18

### CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier I data deliverables. When appropriate to the procedure, method blank results have been reported with each analytical test. Analytical procedures performed by the lab are validated in accordance with NELAC standards. Parameters that are included in the NELAC Fields of Testing but are not included in the lab's NELAC accreditation are identified in the discussion of each analytical procedure.

#### Sample Receipt

14 water samples were received for analysis at ALS Environmental on 1/30/18. The samples were received in good condition and consistent with the accompanying chain of custody form. Samples are refrigerated at  $\leq 6^{\circ}\text{C}$  upon receipt at the lab except for aqueous samples designated for metals analyses, which are stored at room temperature.

#### Metals Analyses:

Method 200.7: The Continuing Calibration Blank contained a low level of Sodium above half the Method Reporting Limit (MRL). The associated sample(s) J1800752- (012, 013) contained this/these compound(s) at a concentration of at least ten times that found in the CCB. In accordance with our QA/QC policy, blank contamination less than ten times that found in the associated samples is deemed insignificant and the data is reported with no further corrective action required.

#### Revision Notes:

This revised report replaces the original report generated on 2/4/18 at 6:44am. The revised report includes metals data via method 200.7, per client request.

This second revised report replaces the first revised report generated on 3/20/18 at 5:16pm. The second revised report includes V qualifiers necessary for correct reporting.

Approved by

A handwritten signature in cursive script, appearing to read "Susan Bouda".

Date 3/27/2018



**SAMPLE DETECTION SUMMARY**

**CLIENT ID: D18A024-03** **Lab ID: J1800752-003**

| Analyte          | Results | Flag | MDL    | PQL   | Units | Method |
|------------------|---------|------|--------|-------|-------|--------|
| Selenium, Total  | 0.016   | V    | 0.002  | 0.010 | mg/L  | 200.7  |
| Sodium, Total    | 453     |      | 0.02   | 0.50  | mg/L  | 200.7  |
| Strontium, Total | 1.47    |      | 0.0001 | 0.010 | mg/L  | 200.7  |

**CLIENT ID: D18A024-04** **Lab ID: J1800752-004**

| Analyte           | Results | Flag | MDL    | PQL   | Units | Method |
|-------------------|---------|------|--------|-------|-------|--------|
| Aluminum, Total   | 0.08    | IV   | 0.010  | 0.10  | mg/L  | 200.7  |
| Arsenic, Total    | 10.7    |      | 0.10   | 1.0   | ug/L  | 200.8  |
| Barium, Total     | 0.009   | I    | 0.001  | 0.010 | mg/L  | 200.7  |
| Calcium, Total    | 101     |      | 0.04   | 0.10  | mg/L  | 200.7  |
| Iron, Total       | 23.2    |      | 0.010  | 0.10  | mg/L  | 200.7  |
| Magnesium, Total  | 34.0    |      | 0.009  | 0.10  | mg/L  | 200.7  |
| Manganese, Total  | 0.142   |      | 0.0007 | 0.010 | mg/L  | 200.7  |
| Molybdenum, Total | 0.007   | I    | 0.0003 | 0.010 | mg/L  | 200.7  |
| Potassium, Total  | 0.5     | IV   | 0.05   | 2.0   | mg/L  | 200.7  |
| Selenium, Total   | 0.015   | V    | 0.002  | 0.010 | mg/L  | 200.7  |
| Sodium, Total     | 9.07    |      | 0.02   | 0.50  | mg/L  | 200.7  |
| Strontium, Total  | 0.093   |      | 0.0001 | 0.010 | mg/L  | 200.7  |

**CLIENT ID: D18A024-05** **Lab ID: J1800752-005**

| Analyte           | Results | Flag | MDL    | PQL   | Units | Method |
|-------------------|---------|------|--------|-------|-------|--------|
| Aluminum, Total   | 0.23    |      | 0.010  | 0.10  | mg/L  | 200.7  |
| Arsenic, Total    | 0.1     | I    | 0.10   | 1.0   | ug/L  | 200.8  |
| Barium, Total     | 0.026   |      | 0.001  | 0.010 | mg/L  | 200.7  |
| Calcium, Total    | 12.5    |      | 0.04   | 0.10  | mg/L  | 200.7  |
| Iron, Total       | 0.52    |      | 0.010  | 0.10  | mg/L  | 200.7  |
| Magnesium, Total  | 5.77    |      | 0.009  | 0.10  | mg/L  | 200.7  |
| Manganese, Total  | 0.003   | I    | 0.0007 | 0.010 | mg/L  | 200.7  |
| Molybdenum, Total | 0.001   | I    | 0.0003 | 0.010 | mg/L  | 200.7  |
| Nickel, Total     | 0.001   | I    | 0.0007 | 0.010 | mg/L  | 200.7  |
| Potassium, Total  | 4.6     |      | 0.05   | 2.0   | mg/L  | 200.7  |
| Selenium, Total   | 0.006   | IV   | 0.002  | 0.010 | mg/L  | 200.7  |
| Sodium, Total     | 32.4    |      | 0.02   | 0.50  | mg/L  | 200.7  |
| Strontium, Total  | 0.095   |      | 0.0001 | 0.010 | mg/L  | 200.7  |
| Vanadium, Total   | 0.003   | I    | 0.0008 | 0.020 | mg/L  | 200.7  |

**CLIENT ID: D18A024-06** **Lab ID: J1800752-006**

| Analyte         | Results | Flag | MDL   | PQL   | Units | Method |
|-----------------|---------|------|-------|-------|-------|--------|
| Aluminum, Total | 0.07    | IV   | 0.010 | 0.10  | mg/L  | 200.7  |
| Arsenic, Total  | 0.3     | I    | 0.10  | 1.0   | ug/L  | 200.8  |
| Barium, Total   | 0.010   |      | 0.001 | 0.010 | mg/L  | 200.7  |
| Calcium, Total  | 47.8    |      | 0.04  | 0.10  | mg/L  | 200.7  |
| Iron, Total     | 0.03    | I    | 0.010 | 0.10  | mg/L  | 200.7  |



**SAMPLE DETECTION SUMMARY**

**CLIENT ID: D18A024-06** **Lab ID: J1800752-006**

| Analyte           | Results | Flag | MDL    | PQL   | Units | Method |
|-------------------|---------|------|--------|-------|-------|--------|
| Lead, Total       | 0.1     | IV   | 0.03   | 0.50  | ug/L  | 200.8  |
| Magnesium, Total  | 2.84    |      | 0.009  | 0.10  | mg/L  | 200.7  |
| Manganese, Total  | 0.004   | I    | 0.0007 | 0.010 | mg/L  | 200.7  |
| Molybdenum, Total | 0.006   | I    | 0.0003 | 0.010 | mg/L  | 200.7  |
| Potassium, Total  | 1.2     | I    | 0.05   | 2.0   | mg/L  | 200.7  |
| Selenium, Total   | 0.013   | V    | 0.002  | 0.010 | mg/L  | 200.7  |
| Sodium, Total     | 7.45    |      | 0.02   | 0.50  | mg/L  | 200.7  |
| Strontium, Total  | 0.087   |      | 0.0001 | 0.010 | mg/L  | 200.7  |
| Vanadium, Total   | 0.011   | I    | 0.0008 | 0.020 | mg/L  | 200.7  |

**CLIENT ID: D18A024-07** **Lab ID: J1800752-007**

| Analyte           | Results | Flag | MDL    | PQL   | Units | Method |
|-------------------|---------|------|--------|-------|-------|--------|
| Aluminum, Total   | 0.15    | V    | 0.010  | 0.10  | mg/L  | 200.7  |
| Arsenic, Total    | 0.4     | I    | 0.10   | 1.0   | ug/L  | 200.8  |
| Barium, Total     | 0.010   |      | 0.001  | 0.010 | mg/L  | 200.7  |
| Calcium, Total    | 36.3    |      | 0.04   | 0.10  | mg/L  | 200.7  |
| Iron, Total       | 0.06    | I    | 0.010  | 0.10  | mg/L  | 200.7  |
| Lead, Total       | 0.04    | IV   | 0.03   | 0.50  | ug/L  | 200.8  |
| Magnesium, Total  | 16.9    |      | 0.009  | 0.10  | mg/L  | 200.7  |
| Manganese, Total  | 0.012   |      | 0.0007 | 0.010 | mg/L  | 200.7  |
| Molybdenum, Total | 0.003   | I    | 0.0003 | 0.010 | mg/L  | 200.7  |
| Potassium, Total  | 1.0     | IV   | 0.05   | 2.0   | mg/L  | 200.7  |
| Selenium, Total   | 0.010   | V    | 0.002  | 0.010 | mg/L  | 200.7  |
| Sodium, Total     | 5.82    |      | 0.02   | 0.50  | mg/L  | 200.7  |
| Strontium, Total  | 0.059   |      | 0.0001 | 0.010 | mg/L  | 200.7  |

**CLIENT ID: D18A024-08** **Lab ID: J1800752-008**

| Analyte           | Results | Flag | MDL    | PQL   | Units | Method |
|-------------------|---------|------|--------|-------|-------|--------|
| Aluminum, Total   | 0.31    |      | 0.010  | 0.10  | mg/L  | 200.7  |
| Arsenic, Total    | 1.9     |      | 0.10   | 1.0   | ug/L  | 200.8  |
| Barium, Total     | 0.005   | I    | 0.001  | 0.010 | mg/L  | 200.7  |
| Calcium, Total    | 14.7    |      | 0.04   | 0.10  | mg/L  | 200.7  |
| Copper, Total     | 0.032   |      | 0.0010 | 0.010 | mg/L  | 200.7  |
| Iron, Total       | 0.47    |      | 0.010  | 0.10  | mg/L  | 200.7  |
| Lead, Total       | 1.64    |      | 0.03   | 0.50  | ug/L  | 200.8  |
| Magnesium, Total  | 1.84    |      | 0.009  | 0.10  | mg/L  | 200.7  |
| Manganese, Total  | 0.009   | I    | 0.0007 | 0.010 | mg/L  | 200.7  |
| Molybdenum, Total | 0.002   | I    | 0.0003 | 0.010 | mg/L  | 200.7  |
| Nickel, Total     | 0.002   | I    | 0.0007 | 0.010 | mg/L  | 200.7  |
| Potassium, Total  | 0.3     | IV   | 0.05   | 2.0   | mg/L  | 200.7  |
| Selenium, Total   | 0.008   | IV   | 0.002  | 0.010 | mg/L  | 200.7  |
| Sodium, Total     | 10.4    |      | 0.02   | 0.50  | mg/L  | 200.7  |



**SAMPLE DETECTION SUMMARY**

**CLIENT ID: D18A024-13** **Lab ID: J1800752-013**

| Analyte          | Results | Flag | MDL    | PQL   | Units | Method |
|------------------|---------|------|--------|-------|-------|--------|
| Sodium, Total    | 8.82    |      | 0.02   | 0.50  | mg/L  | 200.7  |
| Strontium, Total | 1.03    |      | 0.0001 | 0.010 | mg/L  | 200.7  |

**CLIENT ID: D18A024-14** **Lab ID: J1800752-014**

| Analyte          | Results | Flag | MDL    | PQL   | Units | Method |
|------------------|---------|------|--------|-------|-------|--------|
| Aluminum, Total  | 0.01    | IV   | 0.010  | 0.10  | mg/L  | 200.7  |
| Copper, Total    | 0.001   | IV   | 0.0010 | 0.010 | mg/L  | 200.7  |
| Potassium, Total | 0.08    | IV   | 0.05   | 2.0   | mg/L  | 200.7  |
| Selenium, Total  | 0.003   | IV   | 0.002  | 0.010 | mg/L  | 200.7  |



## Miscellaneous Forms

**ALS Environmental—Jacksonville Laboratory**  
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RECEIVED 10/10/09 10:10 AM





## FLORIDA DEP DATA QUALIFIERS

- B Results based upon colony counts outside the acceptable range.
- D Measurement was made in the field.
- H Value based on field kit determination; results may not be accurate.
- I The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
- J Estimated value (one of the following reasons is discussed in the project case narrative).
1. The result may be inaccurate because the surrogate recovery limits have been exceeded.
  2. No known quality control criteria exists for the component.
  3. The reported value failed to meet the established quality control criteria for either precision or accuracy.
  4. The sample matrix interfered with the ability to make any accurate determination (e.g., primary and confirmation results show greater than 40% RPD).
  5. The data is questionable because of improper laboratory or field protocols (e.g., GC/MS Tune did not meet method criteria).
- K Off scale low. The value is less than the lowest calibration standard but greater than the method reporting limit (MRL).
- L Off scale high. The analyte is above the upper limit of the linear calibration range.
- M The MDL/MRL has been elevated because the analyte could not be accurately quantified due to matrix interference.
- N Presumptive evidence of the analyte. Confirmation was not performed.
- Q Sample held beyond the accepted holding time.
- T Value reported is less than the laboratory method detection limit. The value is reported for informational purposes only.
- U Indicates that the compound was analyzed for but not detected.
- V Indicates that the analyte was detected in both the sample and the associated method blank.
- Y The laboratory analysis was from an improperly preserved sample.
- Z Too many colonies were present (TNTC). The numeric value represents the filtration volume.





**Jacksonville Lab ID # for State Certifications<sup>1</sup>**

| <b>Agency</b>  | <b>Number</b>   | <b>Expiration Date</b> |
|--|-----------------|------------------------|
| Department of Defense  | 66206           | 7/31/2018              |
| Florida Department of Health                                   | E82502          | 6/30/2018              |
| Georgia Department of Natural Resources                        | 958             | 6/30/2018              |
| Kentucky Division of Waste Management                          | 123042          | 6/30/2018              |
| Louisiana Department of Environmental Quality                  | 02086           | 6/30/2018              |
| Maine Department of Health and Human Services                  | 2015002         | 2/3/2019               |
| North Carolina Department of Environment and Natural Resources | 527             | 12/31/2018             |
| Pennsylvania Department of Environmental Protection            | 68-04835        | 8/31/2018              |
| South Carolina Department of Health and Environmental Control  | 96021001        | 6/30/2018              |
| Texas Commission on Environmental Quality                      | T104704197-16-8 | 5/31/2018              |
| Virginia Environmental Accreditation Program                   | 460191          | 12/14/2018             |

<sup>1</sup> Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state or agency requirements. The test results meet requirements of the current NELAP/TNI standards or state or agency requirements, where applicable, except as noted in the laboratory case narrative provided. For a specific list of accredited analytes, refer to <http://www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads/North-America-Downloads>



## ACRONYMS

|            |  |
|------------|--|
| ASTM       | American Society for Testing and Materials   |
| A2LA       | American Association for Laboratory Accreditation  |
| CARB       | California Air Resources Board   |
| CAS Number | Chemical Abstract Service registry Number  |
| CFC        | Chlorofluorocarbon   |
| CFU        | Colony-Forming Unit  |
| DEC        | Department of Environmental Conservation   |
| DEQ        | Department of Environmental Quality  |
| DHS        | Department of Health Services  |
| DOE        | Department of Ecology  |
| DOH        | Department of Health   |
| EPA        | U. S. Environmental Protection Agency  |
| ELAP       | Environmental Laboratory Accreditation Program   |
| GC         | Gas Chromatography   |
| GC/MS      | Gas Chromatography/Mass Spectrometry   |
| LUFT       | Leaking Underground Fuel Tank  |
| M          | Modified   |
| MCL        | Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA. |
| MDL        | Method Detection Limit   |
| MPN        | Most Probable Number   |
| MRL        | Method Reporting Limit   |
| NA         | Not Applicable   |
| NC         | Not Calculated   |
| NCASI      | National Council of the Paper Industry for Air and Stream Improvement  |
| ND         | Not Detected   |
| NIOSH      | National Institute for Occupational Safety and Health  |
| PQL        | Practical Quantitation Limit   |
| RCRA       | Resource Conservation and Recovery Act   |
| SIM        | Selected Ion Monitoring  |
| TPH        | Total Petroleum Hydrocarbons   |
| tr         | Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.                           |



ALS Group USA, Corp.  
dba ALS Environmental

Analyst Summary report

**Client:** Gainesville Regional Utilities  
**Project:** D18A024

**Service Request:** J1800752

**Sample Name:** D18A024-01  
**Lab Code:** J1800752-001  
**Sample Matrix:** Water

**Date Collected:** 01/21/18  
**Date Received:** 01/30/18

**Analysis Method**  
200.7  
200.8

**Extracted/Digested By**  
EGARDNER  
CSULLIVAN

**Analyzed By**  
EGARDNER  
CSULLIVAN

**Sample Name:** D18A024-02  
**Lab Code:** J1800752-002  
**Sample Matrix:** Water

**Date Collected:** 01/23/18  
**Date Received:** 01/30/18

**Analysis Method**  
200.7  
200.8

**Extracted/Digested By**  
EGARDNER  
CSULLIVAN

**Analyzed By**  
EGARDNER  
CSULLIVAN

**Sample Name:** D18A024-03  
**Lab Code:** J1800752-003  
**Sample Matrix:** Water

**Date Collected:** 01/26/18  
**Date Received:** 01/30/18

**Analysis Method**  
200.7  
200.8

**Extracted/Digested By**  
EGARDNER  
CSULLIVAN

**Analyzed By**  
EGARDNER  
CSULLIVAN

**Sample Name:** D18A024-04  
**Lab Code:** J1800752-004  
**Sample Matrix:** Water

**Date Collected:** 01/24/18  
**Date Received:** 01/30/18

**Analysis Method**  
200.7  
200.8

**Extracted/Digested By**  
EGARDNER  
CSULLIVAN

**Analyzed By**  
EGARDNER  
CSULLIVAN

ALS Group USA, Corp.  
dba ALS Environmental

Analyst Summary report

**Client:** Gainesville Regional Utilities  
**Project:** D18A024

**Service Request:** J1800752

**Sample Name:** D18A024-05  
**Lab Code:** J1800752-005  
**Sample Matrix:** Water

**Date Collected:** 01/21/18  
**Date Received:** 01/30/18

**Analysis Method**  
200.7  
200.8

**Extracted/Digested By**  
EGARDNER  
CSULLIVAN

**Analyzed By**  
EGARDNER  
CSULLIVAN

**Sample Name:** D18A024-06  
**Lab Code:** J1800752-006  
**Sample Matrix:** Water

**Date Collected:** 01/23/18  
**Date Received:** 01/30/18

**Analysis Method**  
200.7  
200.8

**Extracted/Digested By**  
EGARDNER  
CSULLIVAN

**Analyzed By**  
EGARDNER  
CSULLIVAN

**Sample Name:** D18A024-07  
**Lab Code:** J1800752-007  
**Sample Matrix:** Water

**Date Collected:** 01/26/18  
**Date Received:** 01/30/18

**Analysis Method**  
200.7  
200.8

**Extracted/Digested By**  
EGARDNER  
CSULLIVAN

**Analyzed By**  
EGARDNER  
CSULLIVAN

**Sample Name:** D18A024-08  
**Lab Code:** J1800752-008  
**Sample Matrix:** Water

**Date Collected:** 01/25/18  
**Date Received:** 01/30/18

**Analysis Method**  
200.7  
200.8

**Extracted/Digested By**  
EGARDNER  
CSULLIVAN

**Analyzed By**  
EGARDNER  
CSULLIVAN

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Analyst Summary report

**Client:** Gainesville Regional Utilities  
**Project:** D18A024

**Service Request:** J1800752

**Sample Name:** D18A024-09  
**Lab Code:** J1800752-009  
**Sample Matrix:** Water

**Date Collected:** 01/27/18  
**Date Received:** 01/30/18

**Analysis Method**  
200.7  
200.8

**Extracted/Digested By**  
EGARDNER  
CSULLIVAN

**Analyzed By**  
EGARDNER  
CSULLIVAN

**Sample Name:** D18A024-10  
**Lab Code:** J1800752-010  
**Sample Matrix:** Water

**Date Collected:** 01/25/18  
**Date Received:** 01/30/18

**Analysis Method**  
200.7  
200.8

**Extracted/Digested By**  
EGARDNER  
CSULLIVAN

**Analyzed By**  
EGARDNER  
CSULLIVAN

**Sample Name:** D18A024-11  
**Lab Code:** J1800752-011  
**Sample Matrix:** Water

**Date Collected:** 01/26/18  
**Date Received:** 01/30/18

**Analysis Method**  
200.7  
200.8

**Extracted/Digested By**  
EGARDNER  
CSULLIVAN

**Analyzed By**  
EGARDNER  
CSULLIVAN

**Sample Name:** D18A024-12  
**Lab Code:** J1800752-012  
**Sample Matrix:** Water

**Date Collected:** 01/26/18  
**Date Received:** 01/30/18

**Analysis Method**  
200.7  
200.8

**Extracted/Digested By**  
EGARDNER  
CSULLIVAN

**Analyzed By**  
EGARDNER  
CSULLIVAN

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**dba ALS Environmental**

Analyst Summary report

**Client:** Gainesville Regional Utilities  
**Project:** D18A024

**Service Request:** J1800752

**Sample Name:** D18A024-13  
**Lab Code:** J1800752-013  
**Sample Matrix:** Water

**Date Collected:** 01/25/18  
**Date Received:** 01/30/18

**Analysis Method**

200.7  
200.8

**Extracted/Digested By**

EGARDNER  
CSULLIVAN

**Analyzed By**

EGARDNER  
CSULLIVAN

**Sample Name:** D18A024-14  
**Lab Code:** J1800752-014  
**Sample Matrix:** Water

**Date Collected:** 01/25/18  
**Date Received:** 01/30/18

**Analysis Method**

200.7  
200.8

**Extracted/Digested By**

EGARDNER  
CSULLIVAN

**Analyzed By**

EGARDNER  
CSULLIVAN



## Sample Results

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[www.alsglobal.com](http://www.alsglobal.com)

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## Metals

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[www.alsglobal.com](http://www.alsglobal.com)

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ALS Group USA, Corp.  
dba ALS Environmental

Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A024  
**Sample Matrix:** Water  
**Sample Name:** D18A024-04  
**Lab Code:** J1800752-004

**Service Request:** J1800752  
**Date Collected:** 01/24/18 09:10  
**Date Received:** 01/30/18 09:25

**Basis:** NA

*R475*

Inorganic Parameters

| Analyte Name      | Analysis Method | Result         | Units | PQL    | MDL     | Dil. | Date Analyzed  | Date Extracted | Q |
|-------------------|-----------------|----------------|-------|--------|---------|------|----------------|----------------|---|
| Aluminum, Total   | 200.7           | <b>0.08</b> IV | mg/L  | 0.10   | 0.010   | 1    | 03/16/18 22:41 | 03/15/18       |   |
| Arsenic, Total    | 200.8           | <b>10.7</b>    | ug/L  | 1.0    | 0.10    | 1    | 02/01/18 19:46 | 02/01/18       |   |
| Barium, Total     | 200.7           | <b>0.009</b> I | mg/L  | 0.010  | 0.001   | 1    | 03/16/18 22:42 | 03/15/18       |   |
| Beryllium, Total  | 200.7           | 0.00006 U      | mg/L  | 0.0040 | 0.00006 | 1    | 03/16/18 22:41 | 03/15/18       |   |
| Cadmium, Total    | 200.7           | 0.0002 U       | mg/L  | 0.0050 | 0.0002  | 1    | 03/16/18 22:42 | 03/15/18       |   |
| Calcium, Total    | 200.7           | <b>101</b>     | mg/L  | 0.10   | 0.04    | 1    | 03/16/18 22:41 | 03/15/18       |   |
| Chromium, Total   | 200.7           | 0.0004 U       | mg/L  | 0.010  | 0.0004  | 1    | 03/16/18 22:42 | 03/15/18       |   |
| Cobalt, Total     | 200.7           | 0.003 U        | mg/L  | 0.010  | 0.003   | 1    | 03/16/18 22:42 | 03/15/18       |   |
| Copper, Total     | 200.7           | 0.0010 U       | mg/L  | 0.010  | 0.0010  | 1    | 03/16/18 22:42 | 03/15/18       |   |
| Iron, Total       | 200.7           | <b>23.2</b>    | mg/L  | 0.10   | 0.010   | 1    | 03/16/18 22:41 | 03/15/18       |   |
| Lead, Total       | 200.8           | 0.03 U         | ug/L  | 0.50   | 0.03    | 1    | 02/01/18 19:46 | 02/01/18       |   |
| Magnesium, Total  | 200.7           | <b>34.0</b>    | mg/L  | 0.10   | 0.009   | 1    | 03/16/18 22:41 | 03/15/18       |   |
| Manganese, Total  | 200.7           | <b>0.142</b>   | mg/L  | 0.010  | 0.0007  | 1    | 03/16/18 22:41 | 03/15/18       |   |
| Molybdenum, Total | 200.7           | <b>0.007</b> I | mg/L  | 0.010  | 0.0003  | 1    | 03/16/18 22:42 | 03/15/18       |   |
| Nickel, Total     | 200.7           | 0.0007 U       | mg/L  | 0.010  | 0.0007  | 1    | 03/16/18 22:42 | 03/15/18       |   |
| Potassium, Total  | 200.7           | <b>0.5</b> IV  | mg/L  | 2.0    | 0.05    | 1    | 03/16/18 22:41 | 03/15/18       |   |
| Selenium, Total   | 200.7           | <b>0.015</b> V | mg/L  | 0.010  | 0.002   | 1    | 03/16/18 22:42 | 03/15/18       |   |
| Silver, Total     | 200.7           | 0.0004 U       | mg/L  | 0.010  | 0.0004  | 1    | 03/16/18 22:41 | 03/15/18       |   |
| Sodium, Total     | 200.7           | <b>9.07</b>    | mg/L  | 0.50   | 0.02    | 1    | 03/16/18 22:41 | 03/15/18       |   |
| Strontium, Total  | 200.7           | <b>0.093</b>   | mg/L  | 0.010  | 0.0001  | 1    | 03/16/18 22:41 | 03/15/18       |   |
| Vanadium, Total   | 200.7           | 0.0008 U       | mg/L  | 0.020  | 0.0008  | 1    | 03/16/18 22:41 | 03/15/18       |   |
| Zinc, Total       | 200.7           | 0.006 U        | mg/L  | 0.020  | 0.006   | 1    | 03/16/18 22:42 | 03/15/18       |   |

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Analytical Report

Client: Gainesville Regional Utilities  
Project: D18A024  
Sample Matrix: Water  
Sample Name: D18A024-06  
Lab Code: J1800752-006

Service Request: J1800752  
Date Collected: 01/23/18 15:25  
Date Received: 01/30/18 09:25

Basis: NA

*RELETH*

Inorganic Parameters

| Analyte Name      | Analysis Method | Result    | Units | PQL    | MDL     | Dil. | Date Analyzed  | Date Extracted | Q |
|-------------------|-----------------|-----------|-------|--------|---------|------|----------------|----------------|---|
| Aluminum, Total   | 200.7           | 0.07 IV   | mg/L  | 0.10   | 0.010   | 1    | 03/16/18 23:08 | 03/15/18       |   |
| Arsenic, Total    | 200.8           | 0.3 I     | ug/L  | 1.0    | 0.10    | 1    | 02/01/18 19:49 | 02/01/18       |   |
| Barium, Total     | 200.7           | 0.010     | mg/L  | 0.010  | 0.001   | 1    | 03/16/18 23:09 | 03/15/18       |   |
| Beryllium, Total  | 200.7           | 0.00006 U | mg/L  | 0.0040 | 0.00006 | 1    | 03/16/18 23:08 | 03/15/18       |   |
| Cadmium, Total    | 200.7           | 0.0002 U  | mg/L  | 0.0050 | 0.0002  | 1    | 03/16/18 23:09 | 03/15/18       |   |
| Calcium, Total    | 200.7           | 47.8      | mg/L  | 0.10   | 0.04    | 1    | 03/16/18 23:07 | 03/15/18       |   |
| Chromium, Total   | 200.7           | 0.0004 U  | mg/L  | 0.010  | 0.0004  | 1    | 03/16/18 23:09 | 03/15/18       |   |
| Cobalt, Total     | 200.7           | 0.003 U   | mg/L  | 0.010  | 0.003   | 1    | 03/16/18 23:09 | 03/15/18       |   |
| Copper, Total     | 200.7           | 0.0010 U  | mg/L  | 0.010  | 0.0010  | 1    | 03/16/18 23:09 | 03/15/18       |   |
| Iron, Total       | 200.7           | 0.03 I    | mg/L  | 0.10   | 0.010   | 1    | 03/16/18 23:08 | 03/15/18       |   |
| Lead, Total       | 200.8           | 0.1 IV    | ug/L  | 0.50   | 0.03    | 1    | 02/01/18 19:49 | 02/01/18       |   |
| Magnesium, Total  | 200.7           | 2.84      | mg/L  | 0.10   | 0.009   | 1    | 03/16/18 23:08 | 03/15/18       |   |
| Manganese, Total  | 200.7           | 0.004 I   | mg/L  | 0.010  | 0.0007  | 1    | 03/16/18 23:09 | 03/15/18       |   |
| Molybdenum, Total | 200.7           | 0.006 I   | mg/L  | 0.010  | 0.0003  | 1    | 03/16/18 23:09 | 03/15/18       |   |
| Nickel, Total     | 200.7           | 0.0007 U  | mg/L  | 0.010  | 0.0007  | 1    | 03/16/18 23:09 | 03/15/18       |   |
| Potassium, Total  | 200.7           | 1.2 I     | mg/L  | 2.0    | 0.05    | 1    | 03/16/18 23:07 | 03/15/18       |   |
| Selenium, Total   | 200.7           | 0.013 V   | mg/L  | 0.010  | 0.002   | 1    | 03/16/18 23:09 | 03/15/18       |   |
| Silver, Total     | 200.7           | 0.0004 U  | mg/L  | 0.010  | 0.0004  | 1    | 03/16/18 23:08 | 03/15/18       |   |
| Sodium, Total     | 200.7           | 7.45      | mg/L  | 0.50   | 0.02    | 1    | 03/16/18 23:07 | 03/15/18       |   |
| Strontium, Total  | 200.7           | 0.087     | mg/L  | 0.010  | 0.0001  | 1    | 03/16/18 23:07 | 03/15/18       |   |
| Vanadium, Total   | 200.7           | 0.011 I   | mg/L  | 0.020  | 0.0008  | 1    | 03/16/18 23:09 | 03/15/18       |   |
| Zinc, Total       | 200.7           | 0.006 U   | mg/L  | 0.020  | 0.006   | 1    | 03/16/18 23:09 | 03/15/18       |   |

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Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A024  
**Sample Matrix:** Water  
**Sample Name:** D18A024-14  
**Lab Code:** J1800752-014

**Service Request:** J1800752  
**Date Collected:** 01/25/18 12:27  
**Date Received:** 01/30/18 09:25

*Eg Blank*

**Basis:** NA

Inorganic Parameters

| Analyte Name      | Analysis Method | Result    | Units | PQL    | MDL     | Dil. | Date Analyzed  | Date Extracted | Q |
|-------------------|-----------------|-----------|-------|--------|---------|------|----------------|----------------|---|
| Aluminum, Total   | 200.7           | 0.01 IV   | mg/L  | 0.10   | 0.010   | 1    | 03/17/18 01:06 | 03/15/18       |   |
| Arsenic, Total    | 200.8           | 0.10 U    | ug/L  | 1.0    | 0.10    | 1    | 02/01/18 20:07 | 02/01/18       |   |
| Barium, Total     | 200.7           | 0.001 U   | mg/L  | 0.010  | 0.001   | 1    | 03/17/18 01:07 | 03/15/18       |   |
| Beryllium, Total  | 200.7           | 0.00006 U | mg/L  | 0.0040 | 0.00006 | 1    | 03/17/18 01:07 | 03/15/18       |   |
| Cadmium, Total    | 200.7           | 0.0002 U  | mg/L  | 0.0050 | 0.0002  | 1    | 03/17/18 01:07 | 03/15/18       |   |
| Calcium, Total    | 200.7           | 0.04 U    | mg/L  | 0.10   | 0.04    | 1    | 03/17/18 01:06 | 03/15/18       |   |
| Chromium, Total   | 200.7           | 0.0004 U  | mg/L  | 0.010  | 0.0004  | 1    | 03/17/18 01:07 | 03/15/18       |   |
| Cobalt, Total     | 200.7           | 0.003 U   | mg/L  | 0.010  | 0.003   | 1    | 03/17/18 01:07 | 03/15/18       |   |
| Copper, Total     | 200.7           | 0.001 IV  | mg/L  | 0.010  | 0.0010  | 1    | 03/17/18 01:07 | 03/15/18       |   |
| Iron, Total       | 200.7           | 0.010 U   | mg/L  | 0.10   | 0.010   | 1    | 03/17/18 01:06 | 03/15/18       |   |
| Lead, Total       | 200.8           | 0.03 U    | ug/L  | 0.50   | 0.03    | 1    | 02/01/18 20:07 | 02/01/18       |   |
| Magnesium, Total  | 200.7           | 0.009 U   | mg/L  | 0.10   | 0.009   | 1    | 03/17/18 01:06 | 03/15/18       |   |
| Manganese, Total  | 200.7           | 0.0007 U  | mg/L  | 0.010  | 0.0007  | 1    | 03/17/18 01:07 | 03/15/18       |   |
| Molybdenum, Total | 200.7           | 0.0003 U  | mg/L  | 0.010  | 0.0003  | 1    | 03/17/18 01:07 | 03/15/18       |   |
| Nickel, Total     | 200.7           | 0.0007 U  | mg/L  | 0.010  | 0.0007  | 1    | 03/17/18 01:07 | 03/15/18       |   |
| Potassium, Total  | 200.7           | 0.08 IV   | mg/L  | 2.0    | 0.05    | 1    | 03/17/18 01:06 | 03/15/18       |   |
| Selenium, Total   | 200.7           | 0.003 IV  | mg/L  | 0.010  | 0.002   | 1    | 03/17/18 01:07 | 03/15/18       |   |
| Silver, Total     | 200.7           | 0.0004 U  | mg/L  | 0.010  | 0.0004  | 1    | 03/17/18 01:07 | 03/15/18       |   |
| Sodium, Total     | 200.7           | 0.02 U    | mg/L  | 0.50   | 0.02    | 1    | 03/17/18 01:06 | 03/15/18       |   |
| Strontium, Total  | 200.7           | 0.0001 U  | mg/L  | 0.010  | 0.0001  | 1    | 03/17/18 01:06 | 03/15/18       |   |
| Vanadium, Total   | 200.7           | 0.0008 U  | mg/L  | 0.020  | 0.0008  | 1    | 03/17/18 01:07 | 03/15/18       |   |
| Zinc, Total       | 200.7           | 0.006 U   | mg/L  | 0.020  | 0.006   | 1    | 03/17/18 01:07 | 03/15/18       |   |



## QC Summary Forms

**ALS Environmental - Jacksonville Laboratory**  
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## Metals

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Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A024  
**Sample Matrix:** Water  
**Sample Name:** Method Blank  
**Lab Code:** J1800752-MB

**Service Request:** J1800752  
**Date Collected:** NA  
**Date Received:** NA  
**Basis:** NA

Inorganic Parameters

| Analyte Name      | Analysis Method | Result         | Units | PQL    | MDL     | Dil. | Date Analyzed  | Date Extracted | Q |
|-------------------|-----------------|----------------|-------|--------|---------|------|----------------|----------------|---|
| Aluminum, Total   | 200.7           | <b>0.02 I</b>  | mg/L  | 0.10   | 0.010   | 1    | 03/16/18 22:09 | 03/15/18       |   |
| Arsenic, Total    | 200.8           | 0.10 U         | ug/L  | 1.0    | 0.10    | 1    | 02/01/18 19:27 | 02/01/18       |   |
| Barium, Total     | 200.7           | 0.001 U        | mg/L  | 0.010  | 0.001   | 1    | 03/16/18 22:11 | 03/15/18       |   |
| Beryllium, Total  | 200.7           | 0.00006 U      | mg/L  | 0.0040 | 0.00006 | 1    | 03/16/18 22:10 | 03/15/18       |   |
| Cadmium, Total    | 200.7           | 0.0002 U       | mg/L  | 0.0050 | 0.0002  | 1    | 03/16/18 22:11 | 03/15/18       |   |
| Calcium, Total    | 200.7           | 0.04 U         | mg/L  | 0.10   | 0.04    | 1    | 03/16/18 22:09 | 03/15/18       |   |
| Chromium, Total   | 200.7           | 0.0004 U       | mg/L  | 0.010  | 0.0004  | 1    | 03/16/18 22:11 | 03/15/18       |   |
| Cobalt, Total     | 200.7           | 0.003 U        | mg/L  | 0.010  | 0.003   | 1    | 03/16/18 22:11 | 03/15/18       |   |
| Copper, Total     | 200.7           | <b>0.001 I</b> | mg/L  | 0.010  | 0.0010  | 1    | 03/16/18 22:10 | 03/15/18       |   |
| Iron, Total       | 200.7           | 0.010 U        | mg/L  | 0.10   | 0.010   | 1    | 03/16/18 22:09 | 03/15/18       |   |
| Lead, Total       | 200.8           | <b>0.03 I</b>  | ug/L  | 0.50   | 0.03    | 1    | 02/01/18 19:27 | 02/01/18       |   |
| Magnesium, Total  | 200.7           | 0.009 U        | mg/L  | 0.10   | 0.009   | 1    | 03/16/18 22:09 | 03/15/18       |   |
| Manganese, Total  | 200.7           | 0.0007 U       | mg/L  | 0.010  | 0.0007  | 1    | 03/16/18 22:11 | 03/15/18       |   |
| Molybdenum, Total | 200.7           | 0.0003 U       | mg/L  | 0.010  | 0.0003  | 1    | 03/16/18 22:11 | 03/15/18       |   |
| Nickel, Total     | 200.7           | 0.0007 U       | mg/L  | 0.010  | 0.0007  | 1    | 03/16/18 22:11 | 03/15/18       |   |
| Potassium, Total  | 200.7           | <b>0.1 I</b>   | mg/L  | 2.0    | 0.05    | 1    | 03/16/18 22:09 | 03/15/18       |   |
| Selenium, Total   | 200.7           | <b>0.004 I</b> | mg/L  | 0.010  | 0.002   | 1    | 03/16/18 22:11 | 03/15/18       |   |
| Silver, Total     | 200.7           | 0.0004 U       | mg/L  | 0.010  | 0.0004  | 1    | 03/16/18 22:10 | 03/15/18       |   |
| Sodium, Total     | 200.7           | 0.02 U         | mg/L  | 0.50   | 0.02    | 1    | 03/16/18 22:09 | 03/15/18       |   |
| Strontium, Total  | 200.7           | 0.0001 U       | mg/L  | 0.010  | 0.0001  | 1    | 03/16/18 22:09 | 03/15/18       |   |
| Vanadium, Total   | 200.7           | 0.0008 U       | mg/L  | 0.020  | 0.0008  | 1    | 03/16/18 22:10 | 03/15/18       |   |
| Zinc, Total       | 200.7           | 0.006 U        | mg/L  | 0.020  | 0.006   | 1    | 03/16/18 22:11 | 03/15/18       |   |

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QA/QC Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A024  
**Sample Matrix:** Water

**Service Request:** J1800752  
**Date Analyzed:** 03/16/18

**Lab Control Sample Summary**  
**Inorganic Parameters**

**Units:**mg/L  
**Basis:**NA

**Lab Control Sample**  
J1800752-LCS

| Analyte Name      | Analytical Method | Result | Spike Amount | % Rec | % Rec Limits |
|-------------------|-------------------|--------|--------------|-------|--------------|
| Aluminum, Total   | 200.7             | 4.87   | 5.00         | 97    | 85-115       |
| Barium, Total     | 200.7             | 0.480  | 0.500        | 96    | 85-115       |
| Beryllium, Total  | 200.7             | 0.193  | 0.200        | 97    | 85-115       |
| Cadmium, Total    | 200.7             | 0.240  | 0.250        | 96    | 85-115       |
| Calcium, Total    | 200.7             | 4.83   | 5.00         | 97    | 85-115       |
| Chromium, Total   | 200.7             | 0.481  | 0.500        | 96    | 85-115       |
| Cobalt, Total     | 200.7             | 0.479  | 0.500        | 96    | 85-115       |
| Copper, Total     | 200.7             | 0.493  | 0.500        | 99    | 85-115       |
| Iron, Total       | 200.7             | 4.93   | 5.00         | 99    | 85-115       |
| Magnesium, Total  | 200.7             | 4.93   | 5.00         | 99    | 85-115       |
| Manganese, Total  | 200.7             | 0.486  | 0.500        | 97    | 85-115       |
| Molybdenum, Total | 200.7             | 0.487  | 0.500        | 97    | 85-115       |
| Nickel, Total     | 200.7             | 0.483  | 0.500        | 97    | 85-115       |
| Potassium, Total  | 200.7             | 98.9   | 100          | 99    | 85-115       |
| Selenium, Total   | 200.7             | 0.497  | 0.500        | 99    | 85-115       |
| Silver, Total     | 200.7             | 0.488  | 0.500        | 98    | 85-115       |
| Sodium, Total     | 200.7             | 25.0   | 25.0         | 100   | 85-115       |
| Strontium, Total  | 200.7             | 0.497  | 0.500        | 99    | 85-115       |
| Vanadium, Total   | 200.7             | 0.998  | 1.00         | 100   | 85-115       |
| Zinc, Total       | 200.7             | 0.976  | 1.00         | 98    | 85-115       |



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QA/QC Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A024  
**Sample Matrix:** Water

**Service Request:** J1800752  
**Date Analyzed:** 02/01/18

**Lab Control Sample Summary**  
**Inorganic Parameters**

**Units:**ug/L  
**Basis:**NA

**Lab Control Sample**  
J1800752-LCS

| <b>Analyte Name</b> | <b>Analytical Method</b> | <b>Result</b> | <b>Spike Amount</b> | <b>% Rec</b> | <b>% Rec Limits</b> |
|---------------------|--------------------------|---------------|---------------------|--------------|---------------------|
| Arsenic, Total      | 200.8                    | 49.8          | 50.0                | 100          | 85-115              |
| Lead, Total         | 200.8                    | 25.8          | 25.0                | 103          | 85-115              |

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QA/QC Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A024  
**Sample Matrix:** Water

**Service Request:** J1800752  
**Date Collected:** 01/26/18  
**Date Received:** 01/30/18  
**Date Analyzed:** 03/16/18  
**Date Extracted:** 03/15/18

**Duplicate Matrix Spike Summary**  
**Inorganic Parameters**

**Sample Name:** D18A024-07  
**Lab Code:** J1800752-007  
**Analysis Method:** 200.7  
**Prep Method:** EPA 3005A

**Units:** mg/L  
**Basis:** NA

| Analyte Name      | Matrix Spike<br>J1800752-007MS |        |                 |       | Duplicate Matrix Spike<br>J1800752-007DMS |                 |       |                 | RPD | RPD<br>Limit |
|-------------------|--------------------------------|--------|-----------------|-------|---|-----------------|-------|-----------------|-----|--------------|
|                   | Sample<br>Result               | Result | Spike<br>Amount | % Rec | Result                                    | Spike<br>Amount | % Rec | % Rec<br>Limits |     |              |
| Aluminum, Total   | 0.15 V                         | 5.12   | 5.00            | 99    | 5.05                                      | 5.00            | 98    | 70-130          | 1   | 20           |
| Barium, Total     | 0.010                          | 0.496  | 0.500           | 97    | 0.497                                     | 0.500           | 97    | 70-130          | <1  | 20           |
| Beryllium, Total  | 0.00006 U                      | 0.199  | 0.200           | 100   | 0.199                                     | 0.200           | 100   | 70-130          | <1  | 20           |
| Cadmium, Total    | 0.0002 U                       | 0.244  | 0.250           | 98    | 0.244                                     | 0.250           | 98    | 70-130          | <1  | 20           |
| Calcium, Total    | 36.3                           | 40.7   | 5.00            | 87 #  | 40.6                                      | 5.00            | 87 #  | 70-130          | <1  | 20           |
| Chromium, Total   | 0.0004 U                       | 0.485  | 0.500           | 97    | 0.486                                     | 0.500           | 97    | 70-130          | <1  | 20           |
| Cobalt, Total     | 0.003 U                        | 0.483  | 0.500           | 97    | 0.484                                     | 0.500           | 97    | 70-130          | <1  | 20           |
| Copper, Total     | 0.0010 U                       | 0.489  | 0.500           | 98    | 0.491                                     | 0.500           | 98    | 70-130          | <1  | 20           |
| Iron, Total       | 0.06 I                         | 5.04   | 5.00            | 100   | 5.01                                      | 5.00            | 99    | 70-130          | <1  | 20           |
| Magnesium, Total  | 16.9                           | 21.7   | 5.00            | 95    | 21.5                                      | 5.00            | 92    | 70-130          | <1  | 20           |
| Manganese, Total  | 0.012                          | 0.498  | 0.500           | 97    | 0.499                                     | 0.500           | 97    | 70-130          | <1  | 20           |
| Molybdenum, Total | 0.003 I                        | 0.501  | 0.500           | 100   | 0.502                                     | 0.500           | 100   | 70-130          | <1  | 20           |
| Nickel, Total     | 0.0007 U                       | 0.487  | 0.500           | 97    | 0.488                                     | 0.500           | 98    | 70-130          | <1  | 20           |
| Potassium, Total  | 1.0 IV                         | 101    | 100             | 100   | 101                                       | 100             | 100   | 70-130          | <1  | 20           |
| Selenium, Total   | 0.010 V                        | 0.520  | 0.500           | 102   | 0.518                                     | 0.500           | 102   | 70-130          | <1  | 20           |
| Silver, Total     | 0.0004 U                       | 0.496  | 0.500           | 99    | 0.499                                     | 0.500           | 100   | 70-130          | <1  | 20           |
| Sodium, Total     | 5.82                           | 30.9   | 25.0            | 100   | 30.7                                      | 25.0            | 100   | 70-130          | <1  | 20           |
| Strontium, Total  | 0.059                          | 0.563  | 0.500           | 101   | 0.561                                     | 0.500           | 100   | 70-130          | <1  | 20           |
| Vanadium, Total   | 0.0008 U                       | 1.01   | 1.00            | 101   | 1.01                                      | 1.00            | 101   | 70-130          | <1  | 20           |
| Zinc, Total       | 0.006 U                        | 0.979  | 1.00            | 98    | 0.978                                     | 1.00            | 98    | 70-130          | <1  | 20           |

Results flagged with an asterisk (\*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.  
dba ALS Environmental

QA/QC Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A024  
**Sample Matrix:** Water

**Service Request:** J1800752  
**Date Collected:** 01/26/18  
**Date Received:** 01/30/18  
**Date Analyzed:** 03/17/18  
**Date Extracted:** 03/15/18

**Duplicate Matrix Spike Summary**  
**Inorganic Parameters**

**Sample Name:** D18A024-12  
**Lab Code:** J1800752-012  
**Analysis Method:** 200.7  
**Prep Method:** EPA 3005A

**Units:** mg/L  
**Basis:** NA

| Analyte Name      | Sample Result | Result | Matrix Spike<br>J1800752-012MS |       | Duplicate Matrix Spike<br>J1800752-012DMS |              | % Rec Limits | RPD    | RPD Limit |       |
|-------------------|---------------|--------|--------------------------------|-------|---|--------------|--------------|--------|-----------|-------|
|                   |               |        | Spike Amount                   | % Rec | Result                                    | Spike Amount |              |        |           | % Rec |
| Aluminum, Total   | 0.11 V        | 4.99   | 5.00                           | 98    | 4.97                                      | 5.00         | 97           | 70-130 | <1        | 20    |
| Barium, Total     | 0.003 I       | 0.484  | 0.500                          | 96    | 0.485                                     | 0.500        | 96           | 70-130 | <1        | 20    |
| Beryllium, Total  | 0.00006 U     | 0.195  | 0.200                          | 98    | 0.196                                     | 0.200        | 98           | 70-130 | <1        | 20    |
| Cadmium, Total    | 0.0002 U      | 0.241  | 0.250                          | 96    | 0.242                                     | 0.250        | 97           | 70-130 | <1        | 20    |
| Calcium, Total    | 6.15          | 11.0   | 5.00                           | 97    | 11.2                                      | 5.00         | 101          | 70-130 | 2         | 20    |
| Chromium, Total   | 0.001 I       | 0.477  | 0.500                          | 95    | 0.479                                     | 0.500        | 96           | 70-130 | <1        | 20    |
| Cobalt, Total     | 0.003 U       | 0.482  | 0.500                          | 96    | 0.482                                     | 0.500        | 96           | 70-130 | <1        | 20    |
| Copper, Total     | 0.001 IV      | 0.489  | 0.500                          | 98    | 0.491                                     | 0.500        | 98           | 70-130 | <1        | 20    |
| Iron, Total       | 0.52          | 5.42   | 5.00                           | 98    | 5.50                                      | 5.00         | 100          | 70-130 | 1         | 20    |
| Magnesium, Total  | 3.78          | 8.66   | 5.00                           | 98    | 8.78                                      | 5.00         | 100          | 70-130 | 1         | 20    |
| Manganese, Total  | 0.012         | 0.499  | 0.500                          | 97    | 0.500                                     | 0.500        | 98           | 70-130 | <1        | 20    |
| Molybdenum, Total | 0.001 I       | 0.487  | 0.500                          | 97    | 0.491                                     | 0.500        | 98           | 70-130 | <1        | 20    |
| Nickel, Total     | 0.0007 U      | 0.487  | 0.500                          | 97    | 0.490                                     | 0.500        | 98           | 70-130 | <1        | 20    |
| Potassium, Total  | 0.7 IV        | 99.7   | 100                            | 99    | 98.8                                      | 100          | 98           | 70-130 | <1        | 20    |
| Selenium, Total   | 0.006 IV      | 0.498  | 0.500                          | 98    | 0.498                                     | 0.500        | 98           | 70-130 | <1        | 20    |
| Silver, Total     | 0.0004 U      | 0.486  | 0.500                          | 97    | 0.486                                     | 0.500        | 97           | 70-130 | <1        | 20    |
| Sodium, Total     | 36.0          | 60.7   | 25.0                           | 99    | 60.7                                      | 25.0         | 99           | 70-130 | <1        | 20    |
| Strontium, Total  | 0.004 I       | 0.498  | 0.500                          | 99    | 0.503                                     | 0.500        | 100          | 70-130 | <1        | 20    |
| Vanadium, Total   | 0.001 I       | 0.986  | 1.00                           | 99    | 0.990                                     | 1.00         | 99           | 70-130 | <1        | 20    |
| Zinc, Total       | 0.006 U       | 0.996  | 1.00                           | 100   | 0.998                                     | 1.00         | 100          | 70-130 | <1        | 20    |

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Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.  
dba ALS Environmental

QA/QC Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A024  
**Sample Matrix:** Water

**Service Request:** J1800752  
**Date Collected:** 01/26/18  
**Date Received:** 01/30/18  
**Date Analyzed:** 02/1/18  
**Date Extracted:** 02/1/18

**Duplicate Matrix Spike Summary  
Inorganic Parameters**

**Sample Name:** D18A024-11  
**Lab Code:** J1800752-011  
**Analysis Method:** 200.8  
**Prep Method:** EPA 3005A

**Units:** ug/L  
**Basis:** NA

| Analyte Name   | Sample Result | Result | Matrix Spike<br>J1800752-011MS |       | Duplicate Matrix Spike<br>J1800752-011DMS |              | % Rec Limits | RPD    | RPD Limit |       |
|----------------|---------------|--------|--------------------------------|-------|---|--------------|--------------|--------|-----------|-------|
|                |               |        | Spike Amount                   | % Rec | Result                                    | Spike Amount |              |        |           | % Rec |
| Arsenic, Total | 0.2 I         | 51.4   | 50.0                           | 102   | 51.6                                      | 50.0         | 103          | 70-130 | <1        | 20    |
| Lead, Total    | 0.03 IV       | 25.9   | 25.0                           | 104   | 25.7                                      | 25.0         | 102          | 70-130 | 1         | 20    |

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Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.





March 21, 2018

Service Request No:J1800753

Jeffery Boudreau  
Gainesville Regional Utilities  
10001 NW 13th St  
Gainesville, FL 32653

**Laboratory Results for: D18A027**

Dear Jeffery,

Enclosed are the results of the sample(s) submitted to our laboratory January 30, 2018  
For your reference, these analyses have been assigned our service request number **J1800753**.

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and ALS Environmental is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report. In accordance to the NELAC 2003 Standard, a statement on the estimated uncertainty of measurement of any quantitative analysis will be supplied upon request.

Respectfully submitted,

**ALS Group USA, Corp. dba ALS Environmental**

Gina Bondani  
Project Manager

ADDRESS 9143 Philips Highway, Suite 200, Jacksonville, FL 32256  
PHONE +1 904 739 2277 | FAX +1 904 739 2011  
ALS Group USA, Corp.  
dba ALS Environmental



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## Table of Contents

|                            |    |
|----------------------------|----|
| CoverLetter                | 1  |
| Table of Contents          | 2  |
| Narrative Documents        | 4  |
| Narrative Documents        | 5  |
| Sample Receipt Information | 6  |
| Sample Cross-Reference     | 7  |
| Chain Of Custody           | 8  |
| Miscellaneous Forms        | 13 |
| Qualifiers                 | 14 |
| Acronyms                   | 16 |
| Analyst Summary            | 17 |
| Sample Results             | 21 |
| Metals                     | 22 |
| D18A027-01 - Metals        | 23 |
| D18A027-02 - Metals        | 24 |
| D18A027-03 - Metals        | 25 |
| D18A027-04 - Metals        | 26 |
| D18A027-05 - Metals        | 27 |
| D18A027-06 - Metals        | 28 |
| D18A027-07 - Metals        | 29 |
| D18A027-08 - Metals        | 30 |
| D18A027-09 - Metals        | 31 |

## Table of Contents (continued)

|   |    |
|---|----|
| D18A027-10 - Metals                     | 32 |
| D18A027-11 - Metals                     | 33 |
| D18A027-12 - Metals                     | 34 |
| D18A027-13 - Metals                     | 35 |
| D18A027-15 - Metals                     | 36 |
| QC Summary Forms                        | 37 |
| Metals                                  | 38 |
| 200.7 - Inorganic Parameters            |    |
| Method Blank - Metals                   | 39 |
| J1800753-LCS - LCS Metals               | 40 |
| D18A027-02 - DMS Metals                 | 42 |
| J1800753-010DMS D18A027-10 - DMS Metals | 44 |
| 200.8 - Inorganic Parameters            |    |
| J1800753-013DMS D18A027-13 - DMS Metals | 45 |





# Narrative Documents

**ALS Environmental—Jacksonville Laboratory**  
9143 Philips Highway, Suite 200, Jacksonville, FL 32256  
Phone (904) 739-2277 Fax (904) 739-2011  
[www.alsglobal.com](http://www.alsglobal.com)



**Client:** Gainesville Regional Utilities  
**Project:** D18A027  
**Sample Matrix:** Water

**Service Request:** J1800753  
**Date Received:** 1/30/18

### CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier II data deliverables, including results of QC samples analyzed from this delivery group. When appropriate to the procedure, method blank results have been reported with each analytical test. Analytical procedures performed by the lab are validated in accordance with NELAC standards. Parameters that are included in the NELAC Fields of Testing but are not included in the lab's NELAC accreditation are identified in the discussion of each analytical procedure.

#### Sample Receipt

14 water samples were received for analysis at ALS Environmental on 1/30/18. The samples were received in good condition and consistent with the accompanying chain of custody form. Samples are refrigerated at  $\leq 6^{\circ}\text{C}$  upon receipt at the lab except for aqueous samples designated for metals analyses, which are stored at room temperature.

#### Metals Analyses:

No significant data anomalies were noted with this analysis.

#### Revision Notes:

This revised report replaces the original report generated on 2/5/18 at 1:52pm. The revised report includes additional metals analytes as requested by the client.

Approved by  Date 3/21/2018



## Sample Receipt Information

**ALS Environmental—Jacksonville Laboratory**  
9143 Philips Highway, Suite 200, Jacksonville, FL 32256  
Phone (904) 739-2277 Fax (904) 739-2011  
[www.alsglobal.com](http://www.alsglobal.com)

**Client:** Gainesville Regional Utilities  
**Project:** D18A027

**Service Request:**J1800753

**SAMPLE CROSS-REFERENCE**

| <u>SAMPLE #</u> | <u>CLIENT SAMPLE ID</u> | <u>DATE</u> | <u>TIME</u> |
|-----------------|-------------------------|-------------|-------------|
| J1800753-001    | D18A027-01              | 1/23/2018   | 1408        |
| J1800753-002    | D18A027-02              | 1/24/2018   | 0808        |
| J1800753-003    | D18A027-03              | 1/24/2018   | 1139        |
| J1800753-004    | D18A027-04              | 1/24/2018   | 1334        |
| J1800753-005    | D18A027-05              | 1/23/2018   | 1650        |
| J1800753-006    | D18A027-06              | 1/25/2018   | 0922        |
| J1800753-007    | D18A027-07              | 1/25/2018   | 1128        |
| J1800753-008    | D18A027-08              | 1/24/2018   | 1449        |
| J1800753-009    | D18A027-09              | 1/21/2018   | 1642        |
| J1800753-010    | D18A027-10              | 1/23/2018   | 1204        |
| J1800753-011    | D18A027-11              | 1/21/2018   | 1052        |
| J1800753-012    | D18A027-12              | 1/24/2018   | 0910        |
| J1800753-013    | D18A027-13              | 1/23/2018   | 1525        |
| J1800753-014    | D18A027-15              | 1/25/2018   | 1227        |

**Cooler Receipt Form**

Client: GRU Service Request #: 51800753  
 Project: D18A027 Shipping paid by ALS? Yes  No  N/A  
 Cooler received on 01/30/18 and opened on 01/30/18 by [Signature]  
 COURIER: ALS UPS FEDEX DHL Client Other \_\_\_\_\_ Airbill # 8127 8324 8356

- 1 Were custody seals on outside of cooler? Yes  No   
 If yes, how many and where? #: \_\_\_ on lid other \_\_\_\_\_
- 2 Were seals intact and signature and date correct? Yes  No  N/A
- 3 Were custody papers properly filled out? Yes  No  N/A
- 4 Temperature of cooler(s) upon receipt (Should be 0°C and ≤ 6°C) Ambient \_\_\_\_\_
- 5 Thermometer ID N/A \_\_\_\_\_
- 6 Temperature Blank Present? Yes  No
- 7 Were Ice or Ice Packs present Ice  Ice Packs  No
- 8 Did all bottles arrive in good condition (unbroken, etc....)?  Yes  No  N/A
- 9 Type of packing material present Netting  Vial Holder  Bubble Wrap   
 Paper  Styrofoam  Other  N/A
- 10 Were all bottle labels complete (sample ID, preservation, etc....)?  Yes  No  N/A
- 11 Did all bottle labels and tags agree with custody papers?  Yes  No  N/A
- 12 Were the correct bottles used for the tests indicated?  Yes  No  N/A
- 13 Were all of the preserved bottles received with the appropriate preservative?  Yes  No  N/A  
HNO3 pH<2 H2SO4 pH<2 ZnAc2/NaOH pH>9 NaOH pH>12 HCl pH<2  
 Preservative additions noted below
- 14 Were all samples received within analysis holding times?  Yes  No  N/A
- 15 Were VOA vials free of air bubbles greater than 6mm? If present, note below Yes  No  N/A
- 16 Where did the bottles originate? ALS  Client

| Sample ID | Reagent | Lot # | ml added | Initials Date/Time |
|-----------|---------|-------|----------|--------------------|
|           |         |       |          |                    |
|           |         |       |          |                    |
|           |         |       |          |                    |
|           |         |       |          |                    |
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|           |         |       |          |                    |
|           |         |       |          |                    |
|           |         |       |          |                    |
|           |         |       |          |                    |

Additional comments and/or explanation of all discrepancies noted above:  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Client approval to run samples if discrepancies noted: \_\_\_\_\_ Date: \_\_\_\_\_



**SUBCONTRACT ORDER**  
**Deerhaven Generating Station**  
**D18A027**

J1800753

**SENDING LABORATORY:**

Gainesville Regional Utilities  
 Deerhaven Generating Station  
 10001 NW 13th Street  
 Gainesville, FL 32653  
 Phone: 352-334-3434  
 Fax: 352-334-3149  
 Project Manager: Jeff Boudreau

**RECEIVING LABORATORY:**

ALS Global  
 9143 Philips Highway, Suite 200  
 Jacksonville, FL 32256  
 Phone : (904) 394-4426  
 Fax: (904) 739-2011

**J1800753**  
 Gainesville Regional Utilities  
 D18A027

**5**



| Analysis                             | Expires         | Laboratory ID                   | Comments |
|--------------------------------------|-----------------|---------------------------------|----------|
| <b>Sample Name: SIS-1</b>            |                 |                                 |          |
| <b>Sample ID: D18A027-01</b>         | <b>Water</b>    | <b>Sampled: 23-Jan-18 14:08</b> |          |
| D_Arsenic by 200.8                   | 22-Jul-18 14:08 |                                 |          |
| D_Boron by 200.7                     | 22-Jul-18 14:08 |                                 |          |
| D_Lead by 200.8                      | 22-Jul-18 14:08 |                                 |          |
| D_Lithium by 200.7                   | 22-Jul-18 14:08 |                                 |          |
| D_Thallium by 200.8                  | 22-Jul-18 14:08 |                                 |          |
| D_Antimony by 200.8                  | 22-Jul-18 14:08 |                                 |          |
| <i>Containers Supplied:</i>          |                 |                                 |          |
| D_HDPE, HNO3 pH<2 - 250mL extra2 (B) |                 |                                 |          |
| <b>Sample Name: SIS-2</b>            |                 |                                 |          |
| <b>Sample ID: D18A027-02</b>         | <b>Water</b>    | <b>Sampled: 24-Jan-18 08:08</b> |          |
| D_Antimony by 200.8                  | 23-Jul-18 08:08 |                                 |          |
| D_Arsenic by 200.8                   | 23-Jul-18 08:08 |                                 |          |
| D_Boron by 200.7                     | 23-Jul-18 08:08 |                                 |          |
| D_Lead by 200.8                      | 23-Jul-18 08:08 |                                 |          |
| D_Lithium by 200.7                   | 23-Jul-18 08:08 |                                 |          |
| D_Thallium by 200.8                  | 23-Jul-18 08:08 |                                 |          |
| <i>Containers Supplied:</i>          |                 |                                 |          |
| D_HDPE, HNO3 pH<2 - 250mL extra2 (B) |                 |                                 |          |
| <b>Sample Name: SIS-3</b>            |                 |                                 |          |
| <b>Sample ID: D18A027-03</b>         | <b>Water</b>    | <b>Sampled: 24-Jan-18 11:39</b> |          |
| D_Boron by 200.7                     | 23-Jul-18 11:39 |                                 |          |
| D_Thallium by 200.8                  | 23-Jul-18 11:39 |                                 |          |
| D_Lead by 200.8                      | 23-Jul-18 11:39 |                                 |          |
| D_Arsenic by 200.8                   | 23-Jul-18 11:39 |                                 |          |
| D_Antimony by 200.8                  | 23-Jul-18 11:39 |                                 |          |
| D_Lithium by 200.7                   | 23-Jul-18 11:39 |                                 |          |
| <i>Containers Supplied:</i>          |                 |                                 |          |
| D_HDPE, HNO3 pH<2 - 250mL extra2 (B) |                 |                                 |          |

*As, B, Li  
 As, Pb<sup>Sb</sup>, Tl 200.8  
 B, Li 200.7*

*As, Pb<sup>Sb</sup>, Tl, 200.8  
 B, Li 200.7*

*As, Pb, Sb, Tl 200.8  
 B, Li 200.7*

Released By: *Shelby Phillips* Date: *1-29-18* via Fedex  
 Received By: *Mark B...* Date: *01/30/18 0925*

Released By \_\_\_\_\_ Date \_\_\_\_\_ Received By \_\_\_\_\_ Date \_\_\_\_\_



**SUBCONTRACT ORDER**  
**Deerhaven Generating Station**  
**D18A027**

51800753

| Analysis                             | Expires         | Laboratory ID                  | Comments                            |
|--------------------------------------|-----------------|--------------------------------|-------------------------------------|
| <b>Sample Name: SIS-4</b>            |                 |                                |                                     |
| <b>Sample ID: D18A027-04</b>         | <b>Water</b>    | <b>Sampled:24-Jan-18 13:34</b> |                                     |
| D_Lithium by 200.7                   | 23-Jul-18 13:34 |                                |                                     |
| D_Thallium by 200.8                  | 23-Jul-18 13:34 |                                |                                     |
| D_Lead by 200.8                      | 23-Jul-18 13:34 |                                | As, Pb, Sb, Ti 200.8<br>B. Li 200.7 |
| D_Boron by 200.7                     | 23-Jul-18 13:34 |                                |                                     |
| D_Arsenic by 200.8                   | 23-Jul-18 13:34 |                                |                                     |
| D_Antimony by 200.8                  | 23-Jul-18 13:34 |                                |                                     |
| <i>Containers Supplied:</i>          |                 |                                |                                     |
| D_HDPE, HNO3 pH<2 - 250mL extra2 (B) |                 |                                |                                     |
| <b>Sample Name: LF-1</b>             |                 |                                |                                     |
| <b>Sample ID: D18A027-05</b>         | <b>Water</b>    | <b>Sampled:23-Jan-18 16:50</b> |                                     |
| D_Arsenic by 200.8                   | 22-Jul-18 16:50 |                                |                                     |
| D_Boron by 200.7                     | 22-Jul-18 16:50 |                                |                                     |
| D_Lead by 200.8                      | 22-Jul-18 16:50 |                                |                                     |
| D_Lithium by 200.7                   | 22-Jul-18 16:50 |                                |                                     |
| D_Thallium by 200.8                  | 22-Jul-18 16:50 |                                |                                     |
| D_Antimony by 200.8                  | 22-Jul-18 16:50 |                                |                                     |
| <i>Containers Supplied:</i>          |                 |                                |                                     |
| D_HDPE, HNO3 pH<2 - 250mL extra2 (B) |                 |                                |                                     |
| <b>Sample Name: LF-2</b>             |                 |                                |                                     |
| <b>Sample ID: D18A027-06</b>         | <b>Water</b>    | <b>Sampled:25-Jan-18 09:22</b> |                                     |
| D_Boron by 200.7                     | 24-Jul-18 09:22 |                                |                                     |
| D_Antimony by 200.8                  | 24-Jul-18 09:22 |                                |                                     |
| D_Lead by 200.8                      | 24-Jul-18 09:22 |                                |                                     |
| D_Lithium by 200.7                   | 24-Jul-18 09:22 |                                |                                     |
| D_Thallium by 200.8                  | 24-Jul-18 09:22 |                                |                                     |
| D_Arsenic by 200.8                   | 24-Jul-18 09:22 |                                |                                     |
| <i>Containers Supplied:</i>          |                 |                                |                                     |
| D_HDPE, HNO3 pH<2 - 250mL extra2 (B) |                 |                                |                                     |
| <b>Sample Name: LF-3</b>             |                 |                                |                                     |
| <b>Sample ID: D18A027-07</b>         | <b>Water</b>    | <b>Sampled:25-Jan-18 11:28</b> |                                     |
| D_Antimony by 200.8                  | 24-Jul-18 11:28 |                                |                                     |
| D_Arsenic by 200.8                   | 24-Jul-18 11:28 |                                |                                     |
| D_Boron by 200.7                     | 24-Jul-18 11:28 |                                |                                     |
| D_Lead by 200.8                      | 24-Jul-18 11:28 |                                |                                     |
| D_Lithium by 200.7                   | 24-Jul-18 11:28 |                                |                                     |
| D_Thallium by 200.8                  | 24-Jul-18 11:28 |                                |                                     |
| <i>Containers Supplied:</i>          |                 |                                |                                     |
| D_HDPE, HNO3 pH<2 - 250mL extra2 (B) |                 |                                |                                     |

Released By: *Shelley Phillips* Date: *1-29-18* *via Fedex* Received By: *Matthews* Date: *01/30/18 0925*

---

Released By: \_\_\_\_\_ Date: \_\_\_\_\_ Received By: \_\_\_\_\_ Date: \_\_\_\_\_



**SUBCONTRACT ORDER**  
**Deerhaven Generating Station**  
**D18A027**

J180053

| Analysis                             | Expires         | Laboratory ID                  | Comments |
|--------------------------------------|-----------------|--------------------------------|----------|
| <b>Sample Name: LF-4</b>             |                 |                                |          |
| <b>Sample ID: D18A027-08</b>         | <b>Water</b>    | <b>Sampled:24-Jan-18 14:49</b> |          |
| D_Lithium by 200.7                   | 23-Jul-18 14:49 |                                |          |
| D_Thallium by 200.8                  | 23-Jul-18 14:49 |                                |          |
| D_Lead by 200.8                      | 23-Jul-18 14:49 |                                |          |
| D_Arsenic by 200.8                   | 23-Jul-18 14:49 |                                |          |
| D_Antimony by 200.8                  | 23-Jul-18 14:49 |                                |          |
| D_Boron by 200.7                     | 23-Jul-18 14:49 |                                |          |
| <i>Containers Supplied:</i>          |                 |                                |          |
| D_HDPE, HNO3 pH<2 - 250mL extra2 (B) |                 |                                |          |
| <b>Sample Name: MWD-1-6 (R1T6)</b>   |                 |                                |          |
| <b>Sample ID: D18A027-09</b>         | <b>Water</b>    | <b>Sampled:21-Jan-18 16:42</b> |          |
| D_Lithium by 200.7                   | 20-Jul-18 16:42 |                                |          |
| <i>Containers Supplied:</i>          |                 |                                |          |
| D_HDPE, HNO3 pH<2 - 250mL extra (B)  |                 |                                |          |
| <b>Sample Name: MWB-2-1 (R2T1)</b>   |                 |                                |          |
| <b>Sample ID: D18A027-10</b>         | <b>Water</b>    | <b>Sampled:23-Jan-18 12:04</b> |          |
| D_Lithium by 200.7                   | 22-Jul-18 12:04 |                                |          |
| <i>Containers Supplied:</i>          |                 |                                |          |
| D_HDPE, HNO3 pH<2 - 250mL extra (B)  |                 |                                |          |
| <b>Sample Name: MWD-6-1 (R6T1B)</b>  |                 |                                |          |
| <b>Sample ID: D18A027-11</b>         | <b>Water</b>    | <b>Sampled:21-Jan-18 10:52</b> |          |
| D_Lithium by 200.7                   | 20-Jul-18 10:52 |                                |          |
| <i>Containers Supplied:</i>          |                 |                                |          |
| D_HDPE, HNO3 pH<2 - 250mL extra (B)  |                 |                                |          |
| <b>Sample Name: MWI-4-5 (R4T5B)</b>  |                 |                                |          |
| <b>Sample ID: D18A027-12</b>         | <b>Water</b>    | <b>Sampled:24-Jan-18 09:10</b> |          |
| D_Antimony by 200.8                  | 23-Jul-18 09:10 |                                |          |
| D_Boron by 200.7                     | 23-Jul-18 09:10 |                                |          |
| D_Thallium by 200.8                  | 23-Jul-18 09:10 |                                |          |
| D_Lithium by 200.7                   | 23-Jul-18 09:10 |                                |          |
| <i>Containers Supplied:</i>          |                 |                                |          |
| D_HDPE, HNO3 pH<2 - 250mL extra2 (B) |                 |                                |          |
| <b>Sample Name: MWI-6-4 (R6T4B)</b>  |                 |                                |          |
| <b>Sample ID: D18A027-13</b>         | <b>Water</b>    | <b>Sampled:23-Jan-18 15:25</b> |          |
| D_Thallium by 200.8                  | 22-Jul-18 15:25 |                                |          |
| D_Lithium by 200.7                   | 22-Jul-18 15:25 |                                |          |
| D_Boron by 200.7                     | 22-Jul-18 15:25 |                                |          |
| D_Antimony by 200.8                  | 22-Jul-18 15:25 |                                |          |
| <i>Containers Supplied:</i>          |                 |                                |          |
| D_HDPE, HNO3 pH<2 - 250mL extra2 (B) |                 |                                |          |

Released By: *Shelley Phillips* Date: *1-29-18* Received By: *via Fedex [Signature]* Date: *01/30/18 0925*

Released By: \_\_\_\_\_ Date: \_\_\_\_\_ Received By: \_\_\_\_\_ Date: \_\_\_\_\_





**SUBCONTRACT ORDER**  
**Deerhaven Generating Station**  
**D18A027**

51800753

| Analysis                             | Expires         | Laboratory ID                   | Comments |
|--------------------------------------|-----------------|---------------------------------|----------|
| <b>Sample Name: EBLANK</b>           |                 |                                 |          |
| <b>Sample ID: D18A027-15</b>         | <b>Water</b>    | <b>Sampled: 25-Jan-18 12:27</b> |          |
| D_Thallium by 200.8                  | 24-Jul-18 12:27 |                                 |          |
| D_Lithium by 200.7                   | 24-Jul-18 12:27 |                                 |          |
| D_Antimony by 200.8                  | 24-Jul-18 12:27 |                                 |          |
| D_Boron by 200.7                     | 24-Jul-18 12:27 |                                 |          |
| <i>Containers Supplied:</i>          |                 |                                 |          |
| D_HDPE, HNO3 pH<2 - 250mL extra2 (B) |                 |                                 |          |

|             |         |                  |             |          |      |
|-------------|---------|------------------|-------------|----------|------|
|             | 1-29-18 | <i>via Fedex</i> |             | 01/30/18 | 8925 |
| Released By | Date    |                  | Received By | Date     |      |
| Released By | Date    |                  | Received By | Date     |      |



## Miscellaneous Forms

**ALS Environmental—Jacksonville Laboratory**  
9143 Philips Highway, Suite 200, Jacksonville, FL 32256  
Phone (904) 739-2277 Fax (904) 739-2011  
[www.alsglobal.com](http://www.alsglobal.com)



## **FLORIDA DEP DATA QUALIFIERS**

- B Results based upon colony counts outside the acceptable range.
- D Measurement was made in the field.
- H Value based on field kit determination; results may not be accurate.
- I The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
- J Estimated value (one of the following reasons is discussed in the project case narrative).
1. The result may be inaccurate because the surrogate recovery limits have been exceeded.
  2. No known quality control criteria exists for the component.
  3. The reported value failed to meet the established quality control criteria for either precision or accuracy.
  4. The sample matrix interfered with the ability to make any accurate determination (e.g., primary and confirmation results show greater than 40% RPD).
  5. The data is questionable because of improper laboratory or field protocols (e.g., GC/MS Tune did not meet method criteria).
- K Off scale low. The value is less than the lowest calibration standard but greater than the method reporting limit (MRL).
- L Off scale high. The analyte is above the upper limit of the linear calibration range.
- M The MDL/MRL has been elevated because the analyte could not be accurately quantified due to matrix interference.
- N Presumptive evidence of the analyte. Confirmation was not performed.
- Q Sample held beyond the accepted holding time.
- T Value reported is less than the laboratory method detection limit. The value is reported for informational purposes only.
- U Indicates that the compound was analyzed for but not detected.
- V Indicates that the analyte was detected in both the sample and the associated method blank.
- Y The laboratory analysis was from an improperly preserved sample.
- Z Too many colonies were present (TNTC). The numeric value represents the filtration volume.



**Jacksonville Lab ID # for State Certifications<sup>1</sup>**

| <b>Agency</b>  | <b>Number</b>   | <b>Expiration Date</b> |
|--|-----------------|------------------------|
| Department of Defense  | 66206           | 7/31/2018              |
| Florida Department of Health                                   | E82502          | 6/30/2018              |
| Georgia Department of Natural Resources                        | 958             | 6/30/2018              |
| Kentucky Division of Waste Management                          | 123042          | 6/30/2018              |
| Louisiana Department of Environmental Quality                  | 02086           | 6/30/2018              |
| Maine Department of Health and Human Services                  | 2015002         | 2/3/2019               |
| North Carolina Department of Environment and Natural Resources | 527             | 12/31/2018             |
| Pennsylvania Department of Environmental Protection            | 68-04835        | 8/31/2018              |
| South Carolina Department of Health and Environmental Control  | 96021001        | 6/30/2018              |
| Texas Commission on Environmental Quality                      | T104704197-16-8 | 5/31/2018              |
| Virginia Environmental Accreditation Program                   | 460191          | 12/14/2018             |

<sup>1</sup> Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state or agency requirements. The test results meet requirements of the current NELAP/TNI standards or state or agency requirements, where applicable, except as noted in the laboratory case narrative provided. For a specific list of accredited analytes, refer to <http://www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads/North-America-Downloads>



## ACRONYMS

|            |  |
|------------|--|
| ASTM       | American Society for Testing and Materials   |
| A2LA       | American Association for Laboratory Accreditation  |
| CARB       | California Air Resources Board   |
| CAS Number | Chemical Abstract Service registry Number  |
| CFC        | Chlorofluorocarbon   |
| CFU        | Colony-Forming Unit  |
| DEC        | Department of Environmental Conservation   |
| DEQ        | Department of Environmental Quality  |
| DHS        | Department of Health Services  |
| DOE        | Department of Ecology  |
| DOH        | Department of Health   |
| EPA        | U. S. Environmental Protection Agency  |
| ELAP       | Environmental Laboratory Accreditation Program   |
| GC         | Gas Chromatography   |
| GC/MS      | Gas Chromatography/Mass Spectrometry   |
| LUFT       | Leaking Underground Fuel Tank  |
| M          | Modified   |
| MCL        | Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA. |
| MDL        | Method Detection Limit   |
| MPN        | Most Probable Number   |
| MRL        | Method Reporting Limit   |
| NA         | Not Applicable   |
| NC         | Not Calculated   |
| NCASI      | National Council of the Paper Industry for Air and Stream Improvement  |
| ND         | Not Detected   |
| NIOSH      | National Institute for Occupational Safety and Health  |
| PQL        | Practical Quantitation Limit   |
| RCRA       | Resource Conservation and Recovery Act   |
| SIM        | Selected Ion Monitoring  |
| TPH        | Total Petroleum Hydrocarbons   |
| tr         | Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.                           |

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Analyst Summary report

**Client:** Gainesville Regional Utilities  
**Project:** D18A027

**Service Request:** J1800753

**Sample Name:** D18A027-01  
**Lab Code:** J1800753-001  
**Sample Matrix:** Water

**Date Collected:** 01/23/18  
**Date Received:** 01/30/18

**Analysis Method**  
200.7  
200.8

**Extracted/Digested By**  
EGARDNER  
CSULLIVAN

**Analyzed By**  
EGARDNER  
CSULLIVAN

**Sample Name:** D18A027-02  
**Lab Code:** J1800753-002  
**Sample Matrix:** Water

**Date Collected:** 01/24/18  
**Date Received:** 01/30/18

**Analysis Method**  
200.7  
200.8

**Extracted/Digested By**  
EGARDNER  
CSULLIVAN

**Analyzed By**  
EGARDNER  
CSULLIVAN

**Sample Name:** D18A027-03  
**Lab Code:** J1800753-003  
**Sample Matrix:** Water

**Date Collected:** 01/24/18  
**Date Received:** 01/30/18

**Analysis Method**  
200.7  
200.8

**Extracted/Digested By**  
EGARDNER  
CSULLIVAN

**Analyzed By**  
EGARDNER  
CSULLIVAN

**Sample Name:** D18A027-04  
**Lab Code:** J1800753-004  
**Sample Matrix:** Water

**Date Collected:** 01/24/18  
**Date Received:** 01/30/18

**Analysis Method**  
200.7  
200.8

**Extracted/Digested By**  
EGARDNER  
CSULLIVAN

**Analyzed By**  
EGARDNER  
CSULLIVAN

ALS Group USA, Corp.  
dba ALS Environmental

Analyst Summary report

**Client:** Gainesville Regional Utilities  
**Project:** D18A027

**Service Request:** J1800753

**Sample Name:** D18A027-05  
**Lab Code:** J1800753-005  
**Sample Matrix:** Water

**Date Collected:** 01/23/18  
**Date Received:** 01/30/18

**Analysis Method**  
200.7  
200.8

**Extracted/Digested By**  
EGARDNER  
CSULLIVAN

**Analyzed By**  
EGARDNER  
CSULLIVAN

**Sample Name:** D18A027-06  
**Lab Code:** J1800753-006  
**Sample Matrix:** Water

**Date Collected:** 01/25/18  
**Date Received:** 01/30/18

**Analysis Method**  
200.7  
200.8

**Extracted/Digested By**  
EGARDNER  
CSULLIVAN

**Analyzed By**  
EGARDNER  
CSULLIVAN

**Sample Name:** D18A027-07  
**Lab Code:** J1800753-007  
**Sample Matrix:** Water

**Date Collected:** 01/25/18  
**Date Received:** 01/30/18

**Analysis Method**  
200.7  
200.8

**Extracted/Digested By**  
EGARDNER  
CSULLIVAN

**Analyzed By**  
EGARDNER  
CSULLIVAN

**Sample Name:** D18A027-08  
**Lab Code:** J1800753-008  
**Sample Matrix:** Water

**Date Collected:** 01/24/18  
**Date Received:** 01/30/18

**Analysis Method**  
200.7  
200.8

**Extracted/Digested By**  
EGARDNER  
CSULLIVAN

**Analyzed By**  
EGARDNER  
CSULLIVAN

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dba ALS Environmental

Analyst Summary report

**Client:** Gainesville Regional Utilities  
**Project:** D18A027

**Service Request:** J1800753

**Sample Name:** D18A027-09  
**Lab Code:** J1800753-009  
**Sample Matrix:** Water

**Date Collected:** 01/21/18  
**Date Received:** 01/30/18

**Analysis Method**  
200.7

**Extracted/Digested By**  
EGARDNER

**Analyzed By**  
EGARDNER

**Sample Name:** D18A027-10  
**Lab Code:** J1800753-010  
**Sample Matrix:** Water

**Date Collected:** 01/23/18  
**Date Received:** 01/30/18

**Analysis Method**  
200.7

**Extracted/Digested By**  
EGARDNER

**Analyzed By**  
EGARDNER

**Sample Name:** D18A027-11  
**Lab Code:** J1800753-011  
**Sample Matrix:** Water

**Date Collected:** 01/21/18  
**Date Received:** 01/30/18

**Analysis Method**  
200.7

**Extracted/Digested By**  
EGARDNER

**Analyzed By**  
EGARDNER

**Sample Name:** D18A027-12  
**Lab Code:** J1800753-012  
**Sample Matrix:** Water

**Date Collected:** 01/24/18  
**Date Received:** 01/30/18

**Analysis Method**  
200.7  
200.8

**Extracted/Digested By**  
EGARDNER  
CSULLIVAN

**Analyzed By**  
EGARDNER  
CSULLIVAN



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Analyst Summary report

**Client:** Gainesville Regional Utilities  
**Project:** D18A027

**Service Request:** J1800753

**Sample Name:** D18A027-13  
**Lab Code:** J1800753-013  
**Sample Matrix:** Water

**Date Collected:** 01/23/18  
**Date Received:** 01/30/18

**Analysis Method**  
200.7  
200.8

**Extracted/Digested By**  
EGARDNER  
CSULLIVAN

**Analyzed By**  
EGARDNER  
CSULLIVAN

**Sample Name:** D18A027-15  
**Lab Code:** J1800753-014  
**Sample Matrix:** Water

**Date Collected:** 01/25/18  
**Date Received:** 01/30/18

**Analysis Method**  
200.7  
200.8

**Extracted/Digested By**  
EGARDNER  
CSULLIVAN

**Analyzed By**  
EGARDNER  
CSULLIVAN



# Sample Results

**ALS Environmental—Jacksonville Laboratory**  
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[www.alsglobal.com](http://www.alsglobal.com)



# Metals

**ALS Environmental—Jacksonville Laboratory**  
9143 Philips Highway, Suite 200, Jacksonville, FL 32256  
Phone (904)739-2277 Fax (904)739-2011  
[www.alsglobal.com](http://www.alsglobal.com)

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dba ALS Environmental

Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A027  
**Sample Matrix:** Water  
**Sample Name:** D18A027-01  
**Lab Code:** J1800753-001

**Service Request:** J1800753  
**Date Collected:** 01/23/18 14:08  
**Date Received:** 01/30/18 09:25  
**Basis:** NA

Inorganic Parameters

| Analyte Name      | Analysis Method | Result | Units | PQL  | MDL  | Dil. | Date Analyzed  | Date Extracted | Q |
|-------------------|-----------------|--------|-------|------|------|------|----------------|----------------|---|
| Antimony, Total   | 200.8           | 0.2 I  | ug/L  | 1.0  | 0.04 | 1    | 02/01/18 20:15 | 02/01/18       |   |
| Arsenic, Total    | 200.8           | 0.8 I  | ug/L  | 1.0  | 0.10 | 1    | 02/01/18 20:15 | 02/01/18       |   |
| Barium, Total     | 200.7           | 11     | ug/L  | 10   | 0.3  | 1    | 02/02/18 17:22 | 02/02/18       |   |
| Beryllium, Total  | 200.7           | 0.3 U  | ug/L  | 4.0  | 0.3  | 1    | 02/02/18 17:22 | 02/02/18       |   |
| Boron, Total      | 200.7           | 18 I   | ug/L  | 50   | 10   | 1    | 02/02/18 17:22 | 02/02/18       |   |
| Cadmium, Total    | 200.7           | 0.2 U  | ug/L  | 5.0  | 0.2  | 1    | 02/02/18 17:22 | 02/02/18       |   |
| Calcium, Total    | 200.7           | 51.4   | mg/L  | 0.10 | 0.02 | 1    | 02/02/18 17:20 | 02/02/18       |   |
| Chromium, Total   | 200.7           | 1 I    | ug/L  | 10   | 0.4  | 1    | 02/02/18 17:22 | 02/02/18       |   |
| Cobalt, Total     | 200.7           | 2 U    | ug/L  | 10   | 2    | 1    | 02/02/18 17:22 | 02/02/18       |   |
| Lead, Total       | 200.8           | 0.21 I | ug/L  | 0.50 | 0.03 | 1    | 02/01/18 20:15 | 02/01/18       |   |
| Lithium, Total    | 200.7           | 2 U    | ug/L  | 100  | 2    | 1    | 02/02/18 17:20 | 02/02/18       |   |
| Molybdenum, Total | 200.7           | 7 I    | ug/L  | 10   | 0.6  | 1    | 02/02/18 17:22 | 02/02/18       |   |
| Selenium, Total   | 200.7           | 9 I    | ug/L  | 10   | 3    | 1    | 02/02/18 17:22 | 02/02/18       |   |
| Thallium, Total   | 200.8           | 0.02 U | ug/L  | 0.20 | 0.02 | 1    | 02/01/18 20:15 | 02/01/18       |   |

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Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A027  
**Sample Matrix:** Water  
**Sample Name:** D18A027-02  
**Lab Code:** J1800753-002

**Service Request:** J1800753  
**Date Collected:** 01/24/18 08:08  
**Date Received:** 01/30/18 09:25  
**Basis:** NA

Inorganic Parameters

| Analyte Name      | Analysis Method | Result        | Units | PQL  | MDL  | Dil. | Date Analyzed  | Date Extracted | Q |
|-------------------|-----------------|---------------|-------|------|------|------|----------------|----------------|---|
| Antimony, Total   | 200.8           | <b>0.2 I</b>  | ug/L  | 1.0  | 0.04 | 1    | 02/01/18 20:17 | 02/01/18       |   |
| Arsenic, Total    | 200.8           | <b>0.5 I</b>  | ug/L  | 1.0  | 0.10 | 1    | 02/01/18 20:17 | 02/01/18       |   |
| Barium, Total     | 200.7           | <b>5 I</b>    | ug/L  | 10   | 0.3  | 1    | 02/02/18 17:28 | 02/02/18       |   |
| Beryllium, Total  | 200.7           | 0.3 U         | ug/L  | 4.0  | 0.3  | 1    | 02/02/18 17:27 | 02/02/18       |   |
| Boron, Total      | 200.7           | <b>21 I</b>   | ug/L  | 50   | 10   | 1    | 02/02/18 17:28 | 02/02/18       |   |
| Cadmium, Total    | 200.7           | 0.2 U         | ug/L  | 5.0  | 0.2  | 1    | 02/02/18 17:28 | 02/02/18       |   |
| Calcium, Total    | 200.7           | <b>66.0</b>   | mg/L  | 0.10 | 0.02 | 1    | 02/02/18 17:26 | 02/02/18       |   |
| Chromium, Total   | 200.7           | <b>1 I</b>    | ug/L  | 10   | 0.4  | 1    | 02/02/18 17:28 | 02/02/18       |   |
| Cobalt, Total     | 200.7           | 2 U           | ug/L  | 10   | 2    | 1    | 02/02/18 17:28 | 02/02/18       |   |
| Lead, Total       | 200.8           | <b>0.08 I</b> | ug/L  | 0.50 | 0.03 | 1    | 02/01/18 20:17 | 02/01/18       |   |
| Lithium, Total    | 200.7           | 2 U           | ug/L  | 100  | 2    | 1    | 02/02/18 17:26 | 02/02/18       |   |
| Molybdenum, Total | 200.7           | <b>8 I</b>    | ug/L  | 10   | 0.6  | 1    | 02/02/18 17:28 | 02/02/18       |   |
| Selenium, Total   | 200.7           | <b>10</b>     | ug/L  | 10   | 3    | 1    | 02/02/18 17:28 | 02/02/18       |   |
| Thallium, Total   | 200.8           | 0.02 U        | ug/L  | 0.20 | 0.02 | 1    | 02/01/18 20:17 | 02/01/18       |   |

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Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A027  
**Sample Matrix:** Water  
**Sample Name:** D18A027-03  
**Lab Code:** J1800753-003

**Service Request:** J1800753  
**Date Collected:** 01/24/18 11:39  
**Date Received:** 01/30/18 09:25

**Basis:** NA

Inorganic Parameters

| Analyte Name      | Analysis Method | Result        | Units | PQL  | MDL  | Dil. | Date Analyzed  | Date Extracted | Q |
|-------------------|-----------------|---------------|-------|------|------|------|----------------|----------------|---|
| Antimony, Total   | 200.8           | <b>0.2 I</b>  | ug/L  | 1.0  | 0.04 | 1    | 02/01/18 20:27 | 02/01/18       |   |
| Arsenic, Total    | 200.8           | <b>0.8 I</b>  | ug/L  | 1.0  | 0.10 | 1    | 02/01/18 20:27 | 02/01/18       |   |
| Barium, Total     | 200.7           | <b>9 I</b>    | ug/L  | 10   | 0.3  | 1    | 02/02/18 18:11 | 02/02/18       |   |
| Beryllium, Total  | 200.7           | 0.3 U         | ug/L  | 4.0  | 0.3  | 1    | 02/02/18 18:10 | 02/02/18       |   |
| Boron, Total      | 200.7           | <b>24 I</b>   | ug/L  | 50   | 10   | 1    | 02/02/18 18:11 | 02/02/18       |   |
| Cadmium, Total    | 200.7           | 0.2 U         | ug/L  | 5.0  | 0.2  | 1    | 02/02/18 18:11 | 02/02/18       |   |
| Calcium, Total    | 200.7           | <b>48.8</b>   | mg/L  | 0.10 | 0.02 | 1    | 02/02/18 18:09 | 02/02/18       |   |
| Chromium, Total   | 200.7           | <b>2 I</b>    | ug/L  | 10   | 0.4  | 1    | 02/02/18 18:11 | 02/02/18       |   |
| Cobalt, Total     | 200.7           | 2 U           | ug/L  | 10   | 2    | 1    | 02/02/18 18:11 | 02/02/18       |   |
| Lead, Total       | 200.8           | <b>0.04 I</b> | ug/L  | 0.50 | 0.03 | 1    | 02/01/18 20:27 | 02/01/18       |   |
| Lithium, Total    | 200.7           | 2 U           | ug/L  | 100  | 2    | 1    | 02/02/18 18:09 | 02/02/18       |   |
| Molybdenum, Total | 200.7           | <b>6 I</b>    | ug/L  | 10   | 0.6  | 1    | 02/02/18 18:11 | 02/02/18       |   |
| Selenium, Total   | 200.7           | <b>6 I</b>    | ug/L  | 10   | 3    | 1    | 02/02/18 18:11 | 02/02/18       |   |
| Thallium, Total   | 200.8           | 0.02 U        | ug/L  | 0.20 | 0.02 | 1    | 02/01/18 20:27 | 02/01/18       |   |

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Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A027  
**Sample Matrix:** Water  
**Sample Name:** D18A027-04  
**Lab Code:** J1800753-004

**Service Request:** J1800753  
**Date Collected:** 01/24/18 13:34  
**Date Received:** 01/30/18 09:25  
**Basis:** NA

Inorganic Parameters

| Analyte Name      | Analysis Method | Result        | Units | PQL  | MDL  | Dil. | Date Analyzed  | Date Extracted | Q |
|-------------------|-----------------|---------------|-------|------|------|------|----------------|----------------|---|
| Antimony, Total   | 200.8           | <b>0.2 I</b>  | ug/L  | 1.0  | 0.04 | 1    | 02/01/18 20:29 | 02/01/18       |   |
| Arsenic, Total    | 200.8           | <b>1.0 I</b>  | ug/L  | 1.0  | 0.10 | 1    | 02/01/18 20:29 | 02/01/18       |   |
| Barium, Total     | 200.7           | <b>11</b>     | ug/L  | 10   | 0.3  | 1    | 02/02/18 18:16 | 02/02/18       |   |
| Beryllium, Total  | 200.7           | 0.3 U         | ug/L  | 4.0  | 0.3  | 1    | 02/02/18 18:15 | 02/02/18       |   |
| Boron, Total      | 200.7           | <b>14 I</b>   | ug/L  | 50   | 10   | 1    | 02/02/18 18:16 | 02/02/18       |   |
| Cadmium, Total    | 200.7           | 0.2 U         | ug/L  | 5.0  | 0.2  | 1    | 02/02/18 18:16 | 02/02/18       |   |
| Calcium, Total    | 200.7           | <b>60.3</b>   | mg/L  | 0.10 | 0.02 | 1    | 02/02/18 18:14 | 02/02/18       |   |
| Chromium, Total   | 200.7           | <b>2 I</b>    | ug/L  | 10   | 0.4  | 1    | 02/02/18 18:16 | 02/02/18       |   |
| Cobalt, Total     | 200.7           | 2 U           | ug/L  | 10   | 2    | 1    | 02/02/18 18:16 | 02/02/18       |   |
| Lead, Total       | 200.8           | <b>0.11 I</b> | ug/L  | 0.50 | 0.03 | 1    | 02/01/18 20:29 | 02/01/18       |   |
| Lithium, Total    | 200.7           | 2 U           | ug/L  | 100  | 2    | 1    | 02/02/18 18:14 | 02/02/18       |   |
| Molybdenum, Total | 200.7           | <b>7 I</b>    | ug/L  | 10   | 0.6  | 1    | 02/02/18 18:16 | 02/02/18       |   |
| Selenium, Total   | 200.7           | <b>5 I</b>    | ug/L  | 10   | 3    | 1    | 02/02/18 18:16 | 02/02/18       |   |
| Thallium, Total   | 200.8           | 0.02 U        | ug/L  | 0.20 | 0.02 | 1    | 02/01/18 20:29 | 02/01/18       |   |

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Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A027  
**Sample Matrix:** Water  
**Sample Name:** D18A027-05  
**Lab Code:** J1800753-005

**Service Request:** J1800753  
**Date Collected:** 01/23/18 16:50  
**Date Received:** 01/30/18 09:25  
**Basis:** NA

Inorganic Parameters

| Analyte Name      | Analysis Method | Result        | Units | PQL  | MDL  | Dil. | Date Analyzed  | Date Extracted | Q |
|-------------------|-----------------|---------------|-------|------|------|------|----------------|----------------|---|
| Antimony, Total   | 200.8           | <b>0.5 I</b>  | ug/L  | 1.0  | 0.04 | 1    | 02/01/18 20:30 | 02/01/18       |   |
| Arsenic, Total    | 200.8           | <b>0.4 I</b>  | ug/L  | 1.0  | 0.10 | 1    | 02/01/18 20:30 | 02/01/18       |   |
| Barium, Total     | 200.7           | <b>65</b>     | ug/L  | 10   | 0.3  | 1    | 02/02/18 18:21 | 02/02/18       |   |
| Beryllium, Total  | 200.7           | 0.3 U         | ug/L  | 4.0  | 0.3  | 1    | 02/02/18 18:21 | 02/02/18       |   |
| Boron, Total      | 200.7           | <b>191</b>    | ug/L  | 50   | 10   | 1    | 02/02/18 18:21 | 02/02/18       |   |
| Cadmium, Total    | 200.7           | 0.2 U         | ug/L  | 5.0  | 0.2  | 1    | 02/02/18 18:21 | 02/02/18       |   |
| Calcium, Total    | 200.7           | <b>32.9</b>   | mg/L  | 0.10 | 0.02 | 1    | 02/02/18 18:20 | 02/02/18       |   |
| Chromium, Total   | 200.7           | <b>1 I</b>    | ug/L  | 10   | 0.4  | 1    | 02/02/18 18:21 | 02/02/18       |   |
| Cobalt, Total     | 200.7           | 2 U           | ug/L  | 10   | 2    | 1    | 02/02/18 18:21 | 02/02/18       |   |
| Lead, Total       | 200.8           | 0.03 U        | ug/L  | 0.50 | 0.03 | 1    | 02/01/18 20:30 | 02/01/18       |   |
| Lithium, Total    | 200.7           | 2 U           | ug/L  | 100  | 2    | 1    | 02/02/18 18:20 | 02/02/18       |   |
| Molybdenum, Total | 200.7           | <b>15</b>     | ug/L  | 10   | 0.6  | 1    | 02/02/18 18:21 | 02/02/18       |   |
| Selenium, Total   | 200.7           | <b>6 I</b>    | ug/L  | 10   | 3    | 1    | 02/02/18 18:21 | 02/02/18       |   |
| Thallium, Total   | 200.8           | <b>0.06 I</b> | ug/L  | 0.20 | 0.02 | 1    | 02/01/18 20:30 | 02/01/18       |   |



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Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A027  
**Sample Matrix:** Water  
**Sample Name:** D18A027-06  
**Lab Code:** J1800753-006

**Service Request:** J1800753  
**Date Collected:** 01/25/18 09:22  
**Date Received:** 01/30/18 09:25

**Basis:** NA

Inorganic Parameters

| Analyte Name      | Analysis Method | Result | Units | PQL  | MDL  | Dil. | Date Analyzed  | Date Extracted | Q |
|-------------------|-----------------|--------|-------|------|------|------|----------------|----------------|---|
| Antimony, Total   | 200.8           | 1.1    | ug/L  | 1.0  | 0.04 | 1    | 02/01/18 20:32 | 02/01/18       |   |
| Arsenic, Total    | 200.8           | 0.8 I  | ug/L  | 1.0  | 0.10 | 1    | 02/01/18 20:32 | 02/01/18       |   |
| Barium, Total     | 200.7           | 101    | ug/L  | 10   | 0.3  | 1    | 02/02/18 18:26 | 02/02/18       |   |
| Beryllium, Total  | 200.7           | 0.3 U  | ug/L  | 4.0  | 0.3  | 1    | 02/02/18 18:26 | 02/02/18       |   |
| Boron, Total      | 200.7           | 327    | ug/L  | 50   | 10   | 1    | 02/02/18 18:26 | 02/02/18       |   |
| Cadmium, Total    | 200.7           | 0.2 U  | ug/L  | 5.0  | 0.2  | 1    | 02/02/18 18:26 | 02/02/18       |   |
| Calcium, Total    | 200.7           | 165    | mg/L  | 0.10 | 0.02 | 1    | 02/02/18 18:25 | 02/02/18       |   |
| Chromium, Total   | 200.7           | 3 I    | ug/L  | 10   | 0.4  | 1    | 02/02/18 18:26 | 02/02/18       |   |
| Cobalt, Total     | 200.7           | 2 U    | ug/L  | 10   | 2    | 1    | 02/02/18 18:26 | 02/02/18       |   |
| Lead, Total       | 200.8           | 0.07 I | ug/L  | 0.50 | 0.03 | 1    | 02/01/18 20:32 | 02/01/18       |   |
| Lithium, Total    | 200.7           | 2 U    | ug/L  | 100  | 2    | 1    | 02/02/18 18:25 | 02/02/18       |   |
| Molybdenum, Total | 200.7           | 50     | ug/L  | 10   | 0.6  | 1    | 02/02/18 18:26 | 02/02/18       |   |
| Selenium, Total   | 200.7           | 13     | ug/L  | 10   | 3    | 1    | 02/02/18 18:26 | 02/02/18       |   |
| Thallium, Total   | 200.8           | 0.06 I | ug/L  | 0.20 | 0.02 | 1    | 02/01/18 20:32 | 02/01/18       |   |

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Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A027  
**Sample Matrix:** Water  
**Sample Name:** D18A027-07  
**Lab Code:** J1800753-007

**Service Request:** J1800753  
**Date Collected:** 01/25/18 11:28  
**Date Received:** 01/30/18 09:25  
**Basis:** NA

Inorganic Parameters

| Analyte Name      | Analysis Method | Result | Units | PQL  | MDL  | Dil. | Date Analyzed  | Date Extracted | Q |
|-------------------|-----------------|--------|-------|------|------|------|----------------|----------------|---|
| Antimony, Total   | 200.8           | 1.5    | ug/L  | 1.0  | 0.04 | 1    | 02/01/18 20:33 | 02/01/18       |   |
| Arsenic, Total    | 200.8           | 0.8 I  | ug/L  | 1.0  | 0.10 | 1    | 02/01/18 20:33 | 02/01/18       |   |
| Barium, Total     | 200.7           | 48     | ug/L  | 10   | 0.3  | 1    | 02/02/18 18:31 | 02/02/18       |   |
| Beryllium, Total  | 200.7           | 0.3 U  | ug/L  | 4.0  | 0.3  | 1    | 02/02/18 18:31 | 02/02/18       |   |
| Boron, Total      | 200.7           | 1800   | ug/L  | 50   | 10   | 1    | 02/02/18 18:31 | 02/02/18       |   |
| Cadmium, Total    | 200.7           | 0.2 U  | ug/L  | 5.0  | 0.2  | 1    | 02/02/18 18:31 | 02/02/18       |   |
| Calcium, Total    | 200.7           | 78.1   | mg/L  | 0.10 | 0.02 | 1    | 02/02/18 18:30 | 02/02/18       |   |
| Chromium, Total   | 200.7           | 4 I    | ug/L  | 10   | 0.4  | 1    | 02/02/18 18:31 | 02/02/18       |   |
| Cobalt, Total     | 200.7           | 2 U    | ug/L  | 10   | 2    | 1    | 02/02/18 18:31 | 02/02/18       |   |
| Lead, Total       | 200.8           | 0.09 I | ug/L  | 0.50 | 0.03 | 1    | 02/01/18 20:33 | 02/01/18       |   |
| Lithium, Total    | 200.7           | 2 U    | ug/L  | 100  | 2    | 1    | 02/02/18 18:30 | 02/02/18       |   |
| Molybdenum, Total | 200.7           | 178    | ug/L  | 10   | 0.6  | 1    | 02/02/18 18:31 | 02/02/18       |   |
| Selenium, Total   | 200.7           | 7 I    | ug/L  | 10   | 3    | 1    | 02/02/18 18:31 | 02/02/18       |   |
| Thallium, Total   | 200.8           | 0.04 I | ug/L  | 0.20 | 0.02 | 1    | 02/01/18 20:33 | 02/01/18       |   |

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Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A027  
**Sample Matrix:** Water  
**Sample Name:** D18A027-08  
**Lab Code:** J1800753-008

**Service Request:** J1800753  
**Date Collected:** 01/24/18 14:49  
**Date Received:** 01/30/18 09:25  
**Basis:** NA

Inorganic Parameters

| Analyte Name      | Analysis Method | Result      | Units | PQL  | MDL  | Dil. | Date Analyzed  | Date Extracted | Q |
|-------------------|-----------------|-------------|-------|------|------|------|----------------|----------------|---|
| Antimony, Total   | 200.8           | <b>7.2</b>  | ug/L  | 1.0  | 0.04 | 1    | 02/01/18 20:35 | 02/01/18       |   |
| Arsenic, Total    | 200.8           | <b>1.7</b>  | ug/L  | 1.0  | 0.10 | 1    | 02/01/18 20:35 | 02/01/18       |   |
| Barium, Total     | 200.7           | <b>70</b>   | ug/L  | 10   | 0.3  | 1    | 02/02/18 18:36 | 02/02/18       |   |
| Beryllium, Total  | 200.7           | 0.3 U       | ug/L  | 4.0  | 0.3  | 1    | 02/02/18 18:36 | 02/02/18       |   |
| Boron, Total      | 200.7           | <b>1080</b> | ug/L  | 50   | 10   | 1    | 02/02/18 18:36 | 02/02/18       |   |
| Cadmium, Total    | 200.7           | 0.2 U       | ug/L  | 5.0  | 0.2  | 1    | 02/02/18 18:36 | 02/02/18       |   |
| Calcium, Total    | 200.7           | <b>228</b>  | mg/L  | 0.10 | 0.02 | 1    | 02/02/18 18:35 | 02/02/18       |   |
| Chromium, Total   | 200.7           | <b>3 I</b>  | ug/L  | 10   | 0.4  | 1    | 02/02/18 18:36 | 02/02/18       |   |
| Cobalt, Total     | 200.7           | 2 U         | ug/L  | 10   | 2    | 1    | 02/02/18 18:36 | 02/02/18       |   |
| Lead, Total       | 200.8           | 0.03 U      | ug/L  | 0.50 | 0.03 | 1    | 02/01/18 20:35 | 02/01/18       |   |
| Lithium, Total    | 200.7           | <b>240</b>  | ug/L  | 100  | 2    | 1    | 02/02/18 18:35 | 02/02/18       |   |
| Molybdenum, Total | 200.7           | <b>106</b>  | ug/L  | 10   | 0.6  | 1    | 02/02/18 18:36 | 02/02/18       |   |
| Selenium, Total   | 200.7           | <b>12</b>   | ug/L  | 10   | 3    | 1    | 02/02/18 18:36 | 02/02/18       |   |
| Thallium, Total   | 200.8           | <b>0.48</b> | ug/L  | 0.20 | 0.02 | 1    | 02/01/18 20:35 | 02/01/18       |   |

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Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A027  
**Sample Matrix:** Water  
**Sample Name:** D18A027-09  
**Lab Code:** J1800753-009

**Service Request:** J1800753  
**Date Collected:** 01/21/18 16:42  
**Date Received:** 01/30/18 16:07  
**Basis:** NA

Inorganic Parameters

| Analyte Name   | Analysis Method | Result | Units | PQL | MDL | Dil. | Date Analyzed  | Date Extracted | Q |
|----------------|-----------------|--------|-------|-----|-----|------|----------------|----------------|---|
| Lithium, Total | 200.7           | 2 U    | ug/L  | 100 | 2   | 1    | 02/02/18 18:39 | 02/02/18       |   |

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Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A027  
**Sample Matrix:** Water  
**Sample Name:** D18A027-10  
**Lab Code:** J1800753-010

**Service Request:** J1800753  
**Date Collected:** 01/23/18 12:04  
**Date Received:** 01/30/18 16:07  
**Basis:** NA

Inorganic Parameters

| Analyte Name   | Analysis Method | Result | Units | PQL | MDL | Dil. | Date Analyzed  | Date Extracted | Q |
|----------------|-----------------|--------|-------|-----|-----|------|----------------|----------------|---|
| Lithium, Total | 200.7           | 2 U    | ug/L  | 100 | 2   | 1    | 02/02/18 18:45 | 02/02/18       |   |

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Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A027  
**Sample Matrix:** Water  
**Sample Name:** D18A027-11  
**Lab Code:** J1800753-011

**Service Request:** J1800753  
**Date Collected:** 01/21/18 10:52  
**Date Received:** 01/30/18 16:07  
**Basis:** NA

Inorganic Parameters

| Analyte Name   | Analysis Method | Result | Units | PQL | MDL | Dil. | Date Analyzed  | Date Extracted | Q |
|----------------|-----------------|--------|-------|-----|-----|------|----------------|----------------|---|
| Lithium, Total | 200.7           | 2 U    | ug/L  | 100 | 2   | 1    | 02/02/18 19:45 | 02/02/18       |   |

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Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A027  
**Sample Matrix:** Water  
**Sample Name:** D18A027-12  
**Lab Code:** J1800753-012

**Service Request:** J1800753  
**Date Collected:** 01/24/18 09:10  
**Date Received:** 01/30/18 09:25  
**Basis:** NA

Inorganic Parameters

| Analyte Name    | Analysis Method | Result      | Units | PQL  | MDL  | Dil. | Date Analyzed  | Date Extracted | Q |
|-----------------|-----------------|-------------|-------|------|------|------|----------------|----------------|---|
| Antimony, Total | 200.8           | 0.04 U      | ug/L  | 1.0  | 0.04 | 1    | 02/01/18 20:36 | 02/01/18       |   |
| Boron, Total    | 200.7           | <b>19 I</b> | ug/L  | 50   | 10   | 1    | 02/02/18 19:51 | 02/02/18       |   |
| Lithium, Total  | 200.7           | 2 U         | ug/L  | 100  | 2    | 1    | 02/02/18 19:50 | 02/02/18       |   |
| Thallium, Total | 200.8           | 0.02 U      | ug/L  | 0.20 | 0.02 | 1    | 02/01/18 20:36 | 02/01/18       |   |

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Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A027  
**Sample Matrix:** Water  
**Sample Name:** D18A027-13  
**Lab Code:** J1800753-013

**Service Request:** J1800753  
**Date Collected:** 01/23/18 15:25  
**Date Received:** 01/30/18 09:25  
**Basis:** NA

Inorganic Parameters

| Analyte Name    | Analysis Method | Result        | Units | PQL  | MDL  | Dil. | Date Analyzed  | Date Extracted | Q |
|-----------------|-----------------|---------------|-------|------|------|------|----------------|----------------|---|
| Antimony, Total | 200.8           | <b>0.3 I</b>  | ug/L  | 1.0  | 0.04 | 1    | 02/01/18 20:41 | 02/01/18       |   |
| Boron, Total    | 200.7           | <b>12 I</b>   | ug/L  | 50   | 10   | 1    | 02/02/18 19:57 | 02/02/18       |   |
| Lithium, Total  | 200.7           | 2 U           | ug/L  | 100  | 2    | 1    | 02/02/18 19:55 | 02/02/18       |   |
| Thallium, Total | 200.8           | <b>0.11 I</b> | ug/L  | 0.20 | 0.02 | 1    | 02/01/18 20:41 | 02/01/18       |   |



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Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A027  
**Sample Matrix:** Water  
**Sample Name:** D18A027-15  
**Lab Code:** J1800753-014

**Service Request:** J1800753  
**Date Collected:** 01/25/18 12:27  
**Date Received:** 01/30/18 09:25  
**Basis:** NA

**Inorganic Parameters**

| <b>Analyte Name</b> | <b>Analysis Method</b> | <b>Result</b> | <b>Units</b> | <b>PQL</b> | <b>MDL</b> | <b>Dil.</b> | <b>Date Analyzed</b> | <b>Date Extracted</b> | <b>Q</b> |
|---------------------|------------------------|---------------|--------------|------------|------------|-------------|----------------------|-----------------------|----------|
| Antimony, Total     | 200.8                  | 0.04 U        | ug/L         | 1.0        | 0.04       | 1           | 02/01/18 20:46       | 02/01/18              |          |
| Boron, Total        | 200.7                  | 10 U          | ug/L         | 50         | 10         | 1           | 02/02/18 20:02       | 02/02/18              |          |
| Lithium, Total      | 200.7                  | 2 U           | ug/L         | 100        | 2          | 1           | 02/02/18 20:01       | 02/02/18              |          |
| Thallium, Total     | 200.8                  | 0.02 U        | ug/L         | 0.20       | 0.02       | 1           | 02/01/18 20:46       | 02/01/18              |          |



## QC Summary Forms

**ALS Environmental - Jacksonville Laboratory**  
9143 Philips Highway, Suite 200, Jacksonville, FL 32256  
Phone (904) 739-2277 Fax (904) 739-2011  
[www.alsglobal.com](http://www.alsglobal.com)



# Metals

**ALS Environmental—Jacksonville Laboratory**  
9143 Philips Highway, Suite 200, Jacksonville, FL 32256  
Phone (904)739-2277 Fax (904)739-2011  
[www.alsglobal.com](http://www.alsglobal.com)

**ALS Group USA, Corp.**  
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Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A027  
**Sample Matrix:** Water  
**Sample Name:** Method Blank  
**Lab Code:** J1800753-MB

**Service Request:** J1800753  
**Date Collected:** NA  
**Date Received:** NA  
**Basis:** NA

**Inorganic Parameters**

| <b>Analyte Name</b> | <b>Analysis Method</b> | <b>Result</b> | <b>Units</b> | <b>PQL</b> | <b>MDL</b> | <b>Dil.</b> | <b>Date Analyzed</b> | <b>Date Extracted</b> | <b>Q</b> |
|---------------------|------------------------|---------------|--------------|------------|------------|-------------|----------------------|-----------------------|----------|
| Antimony, Total     | 200.8                  | 0.04 U        | ug/L         | 1.0        | 0.04       | 1           | 02/01/18 20:12       | 02/01/18              |          |
| Arsenic, Total      | 200.8                  | 0.10 U        | ug/L         | 1.0        | 0.10       | 1           | 02/01/18 20:12       | 02/01/18              |          |
| Barium, Total       | 200.7                  | 0.3 U         | ug/L         | 10         | 0.3        | 1           | 02/02/18 17:05       | 02/02/18              |          |
| Beryllium, Total    | 200.7                  | 0.3 U         | ug/L         | 4.0        | 0.3        | 1           | 02/02/18 17:05       | 02/02/18              |          |
| Boron, Total        | 200.7                  | 10 U          | ug/L         | 50         | 10         | 1           | 02/02/18 17:05       | 02/02/18              |          |
| Cadmium, Total      | 200.7                  | 0.2 U         | ug/L         | 5.0        | 0.2        | 1           | 02/02/18 17:05       | 02/02/18              |          |
| Calcium, Total      | 200.7                  | 0.02 U        | mg/L         | 0.10       | 0.02       | 1           | 02/02/18 17:04       | 02/02/18              |          |
| Chromium, Total     | 200.7                  | 0.4 U         | ug/L         | 10         | 0.4        | 1           | 02/02/18 17:05       | 02/02/18              |          |
| Cobalt, Total       | 200.7                  | 2 U           | ug/L         | 10         | 2          | 1           | 02/02/18 17:05       | 02/02/18              |          |
| Lead, Total         | 200.8                  | 0.03 U        | ug/L         | 0.50       | 0.03       | 1           | 02/01/18 20:12       | 02/01/18              |          |
| Lithium, Total      | 200.7                  | 2 U           | ug/L         | 100        | 2          | 1           | 02/02/18 17:04       | 02/02/18              |          |
| Molybdenum, Total   | 200.7                  | 0.6 U         | ug/L         | 10         | 0.6        | 1           | 02/02/18 17:05       | 02/02/18              |          |
| Selenium, Total     | 200.7                  | 3 U           | ug/L         | 10         | 3          | 1           | 02/02/18 17:05       | 02/02/18              |          |
| Thallium, Total     | 200.8                  | 0.02 U        | ug/L         | 0.20       | 0.02       | 1           | 02/01/18 20:12       | 02/01/18              |          |

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QA/QC Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A027  
**Sample Matrix:** Water

**Service Request:** J1800753  
**Date Analyzed:** 02/01/18 - 02/02/18

**Lab Control Sample Summary**  
**Inorganic Parameters**

**Units:**ug/L  
**Basis:**NA

**Lab Control Sample**  
J1800753-LCS

| Analyte Name      | Analytical Method | Result | Spike Amount | % Rec | % Rec Limits |
|-------------------|-------------------|--------|--------------|-------|--------------|
| Antimony, Total   | 200.8             | 50.7   | 50.0         | 101   | 85-115       |
| Arsenic, Total    | 200.8             | 49.1   | 50.0         | 98    | 85-115       |
| Barium, Total     | 200.7             | 508    | 500          | 102   | 85-115       |
| Beryllium, Total  | 200.7             | 205    | 200          | 103   | 85-115       |
| Boron, Total      | 200.7             | 2570   | 2500         | 103   | 85-115       |
| Cadmium, Total    | 200.7             | 259    | 250          | 104   | 85-115       |
| Chromium, Total   | 200.7             | 510    | 500          | 102   | 85-115       |
| Cobalt, Total     | 200.7             | 506    | 500          | 101   | 85-115       |
| Lead, Total       | 200.8             | 25.2   | 25.0         | 101   | 85-115       |
| Lithium, Total    | 200.7             | 5180   | 5000         | 104   | 85-115       |
| Molybdenum, Total | 200.7             | 508    | 500          | 102   | 85-115       |
| Selenium, Total   | 200.7             | 525    | 500          | 105   | 85-115       |
| Thallium, Total   | 200.8             | 10.0   | 10.0         | 100   | 85-115       |

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QA/QC Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A027  
**Sample Matrix:** Water

**Service Request:** J1800753  
**Date Analyzed:** 02/02/18

**Lab Control Sample Summary**  
**Inorganic Parameters**

**Units:**mg/L  
**Basis:**NA

**Lab Control Sample**  
J1800753-LCS

| <b>Analyte Name</b> | <b>Analytical Method</b> | <b>Result</b> | <b>Spike Amount</b> | <b>% Rec</b> | <b>% Rec Limits</b> |
|---------------------|--------------------------|---------------|---------------------|--------------|---------------------|
| Calcium, Total      | 200.7                    | 5.19          | 5.00                | 104          | 85-115              |

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QA/QC Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A027  
**Sample Matrix:** Water

**Service Request:**J1800753  
**Date Collected:**01/24/18  
**Date Received:**01/30/18  
**Date Analyzed:**02/01/18 - 02/02/18

**Duplicate Matrix Spike Summary  
Inorganic Parameters**

**Sample Name:** D18A027-02  
**Lab Code:** J1800753-002

**Units:**ug/L  
**Basis:**NA

**Matrix Spike  
J1800753-002MS**

**Duplicate Matrix Spike  
J1800753-002DMS**

| Analyte Name      | Method | Sample |        | Spike  |       | Duplicate Matrix Spike |        | % Rec | Limits | RPD | RPD Limit |
|-------------------|--------|--------|--------|--------|-------|------------------------|--------|-------|--------|-----|-----------|
|                   |        | Result | Result | Amount | % Rec | Result                 | Amount |       |        |     |           |
| Antimony, Total   | 200.8  | 0.2 I  | 50.2   | 50.0   | 100   | 49.8                   | 50.0   | 99    | 70-130 | <1  | 20        |
| Arsenic, Total    | 200.8  | 0.5 I  | 50.4   | 50.0   | 100   | 51.0                   | 50.0   | 101   | 70-130 | 1   | 20        |
| Barium, Total     | 200.7  | 5 I    | 509    | 500    | 101   | 511                    | 500    | 101   | 70-130 | <1  | 20        |
| Beryllium, Total  | 200.7  | 0.3 U  | 208    | 200    | 104   | 209                    | 200    | 105   | 70-130 | <1  | 20        |
| Boron, Total      | 200.7  | 21 I   | 2630   | 2500   | 104   | 2650                   | 2500   | 105   | 70-130 | <1  | 20        |
| Cadmium, Total    | 200.7  | 0.2 U  | 257    | 250    | 103   | 258                    | 250    | 103   | 70-130 | <1  | 20        |
| Chromium, Total   | 200.7  | 1 I    | 514    | 500    | 103   | 518                    | 500    | 103   | 70-130 | <1  | 20        |
| Cobalt, Total     | 200.7  | 2 U    | 499    | 500    | 100   | 503                    | 500    | 101   | 70-130 | <1  | 20        |
| Lead, Total       | 200.8  | 0.08 I | 25.3   | 25.0   | 101   | 25.5                   | 25.0   | 102   | 70-130 | 1   | 20        |
| Molybdenum, Total | 200.7  | 8 I    | 522    | 500    | 103   | 525                    | 500    | 103   | 70-130 | <1  | 20        |
| Selenium, Total   | 200.7  | 10     | 543    | 500    | 107   | 541                    | 500    | 106   | 70-130 | <1  | 20        |
| Thallium, Total   | 200.8  | 0.02 U | 10.1   | 10.0   | 101   | 10.2                   | 10.0   | 102   | 70-130 | 1   | 20        |
| Lithium, Total    | 200.7  | 2 U    | 5100   | 5000   | 102   | 5110                   | 5000   | 102   | 70-130 | <1  | 20        |

Results flagged with an asterisk (\*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.  
dba ALS Environmental

QA/QC Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A027  
**Sample Matrix:** Water

**Service Request:**J1800753  
**Date Collected:**01/24/18  
**Date Received:**01/30/18  
**Date Analyzed:**2/2/18

**Duplicate Matrix Spike Summary**  
**Inorganic Parameters**

**Sample Name:** D18A027-02 **Units:**mg/L  
**Lab Code:** J1800753-002 **Basis:**NA

| Analyte Name   | Method | Sample Result | Result | Matrix Spike<br>J1800753-002MS |       | Duplicate Matrix Spike<br>J1800753-002DMS |       | % Rec Limits | RPD    | RPD Limit |    |
|----------------|--------|---------------|--------|--------------------------------|-------|---|-------|--------------|--------|-----------|----|
|                |        |               |        | Spike Amount                   | % Rec | Spike Amount                              | % Rec |              |        |           |    |
| Calcium, Total | 200.7  | 66.0          | 70.9   | 5.00                           | 98 #  | 71.0                                      | 5.00  | 100 #        | 70-130 | <1        | 20 |

Results flagged with an asterisk (\*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.



ALS Group USA, Corp.  
dba ALS Environmental

QA/QC Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A027  
**Sample Matrix:** Water

**Service Request:** J1800753  
**Date Collected:** 01/23/18  
**Date Received:** 01/30/18  
**Date Analyzed:** 02/2/18  
**Date Extracted:** 02/2/18

**Duplicate Matrix Spike Summary  
Inorganic Parameters**

**Sample Name:** D18A027-10  
**Lab Code:** J1800753-010  
**Analysis Method:** 200.7  
**Prep Method:** EPA 3005A

**Units:** ug/L  
**Basis:** NA

| Analyte Name   | Sample Result | Result | Matrix Spike<br>J1800753-010MS |       | Result | Duplicate Matrix Spike<br>J1800753-010DMS |       | % Rec Limits | RPD | RPD Limit |
|----------------|---------------|--------|--------------------------------|-------|--------|---|-------|--------------|-----|-----------|
|                |               |        | Spike Amount                   | % Rec |        | Spike Amount                              | % Rec |              |     |           |
| Lithium, Total | 2 U           | 5130   | 5000                           | 103   | 5120   | 5000                                      | 102   | 70-130       | <1  | 20        |

Results flagged with an asterisk (\*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.  
dba ALS Environmental

QA/QC Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A027  
**Sample Matrix:** Water

**Service Request:** J1800753  
**Date Collected:** 01/23/18  
**Date Received:** 01/30/18  
**Date Analyzed:** 02/1/18  
**Date Extracted:** 02/1/18

**Duplicate Matrix Spike Summary  
Inorganic Parameters**

**Sample Name:** D18A027-13  
**Lab Code:** J1800753-013  
**Analysis Method:** 200.8  
**Prep Method:** EPA 3005A

**Units:** ug/L  
**Basis:** NA

| Analyte Name    | Sample Result | Result | Matrix Spike<br>J1800753-013MS |       | Duplicate Matrix Spike<br>J1800753-013DMS |              | % Rec Limits | RPD    | RPD Limit |       |
|-----------------|---------------|--------|--------------------------------|-------|---|--------------|--------------|--------|-----------|-------|
|                 |               |        | Spike Amount                   | % Rec | Result                                    | Spike Amount |              |        |           | % Rec |
| Antimony, Total | 0.3 I         | 50.9   | 50.0                           | 101   | 50.5                                      | 50.0         | 100          | 70-130 | <1        | 20    |
| Thallium, Total | 0.11 I        | 10.4   | 10.0                           | 103   | 10.4                                      | 10.0         | 103          | 70-130 | <1        | 20    |

Results flagged with an asterisk (\*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.



February 05, 2018

Service Request No:J1800753

Jeffery Boudreau  
Gainesville Regional Utilities  
10001 NW 13th St  
Gainesville, FL 32653

**Laboratory Results for: D18A027**

Dear Jeffery,

Enclosed are the results of the sample(s) submitted to our laboratory January 30, 2018  
For your reference, these analyses have been assigned our service request number **J1800753**.

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and ALS Environmental is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report. In accordance to the NELAC 2003 Standard, a statement on the estimated uncertainty of measurement of any quantitative analysis will be supplied upon request.

Respectfully submitted,

**ALS Group USA, Corp. dba ALS Environmental**

Gina Bondani  
Project Manager

ADDRESS 9143 Philips Highway, Suite 200, Jacksonville, FL 32256  
PHONE +1 904 739 2277 | FAX +1 904 739 2011  
ALS Group USA, Corp.  
dba ALS Environmental



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## Table of Contents

|                            |    |
|----------------------------|----|
| CoverLetter                | 1  |
| Table of Contents          | 2  |
| Narrative Documents        | 4  |
| Narrative Documents        | 5  |
| Hit Summary List           | 6  |
| Sample Receipt Information | 8  |
| Sample Cross-Reference     | 9  |
| Chain Of Custody           | 10 |
| Miscellaneous Forms        | 15 |
| Qualifiers                 | 16 |
| Acronyms                   | 18 |
| Analyst Summary            | 19 |
| Sample Results             | 23 |
| Metals                     | 24 |
| D18A027-01 - Metals        | 25 |
| D18A027-02 - Metals        | 26 |
| D18A027-03 - Metals        | 27 |
| D18A027-04 - Metals        | 28 |
| D18A027-05 - Metals        | 29 |
| D18A027-06 - Metals        | 30 |
| D18A027-07 - Metals        | 31 |
| D18A027-08 - Metals        | 32 |

## Table of Contents (continued)

|   |    |
|---|----|
| D18A027-09 - Metals                     | 33 |
| D18A027-10 - Metals                     | 34 |
| D18A027-11 - Metals                     | 35 |
| D18A027-12 - Metals                     | 36 |
| D18A027-13 - Metals                     | 37 |
| D18A027-15 - Metals                     | 38 |
| QC Summary Forms                        | 39 |
| Metals                                  | 40 |
| Method Blank - Metals                   | 41 |
| D18A027-02 - DMS Metals                 | 42 |
| J1800753-010DMS D18A027-10 - DMS Metals | 43 |
| J1800753-013DMS D18A027-13 - DMS Metals | 44 |
| J1800753-LCS - LCS Metals               | 45 |



# Narrative Documents

**ALS Environmental—Jacksonville Laboratory**  
9143 Philips Highway, Suite 200, Jacksonville, FL 32256  
Phone (904) 739-2277 Fax (904) 739-2011  
[www.alsglobal.com](http://www.alsglobal.com)



**Client:** Gainesville Regional Utilities  
**Project:** D18A027  
**Sample Matrix:** Water

**Service Request:** J1800753  
**Date Received:** 1/30/18

### CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier II data deliverables, including results of QC samples analyzed from this delivery group. When appropriate to the procedure, method blank results have been reported with each analytical test. Analytical procedures performed by the lab are validated in accordance with NELAC standards. Parameters that are included in the NELAC Fields of Testing but are not included in the lab's NELAC accreditation are identified in the discussion of each analytical procedure.

#### Sample Receipt

Samples were received for analysis at ALS Environmental and were received in good condition and consistent with the accompanying chain of custody form. Samples are refrigerated at  $\leq 6^{\circ}\text{C}$  upon receipt at the lab except for aqueous samples designated for metals analyses, which are stored at room temperature.

#### Analyses Notes:

No significant data anomalies were noted with this analysis.

Approved by  Date 2/5/2018



**SAMPLE DETECTION SUMMARY**

**CLIENT ID: D18A027-01** **Lab ID: J1800753-001**

| Analyte         | Results | Flag | MDL  | PQL  | Units | Method |
|-----------------|---------|------|------|------|-------|--------|
| Antimony, Total | 0.2     | I    | 0.04 | 1.0  | ug/L  | 200.8  |
| Arsenic, Total  | 0.8     | I    | 0.10 | 1.0  | ug/L  | 200.8  |
| Boron, Total    | 18      | I    | 10   | 50   | ug/L  | 200.7  |
| Lead, Total     | 0.21    | I    | 0.03 | 0.50 | ug/L  | 200.8  |

**CLIENT ID: D18A027-02** **Lab ID: J1800753-002**

| Analyte         | Results | Flag | MDL  | PQL  | Units | Method |
|-----------------|---------|------|------|------|-------|--------|
| Antimony, Total | 0.2     | I    | 0.04 | 1.0  | ug/L  | 200.8  |
| Arsenic, Total  | 0.5     | I    | 0.10 | 1.0  | ug/L  | 200.8  |
| Boron, Total    | 21      | I    | 10   | 50   | ug/L  | 200.7  |
| Lead, Total     | 0.08    | I    | 0.03 | 0.50 | ug/L  | 200.8  |

**CLIENT ID: D18A027-03** **Lab ID: J1800753-003**

| Analyte         | Results | Flag | MDL  | PQL  | Units | Method |
|-----------------|---------|------|------|------|-------|--------|
| Antimony, Total | 0.2     | I    | 0.04 | 1.0  | ug/L  | 200.8  |
| Arsenic, Total  | 0.8     | I    | 0.10 | 1.0  | ug/L  | 200.8  |
| Boron, Total    | 24      | I    | 10   | 50   | ug/L  | 200.7  |
| Lead, Total     | 0.04    | I    | 0.03 | 0.50 | ug/L  | 200.8  |

**CLIENT ID: D18A027-04** **Lab ID: J1800753-004**

| Analyte         | Results | Flag | MDL  | PQL  | Units | Method |
|-----------------|---------|------|------|------|-------|--------|
| Antimony, Total | 0.2     | I    | 0.04 | 1.0  | ug/L  | 200.8  |
| Arsenic, Total  | 1.0     | I    | 0.10 | 1.0  | ug/L  | 200.8  |
| Boron, Total    | 14      | I    | 10   | 50   | ug/L  | 200.7  |
| Lead, Total     | 0.11    | I    | 0.03 | 0.50 | ug/L  | 200.8  |

**CLIENT ID: D18A027-05** **Lab ID: J1800753-005**

| Analyte         | Results | Flag | MDL  | PQL  | Units | Method |
|-----------------|---------|------|------|------|-------|--------|
| Antimony, Total | 0.5     | I    | 0.04 | 1.0  | ug/L  | 200.8  |
| Arsenic, Total  | 0.4     | I    | 0.10 | 1.0  | ug/L  | 200.8  |
| Boron, Total    | 191     |      | 10   | 50   | ug/L  | 200.7  |
| Thallium, Total | 0.06    | I    | 0.02 | 0.20 | ug/L  | 200.8  |

**CLIENT ID: D18A027-06** **Lab ID: J1800753-006**

| Analyte         | Results | Flag | MDL  | PQL  | Units | Method |
|-----------------|---------|------|------|------|-------|--------|
| Antimony, Total | 1.1     |      | 0.04 | 1.0  | ug/L  | 200.8  |
| Arsenic, Total  | 0.8     | I    | 0.10 | 1.0  | ug/L  | 200.8  |
| Boron, Total    | 327     |      | 10   | 50   | ug/L  | 200.7  |
| Lead, Total     | 0.07    | I    | 0.03 | 0.50 | ug/L  | 200.8  |
| Thallium, Total | 0.06    | I    | 0.02 | 0.20 | ug/L  | 200.8  |

**CLIENT ID: D18A027-07** **Lab ID: J1800753-007**

| Analyte         | Results | Flag | MDL  | PQL | Units | Method |
|-----------------|---------|------|------|-----|-------|--------|
| Antimony, Total | 1.5     |      | 0.04 | 1.0 | ug/L  | 200.8  |





**SAMPLE DETECTION SUMMARY**

**CLIENT ID: D18A027-07 Lab ID: J1800753-007**

| Analyte         | Results | Flag | MDL  | PQL  | Units | Method |
|-----------------|---------|------|------|------|-------|--------|
| Arsenic, Total  | 0.8     | I    | 0.10 | 1.0  | ug/L  | 200.8  |
| Boron, Total    | 1800    |      | 10   | 50   | ug/L  | 200.7  |
| Lead, Total     | 0.09    | I    | 0.03 | 0.50 | ug/L  | 200.8  |
| Thallium, Total | 0.04    | I    | 0.02 | 0.20 | ug/L  | 200.8  |

**CLIENT ID: D18A027-08 Lab ID: J1800753-008**

| Analyte         | Results | Flag | MDL  | PQL  | Units | Method |
|-----------------|---------|------|------|------|-------|--------|
| Antimony, Total | 7.2     |      | 0.04 | 1.0  | ug/L  | 200.8  |
| Arsenic, Total  | 1.7     |      | 0.10 | 1.0  | ug/L  | 200.8  |
| Boron, Total    | 1080    |      | 10   | 50   | ug/L  | 200.7  |
| Lithium, Total  | 240     |      | 2    | 100  | ug/L  | 200.7  |
| Thallium, Total | 0.48    |      | 0.02 | 0.20 | ug/L  | 200.8  |

**CLIENT ID: D18A027-12 Lab ID: J1800753-012**

| Analyte      | Results | Flag | MDL | PQL | Units | Method |
|--------------|---------|------|-----|-----|-------|--------|
| Boron, Total | 19      | I    | 10  | 50  | ug/L  | 200.7  |

**CLIENT ID: D18A027-13 Lab ID: J1800753-013**

| Analyte         | Results | Flag | MDL  | PQL  | Units | Method |
|-----------------|---------|------|------|------|-------|--------|
| Antimony, Total | 0.3     | I    | 0.04 | 1.0  | ug/L  | 200.8  |
| Boron, Total    | 12      | I    | 10   | 50   | ug/L  | 200.7  |
| Thallium, Total | 0.11    | I    | 0.02 | 0.20 | ug/L  | 200.8  |



## Sample Receipt Information

**ALS Environmental—Jacksonville Laboratory**  
9143 Philips Highway, Suite 200, Jacksonville, FL 32256  
Phone (904) 739-2277 Fax (904) 739-2011  
[www.alsglobal.com](http://www.alsglobal.com)

**Client:** Gainesville Regional Utilities  
**Project:** D18A027

**Service Request:**J1800753

**SAMPLE CROSS-REFERENCE**

| <u>SAMPLE #</u> | <u>CLIENT SAMPLE ID</u> | <u>DATE</u> | <u>TIME</u> |
|-----------------|-------------------------|-------------|-------------|
| J1800753-001    | D18A027-01              | 1/23/2018   | 1408        |
| J1800753-002    | D18A027-02              | 1/24/2018   | 0808        |
| J1800753-003    | D18A027-03              | 1/24/2018   | 1139        |
| J1800753-004    | D18A027-04              | 1/24/2018   | 1334        |
| J1800753-005    | D18A027-05              | 1/23/2018   | 1650        |
| J1800753-006    | D18A027-06              | 1/25/2018   | 0922        |
| J1800753-007    | D18A027-07              | 1/25/2018   | 1128        |
| J1800753-008    | D18A027-08              | 1/24/2018   | 1449        |
| J1800753-009    | D18A027-09              | 1/21/2018   | 1642        |
| J1800753-010    | D18A027-10              | 1/23/2018   | 1204        |
| J1800753-011    | D18A027-11              | 1/21/2018   | 1052        |
| J1800753-012    | D18A027-12              | 1/24/2018   | 0910        |
| J1800753-013    | D18A027-13              | 1/23/2018   | 1525        |
| J1800753-014    | D18A027-15              | 1/25/2018   | 1227        |

**Cooler Receipt Form**

Client: GRU Service Request #: 51800753  
 Project: D18A027 Shipping paid by ALS? Yes  No  N/A  
 Cooler received on 01/30/18 and opened on 01/30/18 by [Signature]  
 COURIER: ALS UPS FEDEX DHL Client Other \_\_\_\_\_ Airbill # 8127 8324 8356

- 1 Were custody seals on outside of cooler? Yes  No   
 If yes, how many and where? #: \_\_\_ on lid other \_\_\_\_\_
- 2 Were seals intact and signature and date correct? Yes  No  N/A
- 3 Were custody papers properly filled out? Yes  No  N/A
- 4 Temperature of cooler(s) upon receipt (Should be 0°C and ≤ 6°C) Ambient \_\_\_\_\_
- 5 Thermometer ID N/A \_\_\_\_\_
- 6 Temperature Blank Present? Yes  No
- 7 Were Ice or Ice Packs present Ice  Ice Packs  No
- 8 Did all bottles arrive in good condition (unbroken, etc....)?  Yes  No  N/A
- 9 Type of packing material present Netting  Vial Holder  Bubble Wrap   
 Paper  Styrofoam  Other  N/A
- 10 Were all bottle labels complete (sample ID, preservation, etc....)?  Yes  No  N/A
- 11 Did all bottle labels and tags agree with custody papers?  Yes  No  N/A
- 12 Were the correct bottles used for the tests indicated?  Yes  No  N/A
- 13 Were all of the preserved bottles received with the appropriate preservative?  Yes  No  N/A  
HNO3 pH<2 H2SO4 pH<2 ZnAc2/NaOH pH>9 NaOH pH>12 HCl pH<2  
 Preservative additions noted below
- 14 Were all samples received within analysis holding times?  Yes  No  N/A
- 15 Were VOA vials free of air bubbles greater than 6mm? If present, note below Yes  No  N/A
- 16 Where did the bottles originate? ALS  Client

| Sample ID | Reagent | Lot # | ml added | Initials Date/Time |
|-----------|---------|-------|----------|--------------------|
|           |         |       |          |                    |
|           |         |       |          |                    |
|           |         |       |          |                    |
|           |         |       |          |                    |
|           |         |       |          |                    |
|           |         |       |          |                    |
|           |         |       |          |                    |
|           |         |       |          |                    |
|           |         |       |          |                    |
|           |         |       |          |                    |

Additional comments and/or explanation of all discrepancies noted above:  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Client approval to run samples if discrepancies noted: \_\_\_\_\_ Date: \_\_\_\_\_



**SUBCONTRACT ORDER**  
**Deerhaven Generating Station**  
**D18A027**

J1800753

**SENDING LABORATORY:**

Gainesville Regional Utilities  
 Deerhaven Generating Station  
 10001 NW 13th Street  
 Gainesville, FL 32653  
 Phone: 352-334-3434  
 Fax: 352-334-3149  
 Project Manager: Jeff Boudreau

**RECEIVING LABORATORY:**

ALS Global  
 9143 Philips Highway, Suite 200  
 Jacksonville, FL 32256  
 Phone : (904) 394-4426  
 Fax: (904) 739-2011

**J1800753**  
 Gainesville Regional Utilities  
 D18A027

**5**



| Analysis                             | Expires         | Laboratory ID                   | Comments |
|--------------------------------------|-----------------|---------------------------------|----------|
| <b>Sample Name: SIS-1</b>            |                 |                                 |          |
| <b>Sample ID: D18A027-01</b>         | <b>Water</b>    | <b>Sampled: 23-Jan-18 14:08</b> |          |
| D_Arsenic by 200.8                   | 22-Jul-18 14:08 |                                 |          |
| D_Boron by 200.7                     | 22-Jul-18 14:08 |                                 |          |
| D_Lead by 200.8                      | 22-Jul-18 14:08 |                                 |          |
| D_Lithium by 200.7                   | 22-Jul-18 14:08 |                                 |          |
| D_Thallium by 200.8                  | 22-Jul-18 14:08 |                                 |          |
| D_Antimony by 200.8                  | 22-Jul-18 14:08 |                                 |          |
| <i>Containers Supplied:</i>          |                 |                                 |          |
| D_HDPE, HNO3 pH<2 - 250mL extra2 (B) |                 |                                 |          |
| <b>Sample Name: SIS-2</b>            |                 |                                 |          |
| <b>Sample ID: D18A027-02</b>         | <b>Water</b>    | <b>Sampled: 24-Jan-18 08:08</b> |          |
| D_Antimony by 200.8                  | 23-Jul-18 08:08 |                                 |          |
| D_Arsenic by 200.8                   | 23-Jul-18 08:08 |                                 |          |
| D_Boron by 200.7                     | 23-Jul-18 08:08 |                                 |          |
| D_Lead by 200.8                      | 23-Jul-18 08:08 |                                 |          |
| D_Lithium by 200.7                   | 23-Jul-18 08:08 |                                 |          |
| D_Thallium by 200.8                  | 23-Jul-18 08:08 |                                 |          |
| <i>Containers Supplied:</i>          |                 |                                 |          |
| D_HDPE, HNO3 pH<2 - 250mL extra2 (B) |                 |                                 |          |
| <b>Sample Name: SIS-3</b>            |                 |                                 |          |
| <b>Sample ID: D18A027-03</b>         | <b>Water</b>    | <b>Sampled: 24-Jan-18 11:39</b> |          |
| D_Boron by 200.7                     | 23-Jul-18 11:39 |                                 |          |
| D_Thallium by 200.8                  | 23-Jul-18 11:39 |                                 |          |
| D_Lead by 200.8                      | 23-Jul-18 11:39 |                                 |          |
| D_Arsenic by 200.8                   | 23-Jul-18 11:39 |                                 |          |
| D_Antimony by 200.8                  | 23-Jul-18 11:39 |                                 |          |
| D_Lithium by 200.7                   | 23-Jul-18 11:39 |                                 |          |
| <i>Containers Supplied:</i>          |                 |                                 |          |
| D_HDPE, HNO3 pH<2 - 250mL extra2 (B) |                 |                                 |          |

*As, B, Li  
 As, Pb, Sb, Tl 200.8  
 B, Li 200.7*

*As, Pb, Sb, Tl, 200.8  
 B, Li 200.7*

*As, Pb, Sb, Tl 200.8  
 B, Li 200.7*

Released By: *Shelby Phillips* Date: *1-29-18* via Fedex  
 Received By: *Mark B...* Date: *01/30/18 0925*



**SUBCONTRACT ORDER**  
**Deerhaven Generating Station**  
**D18A027**

51800753

| Analysis | Expires | Laboratory ID | Comments |
|----------|---------|---------------|----------|
|----------|---------|---------------|----------|

**Sample Name: SIS-4**

**Sample ID: D18A027-04**      **Water**      **Sampled: 24-Jan-18 13:34**

|                     |                 |
|---------------------|-----------------|
| D_Lithium by 200.7  | 23-Jul-18 13:34 |
| D_Thallium by 200.8 | 23-Jul-18 13:34 |
| D_Lead by 200.8     | 23-Jul-18 13:34 |
| D_Boron by 200.7    | 23-Jul-18 13:34 |
| D_Arsenic by 200.8  | 23-Jul-18 13:34 |
| D_Antimony by 200.8 | 23-Jul-18 13:34 |

As, Pb, Sb, Ti 200.8  
B. Li 200.7

*Containers Supplied:*

D\_HDPE, HNO3 pH<2 - 250mL extra2 (B)

**Sample Name: LF-1**

**Sample ID: D18A027-05**      **Water**      **Sampled: 23-Jan-18 16:50**

|                     |                 |
|---------------------|-----------------|
| D_Arsenic by 200.8  | 22-Jul-18 16:50 |
| D_Boron by 200.7    | 22-Jul-18 16:50 |
| D_Lead by 200.8     | 22-Jul-18 16:50 |
| D_Lithium by 200.7  | 22-Jul-18 16:50 |
| D_Thallium by 200.8 | 22-Jul-18 16:50 |
| D_Antimony by 200.8 | 22-Jul-18 16:50 |

*Containers Supplied:*

D\_HDPE, HNO3 pH<2 - 250mL extra2 (B)

**Sample Name: LF-2**

**Sample ID: D18A027-06**      **Water**      **Sampled: 25-Jan-18 09:22**

|                     |                 |
|---------------------|-----------------|
| D_Boron by 200.7    | 24-Jul-18 09:22 |
| D_Antimony by 200.8 | 24-Jul-18 09:22 |
| D_Lead by 200.8     | 24-Jul-18 09:22 |
| D_Lithium by 200.7  | 24-Jul-18 09:22 |
| D_Thallium by 200.8 | 24-Jul-18 09:22 |
| D_Arsenic by 200.8  | 24-Jul-18 09:22 |

*Containers Supplied:*

D\_HDPE, HNO3 pH<2 - 250mL extra2 (B)

**Sample Name: LF-3**

**Sample ID: D18A027-07**      **Water**      **Sampled: 25-Jan-18 11:28**

|                     |                 |
|---------------------|-----------------|
| D_Antimony by 200.8 | 24-Jul-18 11:28 |
| D_Arsenic by 200.8  | 24-Jul-18 11:28 |
| D_Boron by 200.7    | 24-Jul-18 11:28 |
| D_Lead by 200.8     | 24-Jul-18 11:28 |
| D_Lithium by 200.7  | 24-Jul-18 11:28 |
| D_Thallium by 200.8 | 24-Jul-18 11:28 |

*Containers Supplied:*

D\_HDPE, HNO3 pH<2 - 250mL extra2 (B)

|                         |                |                 |                      |
|-------------------------|----------------|-----------------|----------------------|
| Released By             | Date           | Received By     | Date                 |
| <i>Shelley Phillips</i> | <i>1-29-18</i> | <i>Matthews</i> | <i>01/30/18 0925</i> |

|             |      |             |      |
|-------------|------|-------------|------|
| Released By | Date | Received By | Date |
|-------------|------|-------------|------|



**SUBCONTRACT ORDER**  
**Deerhaven Generating Station**  
**D18A027**

J180053

| Analysis                             | Expires         | Laboratory ID                  | Comments |
|--------------------------------------|-----------------|--------------------------------|----------|
| <b>Sample Name: LF-4</b>             |                 |                                |          |
| <b>Sample ID: D18A027-08</b>         | <b>Water</b>    | <b>Sampled:24-Jan-18 14:49</b> |          |
| D_Lithium by 200.7                   | 23-Jul-18 14:49 |                                |          |
| D_Thallium by 200.8                  | 23-Jul-18 14:49 |                                |          |
| D_Lead by 200.8                      | 23-Jul-18 14:49 |                                |          |
| D_Arsenic by 200.8                   | 23-Jul-18 14:49 |                                |          |
| D_Antimony by 200.8                  | 23-Jul-18 14:49 |                                |          |
| D_Boron by 200.7                     | 23-Jul-18 14:49 |                                |          |
| <i>Containers Supplied:</i>          |                 |                                |          |
| D_HDPE, HNO3 pH<2 - 250mL extra2 (B) |                 |                                |          |
| <b>Sample Name: MWD-1-6 (R1T6)</b>   |                 |                                |          |
| <b>Sample ID: D18A027-09</b>         | <b>Water</b>    | <b>Sampled:21-Jan-18 16:42</b> |          |
| D_Lithium by 200.7                   | 20-Jul-18 16:42 |                                |          |
| <i>Containers Supplied:</i>          |                 |                                |          |
| D_HDPE, HNO3 pH<2 - 250mL extra (B)  |                 |                                |          |
| <b>Sample Name: MWB-2-1 (R2T1)</b>   |                 |                                |          |
| <b>Sample ID: D18A027-10</b>         | <b>Water</b>    | <b>Sampled:23-Jan-18 12:04</b> |          |
| D_Lithium by 200.7                   | 22-Jul-18 12:04 |                                |          |
| <i>Containers Supplied:</i>          |                 |                                |          |
| D_HDPE, HNO3 pH<2 - 250mL extra (B)  |                 |                                |          |
| <b>Sample Name: MWD-6-1 (R6T1B)</b>  |                 |                                |          |
| <b>Sample ID: D18A027-11</b>         | <b>Water</b>    | <b>Sampled:21-Jan-18 10:52</b> |          |
| D_Lithium by 200.7                   | 20-Jul-18 10:52 |                                |          |
| <i>Containers Supplied:</i>          |                 |                                |          |
| D_HDPE, HNO3 pH<2 - 250mL extra (B)  |                 |                                |          |
| <b>Sample Name: MWI-4-5 (R4T5B)</b>  |                 |                                |          |
| <b>Sample ID: D18A027-12</b>         | <b>Water</b>    | <b>Sampled:24-Jan-18 09:10</b> |          |
| D_Antimony by 200.8                  | 23-Jul-18 09:10 |                                |          |
| D_Boron by 200.7                     | 23-Jul-18 09:10 |                                |          |
| D_Thallium by 200.8                  | 23-Jul-18 09:10 |                                |          |
| D_Lithium by 200.7                   | 23-Jul-18 09:10 |                                |          |
| <i>Containers Supplied:</i>          |                 |                                |          |
| D_HDPE, HNO3 pH<2 - 250mL extra2 (B) |                 |                                |          |
| <b>Sample Name: MWI-6-4 (R6T4B)</b>  |                 |                                |          |
| <b>Sample ID: D18A027-13</b>         | <b>Water</b>    | <b>Sampled:23-Jan-18 15:25</b> |          |
| D_Thallium by 200.8                  | 22-Jul-18 15:25 |                                |          |
| D_Lithium by 200.7                   | 22-Jul-18 15:25 |                                |          |
| D_Boron by 200.7                     | 22-Jul-18 15:25 |                                |          |
| D_Antimony by 200.8                  | 22-Jul-18 15:25 |                                |          |
| <i>Containers Supplied:</i>          |                 |                                |          |
| D_HDPE, HNO3 pH<2 - 250mL extra2 (B) |                 |                                |          |

Released By: *Shelley Phillips* Date: *1-29-18* Received By: *via Fedex [Signature]* Date: *01/30/18* *0925*

Released By \_\_\_\_\_ Date \_\_\_\_\_ Received By \_\_\_\_\_ Date \_\_\_\_\_



**SUBCONTRACT ORDER**  
**Deerhaven Generating Station**  
**D18A027**

51800753

| Analysis                             | Expires         | Laboratory ID                   | Comments |
|--------------------------------------|-----------------|---------------------------------|----------|
| <b>Sample Name: EBLANK</b>           |                 |                                 |          |
| <b>Sample ID: D18A027-15</b>         | <b>Water</b>    | <b>Sampled: 25-Jan-18 12:27</b> |          |
| D_Thallium by 200.8                  | 24-Jul-18 12:27 |                                 |          |
| D_Lithium by 200.7                   | 24-Jul-18 12:27 |                                 |          |
| D_Antimony by 200.8                  | 24-Jul-18 12:27 |                                 |          |
| D_Boron by 200.7                     | 24-Jul-18 12:27 |                                 |          |
| <i>Containers Supplied:</i>          |                 |                                 |          |
| D_HDPE, HNO3 pH<2 - 250mL extra2 (B) |                 |                                 |          |

Released By: *Shelly Phillips* Date: *1-29-18* *via Fedex* Received By: *[Signature]* Date: *01/30/18* *925*

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Released By: \_\_\_\_\_ Date: \_\_\_\_\_ Received By: \_\_\_\_\_ Date: \_\_\_\_\_





## Miscellaneous Forms

**ALS Environmental—Jacksonville Laboratory**  
9143 Philips Highway, Suite 200, Jacksonville, FL 32256  
Phone (904) 739-2277 Fax (904) 739-2011  
[www.alsglobal.com](http://www.alsglobal.com)



## **FLORIDA DEP DATA QUALIFIERS**

- B Results based upon colony counts outside the acceptable range.
- D Measurement was made in the field.
- H Value based on field kit determination; results may not be accurate.
- I The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
- J Estimated value (one of the following reasons is discussed in the project case narrative).
1. The result may be inaccurate because the surrogate recovery limits have been exceeded.
  2. No known quality control criteria exists for the component.
  3. The reported value failed to meet the established quality control criteria for either precision or accuracy.
  4. The sample matrix interfered with the ability to make any accurate determination (e.g., primary and confirmation results show greater than 40% RPD).
  5. The data is questionable because of improper laboratory or field protocols (e.g., GC/MS Tune did not meet method criteria).
- K Off scale low. The value is less than the lowest calibration standard but greater than the method reporting limit (MRL).
- L Off scale high. The analyte is above the upper limit of the linear calibration range.
- M The MDL/MRL has been elevated because the analyte could not be accurately quantified due to matrix interference.
- N Presumptive evidence of the analyte. Confirmation was not performed.
- Q Sample held beyond the accepted holding time.
- T Value reported is less than the laboratory method detection limit. The value is reported for informational purposes only.
- U Indicates that the compound was analyzed for but not detected.
- V Indicates that the analyte was detected in both the sample and the associated method blank.
- Y The laboratory analysis was from an improperly preserved sample.
- Z Too many colonies were present (TNTC). The numeric value represents the filtration volume.



**Jacksonville Lab ID # for State Certifications<sup>1</sup>**

| <b>Agency</b>  | <b>Number</b>   | <b>Expiration Date</b> |
|--|-----------------|------------------------|
| Department of Defense  | 66206           | 7/31/2018              |
| Florida Department of Health                                   | E82502          | 6/30/2018              |
| Georgia Department of Natural Resources                        | 958             | 6/30/2018              |
| Kentucky Division of Waste Management                          | 123042          | 6/30/2018              |
| Louisiana Department of Environmental Quality                  | 02086           | 6/30/2018              |
| Maine Department of Health and Human Services                  | 2015002         | 2/3/2019               |
| North Carolina Department of Environment and Natural Resources | 527             | 12/31/2018             |
| Pennsylvania Department of Environmental Protection            | 68-04835        | 8/31/2018              |
| South Carolina Department of Health and Environmental Control  | 96021001        | 6/30/2018              |
| Texas Commission on Environmental Quality                      | T104704197-16-8 | 5/31/2018              |
| Virginia Environmental Accreditation Program                   | 460191          | 12/14/2018             |

<sup>1</sup> Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state or agency requirements. The test results meet requirements of the current NELAP/TNI standards or state or agency requirements, where applicable, except as noted in the laboratory case narrative provided. For a specific list of accredited analytes, refer to <http://www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads/North-America-Downloads>



## ACRONYMS

|            |  |
|------------|--|
| ASTM       | American Society for Testing and Materials   |
| A2LA       | American Association for Laboratory Accreditation  |
| CARB       | California Air Resources Board   |
| CAS Number | Chemical Abstract Service registry Number  |
| CFC        | Chlorofluorocarbon   |
| CFU        | Colony-Forming Unit  |
| DEC        | Department of Environmental Conservation   |
| DEQ        | Department of Environmental Quality  |
| DHS        | Department of Health Services  |
| DOE        | Department of Ecology  |
| DOH        | Department of Health   |
| EPA        | U. S. Environmental Protection Agency  |
| ELAP       | Environmental Laboratory Accreditation Program   |
| GC         | Gas Chromatography   |
| GC/MS      | Gas Chromatography/Mass Spectrometry   |
| LUFT       | Leaking Underground Fuel Tank  |
| M          | Modified   |
| MCL        | Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA. |
| MDL        | Method Detection Limit   |
| MPN        | Most Probable Number   |
| MRL        | Method Reporting Limit   |
| NA         | Not Applicable   |
| NC         | Not Calculated   |
| NCASI      | National Council of the Paper Industry for Air and Stream Improvement  |
| ND         | Not Detected   |
| NIOSH      | National Institute for Occupational Safety and Health  |
| PQL        | Practical Quantitation Limit   |
| RCRA       | Resource Conservation and Recovery Act   |
| SIM        | Selected Ion Monitoring  |
| TPH        | Total Petroleum Hydrocarbons   |
| tr         | Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.                           |

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Analyst Summary report

**Client:** Gainesville Regional Utilities  
**Project:** D18A027

**Service Request:** J1800753

**Sample Name:** D18A027-01  
**Lab Code:** J1800753-001  
**Sample Matrix:** Water

**Date Collected:** 01/23/18  
**Date Received:** 01/30/18

**Analysis Method**  
200.7  
200.8

**Extracted/Digested By**  
EGARDNER  
CSULLIVAN

**Analyzed By**  
EGARDNER  
CSULLIVAN

**Sample Name:** D18A027-02  
**Lab Code:** J1800753-002  
**Sample Matrix:** Water

**Date Collected:** 01/24/18  
**Date Received:** 01/30/18

**Analysis Method**  
200.7  
200.8

**Extracted/Digested By**  
EGARDNER  
CSULLIVAN

**Analyzed By**  
EGARDNER  
CSULLIVAN

**Sample Name:** D18A027-03  
**Lab Code:** J1800753-003  
**Sample Matrix:** Water

**Date Collected:** 01/24/18  
**Date Received:** 01/30/18

**Analysis Method**  
200.7  
200.8

**Extracted/Digested By**  
EGARDNER  
CSULLIVAN

**Analyzed By**  
EGARDNER  
CSULLIVAN

**Sample Name:** D18A027-04  
**Lab Code:** J1800753-004  
**Sample Matrix:** Water

**Date Collected:** 01/24/18  
**Date Received:** 01/30/18

**Analysis Method**  
200.7  
200.8

**Extracted/Digested By**  
EGARDNER  
CSULLIVAN

**Analyzed By**  
EGARDNER  
CSULLIVAN

ALS Group USA, Corp.  
dba ALS Environmental

Analyst Summary report

**Client:** Gainesville Regional Utilities  
**Project:** D18A027

**Service Request:** J1800753

**Sample Name:** D18A027-05  
**Lab Code:** J1800753-005  
**Sample Matrix:** Water

**Date Collected:** 01/23/18  
**Date Received:** 01/30/18

**Analysis Method**  
200.7  
200.8

**Extracted/Digested By**  
EGARDNER  
CSULLIVAN

**Analyzed By**  
EGARDNER  
CSULLIVAN

**Sample Name:** D18A027-06  
**Lab Code:** J1800753-006  
**Sample Matrix:** Water

**Date Collected:** 01/25/18  
**Date Received:** 01/30/18

**Analysis Method**  
200.7  
200.8

**Extracted/Digested By**  
EGARDNER  
CSULLIVAN

**Analyzed By**  
EGARDNER  
CSULLIVAN

**Sample Name:** D18A027-07  
**Lab Code:** J1800753-007  
**Sample Matrix:** Water

**Date Collected:** 01/25/18  
**Date Received:** 01/30/18

**Analysis Method**  
200.7  
200.8

**Extracted/Digested By**  
EGARDNER  
CSULLIVAN

**Analyzed By**  
EGARDNER  
CSULLIVAN

**Sample Name:** D18A027-08  
**Lab Code:** J1800753-008  
**Sample Matrix:** Water

**Date Collected:** 01/24/18  
**Date Received:** 01/30/18

**Analysis Method**  
200.7  
200.8

**Extracted/Digested By**  
EGARDNER  
CSULLIVAN

**Analyzed By**  
EGARDNER  
CSULLIVAN

ALS Group USA, Corp.  
dba ALS Environmental

Analyst Summary report

**Client:** Gainesville Regional Utilities  
**Project:** D18A027

**Service Request:** J1800753

**Sample Name:** D18A027-09  
**Lab Code:** J1800753-009  
**Sample Matrix:** Water

**Date Collected:** 01/21/18  
**Date Received:** 01/30/18

**Analysis Method**  
200.7

**Extracted/Digested By**  
EGARDNER

**Analyzed By**  
EGARDNER

**Sample Name:** D18A027-10  
**Lab Code:** J1800753-010  
**Sample Matrix:** Water

**Date Collected:** 01/23/18  
**Date Received:** 01/30/18

**Analysis Method**  
200.7

**Extracted/Digested By**  
EGARDNER

**Analyzed By**  
EGARDNER

**Sample Name:** D18A027-11  
**Lab Code:** J1800753-011  
**Sample Matrix:** Water

**Date Collected:** 01/21/18  
**Date Received:** 01/30/18

**Analysis Method**  
200.7

**Extracted/Digested By**  
EGARDNER

**Analyzed By**  
EGARDNER

**Sample Name:** D18A027-12  
**Lab Code:** J1800753-012  
**Sample Matrix:** Water

**Date Collected:** 01/24/18  
**Date Received:** 01/30/18

**Analysis Method**  
200.7  
200.8

**Extracted/Digested By**  
EGARDNER  
CSULLIVAN

**Analyzed By**  
EGARDNER  
CSULLIVAN

ALS Group USA, Corp.  
dba ALS Environmental

Analyst Summary report

**Client:** Gainesville Regional Utilities  
**Project:** D18A027

**Service Request:** J1800753

**Sample Name:** D18A027-13  
**Lab Code:** J1800753-013  
**Sample Matrix:** Water

**Date Collected:** 01/23/18  
**Date Received:** 01/30/18

**Analysis Method**  
200.7  
200.8

**Extracted/Digested By**  
EGARDNER  
CSULLIVAN

**Analyzed By**  
EGARDNER  
CSULLIVAN

**Sample Name:** D18A027-15  
**Lab Code:** J1800753-014  
**Sample Matrix:** Water

**Date Collected:** 01/25/18  
**Date Received:** 01/30/18

**Analysis Method**  
200.7  
200.8

**Extracted/Digested By**  
EGARDNER  
CSULLIVAN

**Analyzed By**  
EGARDNER  
CSULLIVAN





# Sample Results

**ALS Environmental—Jacksonville Laboratory**  
9143 Philips Highway, Suite 200, Jacksonville, FL 32256  
Phone (904) 739-2277 Fax (904) 739-2011  
[www.alsglobal.com](http://www.alsglobal.com)



# Metals

**ALS Environmental—Jacksonville Laboratory**  
9143 Philips Highway, Suite 200, Jacksonville, FL 32256  
Phone (904)739-2277 Fax (904)739-2011  
[www.alsglobal.com](http://www.alsglobal.com)

ALS Group USA, Corp.  
dba ALS Environmental

Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A027  
**Sample Matrix:** Water  
**Sample Name:** D18A027-01  
**Lab Code:** J1800753-001

**Service Request:** J1800753  
**Date Collected:** 01/23/18 14:08  
**Date Received:** 01/30/18 09:25  
**Basis:** NA

Inorganic Parameters

| Analyte Name    | Analysis Method | Result | Units | PQL  | MDL  | Dil. | Date Analyzed  | Date Extracted | Q |
|-----------------|-----------------|--------|-------|------|------|------|----------------|----------------|---|
| Antimony, Total | 200.8           | 0.2 I  | ug/L  | 1.0  | 0.04 | 1    | 02/01/18 20:15 | 02/01/18       |   |
| Arsenic, Total  | 200.8           | 0.8 I  | ug/L  | 1.0  | 0.10 | 1    | 02/01/18 20:15 | 02/01/18       |   |
| Boron, Total    | 200.7           | 18 I   | ug/L  | 50   | 10   | 1    | 02/02/18 17:22 | 02/02/18       |   |
| Lead, Total     | 200.8           | 0.21 I | ug/L  | 0.50 | 0.03 | 1    | 02/01/18 20:15 | 02/01/18       |   |
| Lithium, Total  | 200.7           | 2 U    | ug/L  | 100  | 2    | 1    | 02/02/18 17:20 | 02/02/18       |   |
| Thallium, Total | 200.8           | 0.02 U | ug/L  | 0.20 | 0.02 | 1    | 02/01/18 20:15 | 02/01/18       |   |

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dba ALS Environmental

Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A027  
**Sample Matrix:** Water  
**Sample Name:** D18A027-02  
**Lab Code:** J1800753-002

**Service Request:** J1800753  
**Date Collected:** 01/24/18 08:08  
**Date Received:** 01/30/18 09:25

**Basis:** NA

**Inorganic Parameters**

| <b>Analyte Name</b> | <b>Analysis Method</b> | <b>Result</b> | <b>Units</b> | <b>PQL</b> | <b>MDL</b> | <b>Dil.</b> | <b>Date Analyzed</b> | <b>Date Extracted</b> | <b>Q</b> |
|---------------------|------------------------|---------------|--------------|------------|------------|-------------|----------------------|-----------------------|----------|
| Antimony, Total     | 200.8                  | <b>0.2 I</b>  | ug/L         | 1.0        | 0.04       | 1           | 02/01/18 20:17       | 02/01/18              |          |
| Arsenic, Total      | 200.8                  | <b>0.5 I</b>  | ug/L         | 1.0        | 0.10       | 1           | 02/01/18 20:17       | 02/01/18              |          |
| Boron, Total        | 200.7                  | <b>21 I</b>   | ug/L         | 50         | 10         | 1           | 02/02/18 17:28       | 02/02/18              |          |
| Lead, Total         | 200.8                  | <b>0.08 I</b> | ug/L         | 0.50       | 0.03       | 1           | 02/01/18 20:17       | 02/01/18              |          |
| Lithium, Total      | 200.7                  | 2 U           | ug/L         | 100        | 2          | 1           | 02/02/18 17:26       | 02/02/18              |          |
| Thallium, Total     | 200.8                  | 0.02 U        | ug/L         | 0.20       | 0.02       | 1           | 02/01/18 20:17       | 02/01/18              |          |

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Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A027  
**Sample Matrix:** Water  
**Sample Name:** D18A027-03  
**Lab Code:** J1800753-003

**Service Request:** J1800753  
**Date Collected:** 01/24/18 11:39  
**Date Received:** 01/30/18 09:25

**Basis:** NA

**Inorganic Parameters**

| <b>Analyte Name</b> | <b>Analysis Method</b> | <b>Result</b> | <b>Units</b> | <b>PQL</b> | <b>MDL</b> | <b>Dil.</b> | <b>Date Analyzed</b> | <b>Date Extracted</b> | <b>Q</b> |
|---------------------|------------------------|---------------|--------------|------------|------------|-------------|----------------------|-----------------------|----------|
| Antimony, Total     | 200.8                  | <b>0.2 I</b>  | ug/L         | 1.0        | 0.04       | 1           | 02/01/18 20:27       | 02/01/18              |          |
| Arsenic, Total      | 200.8                  | <b>0.8 I</b>  | ug/L         | 1.0        | 0.10       | 1           | 02/01/18 20:27       | 02/01/18              |          |
| Boron, Total        | 200.7                  | <b>24 I</b>   | ug/L         | 50         | 10         | 1           | 02/02/18 18:11       | 02/02/18              |          |
| Lead, Total         | 200.8                  | <b>0.04 I</b> | ug/L         | 0.50       | 0.03       | 1           | 02/01/18 20:27       | 02/01/18              |          |
| Lithium, Total      | 200.7                  | 2 U           | ug/L         | 100        | 2          | 1           | 02/02/18 18:09       | 02/02/18              |          |
| Thallium, Total     | 200.8                  | 0.02 U        | ug/L         | 0.20       | 0.02       | 1           | 02/01/18 20:27       | 02/01/18              |          |

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dba ALS Environmental

Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A027  
**Sample Matrix:** Water  
**Sample Name:** D18A027-04  
**Lab Code:** J1800753-004

**Service Request:** J1800753  
**Date Collected:** 01/24/18 13:34  
**Date Received:** 01/30/18 09:25

**Basis:** NA

**Inorganic Parameters**

| <b>Analyte Name</b> | <b>Analysis Method</b> | <b>Result</b> | <b>Units</b> | <b>PQL</b> | <b>MDL</b> | <b>Dil.</b> | <b>Date Analyzed</b> | <b>Date Extracted</b> | <b>Q</b> |
|---------------------|------------------------|---------------|--------------|------------|------------|-------------|----------------------|-----------------------|----------|
| Antimony, Total     | 200.8                  | <b>0.2 I</b>  | ug/L         | 1.0        | 0.04       | 1           | 02/01/18 20:29       | 02/01/18              |          |
| Arsenic, Total      | 200.8                  | <b>1.0 I</b>  | ug/L         | 1.0        | 0.10       | 1           | 02/01/18 20:29       | 02/01/18              |          |
| Boron, Total        | 200.7                  | <b>14 I</b>   | ug/L         | 50         | 10         | 1           | 02/02/18 18:16       | 02/02/18              |          |
| Lead, Total         | 200.8                  | <b>0.11 I</b> | ug/L         | 0.50       | 0.03       | 1           | 02/01/18 20:29       | 02/01/18              |          |
| Lithium, Total      | 200.7                  | 2 U           | ug/L         | 100        | 2          | 1           | 02/02/18 18:14       | 02/02/18              |          |
| Thallium, Total     | 200.8                  | 0.02 U        | ug/L         | 0.20       | 0.02       | 1           | 02/01/18 20:29       | 02/01/18              |          |

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Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A027  
**Sample Matrix:** Water  
**Sample Name:** D18A027-05  
**Lab Code:** J1800753-005

**Service Request:** J1800753  
**Date Collected:** 01/23/18 16:50  
**Date Received:** 01/30/18 09:25

**Basis:** NA

**Inorganic Parameters**

| <b>Analyte Name</b> | <b>Analysis Method</b> | <b>Result</b> | <b>Units</b> | <b>PQL</b> | <b>MDL</b> | <b>Dil.</b> | <b>Date Analyzed</b> | <b>Date Extracted</b> | <b>Q</b> |
|---------------------|------------------------|---------------|--------------|------------|------------|-------------|----------------------|-----------------------|----------|
| Antimony, Total     | 200.8                  | <b>0.5 I</b>  | ug/L         | 1.0        | 0.04       | 1           | 02/01/18 20:30       | 02/01/18              |          |
| Arsenic, Total      | 200.8                  | <b>0.4 I</b>  | ug/L         | 1.0        | 0.10       | 1           | 02/01/18 20:30       | 02/01/18              |          |
| Boron, Total        | 200.7                  | <b>191</b>    | ug/L         | 50         | 10         | 1           | 02/02/18 18:21       | 02/02/18              |          |
| Lead, Total         | 200.8                  | 0.03 U        | ug/L         | 0.50       | 0.03       | 1           | 02/01/18 20:30       | 02/01/18              |          |
| Lithium, Total      | 200.7                  | 2 U           | ug/L         | 100        | 2          | 1           | 02/02/18 18:20       | 02/02/18              |          |
| Thallium, Total     | 200.8                  | <b>0.06 I</b> | ug/L         | 0.20       | 0.02       | 1           | 02/01/18 20:30       | 02/01/18              |          |

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Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A027  
**Sample Matrix:** Water  
**Sample Name:** D18A027-06  
**Lab Code:** J1800753-006

**Service Request:** J1800753  
**Date Collected:** 01/25/18 09:22  
**Date Received:** 01/30/18 09:25  
**Basis:** NA

Inorganic Parameters

| Analyte Name    | Analysis Method | Result | Units | PQL  | MDL  | Dil. | Date Analyzed  | Date Extracted | Q |
|-----------------|-----------------|--------|-------|------|------|------|----------------|----------------|---|
| Antimony, Total | 200.8           | 1.1    | ug/L  | 1.0  | 0.04 | 1    | 02/01/18 20:32 | 02/01/18       |   |
| Arsenic, Total  | 200.8           | 0.8 I  | ug/L  | 1.0  | 0.10 | 1    | 02/01/18 20:32 | 02/01/18       |   |
| Boron, Total    | 200.7           | 327    | ug/L  | 50   | 10   | 1    | 02/02/18 18:26 | 02/02/18       |   |
| Lead, Total     | 200.8           | 0.07 I | ug/L  | 0.50 | 0.03 | 1    | 02/01/18 20:32 | 02/01/18       |   |
| Lithium, Total  | 200.7           | 2 U    | ug/L  | 100  | 2    | 1    | 02/02/18 18:25 | 02/02/18       |   |
| Thallium, Total | 200.8           | 0.06 I | ug/L  | 0.20 | 0.02 | 1    | 02/01/18 20:32 | 02/01/18       |   |



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Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A027  
**Sample Matrix:** Water  
**Sample Name:** D18A027-07  
**Lab Code:** J1800753-007

**Service Request:** J1800753  
**Date Collected:** 01/25/18 11:28  
**Date Received:** 01/30/18 09:25

**Basis:** NA

**Inorganic Parameters**

| <b>Analyte Name</b> | <b>Analysis Method</b> | <b>Result</b> | <b>Units</b> | <b>PQL</b> | <b>MDL</b> | <b>Dil.</b> | <b>Date Analyzed</b> | <b>Date Extracted</b> | <b>Q</b> |
|---------------------|------------------------|---------------|--------------|------------|------------|-------------|----------------------|-----------------------|----------|
| Antimony, Total     | 200.8                  | <b>1.5</b>    | ug/L         | 1.0        | 0.04       | 1           | 02/01/18 20:33       | 02/01/18              |          |
| Arsenic, Total      | 200.8                  | <b>0.8 I</b>  | ug/L         | 1.0        | 0.10       | 1           | 02/01/18 20:33       | 02/01/18              |          |
| Boron, Total        | 200.7                  | <b>1800</b>   | ug/L         | 50         | 10         | 1           | 02/02/18 18:31       | 02/02/18              |          |
| Lead, Total         | 200.8                  | <b>0.09 I</b> | ug/L         | 0.50       | 0.03       | 1           | 02/01/18 20:33       | 02/01/18              |          |
| Lithium, Total      | 200.7                  | 2 U           | ug/L         | 100        | 2          | 1           | 02/02/18 18:30       | 02/02/18              |          |
| Thallium, Total     | 200.8                  | <b>0.04 I</b> | ug/L         | 0.20       | 0.02       | 1           | 02/01/18 20:33       | 02/01/18              |          |

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Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A027  
**Sample Matrix:** Water  
**Sample Name:** D18A027-08  
**Lab Code:** J1800753-008

**Service Request:** J1800753  
**Date Collected:** 01/24/18 14:49  
**Date Received:** 01/30/18 09:25  
**Basis:** NA

Inorganic Parameters

| Analyte Name    | Analysis Method | Result | Units | PQL  | MDL  | Dil. | Date Analyzed  | Date Extracted | Q |
|-----------------|-----------------|--------|-------|------|------|------|----------------|----------------|---|
| Antimony, Total | 200.8           | 7.2    | ug/L  | 1.0  | 0.04 | 1    | 02/01/18 20:35 | 02/01/18       |   |
| Arsenic, Total  | 200.8           | 1.7    | ug/L  | 1.0  | 0.10 | 1    | 02/01/18 20:35 | 02/01/18       |   |
| Boron, Total    | 200.7           | 1080   | ug/L  | 50   | 10   | 1    | 02/02/18 18:36 | 02/02/18       |   |
| Lead, Total     | 200.8           | 0.03 U | ug/L  | 0.50 | 0.03 | 1    | 02/01/18 20:35 | 02/01/18       |   |
| Lithium, Total  | 200.7           | 240    | ug/L  | 100  | 2    | 1    | 02/02/18 18:35 | 02/02/18       |   |
| Thallium, Total | 200.8           | 0.48   | ug/L  | 0.20 | 0.02 | 1    | 02/01/18 20:35 | 02/01/18       |   |

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Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A027  
**Sample Matrix:** Water  
**Sample Name:** D18A027-09  
**Lab Code:** J1800753-009

**Service Request:** J1800753  
**Date Collected:** 01/21/18 16:42  
**Date Received:** 01/30/18 16:07  
**Basis:** NA

Inorganic Parameters

| Analyte Name   | Analysis Method | Result | Units | PQL | MDL | Dil. | Date Analyzed  | Date Extracted | Q |
|----------------|-----------------|--------|-------|-----|-----|------|----------------|----------------|---|
| Lithium, Total | 200.7           | 2 U    | ug/L  | 100 | 2   | 1    | 02/02/18 18:39 | 02/02/18       |   |

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Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A027  
**Sample Matrix:** Water  
**Sample Name:** D18A027-10  
**Lab Code:** J1800753-010

**Service Request:** J1800753  
**Date Collected:** 01/23/18 12:04  
**Date Received:** 01/30/18 16:07  
**Basis:** NA

Inorganic Parameters

| Analyte Name   | Analysis Method | Result | Units | PQL | MDL | Dil. | Date Analyzed  | Date Extracted | Q |
|----------------|-----------------|--------|-------|-----|-----|------|----------------|----------------|---|
| Lithium, Total | 200.7           | 2 U    | ug/L  | 100 | 2   | 1    | 02/02/18 18:45 | 02/02/18       |   |

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Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A027  
**Sample Matrix:** Water  
**Sample Name:** D18A027-11  
**Lab Code:** J1800753-011

**Service Request:** J1800753  
**Date Collected:** 01/21/18 10:52  
**Date Received:** 01/30/18 16:07  
**Basis:** NA

**Inorganic Parameters**

| <b>Analyte Name</b> | <b>Analysis Method</b> | <b>Result</b> | <b>Units</b> | <b>PQL</b> | <b>MDL</b> | <b>Dil.</b> | <b>Date Analyzed</b> | <b>Date Extracted</b> | <b>Q</b> |
|---------------------|------------------------|---------------|--------------|------------|------------|-------------|----------------------|-----------------------|----------|
| Lithium, Total      | 200.7                  | 2 U           | ug/L         | 100        | 2          | 1           | 02/02/18 19:45       | 02/02/18              |          |

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Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A027  
**Sample Matrix:** Water  
**Sample Name:** D18A027-12  
**Lab Code:** J1800753-012

**Service Request:** J1800753  
**Date Collected:** 01/24/18 09:10  
**Date Received:** 01/30/18 09:25  
**Basis:** NA

Inorganic Parameters

| Analyte Name    | Analysis Method | Result      | Units | PQL  | MDL  | Dil. | Date Analyzed  | Date Extracted | Q |
|-----------------|-----------------|-------------|-------|------|------|------|----------------|----------------|---|
| Antimony, Total | 200.8           | 0.04 U      | ug/L  | 1.0  | 0.04 | 1    | 02/01/18 20:36 | 02/01/18       |   |
| Boron, Total    | 200.7           | <b>19 I</b> | ug/L  | 50   | 10   | 1    | 02/02/18 19:51 | 02/02/18       |   |
| Lithium, Total  | 200.7           | 2 U         | ug/L  | 100  | 2    | 1    | 02/02/18 19:50 | 02/02/18       |   |
| Thallium, Total | 200.8           | 0.02 U      | ug/L  | 0.20 | 0.02 | 1    | 02/01/18 20:36 | 02/01/18       |   |

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Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A027  
**Sample Matrix:** Water  
**Sample Name:** D18A027-13  
**Lab Code:** J1800753-013

**Service Request:** J1800753  
**Date Collected:** 01/23/18 15:25  
**Date Received:** 01/30/18 09:25  
**Basis:** NA

Inorganic Parameters

| <b>Analyte Name</b> | <b>Analysis Method</b> | <b>Result</b> | <b>Units</b> | <b>PQL</b> | <b>MDL</b> | <b>Dil.</b> | <b>Date Analyzed</b> | <b>Date Extracted</b> | <b>Q</b> |
|---------------------|------------------------|---------------|--------------|------------|------------|-------------|----------------------|-----------------------|----------|
| Antimony, Total     | 200.8                  | <b>0.3 I</b>  | ug/L         | 1.0        | 0.04       | 1           | 02/01/18 20:41       | 02/01/18              |          |
| Boron, Total        | 200.7                  | <b>12 I</b>   | ug/L         | 50         | 10         | 1           | 02/02/18 19:57       | 02/02/18              |          |
| Lithium, Total      | 200.7                  | 2 U           | ug/L         | 100        | 2          | 1           | 02/02/18 19:55       | 02/02/18              |          |
| Thallium, Total     | 200.8                  | <b>0.11 I</b> | ug/L         | 0.20       | 0.02       | 1           | 02/01/18 20:41       | 02/01/18              |          |

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Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A027  
**Sample Matrix:** Water  
**Sample Name:** D18A027-15  
**Lab Code:** J1800753-014

**Service Request:** J1800753  
**Date Collected:** 01/25/18 12:27  
**Date Received:** 01/30/18 09:25  
**Basis:** NA

Inorganic Parameters

| Analyte Name    | Analysis Method | Result | Units | PQL  | MDL  | Dil. | Date Analyzed  | Date Extracted | Q |
|-----------------|-----------------|--------|-------|------|------|------|----------------|----------------|---|
| Antimony, Total | 200.8           | 0.04 U | ug/L  | 1.0  | 0.04 | 1    | 02/01/18 20:46 | 02/01/18       |   |
| Boron, Total    | 200.7           | 10 U   | ug/L  | 50   | 10   | 1    | 02/02/18 20:02 | 02/02/18       |   |
| Lithium, Total  | 200.7           | 2 U    | ug/L  | 100  | 2    | 1    | 02/02/18 20:01 | 02/02/18       |   |
| Thallium, Total | 200.8           | 0.02 U | ug/L  | 0.20 | 0.02 | 1    | 02/01/18 20:46 | 02/01/18       |   |





## QC Summary Forms

**ALS Environmental - Jacksonville Laboratory**  
9143 Philips Highway, Suite 200, Jacksonville, FL 32256  
Phone (904) 739-2277 Fax (904) 739-2011  
[www.alsglobal.com](http://www.alsglobal.com)



# Metals

**ALS Environmental—Jacksonville Laboratory**  
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ALS Group USA, Corp.  
dba ALS Environmental

Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A027  
**Sample Matrix:** Water  
**Sample Name:** Method Blank  
**Lab Code:** J1800753-MB

**Service Request:** J1800753  
**Date Collected:** NA  
**Date Received:** NA  
**Basis:** NA

**Inorganic Parameters**

| <b>Analyte Name</b> | <b>Analysis Method</b> | <b>Result</b> | <b>Units</b> | <b>PQL</b> | <b>MDL</b> | <b>Dil.</b> | <b>Date Analyzed</b> | <b>Date Extracted</b> | <b>Q</b> |
|---------------------|------------------------|---------------|--------------|------------|------------|-------------|----------------------|-----------------------|----------|
| Antimony, Total     | 200.8                  | 0.04 U        | ug/L         | 1.0        | 0.04       | 1           | 02/01/18 20:12       | 02/01/18              |          |
| Arsenic, Total      | 200.8                  | 0.10 U        | ug/L         | 1.0        | 0.10       | 1           | 02/01/18 20:12       | 02/01/18              |          |
| Boron, Total        | 200.7                  | 10 U          | ug/L         | 50         | 10         | 1           | 02/02/18 17:05       | 02/02/18              |          |
| Lead, Total         | 200.8                  | 0.03 U        | ug/L         | 0.50       | 0.03       | 1           | 02/01/18 20:12       | 02/01/18              |          |
| Lithium, Total      | 200.7                  | 2 U           | ug/L         | 100        | 2          | 1           | 02/02/18 17:04       | 02/02/18              |          |
| Thallium, Total     | 200.8                  | 0.02 U        | ug/L         | 0.20       | 0.02       | 1           | 02/01/18 20:12       | 02/01/18              |          |

ALS Group USA, Corp.  
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QA/QC Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A027  
**Sample Matrix:** Water

**Service Request:**J1800753  
**Date Collected:**01/24/18  
**Date Received:**01/30/18  
**Date Analyzed:**02/01/18 - 02/02/18

**Duplicate Matrix Spike Summary  
Inorganic Parameters**

**Sample Name:** D18A027-02  
**Lab Code:** J1800753-002

**Units:**ug/L  
**Basis:**NA

**Matrix Spike  
J1800753-002MS**

**Duplicate Matrix Spike  
J1800753-002DMS**

| <b>Analyte Name</b> | <b>Method</b> | <b>Sample Result</b> | <b>Result</b> | <b>Spike Amount</b> | <b>% Rec</b> | <b>Result</b> | <b>Spike Amount</b> | <b>% Rec</b> | <b>% Rec Limits</b> | <b>RPD</b> | <b>RPD Limit</b> |
|---------------------|---------------|----------------------|---------------|---------------------|--------------|---------------|---------------------|--------------|---------------------|------------|------------------|
| Antimony, Total     | 200.8         | 0.2 I                | 50.2          | 50.0                | 100          | 49.8          | 50.0                | 99           | 70-130              | <1         | 20               |
| Arsenic, Total      | 200.8         | 0.5 I                | 50.4          | 50.0                | 100          | 51.0          | 50.0                | 101          | 70-130              | 1          | 20               |
| Boron, Total        | 200.7         | 21 I                 | 2630          | 2500                | 104          | 2650          | 2500                | 105          | 70-130              | <1         | 20               |
| Lead, Total         | 200.8         | 0.08 I               | 25.3          | 25.0                | 101          | 25.5          | 25.0                | 102          | 70-130              | 1          | 20               |
| Thallium, Total     | 200.8         | 0.02 U               | 10.1          | 10.0                | 101          | 10.2          | 10.0                | 102          | 70-130              | 1          | 20               |
| Lithium, Total      | 200.7         | 2 U                  | 5100          | 5000                | 102          | 5110          | 5000                | 102          | 70-130              | <1         | 20               |

Results flagged with an asterisk (\*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.  
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QA/QC Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A027  
**Sample Matrix:** Water

**Service Request:** J1800753  
**Date Collected:** 01/23/18  
**Date Received:** 01/30/18  
**Date Analyzed:** 02/2/18  
**Date Extracted:** 02/2/18

**Duplicate Matrix Spike Summary  
Inorganic Parameters**

**Sample Name:** D18A027-10  
**Lab Code:** J1800753-010  
**Analysis Method:** 200.7  
**Prep Method:** EPA 3005A

**Units:** ug/L  
**Basis:** NA

| Analyte Name   | Sample Result | Result | Matrix Spike<br>J1800753-010MS |       | Duplicate Matrix Spike<br>J1800753-010DMS |              | % Rec Limits | RPD    | RPD Limit |       |
|----------------|---------------|--------|--------------------------------|-------|---|--------------|--------------|--------|-----------|-------|
|                |               |        | Spike Amount                   | % Rec | Result                                    | Spike Amount |              |        |           | % Rec |
| Lithium, Total | 2 U           | 5130   | 5000                           | 103   | 5120                                      | 5000         | 102          | 70-130 | <1        | 20    |

Results flagged with an asterisk (\*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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QA/QC Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A027  
**Sample Matrix:** Water

**Service Request:** J1800753  
**Date Collected:** 01/23/18  
**Date Received:** 01/30/18  
**Date Analyzed:** 02/1/18  
**Date Extracted:** 02/1/18

**Duplicate Matrix Spike Summary  
Inorganic Parameters**

**Sample Name:** D18A027-13  
**Lab Code:** J1800753-013  
**Analysis Method:** 200.8  
**Prep Method:** EPA 3005A

**Units:** ug/L  
**Basis:** NA

| Analyte Name    | Sample Result | Result | Matrix Spike<br>J1800753-013MS |       | Duplicate Matrix Spike<br>J1800753-013DMS |              | % Rec Limits | RPD    | RPD Limit |       |
|-----------------|---------------|--------|--------------------------------|-------|---|--------------|--------------|--------|-----------|-------|
|                 |               |        | Spike Amount                   | % Rec | Result                                    | Spike Amount |              |        |           | % Rec |
| Antimony, Total | 0.3 I         | 50.9   | 50.0                           | 101   | 50.5                                      | 50.0         | 100          | 70-130 | <1        | 20    |
| Thallium, Total | 0.11 I        | 10.4   | 10.0                           | 103   | 10.4                                      | 10.0         | 103          | 70-130 | <1        | 20    |

Results flagged with an asterisk (\*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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QA/QC Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A027  
**Sample Matrix:** Water

**Service Request:** J1800753  
**Date Analyzed:** 02/01/18 - 02/02/18

**Lab Control Sample Summary**  
**Inorganic Parameters**

**Units:**ug/L  
**Basis:**NA

**Lab Control Sample**  
J1800753-LCS

| <b>Analyte Name</b> | <b>Analytical Method</b> | <b>Result</b> | <b>Spike Amount</b> | <b>% Rec</b> | <b>% Rec Limits</b> |
|---------------------|--------------------------|---------------|---------------------|--------------|---------------------|
| Antimony, Total     | 200.8                    | 50.7          | 50.0                | 101          | 85-115              |
| Arsenic, Total      | 200.8                    | 49.1          | 50.0                | 98           | 85-115              |
| Boron, Total        | 200.7                    | 2570          | 2500                | 103          | 85-115              |
| Lead, Total         | 200.8                    | 25.2          | 25.0                | 101          | 85-115              |
| Lithium, Total      | 200.7                    | 5180          | 5000                | 104          | 85-115              |
| Thallium, Total     | 200.8                    | 10.0          | 10.0                | 100          | 85-115              |



February 04, 2018

Jeffery Boudreau  
Gainesville Regional Utilities  
10001 NW 13th St  
Gainesville, FL 32653

Service Request No: J1800752

CCR #1  
As s Lead  
for K 475  
M6T4  
EBlank

**Laboratory Results for: D18A024**

Dear Jeffery,

Enclosed are the results of the sample(s) submitted to our laboratory January 30, 2018  
For your reference, these analyses have been assigned our service request number **J1800752**.

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and ALS Environmental is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report. In accordance to the NELAC 2003 Standard, a statement on the estimated uncertainty of measurement of any quantitative analysis will be supplied upon request.

Respectfully submitted,

**ALS Group USA, Corp. dba ALS Environmental**

Gina Bondani  
Project Manager

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## Table of Contents

|                            |    |
|----------------------------|----|
| CoverLetter                | 1  |
| Table of Contents          | 2  |
| Narrative Documents        | 4  |
| Narrative Documents        | 5  |
| Hit Summary List           | 6  |
| Sample Receipt Information | 8  |
| Sample Cross-Reference     | 9  |
| Chain Of Custody           | 10 |
| Miscellaneous Forms        | 14 |
| Qualifiers                 | 15 |
| Acronyms                   | 17 |
| Analyst Summary            | 18 |
| Sample Results             | 21 |
| Metals                     | 22 |
| D18A024-01 - Metals        | 23 |
| D18A024-02 - Metals        | 24 |
| D18A024-03 - Metals        | 25 |
| D18A024-04 - Metals        | 26 |
| D18A024-05 - Metals        | 27 |
| D18A024-06 - Metals        | 28 |
| D18A024-07 - Metals        | 29 |
| D18A024-08 - Metals        | 30 |

## Table of Contents (continued)

|   |    |
|---|----|
| D18A024-09 - Metals                     | 31 |
| D18A024-10 - Metals                     | 32 |
| D18A024-11 - Metals                     | 33 |
| D18A024-12 - Metals                     | 34 |
| D18A024-13 - Metals                     | 35 |
| D18A024-14 - Metals                     | 36 |
| QC Summary Forms                        | 37 |
| Metals                                  | 38 |
| Method Blank - Metals                   | 39 |
| J1800752-011DMS D18A024-11 - DMS Metals | 40 |
| J1800752-LCS - LCS Metals               | 41 |



## Narrative Documents

**ALS Environmental—Jacksonville Laboratory**  
9143 Philips Highway, Suite 200, Jacksonville, FL 32256  
Phone (904) 739-2277 Fax (904) 739-2011  
[www.alsglobal.com](http://www.alsglobal.com)



**Client:** Gainesville Regional Utilities  
**Project:** D18A024  
**Sample Matrix:** Water

**Service Request:** J1800752  
**Date Received:** 1/30/18

### CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier II data deliverables, including results of QC samples analyzed from this delivery group. When appropriate to the procedure, method blank results have been reported with each analytical test. Analytical procedures performed by the lab are validated in accordance with NELAC standards. Parameters that are included in the NELAC Fields of Testing but are not included in the lab's NELAC accreditation are identified in the discussion of each analytical procedure.

#### Sample Receipt

Samples were received for analysis at ALS Environmental and were received in good condition and consistent with the accompanying chain of custody form. Samples are refrigerated at  $\leq 6^{\circ}\text{C}$  upon receipt at the lab except for aqueous samples designated for metals analyses, which are stored at room temperature.

#### Analyses Notes:

No significant data anomalies were noted with this analysis.

Approved by  Date 2/4/2018



SAMPLE DETECTION SUMMARY

**CLIENT ID: D18A024-01** **Lab ID: J1800752-001**

| Analyte        | Results | Flag | MDL  | PQL | Units | Method |
|----------------|---------|------|------|-----|-------|--------|
| Arsenic, Total | 12.2    |      | 0.10 | 1.0 | ug/L  | 200.8  |

**CLIENT ID: D18A024-02** **Lab ID: J1800752-002**

| Analyte        | Results | Flag | MDL  | PQL | Units | Method |
|----------------|---------|------|------|-----|-------|--------|
| Arsenic, Total | 0.1     | I    | 0.10 | 1.0 | ug/L  | 200.8  |

**CLIENT ID: D18A024-03** **Lab ID: J1800752-003**

| Analyte        | Results | Flag | MDL  | PQL | Units | Method |
|----------------|---------|------|------|-----|-------|--------|
| Arsenic, Total | 0.9     | I    | 0.10 | 1.0 | ug/L  | 200.8  |

**CLIENT ID: D18A024-04** **Lab ID: J1800752-004**

| Analyte        | Results | Flag | MDL  | PQL | Units | Method |
|----------------|---------|------|------|-----|-------|--------|
| Arsenic, Total | 10.7    |      | 0.10 | 1.0 | ug/L  | 200.8  |

**CLIENT ID: D18A024-05** **Lab ID: J1800752-005**

| Analyte        | Results | Flag | MDL  | PQL | Units | Method |
|----------------|---------|------|------|-----|-------|--------|
| Arsenic, Total | 0.1     | I    | 0.10 | 1.0 | ug/L  | 200.8  |

**CLIENT ID: D18A024-06** **Lab ID: J1800752-006**

| Analyte        | Results | Flag | MDL  | PQL  | Units | Method |
|----------------|---------|------|------|------|-------|--------|
| Arsenic, Total | 0.3     | I    | 0.10 | 1.0  | ug/L  | 200.8  |
| Lead, Total    | 0.1     | I    | 0.03 | 0.50 | ug/L  | 200.8  |

**CLIENT ID: D18A024-07** **Lab ID: J1800752-007**

| Analyte        | Results | Flag | MDL  | PQL  | Units | Method |
|----------------|---------|------|------|------|-------|--------|
| Arsenic, Total | 0.4     | I    | 0.10 | 1.0  | ug/L  | 200.8  |
| Lead, Total    | 0.04    | I    | 0.03 | 0.50 | ug/L  | 200.8  |

**CLIENT ID: D18A024-08** **Lab ID: J1800752-008**

| Analyte        | Results | Flag | MDL  | PQL  | Units | Method |
|----------------|---------|------|------|------|-------|--------|
| Arsenic, Total | 1.9     |      | 0.10 | 1.0  | ug/L  | 200.8  |
| Lead, Total    | 1.64    |      | 0.03 | 0.50 | ug/L  | 200.8  |

**CLIENT ID: D18A024-09** **Lab ID: J1800752-009**

| Analyte        | Results | Flag | MDL  | PQL  | Units | Method |
|----------------|---------|------|------|------|-------|--------|
| Arsenic, Total | 3.8     |      | 0.10 | 1.0  | ug/L  | 200.8  |
| Lead, Total    | 0.04    | I    | 0.03 | 0.50 | ug/L  | 200.8  |

**CLIENT ID: D18A024-10** **Lab ID: J1800752-010**

| Analyte        | Results | Flag | MDL  | PQL | Units | Method |
|----------------|---------|------|------|-----|-------|--------|
| Arsenic, Total | 0.3     | I    | 0.10 | 1.0 | ug/L  | 200.8  |

**CLIENT ID: D18A024-11** **Lab ID: J1800752-011**

| Analyte        | Results | Flag | MDL  | PQL  | Units | Method |
|----------------|---------|------|------|------|-------|--------|
| Arsenic, Total | 0.2     | I    | 0.10 | 1.0  | ug/L  | 200.8  |
| Lead, Total    | 0.03    | I    | 0.03 | 0.50 | ug/L  | 200.8  |

**SAMPLE DETECTION SUMMARY**

| <b>CLIENT ID: D18A024-12</b> |                | <b>Lab ID: J1800752-012</b> |            |            |              |               |
|------------------------------|----------------|-----------------------------|------------|------------|--------------|---------------|
| <b>Analyte</b>               | <b>Results</b> | <b>Flag</b>                 | <b>MDL</b> | <b>PQL</b> | <b>Units</b> | <b>Method</b> |
| Arsenic, Total               | 0.2            | I                           | 0.10       | 1.0        | ug/L         | 200.8         |

| <b>CLIENT ID: D18A024-13</b> |                | <b>Lab ID: J1800752-013</b> |            |            |              |               |
|------------------------------|----------------|-----------------------------|------------|------------|--------------|---------------|
| <b>Analyte</b>               | <b>Results</b> | <b>Flag</b>                 | <b>MDL</b> | <b>PQL</b> | <b>Units</b> | <b>Method</b> |
| Arsenic, Total               | 0.8            | I                           | 0.10       | 1.0        | ug/L         | 200.8         |



## Sample Receipt Information

**ALS Environmental—Jacksonville Laboratory**  
9143 Philips Highway, Suite 200, Jacksonville, FL 32256  
Phone (904) 739-2277 Fax (904) 739-2011  
[www.alsglobal.com](http://www.alsglobal.com)

**Client:** Gainesville Regional Utilities  
**Project:** D18A024

**Service Request:**J1800752

**SAMPLE CROSS-REFERENCE**

| <u>SAMPLE #</u> | <u>CLIENT SAMPLE ID</u> | <u>DATE</u> | <u>TIME</u> |
|-----------------|-------------------------|-------------|-------------|
| J1800752-001    | D18A024-01              | 1/21/2018   | 1642        |
| J1800752-002    | D18A024-02              | 1/23/2018   | 1204        |
| J1800752-003    | D18A024-03              | 1/26/2018   | 1538        |
| J1800752-004    | D18A024-04              | 1/24/2018   | 0910        |
| J1800752-005    | D18A024-05              | 1/21/2018   | 1052        |
| J1800752-006    | D18A024-06              | 1/23/2018   | 1525        |
| J1800752-007    | D18A024-07              | 1/26/2018   | 1330        |
| J1800752-008    | D18A024-08              | 1/25/2018   | 1507        |
| J1800752-009    | D18A024-09              | 1/27/2018   | 1000        |
| J1800752-010    | D18A024-10              | 1/25/2018   | 1410        |
| J1800752-011    | D18A024-11              | 1/26/2018   | 1014        |
| J1800752-012    | D18A024-12              | 1/26/2018   | 0842        |
| J1800752-013    | D18A024-13              | 1/25/2018   | 1647        |
| J1800752-014    | D18A024-14              | 1/25/2018   | 1227        |



**Cooler Receipt Form**

Client: GRU Service Request #: 51800752  
 Project: D18A024 Shipping paid by ALS? Yes  No  N/A  
 Cooler received on 01/30/18 and opened on 01/30/18 by MPJ  
 COURIER: ALS UPS  FEDEX DHL Client Other \_\_\_\_\_ Airbill # 8127 8324 8056

- 1 Were custody seals on outside of cooler? Yes  No   
 If yes, how many and where? #: \_\_\_ on lid other
- 2 Were seals intact and signature and date correct? Yes  No  N/A
- 3 Were custody papers properly filled out? Yes  No  N/A
- 4 Temperature of cooler(s) upon receipt (Should be 0°C and ≤ 6°C) Ambient
- 5 Thermometer ID N/A
- 6 Temperature Blank Present? Yes  No
- 7 Were Ice or Ice Packs present Ice  Ice Packs  No
- 8 Did all bottles arrive in good condition (unbroken, etc....)?  Yes  No  N/A
- 9 Type of packing material present  
 Netting  Vial Holder  Bubble Wrap   
 Paper  Styrofoam  Other  N/A
- 10 Were all bottle labels complete (sample ID, preservation, etc....)?  Yes  No  N/A
- 11 Did all bottle labels and tags agree with custody papers?  Yes  No  N/A
- 12 Were the correct bottles used for the tests indicated?  Yes  No  N/A
- 13 Were all of the preserved bottles received with the appropriate preservative?  
 HNO3 pH<  H2SO4 pH<  ZnAc2/NaOH pH>9  NaOH pH>12  HCl pH<2   
 Preservative additions noted below MPJ 01/30/18
- 14 Were all samples received within analysis holding times?  Yes  No  N/A
- 15 Were VOA vials free of air bubbles greater than 6mm? If present, note below Yes  No  N/A
- 16 Where did the bottles originate? ALS  Client

| Sample ID | Reagent | Lot # | ml added | Initials Date/Time |
|-----------|---------|-------|----------|--------------------|
|           |         |       |          |                    |
|           |         |       |          |                    |
|           |         |       |          |                    |
|           |         |       |          |                    |
|           |         |       |          |                    |
|           |         |       |          |                    |
|           |         |       |          |                    |
|           |         |       |          |                    |
|           |         |       |          |                    |
|           |         |       |          |                    |

Additional comments and/or explanation of all discrepancies noted above:  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Client approval to run samples if discrepancies noted: \_\_\_\_\_ Date: \_\_\_\_\_



**SUBCONTRACT ORDER**  
**Deerhaven Generating Station**  
**D18A024**

51800752

**SENDING LABORATORY:**

Gainesville Regional Utilities  
 Deerhaven Generating Station  
 10001 NW 13th Street  
 Gainesville, FL 32653  
 Phone: 352-334-3434  
 Fax: 352-334-3149  
 Project Manager: Jeff Boudreau

**RECEIVING LABORATORY:**

ALS Global  
 9143 Philips Highway, Suite 200  
 Jacksonville, FL 32256  
 Phone : (904) 394-4426  
 Fax: (904) 739-2011

**J1800752**

**5**

Gainesville Regional Utilities  
 D18A024



| Analysis                             | Expires                         | Laboratory ID | Comments |
|--------------------------------------|---------------------------------|---------------|----------|
| <b>Sample Name: MWD-1-6 (R1T6)</b>   |                                 |               |          |
| <b>Sample ID: D18A024-01</b> Water   | <b>Sampled: 21-Jan-18 16:42</b> | [REDACTED]    |          |
| D_Lead by 200.8                      | 20-Jul-18 16:42                 |               |          |
| D_Arsenic by 200.8                   | 20-Jul-18 16:42                 |               |          |
| <i>Containers Supplied:</i>          |                                 |               |          |
| D_HDPE, HNO3 pH<2 - 250mL extra2 (F) |                                 |               |          |
| <b>Sample Name: MWB-2-1 (R2T1)</b>   |                                 |               |          |
| <b>Sample ID: D18A024-02</b> Water   | <b>Sampled: 23-Jan-18 12:04</b> | [REDACTED]    |          |
| D_Arsenic by 200.8                   | 22-Jul-18 12:04                 |               |          |
| D_Lead by 200.8                      | 22-Jul-18 12:04                 |               |          |
| <i>Containers Supplied:</i>          |                                 |               |          |
| D_HDPE, HNO3 pH<2 - 250mL extra2 (F) |                                 |               |          |
| <b>Sample Name: MWI-3-7 (R3T7)</b>   |                                 |               |          |
| <b>Sample ID: D18A024-03</b> Water   | <b>Sampled: 26-Jan-18 15:38</b> | [REDACTED]    |          |
| D_Arsenic by 200.8                   | 25-Jul-18 15:38                 |               |          |
| D_Lead by 200.8                      | 25-Jul-18 15:38                 |               |          |
| <i>Containers Supplied:</i>          |                                 |               |          |
| D_HDPE, HNO3 pH<2 - 250mL extra2 (F) |                                 |               |          |
| <b>Sample Name: MWI-4-5 (R4T5B)</b>  |                                 |               |          |
| <b>Sample ID: D18A024-04</b> Water   | <b>Sampled: 24-Jan-18 09:10</b> | [REDACTED]    |          |
| D_Arsenic by 200.8                   | 23-Jul-18 09:10                 |               |          |
| D_Lead by 200.8                      | 23-Jul-18 09:10                 |               |          |
| <i>Containers Supplied:</i>          |                                 |               |          |
| D_HDPE, HNO3 pH<2 - 250mL extra2 (F) |                                 |               |          |
| <b>Sample Name: MWD-6-1 (R6T1B)</b>  |                                 |               |          |
| <b>Sample ID: D18A024-05</b> Water   | <b>Sampled: 21-Jan-18 10:52</b> | [REDACTED]    |          |
| D_Arsenic by 200.8                   | 20-Jul-18 10:52                 |               |          |
| D_Lead by 200.8                      | 20-Jul-18 10:52                 |               |          |
| <i>Containers Supplied:</i>          |                                 |               |          |
| D_HDPE, HNO3 pH<2 - 250mL extra2 (F) |                                 |               |          |

Released By: Shelley Phillips    Date: 1-29-18    via FEDEX

Received By: [Signature]    Date: 01/30/18 0925

Released By: \_\_\_\_\_    Date: \_\_\_\_\_    Received By: \_\_\_\_\_    Date: \_\_\_\_\_



**SUBCONTRACT ORDER**  
**Deerhaven Generating Station**  
**D18A024**

51800752

| Analysis                             | Expires         | Laboratory ID                  | Comments |
|--------------------------------------|-----------------|--------------------------------|----------|
| <b>Sample Name: MWI-6-4 (R6T4B)</b>  |                 |                                |          |
| <b>Sample ID: D18A024-06</b>         | <b>Water</b>    | <b>Sampled:23-Jan-18 15:25</b> |          |
| D_Arsenic by 200.8                   | 22-Jul-18 15:25 |                                |          |
| D_Lead by 200.8                      | 22-Jul-18 15:25 |                                |          |
| <i>Containers Supplied:</i>          |                 |                                |          |
| D_HDPE, HNO3 pH<2 - 250mL extra2 (F) |                 |                                |          |
| <b>Sample Name: MWI-6-8 (R6T8B)</b>  |                 |                                |          |
| <b>Sample ID: D18A024-07</b>         | <b>Water</b>    | <b>Sampled:26-Jan-18 13:30</b> |          |
| D_Lead by 200.8                      | 25-Jul-18 13:30 |                                |          |
| D_Arsenic by 200.8                   | 25-Jul-18 13:30 |                                |          |
| <i>Containers Supplied:</i>          |                 |                                |          |
| D_HDPE, HNO3 pH<2 - 250mL extra2 (F) |                 |                                |          |
| <b>Sample Name: MWD-6-12 (R6T12)</b> |                 |                                |          |
| <b>Sample ID: D18A024-08</b>         | <b>Water</b>    | <b>Sampled:25-Jan-18 15:07</b> |          |
| D_Lead by 200.8                      | 24-Jul-18 15:07 |                                |          |
| D_Arsenic by 200.8                   | 24-Jul-18 15:07 |                                |          |
| <i>Containers Supplied:</i>          |                 |                                |          |
| D_HDPE, HNO3 pH<2 - 250mL extra2 (F) |                 |                                |          |
| <b>Sample Name: MWC-8-10 (R8T10)</b> |                 |                                |          |
| <b>Sample ID: D18A024-09</b>         | <b>Water</b>    | <b>Sampled:27-Jan-18 10:00</b> |          |
| D_Arsenic by 200.8                   | 26-Jul-18 10:00 |                                |          |
| D_Lead by 200.8                      | 26-Jul-18 10:00 |                                |          |
| <i>Containers Supplied:</i>          |                 |                                |          |
| D_HDPE, HNO3 pH<2 - 250mL extra2 (F) |                 |                                |          |
| <b>Sample Name: MWI-9-5 (R9T5B)</b>  |                 |                                |          |
| <b>Sample ID: D18A024-10</b>         | <b>Water</b>    | <b>Sampled:25-Jan-18 14:10</b> |          |
| D_Arsenic by 200.8                   | 24-Jul-18 14:10 |                                |          |
| D_Lead by 200.8                      | 24-Jul-18 14:10 |                                |          |
| <i>Containers Supplied:</i>          |                 |                                |          |
| D_HDPE, HNO3 pH<2 - 250mL extra2 (F) |                 |                                |          |
| <b>Sample Name: MWC-10-8 (R10T8)</b> |                 |                                |          |
| <b>Sample ID: D18A024-11</b>         | <b>Water</b>    | <b>Sampled:26-Jan-18 10:14</b> |          |
| D_Arsenic by 200.8                   | 25-Jul-18 10:14 |                                |          |
| D_Lead by 200.8                      | 25-Jul-18 10:14 |                                |          |
| <i>Containers Supplied:</i>          |                 |                                |          |
| D_HDPE, HNO3 pH<2 - 250mL extra2 (F) |                 |                                |          |

Released By: *Shelly Phillip*      Date: *1-29-18*     
 Received By: *Matthew J. [Signature]*      Date: *2/13/18*      *0928*

Released By: \_\_\_\_\_      Date: \_\_\_\_\_     
 Received By: \_\_\_\_\_      Date: \_\_\_\_\_



**SUBCONTRACT ORDER**  
**Deerhaven Generating Station**  
**D18A024**

51800752

| Analysis                              | Expires         | Laboratory ID                   | Comments |
|---------------------------------------|-----------------|---------------------------------|----------|
| <b>Sample Name: MWC-11-4 (R11T4B)</b> |                 |                                 |          |
| <b>Sample ID: D18A024-12</b>          | <b>Water</b>    | <b>Sampled: 26-Jan-18 08:42</b> |          |
| D_Arsenic by 200.8                    | 25-Jul-18 08:42 |                                 |          |
| D_Lead by 200.8                       | 25-Jul-18 08:42 |                                 |          |
| <i>Containers Supplied:</i>           |                 |                                 |          |
| D_HDPE, HNO3 pH<2 - 250mL extra2 (F)  |                 |                                 |          |
| <b>Sample Name: MWC-DEEP (DEEP-1)</b> |                 |                                 |          |
| <b>Sample ID: D18A024-13</b>          | <b>Water</b>    | <b>Sampled: 25-Jan-18 16:47</b> |          |
| D_Arsenic by 200.8                    | 24-Jul-18 16:47 |                                 |          |
| D_Lead by 200.8                       | 24-Jul-18 16:47 |                                 |          |
| <i>Containers Supplied:</i>           |                 |                                 |          |
| D_HDPE, HNO3 pH<2 - 250mL extra2 (F)  |                 |                                 |          |
| <b>Sample Name: EBLANK</b>            |                 |                                 |          |
| <b>Sample ID: D18A024-14</b>          | <b>Water</b>    | <b>Sampled: 25-Jan-18 12:27</b> |          |
| D_Lead by 200.8                       | 24-Jul-18 12:27 |                                 |          |
| D_Arsenic by 200.8                    | 24-Jul-18 12:27 |                                 |          |
| <i>Containers Supplied:</i>           |                 |                                 |          |
| D_HDPE, HNO3 pH<2 - 250mL extra2 (F)  |                 |                                 |          |

Released By: Shelby Phillips Date: 1-29-18 *via Fader*  
 Received By: [Signature] Date: 01/30/18 0925

---

Released By: \_\_\_\_\_ Date: \_\_\_\_\_  
 Received By: \_\_\_\_\_ Date: \_\_\_\_\_



## Miscellaneous Forms

**ALS Environmental—Jacksonville Laboratory**  
9143 Philips Highway, Suite 200, Jacksonville, FL 32256  
Phone (904) 739-2277 Fax (904) 739-2011  
[www.alsglobal.com](http://www.alsglobal.com)



## FLORIDA DEP DATA QUALIFIERS

- B Results based upon colony counts outside the acceptable range.
- D Measurement was made in the field.
- H Value based on field kit determination; results may not be accurate.
- I The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
- J Estimated value (one of the following reasons is discussed in the project case narrative).
1. The result may be inaccurate because the surrogate recovery limits have been exceeded.
  2. No known quality control criteria exists for the component.
  3. The reported value failed to meet the established quality control criteria for either precision or accuracy.
  4. The sample matrix interfered with the ability to make any accurate determination (e.g., primary and confirmation results show greater than 40% RPD).
  5. The data is questionable because of improper laboratory or field protocols (e.g., GC/MS Tune did not meet method criteria).
- K Off scale low. The value is less than the lowest calibration standard but greater than the method reporting limit (MRL).
- L Off scale high. The analyte is above the upper limit of the linear calibration range.
- M The MDL/MRL has been elevated because the analyte could not be accurately quantified due to matrix interference.
- N Presumptive evidence of the analyte. Confirmation was not performed.
- Q Sample held beyond the accepted holding time.
- T Value reported is less than the laboratory method detection limit. The value is reported for informational purposes only.
- U Indicates that the compound was analyzed for but not detected.
- V Indicates that the analyte was detected in both the sample and the associated method blank.
- Y The laboratory analysis was from an improperly preserved sample.
- Z Too many colonies were present (TNTC). The numeric value represents the filtration volume.



**Jacksonville Lab ID # for State Certifications<sup>1</sup>**

| <b>Agency</b>  | <b>Number</b>   | <b>Expiration Date</b> |
|--|-----------------|------------------------|
| Department of Defense  | 66206           | 7/31/2018              |
| Florida Department of Health                                   | E82502          | 6/30/2018              |
| Georgia Department of Natural Resources                        | 958             | 6/30/2018              |
| Kentucky Division of Waste Management                          | 123042          | 6/30/2018              |
| Louisiana Department of Environmental Quality                  | 02086           | 6/30/2018              |
| Maine Department of Health and Human Services                  | 2015002         | 2/3/2019               |
| North Carolina Department of Environment and Natural Resources | 527             | 12/31/2018             |
| Pennsylvania Department of Environmental Protection            | 68-04835        | 8/31/2018              |
| South Carolina Department of Health and Environmental Control  | 96021001        | 6/30/2018              |
| Texas Commission on Environmental Quality                      | T104704197-16-8 | 5/31/2018              |
| Virginia Environmental Accreditation Program                   | 460191          | 12/14/2018             |

<sup>1</sup> Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state or agency requirements. The test results meet requirements of the current NELAP/TNI standards or state or agency requirements, where applicable, except as noted in the laboratory case narrative provided. For a specific list of accredited analytes, refer to <http://www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads/North-America-Downloads>



### ACRONYMS

|            |  |
|------------|--|
| ASTM       | American Society for Testing and Materials   |
| A2LA       | American Association for Laboratory Accreditation  |
| CARB       | California Air Resources Board   |
| CAS Number | Chemical Abstract Service registry Number  |
| CFC        | Chlorofluorocarbon   |
| CFU        | Colony-Forming Unit  |
| DEC        | Department of Environmental Conservation   |
| DEQ        | Department of Environmental Quality  |
| DHS        | Department of Health Services  |
| DOE        | Department of Ecology  |
| DOH        | Department of Health   |
| EPA        | U. S. Environmental Protection Agency  |
| ELAP       | Environmental Laboratory Accreditation Program   |
| GC         | Gas Chromatography   |
| GC/MS      | Gas Chromatography/Mass Spectrometry   |
| LUFT       | Leaking Underground Fuel Tank  |
| M          | Modified   |
| MCL        | Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA. |
| MDL        | Method Detection Limit   |
| MPN        | Most Probable Number   |
| MRL        | Method Reporting Limit   |
| NA         | Not Applicable   |
| NC         | Not Calculated   |
| NCASI      | National Council of the Paper Industry for Air and Stream Improvement  |
| ND         | Not Detected   |
| NIOSH      | National Institute for Occupational Safety and Health  |
| PQL        | Practical Quantitation Limit   |
| RCRA       | Resource Conservation and Recovery Act   |
| SIM        | Selected Ion Monitoring  |
| TPH        | Total Petroleum Hydrocarbons   |
| tr         | Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.                           |





ALS Group USA, Corp.  
dba ALS Environmental

Analyst Summary report

**Client:** Gainesville Regional Utilities  
**Project:** D18A024

**Service Request:** J1800752

**Sample Name:** D18A024-01  
**Lab Code:** J1800752-001  
**Sample Matrix:** Water

**Date Collected:** 01/21/18  
**Date Received:** 01/30/18

**Analysis Method**  
200.8

**Extracted/Digested By**  
CSULLIVAN

**Analyzed By**  
CSULLIVAN

**Sample Name:** D18A024-02  
**Lab Code:** J1800752-002  
**Sample Matrix:** Water

**Date Collected:** 01/23/18  
**Date Received:** 01/30/18

**Analysis Method**  
200.8

**Extracted/Digested By**  
CSULLIVAN

**Analyzed By**  
CSULLIVAN

**Sample Name:** D18A024-03  
**Lab Code:** J1800752-003  
**Sample Matrix:** Water

**Date Collected:** 01/26/18  
**Date Received:** 01/30/18

**Analysis Method**  
200.8

**Extracted/Digested By**  
CSULLIVAN

**Analyzed By**  
CSULLIVAN

**Sample Name:** D18A024-04  
**Lab Code:** J1800752-004  
**Sample Matrix:** Water

**Date Collected:** 01/24/18  
**Date Received:** 01/30/18

**Analysis Method**  
200.8

**Extracted/Digested By**  
CSULLIVAN

**Analyzed By**  
CSULLIVAN

**Sample Name:** D18A024-05  
**Lab Code:** J1800752-005  
**Sample Matrix:** Water

**Date Collected:** 01/21/18  
**Date Received:** 01/30/18

**Analysis Method**  
200.8

**Extracted/Digested By**  
CSULLIVAN

**Analyzed By**  
CSULLIVAN

ALS Group USA, Corp.  
dba ALS Environmental  
Analyst Summary report

**Client:** Gainesville Regional Utilities  
**Project:** D18A024

**Service Request:** J1800752

**Sample Name:** D18A024-06  
**Lab Code:** J1800752-006  
**Sample Matrix:** Water

**Date Collected:** 01/23/18  
**Date Received:** 01/30/18

**Analysis Method**  
200.8

**Extracted/Digested By**  
CSULLIVAN

**Analyzed By**  
CSULLIVAN

**Sample Name:** D18A024-07  
**Lab Code:** J1800752-007  
**Sample Matrix:** Water

**Date Collected:** 01/26/18  
**Date Received:** 01/30/18

**Analysis Method**  
200.8

**Extracted/Digested By**  
CSULLIVAN

**Analyzed By**  
CSULLIVAN

**Sample Name:** D18A024-08  
**Lab Code:** J1800752-008  
**Sample Matrix:** Water

**Date Collected:** 01/25/18  
**Date Received:** 01/30/18

**Analysis Method**  
200.8

**Extracted/Digested By**  
CSULLIVAN

**Analyzed By**  
CSULLIVAN

**Sample Name:** D18A024-09  
**Lab Code:** J1800752-009  
**Sample Matrix:** Water

**Date Collected:** 01/27/18  
**Date Received:** 01/30/18

**Analysis Method**  
200.8

**Extracted/Digested By**  
CSULLIVAN

**Analyzed By**  
CSULLIVAN

**Sample Name:** D18A024-10  
**Lab Code:** J1800752-010  
**Sample Matrix:** Water

**Date Collected:** 01/25/18  
**Date Received:** 01/30/18

**Analysis Method**  
200.8

**Extracted/Digested By**  
CSULLIVAN

**Analyzed By**  
CSULLIVAN

ALS Group USA, Corp.  
dba ALS Environmental

Analyst Summary report

**Client:** Gainesville Regional Utilities  
**Project:** D18A024

**Service Request:** J1800752

**Sample Name:** D18A024-11  
**Lab Code:** J1800752-011  
**Sample Matrix:** Water

**Date Collected:** 01/26/18  
**Date Received:** 01/30/18

**Analysis Method**  
200.8

**Extracted/Digested By**  
CSULLIVAN

**Analyzed By**  
CSULLIVAN

**Sample Name:** D18A024-12  
**Lab Code:** J1800752-012  
**Sample Matrix:** Water

**Date Collected:** 01/26/18  
**Date Received:** 01/30/18

**Analysis Method**  
200.8

**Extracted/Digested By**  
CSULLIVAN

**Analyzed By**  
CSULLIVAN

**Sample Name:** D18A024-13  
**Lab Code:** J1800752-013  
**Sample Matrix:** Water

**Date Collected:** 01/25/18  
**Date Received:** 01/30/18

**Analysis Method**  
200.8

**Extracted/Digested By**  
CSULLIVAN

**Analyzed By**  
CSULLIVAN

**Sample Name:** D18A024-14  
**Lab Code:** J1800752-014  
**Sample Matrix:** Water

**Date Collected:** 01/25/18  
**Date Received:** 01/30/18

**Analysis Method**  
200.8

**Extracted/Digested By**  
CSULLIVAN

**Analyzed By**  
CSULLIVAN



## Sample Results

**ALS Environmental—Jacksonville Laboratory**  
9143 Philips Highway, Suite 200, Jacksonville, FL 32256  
Phone (904) 739-2277 Fax (904) 739-2011  
[www.alsglobal.com](http://www.alsglobal.com)

ALS Group USA, Corp.  
dba ALS Environmental

Analytical Report

Client: Gainesville Regional Utilities  
Project: D18A024  
Sample Matrix: Water  
Sample Name: D18A024-04  
Lab Code: J1800752-004

Service Request: J1800752  
Date Collected: 01/24/18 09:10  
Date Received: 01/30/18 09:25  
Basis: NA

LYTS

Inorganic Parameters

| Analyte Name   | Analysis Method | Result | Units | PQL  | MDL  | Dil. | Date Analyzed  | Date Extracted | Q |
|----------------|-----------------|--------|-------|------|------|------|----------------|----------------|---|
| Arsenic, Total | 200.8           | 10.7   | ug/L  | 1.0  | 0.10 | 1    | 02/01/18 19:46 | 02/01/18       |   |
| Lead, Total    | 200.8           | 0.03 U | ug/L  | 0.50 | 0.03 | 1    | 02/01/18 19:46 | 02/01/18       |   |

ALS Group USA, Corp.  
dba ALS Environmental

Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A024  
**Sample Matrix:** Water  
**Sample Name:** D18A024-06  
**Lab Code:** J1800752-006

**Service Request:** J1800752  
**Date Collected:** 01/23/18 15:25  
**Date Received:** 01/30/18 09:25  
**Basis:** NA

*RLTY*

Inorganic Parameters

| Analyte Name   | Analysis Method | Result | Units | PQL  | MDL  | Dil. | Date Analyzed  | Date Extracted | Q |
|----------------|-----------------|--------|-------|------|------|------|----------------|----------------|---|
| Arsenic, Total | 200.8           | 0.3 I  | ug/L  | 1.0  | 0.10 | 1    | 02/01/18 19:49 | 02/01/18       |   |
| Lead, Total    | 200.8           | 0.1 I  | ug/L  | 0.50 | 0.03 | 1    | 02/01/18 19:49 | 02/01/18       |   |

ALS Group USA, Corp.  
dba ALS Environmental

Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A024  
**Sample Matrix:** Water  
**Sample Name:** D18A024-14  
**Lab Code:** J1800752-014

**Service Request:** J1800752  
**Date Collected:** 01/25/18 12:27  
**Date Received:** 01/30/18 09:25  
**Basis:** NA

*E/Blank*

**Inorganic Parameters**

| <b>Analyte Name</b> | <b>Analysis Method</b> | <b>Result</b> | <b>Units</b> | <b>PQL</b> | <b>MDL</b> | <b>Dil.</b> | <b>Date Analyzed</b> | <b>Date Extracted</b> | <b>Q</b> |
|---------------------|------------------------|---------------|--------------|------------|------------|-------------|----------------------|-----------------------|----------|
| Arsenic, Total      | 200.8                  | 0.10 U        | ug/L         | 1.0        | 0.10       | 1           | 02/01/18 20:07       | 02/01/18              |          |
| Lead, Total         | 200.8                  | 0.03 U        | ug/L         | 0.50       | 0.03       | 1           | 02/01/18 20:07       | 02/01/18              |          |





## QC Summary Forms

**ALS Environmental - Jacksonville Laboratory**  
9143 Philips Highway, Suite 200, Jacksonville, FL 32256  
Phone (904) 739-2277 Fax (904) 739-2011  
[www.alsglobal.com](http://www.alsglobal.com)



## Metals

**ALS Environmental—Jacksonville Laboratory**  
9143 Philips Highway, Suite 200, Jacksonville, FL 32256  
Phone (904)739-2277 Fax (904)739-2011  
[www.alsglobal.com](http://www.alsglobal.com)

ALS Group USA, Corp.  
dba ALS Environmental

Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A024  
**Sample Matrix:** Water  
**Sample Name:** Method Blank  
**Lab Code:** J1800752-MB

**Service Request:** J1800752  
**Date Collected:** NA  
**Date Received:** NA  
**Basis:** NA

Inorganic Parameters

| <b>Analyte Name</b> | <b>Analysis Method</b> | <b>Result</b> | <b>Units</b> | <b>PQL</b> | <b>MDL</b> | <b>Dil.</b> | <b>Date Analyzed</b> | <b>Date Extracted</b> | <b>Q</b> |
|---------------------|------------------------|---------------|--------------|------------|------------|-------------|----------------------|-----------------------|----------|
| Arsenic, Total      | 200.8                  | 0.1 U         | ug/L         | 1.0        | 0.1        | 1           | 02/01/18 19:27       | 02/01/18              |          |
| Lead, Total         | 200.8                  | 0.03 I        | ug/L         | 0.50       | 0.03       | 1           | 02/01/18 19:27       | 02/01/18              |          |

ALS Group USA, Corp.  
dba ALS Environmental

QA/QC Report

Client: Gainesville Regional Utilities  
Project: D18A024  
Sample Matrix: Water

Service Request: J1800752  
Date Collected: 01/26/18  
Date Received: 01/30/18  
Date Analyzed: 02/1/18  
Date Extracted: 02/1/18

Duplicate Matrix Spike Summary  
Inorganic Parameters

Sample Name: D18A024-11  
Lab Code: J1800752-011  
Analysis Method: 200.8  
Prep Method: EPA 3005A

Units: ug/L  
Basis: NA

| Analyte Name   | Sample Result | Result | Matrix Spike<br>J1800752-011MS |       | Duplicate Matrix Spike<br>J1800752-011DMS |              |       | % Rec Limits | RPD | RPD Limit |
|----------------|---------------|--------|--------------------------------|-------|---|--------------|-------|--------------|-----|-----------|
|                |               |        | Spike Amount                   | % Rec | Result                                    | Spike Amount | % Rec |              |     |           |
| Arsenic, Total | 0.2 I         | 51.4   | 50.0                           | 102   | 51.6                                      | 50.0         | 103   | 70-130       | <1  | 20        |
| Lead, Total    | 0.03 I        | 25.9   | 25.0                           | 104   | 25.7                                      | 25.0         | 102   | 70-130       | 1   | 20        |

Results flagged with an asterisk (\*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.  
dba ALS Environmental

QA/QC Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A024  
**Sample Matrix:** Water

**Service Request:** J1800752  
**Date Analyzed:** 02/01/18  
**Date Extracted:** 02/01/18

**Lab Control Sample Summary**  
**Inorganic Parameters**

**Analysis Method:** 200.8  
**Prep Method:** EPA 3005A

**Units:** ug/L  
**Basis:** NA  
**Analysis Lot:** 578899

**Lab Control Sample**  
**J1800752-LCS**

| <b>Analyte Name</b> | <b>Result</b> | <b>Spike Amount</b> | <b>% Rec</b> | <b>% Rec Limits</b> |
|---------------------|---------------|---------------------|--------------|---------------------|
| Arsenic, Total      | 49.8          | 50.0                | 100          | 85-115              |
| Lead, Total         | 25.8          | 25.0                | 103          | 85-115              |



# *Kanapaha Laboratory*

3901 South West 63rd Blvd  
Gainesville, FL 32608  
(352) 393-6777

Florida Department of Health Certification E52099

March 21, 2018

Jeff Boudreau  
Deerhaven Laboratory  
Station D-38  
Gainesville, FL/USA 32614-7117

RE: Environmental

Enclosed are the results of analyses for samples received by the laboratory on 1/30/2018. If you have any questions concerning this report, please feel free to contact me.

Please note that all results were determined in accordance with NELAP requirements. All data is subject to a degree of uncertainty. Kanapaha Lab uncertainty is based upon LCS quality control statistics.

Sincerely,

Jaclyn M Dlhos  
Laboratory Supervisor



Deerhaven Laboratory  
Station D-38  
Gainesville, FL/USA 32614-7117

Project: Environmental  
Project Number: D18A027  
Project Manager: Jeff Boudreau

**Reported:**  
03/21/2018 11:59

### ANALYTICAL REPORT FOR SAMPLES

| <b>Laboratory ID</b> | <b>Sample ID</b>   | <b>Matrix</b> | <b>Date Sampled</b> | <b>Date Received</b> |
|----------------------|--------------------|---------------|---------------------|----------------------|
| K18A094-01           | D18A027-01 (SIS-1) | Groundwater   | 01/23/2018 14:08    | 01/30/2018 12:00     |
| K18A094-02           | D18A027-02 (SIS-2) | Groundwater   | 01/24/2018 08:08    | 01/30/2018 12:00     |
| K18A094-03           | D18A027-03 (SIS-3) | Groundwater   | 01/24/2018 11:39    | 01/30/2018 12:00     |
| K18A094-04           | D18A027-04 (SIS-4) | Groundwater   | 01/24/2018 13:34    | 01/30/2018 12:00     |
| K18A094-05           | D18A027-05 (LF-1)  | Groundwater   | 01/23/2018 16:50    | 01/30/2018 12:00     |
| K18A094-06           | D18A027-06 (LF-2)  | Groundwater   | 01/25/2018 09:22    | 01/30/2018 12:00     |
| K18A094-07           | D18A027-07 (LF-3)  | Groundwater   | 01/25/2018 11:28    | 01/30/2018 12:00     |
| K18A094-08           | D18A027-08 (LF-4)  | Groundwater   | 01/24/2018 14:49    | 01/30/2018 12:00     |



Deerhaven Laboratory  
Station D-38  
Gainesville, FL/USA 32614-7117

Project: Environmental  
Project Number: D18A027  
Project Manager: Jeff Boudreau

**Reported:**  
03/21/2018 11:59

**D18A027-01 (SIS-1)**  
**K18A094-01 (Groundwater, Grab)**  
Collected: 01/23/2018 2:08 pm

| Analyte | Result | Qual | MDL | PQL | Units | Dil | Prepared | Analyzed | Method |
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|

**Laboratory: Kanapaha Laboratory**

**Metals by EPA 200 Series Methods**

|         |       |   |       |       |      |   |            |            |           |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|
| Mercury | 0.100 | U | 0.100 | 0.400 | ug/L | 1 | 02/15/2018 | 02/15/2018 | EPA 245.1 |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|

**D18A027-02 (SIS-2)**  
**K18A094-02 (Groundwater, Grab)**  
Collected: 01/24/2018 8:08 am

| Analyte | Result | Qual | MDL | PQL | Units | Dil | Prepared | Analyzed | Method |
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|

**Laboratory: Kanapaha Laboratory**

**Metals by EPA 200 Series Methods**

|         |       |   |       |       |      |   |            |            |           |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|
| Mercury | 0.100 | U | 0.100 | 0.400 | ug/L | 1 | 02/15/2018 | 02/15/2018 | EPA 245.1 |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|

**D18A027-03 (SIS-3)**  
**K18A094-03 (Groundwater, Grab)**  
Collected: 01/24/2018 11:39 am

| Analyte | Result | Qual | MDL | PQL | Units | Dil | Prepared | Analyzed | Method |
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|

**Laboratory: Kanapaha Laboratory**

**Metals by EPA 200 Series Methods**

|         |       |   |       |       |      |   |            |            |           |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|
| Mercury | 0.100 | U | 0.100 | 0.400 | ug/L | 1 | 02/15/2018 | 02/15/2018 | EPA 245.1 |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|

**D18A027-04 (SIS-4)**  
**K18A094-04 (Groundwater, Grab)**  
Collected: 01/24/2018 1:34 pm

| Analyte | Result | Qual | MDL | PQL | Units | Dil | Prepared | Analyzed | Method |
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|

**Laboratory: Kanapaha Laboratory**

**Metals by EPA 200 Series Methods**

|         |       |   |       |       |      |   |            |            |           |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|
| Mercury | 0.100 | U | 0.100 | 0.400 | ug/L | 1 | 02/15/2018 | 02/15/2018 | EPA 245.1 |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|





Deerhaven Laboratory  
Station D-38  
Gainesville, FL/USA 32614-7117

Project: Environmental  
Project Number: D18A027  
Project Manager: Jeff Boudreau

**Reported:**  
03/21/2018 11:59

**D18A027-05 (LF-1)**  
**K18A094-05 (Groundwater, Grab)**  
Collected: 01/23/2018 4:50 pm

| Analyte | Result | Qual | MDL | PQL | Units | Dil | Prepared | Analyzed | Method |
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|

**Laboratory: Kanapaha Laboratory**

**Metals by EPA 200 Series Methods**

|         |       |   |       |       |      |   |            |            |           |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|
| Mercury | 0.100 | U | 0.100 | 0.400 | ug/L | 1 | 02/15/2018 | 02/15/2018 | EPA 245.1 |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|

**D18A027-06 (LF-2)**  
**K18A094-06 (Groundwater, Grab)**  
Collected: 01/25/2018 9:22 am

| Analyte | Result | Qual | MDL | PQL | Units | Dil | Prepared | Analyzed | Method |
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|

**Laboratory: Kanapaha Laboratory**

**Metals by EPA 200 Series Methods**

|         |       |   |       |       |      |   |            |            |           |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|
| Mercury | 0.100 | U | 0.100 | 0.400 | ug/L | 1 | 02/15/2018 | 02/15/2018 | EPA 245.1 |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|

**D18A027-07 (LF-3)**  
**K18A094-07 (Groundwater, Grab)**  
Collected: 01/25/2018 11:28 am

| Analyte | Result | Qual | MDL | PQL | Units | Dil | Prepared | Analyzed | Method |
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|

**Laboratory: Kanapaha Laboratory**

**Metals by EPA 200 Series Methods**

|         |       |   |       |       |      |   |            |            |           |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|
| Mercury | 0.100 | U | 0.100 | 0.400 | ug/L | 1 | 02/15/2018 | 02/15/2018 | EPA 245.1 |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|

**D18A027-08 (LF-4)**  
**K18A094-08 (Groundwater, Grab)**  
Collected: 01/24/2018 2:49 pm

| Analyte | Result | Qual | MDL | PQL | Units | Dil | Prepared | Analyzed | Method |
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|

**Laboratory: Kanapaha Laboratory**

**Metals by EPA 200 Series Methods**

|         |       |   |       |       |      |   |            |            |           |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|
| Mercury | 0.100 | U | 0.100 | 0.400 | ug/L | 1 | 02/15/2018 | 02/15/2018 | EPA 245.1 |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|



Deerhaven Laboratory  
Station D-38  
Gainesville, FL/USA 32614-7117

Project: Environmental  
Project Number: D18A027  
Project Manager: Jeff Boudreau

**Reported:**  
03/21/2018 11:59

### Metals by EPA 200 Series Methods - Quality Control Laboratory: Kanapaha Laboratory

| Analyte                                | Result | Qual | MDL                       | PQL   | Units | Spike Level                    | Source Result | %REC | % REC Limits | RSD   | RSD Limit |
|--|--------|------|---------------------------|-------|-------|--------------------------------|---------------|------|--------------|-------|-----------|
| <b>Batch B18B120 - MERCURY</b>         |        |      |                           |       |       |                                |               |      |              |       |           |
| <b>Blank (B18B120-BLK1)</b>            |        |      |                           |       |       | Prepared & Analyzed: 2/15/2018 |               |      |              |       |           |
| Mercury                                | 0.100  | U    | 0.100                     | 0.400 | ug/L  |                                |               |      |              | 56.8  |           |
| <b>Blank (B18B120-BLK2)</b>            |        |      |                           |       |       | Prepared & Analyzed: 2/15/2018 |               |      |              |       |           |
| Mercury                                | 0.100  | U    | 0.100                     | 0.400 | ug/L  |                                |               |      |              | 56.8  |           |
| <b>Blank (B18B120-BLK3)</b>            |        |      |                           |       |       | Prepared & Analyzed: 2/15/2018 |               |      |              |       |           |
| Mercury                                | 0.100  | U    | 0.100                     | 0.400 | ug/L  |                                |               |      |              | 56.8  |           |
| <b>LCS (B18B120-BS1)</b>               |        |      |                           |       |       | Prepared & Analyzed: 2/15/2018 |               |      |              |       |           |
| Mercury                                | 19.8   |      |                           |       | ug/L  | 20.0                           |               | 98.9 | 90-110       | 2.48  |           |
| <b>LCS (B18B120-BS2)</b>               |        |      |                           |       |       | Prepared & Analyzed: 2/15/2018 |               |      |              |       |           |
| Mercury                                | 18.8   |      |                           |       | ug/L  | 20.0                           |               | 94.2 | 90-110       | 2.48  |           |
| <b>LCS (B18B120-BS3)</b>               |        |      |                           |       |       | Prepared & Analyzed: 2/15/2018 |               |      |              |       |           |
| Mercury                                | 19.5   |      |                           |       | ug/L  | 20.0                           |               | 97.7 | 90-110       | 2.48  |           |
| <b>Duplicate (B18B120-DUP1)</b>        |        |      | <b>Source: K18A094-08</b> |       |       | Prepared & Analyzed: 2/15/2018 |               |      |              |       |           |
| Mercury                                | 0.100  | U    | 0.100                     | 0.400 | ug/L  |                                | ND            |      |              | 41.6  |           |
| <b>Duplicate (B18B120-DUP2)</b>        |        |      | <b>Source: K18A097-01</b> |       |       | Prepared & Analyzed: 2/15/2018 |               |      |              |       |           |
| Mercury                                | 16.8   |      | 0.500                     | 2.00  | ug/L  |                                | 16.8          |      |              | 0.250 |           |
| <b>Matrix Spike (B18B120-MS1)</b>      |        |      | <b>Source: K18A094-08</b> |       |       | Prepared & Analyzed: 2/15/2018 |               |      |              |       |           |
| Mercury                                | 2.04   |      | 0.100                     | 0.400 | ug/L  | 2.00                           | ND            | 102  | 90-110       | 0.116 |           |
| <b>Matrix Spike (B18B120-MS2)</b>      |        |      | <b>Source: K18A097-01</b> |       |       | Prepared & Analyzed: 2/15/2018 |               |      |              |       |           |
| Mercury                                | 36.1   |      | 1.00                      | 4.00  | ug/L  | 20.0                           | 16.8          | 96.2 | 90-110       | 0.338 |           |
| <b>Matrix Spike Dup (B18B120-MSD1)</b> |        |      | <b>Source: K18A094-08</b> |       |       | Prepared & Analyzed: 2/15/2018 |               |      |              |       |           |
| Mercury                                | 2.03   |      | 0.100                     | 0.400 | ug/L  | 2.00                           | ND            | 102  | 90-110       | 0.116 |           |
| <b>Matrix Spike Dup (B18B120-MSD2)</b> |        |      | <b>Source: K18A097-01</b> |       |       | Prepared & Analyzed: 2/15/2018 |               |      |              |       |           |
| Mercury                                | 36.3   |      | 1.00                      | 4.00  | ug/L  | 20.0                           | 16.8          | 97.1 | 90-110       | 0.338 |           |



Deerhaven Laboratory  
Station D-38  
Gainesville, FL/USA 32614-7117

Project: Environmental  
Project Number: D18A027  
Project Manager: Jeff Boudreau

**Reported:**  
03/21/2018 11:59

### Notes and Definitions

| <u>Qualifier</u> | <u>Description</u>  |
|------------------|---|
| NR               | Not Reported  |
| RSD              | Relative Standard Deviation   |
| U                | Compound was analyzed for but not detected                              |
| N                | Presumptive evidence of presence of material                            |
| L                | Off-scale high. Actual value is known to be greater than value given    |
| I                | The reported value is between the laboratory MDL and the laboratory PQL |
| V                | Analyte was detected in both the sample and the associated method blank |



**SUBCONTRACT ORDER**  
**Deerhaven Generating Station**  
**D18A027**

**SENDING LABORATORY:**

Gainesville Regional Utilities  
 Deerhaven Generating Station  
 10001 NW 13th Street  
 Gainesville, FL 32653  
 Phone: 352-334-3434  
 Fax: 352-334-3149  
 Project Manager: Jeff Boudreau

**RECEIVING LABORATORY:**

Kanapaha Laboratory  
 3901 SW 63rd BLVD  
 Gainesville, FL/USA 32608  
 Phone :352-393-6777  
 Fax: 352-334-2732

| Analysis                      | Expires         | Laboratory ID                  | Comments          |
|-------------------------------|-----------------|--------------------------------|-------------------|
| <b>Sample Name: SIS-1</b>     |                 |                                |                   |
| <b>Sample ID: D18A027-01</b>  | <b>Water</b>    | <b>Sampled:23-Jan-18 14:08</b> | <b>K18A094-01</b> |
| K_Beryllium                   | 22-Jul-18 14:08 |                                |                   |
| K_Cadmium                     | 22-Jul-18 14:08 |                                |                   |
| K_Calcium                     | 22-Jul-18 14:08 |                                |                   |
| K_Chromium                    | 22-Jul-18 14:08 |                                |                   |
| K_Cobalt                      | 22-Jul-18 14:08 |                                |                   |
| K_Mercury, cold vapor         | 20-Feb-18 14:08 |                                |                   |
| K_Molybdenum                  | 22-Jul-18 14:08 |                                |                   |
| K_Selenium                    | 22-Jul-18 14:08 |                                |                   |
| K_Barium                      | 22-Jul-18 14:08 |                                |                   |
| <i>Containers Supplied:</i>   |                 |                                |                   |
| D_HDPE, HNO3 pH<2 - 500mL (A) |                 |                                |                   |
| <b>Sample Name: SIS-2</b>     |                 |                                |                   |
| <b>Sample ID: D18A027-02</b>  | <b>Water</b>    | <b>Sampled:24-Jan-18 08:08</b> | <b>K18A094-02</b> |
| K_Beryllium                   | 23-Jul-18 08:08 |                                |                   |
| K_Molybdenum                  | 23-Jul-18 08:08 |                                |                   |
| K_Mercury, cold vapor         | 21-Feb-18 08:08 |                                |                   |
| K_Cobalt                      | 23-Jul-18 08:08 |                                |                   |
| K_Chromium                    | 23-Jul-18 08:08 |                                |                   |
| K_Cadmium                     | 23-Jul-18 08:08 |                                |                   |
| K_Selenium                    | 23-Jul-18 08:08 |                                |                   |
| K_Barium                      | 23-Jul-18 08:08 |                                |                   |
| K_Calcium                     | 23-Jul-18 08:08 |                                |                   |
| <i>Containers Supplied:</i>   |                 |                                |                   |
| D_HDPE, HNO3 pH<2 - 500mL (A) |                 |                                |                   |

*via Inter-office (IO) mail*

|             |         |             |                 |
|-------------|---------|-------------|-----------------|
|             | 1-29-18 |             | 01/30/18 @ 1200 |
| Released By | Date    | Received By | Date            |
| Released By | Date    | Received By | Date            |



**SUBCONTRACT ORDER**  
**Deerhaven Generating Station**  
**D18A027**

| Analysis                      | Expires         | Laboratory ID           | Comments   |
|-------------------------------|-----------------|-------------------------|------------|
| <b>Sample Name: SIS-3</b>     |                 |                         |            |
| <b>Sample ID: D18A027-03</b>  | Water           | Sampled:24-Jan-18 11:39 | K18A094-03 |
| K_Cobalt                      | 23-Jul-18 11:39 |                         |            |
| K_Selenium                    | 23-Jul-18 11:39 |                         |            |
| K_Molybdenum                  | 23-Jul-18 11:39 |                         |            |
| K_Mercury, cold vapor         | 21-Feb-18 11:39 |                         |            |
| K_Chromium                    | 23-Jul-18 11:39 |                         |            |
| K_Calcium                     | 23-Jul-18 11:39 |                         |            |
| K_Cadmium                     | 23-Jul-18 11:39 |                         |            |
| K_Barium                      | 23-Jul-18 11:39 |                         |            |
| K_Beryllium                   | 23-Jul-18 11:39 |                         |            |
| <i>Containers Supplied:</i>   |                 |                         |            |
| D_HDPE, HNO3 pH<2 - 500mL (A) |                 |                         |            |
| <b>Sample Name: SIS-4</b>     |                 |                         |            |
| <b>Sample ID: D18A027-04</b>  | Water           | Sampled:24-Jan-18 13:34 | K18A094-04 |
| K_Molybdenum                  | 23-Jul-18 13:34 |                         |            |
| K_Barium                      | 23-Jul-18 13:34 |                         |            |
| K_Beryllium                   | 23-Jul-18 13:34 |                         |            |
| K_Cadmium                     | 23-Jul-18 13:34 |                         |            |
| K_Calcium                     | 23-Jul-18 13:34 |                         |            |
| K_Chromium                    | 23-Jul-18 13:34 |                         |            |
| K_Cobalt                      | 23-Jul-18 13:34 |                         |            |
| K_Mercury, cold vapor         | 21-Feb-18 13:34 |                         |            |
| K_Selenium                    | 23-Jul-18 13:34 |                         |            |
| <i>Containers Supplied:</i>   |                 |                         |            |
| D_HDPE, HNO3 pH<2 - 500mL (A) |                 |                         |            |
| <b>Sample Name: LF-1</b>      |                 |                         |            |
| <b>Sample ID: D18A027-05</b>  | Water           | Sampled:23-Jan-18 16:50 | K18A094-05 |
| K_Beryllium                   | 22-Jul-18 16:50 |                         |            |
| K_Cadmium                     | 22-Jul-18 16:50 |                         |            |
| K_Calcium                     | 22-Jul-18 16:50 |                         |            |
| K_Chromium                    | 22-Jul-18 16:50 |                         |            |
| K_Cobalt                      | 22-Jul-18 16:50 |                         |            |
| K_Mercury, cold vapor         | 20-Feb-18 16:50 |                         |            |
| K_Molybdenum                  | 22-Jul-18 16:50 |                         |            |
| K_Selenium                    | 22-Jul-18 16:50 |                         |            |
| K_Barium                      | 22-Jul-18 16:50 |                         |            |
| <i>Containers Supplied:</i>   |                 |                         |            |
| D_HDPE, HNO3 pH<2 - 500mL (A) |                 |                         |            |

|                   |                     |                |                  |                        |
|-------------------|---------------------|----------------|------------------|------------------------|
| <i>J. Phillip</i> | <i>via I-0 mail</i> | <i>1-29-18</i> | <i>J. M. DeH</i> | <i>01/30/18 @ 1200</i> |
| Released By       |                     | Date           | Received By      | Date                   |
| Released By       |                     | Date           | Received By      | Date                   |



**SUBCONTRACT ORDER**  
**Deerhaven Generating Station**  
**D18A027**

| Analysis                      | Expires         | Laboratory ID                  | Comments          |
|-------------------------------|-----------------|--------------------------------|-------------------|
| <b>Sample Name: LF-2</b>      |                 |                                |                   |
| <b>Sample ID: D18A027-06</b>  | <b>Water</b>    | <b>Sampled:25-Jan-18 09:22</b> | <b>K18A094-06</b> |
| K_Cadmium                     | 24-Jul-18 09:22 |                                |                   |
| K_Molybdenum                  | 24-Jul-18 09:22 |                                |                   |
| K_Mercury, cold vapor         | 22-Feb-18 09:22 |                                |                   |
| K_Cobalt                      | 24-Jul-18 09:22 |                                |                   |
| K_Calcium                     | 24-Jul-18 09:22 |                                |                   |
| K_Selenium                    | 24-Jul-18 09:22 |                                |                   |
| K_Beryllium                   | 24-Jul-18 09:22 |                                |                   |
| K_Barium                      | 24-Jul-18 09:22 |                                |                   |
| K_Chromium                    | 24-Jul-18 09:22 |                                |                   |
| <i>Containers Supplied:</i>   |                 |                                |                   |
| D_HDPE, HNO3 pH<2 - 500mL (A) |                 |                                |                   |
| <b>Sample Name: LF-3</b>      |                 |                                |                   |
| <b>Sample ID: D18A027-07</b>  | <b>Water</b>    | <b>Sampled:25-Jan-18 11:28</b> | <b>K18A094-07</b> |
| K_Barium                      | 24-Jul-18 11:28 |                                |                   |
| K_Cobalt                      | 24-Jul-18 11:28 |                                |                   |
| K_Chromium                    | 24-Jul-18 11:28 |                                |                   |
| K_Calcium                     | 24-Jul-18 11:28 |                                |                   |
| K_Cadmium                     | 24-Jul-18 11:28 |                                |                   |
| K_Beryllium                   | 24-Jul-18 11:28 |                                |                   |
| K_Selenium                    | 24-Jul-18 11:28 |                                |                   |
| K_Mercury, cold vapor         | 22-Feb-18 11:28 |                                |                   |
| K_Molybdenum                  | 24-Jul-18 11:28 |                                |                   |
| <i>Containers Supplied:</i>   |                 |                                |                   |
| D_HDPE, HNO3 pH<2 - 500mL (A) |                 |                                |                   |
| <b>Sample Name: LF-4</b>      |                 |                                |                   |
| <b>Sample ID: D18A027-08</b>  | <b>Water</b>    | <b>Sampled:24-Jan-18 14:49</b> | <b>K18A094-08</b> |
| K_Cadmium                     | 23-Jul-18 14:49 |                                |                   |
| K_Beryllium                   | 23-Jul-18 14:49 |                                |                   |
| K_Barium                      | 23-Jul-18 14:49 |                                |                   |
| K_Selenium                    | 23-Jul-18 14:49 |                                |                   |
| K_Calcium                     | 23-Jul-18 14:49 |                                |                   |
| K_Chromium                    | 23-Jul-18 14:49 |                                |                   |
| K_Cobalt                      | 23-Jul-18 14:49 |                                |                   |
| K_Mercury, cold vapor         | 21-Feb-18 14:49 |                                |                   |
| K_Molybdenum                  | 23-Jul-18 14:49 |                                |                   |
| <i>Containers Supplied:</i>   |                 |                                |                   |
| D_HDPE, HNO3 pH<2 - 500mL (A) |                 |                                |                   |

*S. Phellis* *Via E-mail*  
 Released By: *S. Phellis* Date: *1-29-18* Received By: *John M. Deh* Date: *01/30/18 @ 1200*

---

Released By: \_\_\_\_\_ Date: \_\_\_\_\_ Received By: \_\_\_\_\_ Date: \_\_\_\_\_

February 14, 2018

*Chloride: Sulfates  
data  
wk #1 CCR  
K475  
K674  
EBlank*

Mr. Jeffery Boudreau  
Deerhaven Lab  
P.O. Box 147117, Station D38  
Gainesville, FL 32614

RE: Project: D18A024  
Pace Project No.: 35371016

Dear Mr. Boudreau:

Enclosed are the analytical results for sample(s) received by the laboratory on January 30, 2018. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,



Jeff Baylor  
jeff.baylor@pacelabs.com  
(386)672-5668  
Project Manager

Enclosures

cc: Kent Brakefield  
Shelley Phillips, Deerhaven Lab



### REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: D18A024  
Pace Project No.: 35371016

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### Pennsylvania Certification IDs

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601  
L-A-B DOD-ELAP Accreditation #: L2417  
Alabama Certification #: 41590  
Arizona Certification #: AZ0734  
Arkansas Certification  
California Certification #: 04222CA  
Colorado Certification  
Connecticut Certification #: PH-0694  
Delaware Certification  
Florida/TNI Certification #: E87683  
Georgia Certification #: C040  
Guam Certification  
Hawaii Certification  
Idaho Certification  
Illinois Certification  
Indiana Certification  
Iowa Certification #: 391  
Kansas/TNI Certification #: E-10358  
Kentucky Certification #: 90133  
Louisiana DHH/TNI Certification #: LA140008  
Louisiana DEQ/TNI Certification #: 4086  
Maine Certification #: PA00091  
Maryland Certification #: 308  
Massachusetts Certification #: M-PA1457  
Michigan/PADEP Certification  
Missouri Certification #: 235

Montana Certification #: Cert 0082  
Nebraska Certification #: NE-05-29-14  
Nevada Certification #: PA014572015-1  
New Hampshire/TNI Certification #: 2976  
New Jersey/TNI Certification #: PA 051  
New Mexico Certification #: PA01457  
New York/TNI Certification #: 10888  
North Carolina Certification #: 42706  
North Dakota Certification #: R-190  
Oregon/TNI Certification #: PA200002  
Pennsylvania/TNI Certification #: 65-00282  
Puerto Rico Certification #: PA01457  
Rhode Island Certification #: 65-00282  
South Dakota Certification  
Tennessee Certification #: TN2867  
Texas/TNI Certification #: T104704188-14-8  
Utah/TNI Certification #: PA014572015-5  
USDA Soil Permit #: P330-14-00213  
Vermont Dept. of Health: ID# VT-0282  
Virgin Island/PADEP Certification  
Virginia/VELAP Certification #: 460198  
Washington Certification #: C868  
West Virginia DEP Certification #: 143  
West Virginia DHHR Certification #: 9964C  
Wisconsin Certification  
Wyoming Certification #: 8TMS-L

---

### Ormond Beach Certification IDs

8 East Tower Circle, Ormond Beach, FL 32174  
Alabama Certification #: 41320  
Connecticut Certification #: PH-0216  
Delaware Certification: FL NELAC Reciprocity  
Florida Certification #: E83079  
Georgia Certification #: 955  
Guam Certification: FL NELAC Reciprocity  
Hawaii Certification: FL NELAC Reciprocity  
Illinois Certification #: 200068  
Indiana Certification: FL NELAC Reciprocity  
Kansas Certification #: E-10383  
Louisiana Certification #: FL NELAC Reciprocity  
Louisiana Environmental Certificate #: 05007  
Maryland Certification: #346  
Michigan Certification #: 9911  
Mississippi Certification: FL NELAC Reciprocity  
Missouri Certification #: 236  
Montana Certification #: Cert 0074

Nebraska Certification: NE-OS-28-14  
Nevada Certification: FL NELAC Reciprocity  
New Jersey Certification #: FL022  
New York Certification #: 11608  
North Carolina Environmental Certificate #: 667  
North Carolina Certification #: 12710  
Oklahoma Certification #: D9947  
Pennsylvania Certification #: 68-00547  
Puerto Rico Certification #: FL01264  
South Carolina Certification: #96042001  
Tennessee Certification #: TN02974  
Texas Certification: FL NELAC Reciprocity  
US Virgin Islands Certification: FL NELAC Reciprocity  
Virginia Environmental Certification #: 460165  
Wyoming Certification: FL NELAC Reciprocity  
West Virginia Certification #: 9962C  
Wisconsin Certification #: 399079670  
Wyoming (EPA Region 8): FL NELAC Reciprocity

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## REPORT OF LABORATORY ANALYSIS

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**SAMPLE SUMMARY**

Project: D18A024  
Pace Project No.: 35371016

| Lab ID      | Sample ID  | Matrix | Date Collected | Date Received  |
|-------------|------------|--------|----------------|----------------|
| 35371016001 | D18A024-01 | Water  | 01/21/18 16:42 | 01/30/18 10:15 |
| 35371016002 | D18A024-02 | Water  | 01/23/18 12:04 | 01/30/18 10:15 |
| 35371016003 | D18A024-03 | Water  | 01/26/18 15:38 | 01/30/18 10:15 |
| 35371016004 | D18A024-04 | Water  | 01/24/18 09:10 | 01/30/18 10:15 |
| 35371016005 | D18A024-05 | Water  | 01/21/18 10:52 | 01/30/18 10:15 |
| 35371016006 | D18A024-06 | Water  | 01/23/18 15:25 | 01/30/18 10:15 |
| 35371016007 | D18A024-07 | Water  | 01/26/18 13:30 | 01/30/18 10:15 |
| 35371016008 | D18A024-08 | Water  | 01/25/18 15:07 | 01/30/18 10:15 |
| 35371016009 | D18A024-09 | Water  | 01/27/18 10:00 | 01/30/18 10:15 |
| 35371016010 | D18A024-10 | Water  | 01/25/18 14:10 | 01/30/18 10:15 |
| 35371016011 | D18A024-11 | Water  | 01/26/18 10:14 | 01/30/18 10:15 |
| 35371016012 | D18A024-12 | Water  | 01/26/18 08:42 | 01/30/18 10:15 |
| 35371016013 | D18A024-13 | Water  | 01/25/18 16:47 | 01/30/18 10:15 |
| 35371016014 | D18A024-14 | Water  | 01/25/18 12:27 | 01/30/18 10:15 |

**REPORT OF LABORATORY ANALYSIS**

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### SAMPLE ANALYTE COUNT

Project: D18A024  
Pace Project No.: 35371016

| Lab ID      | Sample ID  | Method     | Analysts | Analytes Reported | Laboratory |
|-------------|------------|------------|----------|-------------------|------------|
| 35371016001 | D18A024-01 | EPA 900.0  | NJV      | 1                 | PASI-PA    |
|             |            | EPA 300.0  | CMD      | 2                 | PASI-O     |
|             |            | EPA 353.2  | JMD      | 1                 | PASI-O     |
|             |            | SM 5310B   | JMD      | 1                 | PASI-O     |
| 35371016002 | D18A024-02 | EPA 900.0  | NJV      | 1                 | PASI-PA    |
|             |            | EPA 300.0  | CMD      | 2                 | PASI-O     |
|             |            | EPA 353.2  | JMD      | 1                 | PASI-O     |
|             |            | SM 5310B   | JMD      | 1                 | PASI-O     |
| 35371016003 | D18A024-03 | SM7110C-11 | NEG      | 1                 | PASI-PA    |
|             |            | EPA 300.0  | CMD      | 2                 | PASI-O     |
|             |            | EPA 353.2  | JMD      | 1                 | PASI-O     |
|             |            | SM 5310B   | JMD      | 1                 | PASI-O     |
| 35371016004 | D18A024-04 | EPA 900.0  | NJV      | 1                 | PASI-PA    |
|             |            | EPA 300.0  | CMD      | 2                 | PASI-O     |
|             |            | EPA 353.2  | JMD      | 1                 | PASI-O     |
|             |            | SM 5310B   | JMD      | 1                 | PASI-O     |
| 35371016005 | D18A024-05 | EPA 900.0  | NJV      | 1                 | PASI-PA    |
|             |            | EPA 300.0  | CMD      | 2                 | PASI-O     |
|             |            | EPA 353.2  | JMD      | 1                 | PASI-O     |
|             |            | SM 5310B   | JMD      | 1                 | PASI-O     |
| 35371016006 | D18A024-06 | EPA 900.0  | NJV      | 1                 | PASI-PA    |
|             |            | EPA 300.0  | CMD      | 2                 | PASI-O     |
|             |            | EPA 353.2  | JMD      | 1                 | PASI-O     |
|             |            | SM 5310B   | JMD      | 1                 | PASI-O     |
| 35371016007 | D18A024-07 | EPA 900.0  | NJV      | 1                 | PASI-PA    |
|             |            | EPA 300.0  | CMD      | 2                 | PASI-O     |
|             |            | EPA 353.2  | JMD      | 1                 | PASI-O     |
|             |            | SM 5310B   | JMD      | 1                 | PASI-O     |
| 35371016008 | D18A024-08 | EPA 900.0  | NJV      | 1                 | PASI-PA    |
|             |            | EPA 300.0  | CMD      | 2                 | PASI-O     |
|             |            | EPA 353.2  | JMD      | 1                 | PASI-O     |
|             |            | SM 5310B   | JMD      | 1                 | PASI-O     |
| 35371016009 | D18A024-09 | EPA 900.0  | NJV      | 1                 | PASI-PA    |
|             |            | EPA 300.0  | CMD      | 2                 | PASI-O     |
|             |            | EPA 353.2  | JMD      | 1                 | PASI-O     |
|             |            | SM 5310B   | JMD      | 1                 | PASI-O     |
| 35371016010 | D18A024-10 | EPA 900.0  | NJV      | 1                 | PASI-PA    |

### REPORT OF LABORATORY ANALYSIS

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**SAMPLE ANALYTE COUNT**

Project: D18A024  
 Pace Project No.: 35371016

| Lab ID      | Sample ID  | Method    | Analysts | Analytes Reported | Laboratory |
|-------------|------------|-----------|----------|-------------------|------------|
| 35371016011 | D18A024-11 | EPA 300.0 | CMD      | 2                 | PASI-O     |
|             |            | EPA 353.2 | JMD      | 1                 | PASI-O     |
|             |            | SM 5310B  | JMD      | 1                 | PASI-O     |
|             |            | EPA 900.0 | NJV      | 1                 | PASI-PA    |
|             |            | EPA 300.0 | CMD      | 2                 | PASI-O     |
| 35371016012 | D18A024-12 | EPA 353.2 | JMD      | 1                 | PASI-O     |
|             |            | SM 5310B  | JMD      | 1                 | PASI-O     |
|             |            | EPA 900.0 | NJV      | 1                 | PASI-PA    |
|             |            | EPA 300.0 | CMD      | 2                 | PASI-O     |
|             |            | EPA 353.2 | JMD      | 1                 | PASI-O     |
| 35371016013 | D18A024-13 | SM 5310B  | JMD      | 1                 | PASI-O     |
|             |            | EPA 900.0 | NJV      | 1                 | PASI-PA    |
|             |            | EPA 300.0 | CMD      | 2                 | PASI-O     |
|             |            | EPA 353.2 | JMD      | 1                 | PASI-O     |
|             |            | SM 5310B  | JMD      | 1                 | PASI-O     |
| 35371016014 | D18A024-14 | EPA 900.0 | NJV      | 1                 | PASI-PA    |
|             |            | EPA 300.0 | CMD      | 2                 | PASI-O     |
|             |            | EPA 353.2 | JMD      | 1                 | PASI-O     |
|             |            | SM 5310B  | JMD      | 1                 | PASI-O     |

**REPORT OF LABORATORY ANALYSIS**

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**ANALYTICAL RESULTS**

Project: D18A024  
Pace Project No.: 35371016

1475

**Sample: D18A024-04**      **Lab ID: 35371016004**      Collected: 01/24/18 09:10      Received: 01/30/18 10:15      Matrix: Water

| Parameters                           | Results | Units                        | PQL   | MDL   | DF | Prepared | Analyzed       | CAS No.    | Qual |
|--------------------------------------|---------|------------------------------|-------|-------|----|----------|----------------|------------|------|
| <b>300.0 IC Anions 28 Days</b>       |         | Analytical Method: EPA 300.0 |       |       |    |          |                |            |      |
| Chloride                             | 3.6 I   | mg/L                         | 5.0   | 2.5   | 1  |          | 02/01/18 15:35 | 16887-00-6 |      |
| Sulfate                              | 4.2 I   | mg/L                         | 5.0   | 2.5   | 1  |          | 02/01/18 15:35 | 14808-79-8 |      |
| <b>353.2 Nitrogen, NO2/NO3 pres.</b> |         | Analytical Method: EPA 353.2 |       |       |    |          |                |            |      |
| Nitrogen, NO2 plus NO3               | 0.025 U | mg/L                         | 0.050 | 0.025 | 1  |          | 01/31/18 15:49 |            |      |
| <b>5310B TOC</b>                     |         | Analytical Method: SM 5310B  |       |       |    |          |                |            |      |
| Total Organic Carbon                 | 20.8    | mg/L                         | 1.0   | 0.50  | 1  |          | 02/01/18 03:30 | 7440-44-0  |      |

**REPORT OF LABORATORY ANALYSIS**

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**ANALYTICAL RESULTS**

Project: D18A024  
Pace Project No.: 35371016

*ALTY*

**Sample: D18A024-06**      **Lab ID: 35371016006**      Collected: 01/23/18 15:25      Received: 01/30/18 10:15      Matrix: Water

| Parameters                           | Results                      | Units | PQL   | MDL   | DF | Prepared | Analyzed       | CAS No.    | Qual |
|--------------------------------------|------------------------------|-------|-------|-------|----|----------|----------------|------------|------|
| <b>300.0 IC Anions 28 Days</b>       | Analytical Method: EPA 300.0 |       |       |       |    |          |                |            |      |
| Chloride                             | <b>5.1</b>                   | mg/L  | 5.0   | 2.5   | 1  |          | 02/01/18 20:49 | 16887-00-6 |      |
| Sulfate                              | <b>25.3</b>                  | mg/L  | 5.0   | 2.5   | 1  |          | 02/01/18 20:49 | 14808-79-8 |      |
| <b>353.2 Nitrogen, NO2/NO3 pres.</b> | Analytical Method: EPA 353.2 |       |       |       |    |          |                |            |      |
| Nitrogen, NO2 plus NO3               | <b>0.30</b>                  | mg/L  | 0.050 | 0.025 | 1  |          | 01/31/18 15:51 |            |      |
| <b>5310B TOC</b>                     | Analytical Method: SM 5310B  |       |       |       |    |          |                |            |      |
| Total Organic Carbon                 | <b>6.9</b>                   | mg/L  | 1.0   | 0.50  | 1  |          | 02/01/18 04:02 | 7440-44-0  |      |

**REPORT OF LABORATORY ANALYSIS**

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**ANALYTICAL RESULTS**

Project: D18A024  
Pace Project No.: 35371016

**Sample: D18A024-14**      **Lab ID: 35371016014**      Collected: 01/25/18 12:27      Received: 01/30/18 10:15      Matrix: Water

| Parameters                           | Results                      | Units | PQL   | MDL   | DF | Prepared | Analyzed       | CAS No.    | Qual |
|--------------------------------------|------------------------------|-------|-------|-------|----|----------|----------------|------------|------|
| <b>300.0 IC Anions 28 Days</b>       | Analytical Method: EPA 300.0 |       |       |       |    |          |                |            |      |
| Chloride                             | <b>2.5 U</b>                 | mg/L  | 5.0   | 2.5   | 1  |          | 02/01/18 20:26 | 16887-00-6 |      |
| Sulfate                              | <b>2.5 U</b>                 | mg/L  | 5.0   | 2.5   | 1  |          | 02/01/18 20:26 | 14808-79-8 |      |
| <b>353.2 Nitrogen, NO2/NO3 pres.</b> | Analytical Method: EPA 353.2 |       |       |       |    |          |                |            |      |
| Nitrogen, NO2 plus NO3               | <b>0.025 U</b>               | mg/L  | 0.050 | 0.025 | 1  |          | 01/31/18 16:06 |            |      |
| <b>5310B TOC</b>                     | Analytical Method: SM 5310B  |       |       |       |    |          |                |            |      |
| Total Organic Carbon                 | <b>0.50 U</b>                | mg/L  | 1.0   | 0.50  | 1  |          | 02/01/18 08:04 | 7440-44-0  |      |

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**QUALITY CONTROL DATA**

Project: D18A024  
 Pace Project No.: 35371016

QC Batch: 422565 Analysis Method: EPA 353.2  
 QC Batch Method: EPA 353.2 Analysis Description: 353.2 Nitrate + Nitrite, preserved  
 Associated Lab Samples: 35371016001

METHOD BLANK: 2300313 Matrix: Water  
 Associated Lab Samples: 35371016001

| Parameter              | Units | Blank Result | Reporting Limit | MDL   | Analyzed       | Qualifiers |
|------------------------|-------|--------------|-----------------|-------|----------------|------------|
| Nitrogen, NO2 plus NO3 | mg/L  | 0.025 U      | 0.050           | 0.025 | 01/31/18 15:00 |            |

LABORATORY CONTROL SAMPLE: 2300314

| Parameter              | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|------------------------|-------|-------------|------------|-----------|--------------|------------|
| Nitrogen, NO2 plus NO3 | mg/L  | 2           | 2.1        | 106       | 90-110       |            |

MATRIX SPIKE SAMPLE: 2300316

| Parameter              | Units | 35370803001 Result | Spike Conc. | MS Result | MS % Rec | % Rec Limits | Qualifiers |
|------------------------|-------|--------------------|-------------|-----------|----------|--------------|------------|
| Nitrogen, NO2 plus NO3 | mg/L  | 0.15               | 2           | 2.2       | 102      | 90-110       |            |

MATRIX SPIKE SAMPLE: 2300318

| Parameter              | Units | 35370997001 Result | Spike Conc. | MS Result | MS % Rec | % Rec Limits | Qualifiers |
|------------------------|-------|--------------------|-------------|-----------|----------|--------------|------------|
| Nitrogen, NO2 plus NO3 | mg/L  | 0.35               | 2           | 2.4       | 100      | 90-110       |            |

SAMPLE DUPLICATE: 2300315

| Parameter              | Units | 35370803001 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|--------------------|------------|-----|---------|------------|
| Nitrogen, NO2 plus NO3 | mg/L  | 0.15               | 0.15       | 0   | 20      |            |

SAMPLE DUPLICATE: 2300317

| Parameter              | Units | 35370997001 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|--------------------|------------|-----|---------|------------|
| Nitrogen, NO2 plus NO3 | mg/L  | 0.35               | 0.35       | 1   | 20      |            |

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### QUALITY CONTROL DATA

Project: D18A024  
Pace Project No.: 35371016

QC Batch: 422566 Analysis Method: EPA 353.2  
QC Batch Method: EPA 353.2 Analysis Description: 353.2 Nitrate + Nitrite, preserved  
Associated Lab Samples: 35371016002, 35371016003, 35371016004, 35371016005, 35371016006, 35371016007, 35371016008, 35371016009, 35371016010, 35371016011, 35371016012, 35371016013, 35371016014

METHOD BLANK: 2300319 Matrix: Water  
Associated Lab Samples: 35371016002, 35371016003, 35371016004, 35371016005, 35371016006, 35371016007, 35371016008, 35371016009, 35371016010, 35371016011, 35371016012, 35371016013, 35371016014

| Parameter              | Units | Blank Result | Reporting Limit | MDL   | Analyzed       | Qualifiers |
|------------------------|-------|--------------|-----------------|-------|----------------|------------|
| Nitrogen, NO2 plus NO3 | mg/L  | 0.025 U      | 0.050           | 0.025 | 01/31/18 15:38 |            |

LABORATORY CONTROL SAMPLE: 2300320

| Parameter              | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|------------------------|-------|-------------|------------|-----------|--------------|------------|
| Nitrogen, NO2 plus NO3 | mg/L  | 2           | 2.1        | 104       | 90-110       |            |

MATRIX SPIKE SAMPLE: 2300322

| Parameter              | Units | 35371016002 Result | Spike Conc. | MS Result | MS % Rec | % Rec Limits | Qualifiers |
|------------------------|-------|--------------------|-------------|-----------|----------|--------------|------------|
| Nitrogen, NO2 plus NO3 | mg/L  | 0.056              | 2           | 2.1       | 103      | 90-110       |            |

MATRIX SPIKE SAMPLE: 2300324

| Parameter              | Units | 35371016012 Result | Spike Conc. | MS Result | MS % Rec | % Rec Limits | Qualifiers |
|------------------------|-------|--------------------|-------------|-----------|----------|--------------|------------|
| Nitrogen, NO2 plus NO3 | mg/L  | 0.025 U            | 2           | 1.4       | 70       | 90-110 J(M1) |            |

SAMPLE DUPLICATE: 2300321

| Parameter              | Units | 35371016002 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|--------------------|------------|-----|---------|------------|
| Nitrogen, NO2 plus NO3 | mg/L  | 0.056              | 0.058      | 3   | 20      |            |

SAMPLE DUPLICATE: 2300323

| Parameter              | Units | 35371016012 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|--------------------|------------|-----|---------|------------|
| Nitrogen, NO2 plus NO3 | mg/L  | 0.025 U            | 0.025 U    |     | 20      |            |

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**QUALITY CONTROL DATA**

Project: D18A024  
Pace Project No.: 35371016

QC Batch: 422567 Analysis Method: SM 5310B  
QC Batch Method: SM 5310B Analysis Description: 5310B TOC  
Associated Lab Samples: 35371016001, 35371016002, 35371016003, 35371016004, 35371016005, 35371016006, 35371016007

METHOD BLANK: 2300325 Matrix: Water  
Associated Lab Samples: 35371016001, 35371016002, 35371016003, 35371016004, 35371016005, 35371016006, 35371016007

| Parameter            | Units | Blank Result | Reporting Limit | MDL  | Analyzed       | Qualifiers |
|----------------------|-------|--------------|-----------------|------|----------------|------------|
| Total Organic Carbon | mg/L  | 0.50 U       | 1.0             | 0.50 | 01/31/18 21:14 |            |

LABORATORY CONTROL SAMPLE: 2300326

| Parameter            | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|----------------------|-------|-------------|------------|-----------|--------------|------------|
| Total Organic Carbon | mg/L  | 20          | 19.5       | 97        | 90-110       |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2300327 2300328

| Parameter            | Units | 261248001 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | Max RPD | Qual |
|----------------------|-------|------------------|----------------|-----------------|-----------|------------|----------|-----------|--------------|---------|------|
| Total Organic Carbon | mg/L  | 1.4              | 20             | 20              | 22.0      | 22.7       | 103      | 107       | 80-120       | 3       | 20   |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2300329 2300330

| Parameter            | Units | 35371016006 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | Max RPD | Qual |
|----------------------|-------|--------------------|----------------|-----------------|-----------|------------|----------|-----------|--------------|---------|------|
| Total Organic Carbon | mg/L  | 6.9                | 20             | 20              | 26.4      | 26.2       | 98       | 97        | 80-120       | 1       | 20   |

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**QUALITY CONTROL DATA**

Project: D18A024  
Pace Project No.: 35371016

QC Batch: 422569 Analysis Method: SM 5310B  
QC Batch Method: SM 5310B Analysis Description: 5310B TOC  
Associated Lab Samples: 35371016008, 35371016009, 35371016010, 35371016011, 35371016012, 35371016013, 35371016014

METHOD BLANK: 2300337 Matrix: Water  
Associated Lab Samples: 35371016008, 35371016009, 35371016010, 35371016011, 35371016012, 35371016013, 35371016014

| Parameter            | Units | Blank Result | Reporting Limit | MDL  | Analyzed       | Qualifiers |
|----------------------|-------|--------------|-----------------|------|----------------|------------|
| Total Organic Carbon | mg/L  | 0.50 U       | 1.0             | 0.50 | 02/01/18 04:56 |            |

LABORATORY CONTROL SAMPLE: 2300338

| Parameter            | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|----------------------|-------|-------------|------------|-----------|--------------|------------|
| Total Organic Carbon | mg/L  | 20          | 19.5       | 97        | 90-110       |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2300339 2300340

| Parameter            | Units | 2300339            |                | 2300340         |           | MS % Rec | MSD % Rec | % Rec Limits | RPD    | Max RPD | Qual |            |
|----------------------|-------|--------------------|----------------|-----------------|-----------|----------|-----------|--------------|--------|---------|------|------------|
|                      |       | 35371016008 Result | MS Spike Conc. | MSD Spike Conc. | MS Result |          |           |              |        |         |      | MSD Result |
| Total Organic Carbon | mg/L  | 13.2               | 20             | 20              | 30.8      | 32.1     | 88        | 94           | 80-120 | 4       | 20   |            |

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## QUALIFIERS

Project: D18A024  
Pace Project No.: 35371016

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.  
ND - Not Detected at or above adjusted reporting limit.  
TNTC - Too Numerous To Count  
MDL - Adjusted Method Detection Limit.  
PQL - Practical Quantitation Limit.  
RL - Reporting Limit.  
S - Surrogate  
1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.  
Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.  
LCS(D) - Laboratory Control Sample (Duplicate)  
MS(D) - Matrix Spike (Duplicate)  
DUP - Sample Duplicate  
RPD - Relative Percent Difference  
NC - Not Calculable.  
SG - Silica Gel - Clean-Up  
U - Indicates the compound was analyzed for, but not detected.  
N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.  
Act - Activity  
Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval).  
Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)  
(MDC) - Minimum Detectable Concentration  
Trac - Tracer Recovery (%)  
Carr - Carrier Recovery (%)  
Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.  
TNI - The NELAC Institute.

### LABORATORIES

PASI-O Pace Analytical Services - Ormond Beach  
PASI-PA Pace Analytical Services - Greensburg

### ANALYTE QUALIFIERS

I The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.  
U Compound was analyzed for but not detected.  
J(M1) Estimated Value. Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.  
L Off-scale high. Actual value is known to be greater than value given.

## REPORT OF LABORATORY ANALYSIS

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**QUALITY CONTROL DATA CROSS REFERENCE TABLE**

Project: D18A024  
Pace Project No.: 35371016

| Lab ID      | Sample ID  | QC Batch Method | QC Batch | Analytical Method | Analytical Batch |
|-------------|------------|-----------------|----------|-------------------|------------------|
| 35371016003 | D18A024-03 | SM7110C-11      | 287625   |                   |                  |
| 35371016001 | D18A024-01 | EPA 900.0       | 287049   |                   |                  |
| 35371016002 | D18A024-02 | EPA 900.0       | 287049   |                   |                  |
| 35371016004 | D18A024-04 | EPA 900.0       | 287049   |                   |                  |
| 35371016005 | D18A024-05 | EPA 900.0       | 287049   |                   |                  |
| 35371016006 | D18A024-06 | EPA 900.0       | 287049   |                   |                  |
| 35371016007 | D18A024-07 | EPA 900.0       | 287049   |                   |                  |
| 35371016008 | D18A024-08 | EPA 900.0       | 287049   |                   |                  |
| 35371016009 | D18A024-09 | EPA 900.0       | 287049   |                   |                  |
| 35371016010 | D18A024-10 | EPA 900.0       | 287049   |                   |                  |
| 35371016011 | D18A024-11 | EPA 900.0       | 287049   |                   |                  |
| 35371016012 | D18A024-12 | EPA 900.0       | 287049   |                   |                  |
| 35371016013 | D18A024-13 | EPA 900.0       | 287049   |                   |                  |
| 35371016014 | D18A024-14 | EPA 900.0       | 287049   |                   |                  |
| 35371016001 | D18A024-01 | EPA 300.0       | 422814   |                   |                  |
| 35371016002 | D18A024-02 | EPA 300.0       | 422814   |                   |                  |
| 35371016003 | D18A024-03 | EPA 300.0       | 422814   |                   |                  |
| 35371016004 | D18A024-04 | EPA 300.0       | 422814   |                   |                  |
| 35371016005 | D18A024-05 | EPA 300.0       | 422814   |                   |                  |
| 35371016006 | D18A024-06 | EPA 300.0       | 422814   |                   |                  |
| 35371016007 | D18A024-07 | EPA 300.0       | 422814   |                   |                  |
| 35371016008 | D18A024-08 | EPA 300.0       | 422814   |                   |                  |
| 35371016009 | D18A024-09 | EPA 300.0       | 422814   |                   |                  |
| 35371016010 | D18A024-10 | EPA 300.0       | 422814   |                   |                  |
| 35371016011 | D18A024-11 | EPA 300.0       | 422814   |                   |                  |
| 35371016012 | D18A024-12 | EPA 300.0       | 422814   |                   |                  |
| 35371016013 | D18A024-13 | EPA 300.0       | 422814   |                   |                  |
| 35371016014 | D18A024-14 | EPA 300.0       | 422814   |                   |                  |
| 35371016001 | D18A024-01 | EPA 353.2       | 422565   |                   |                  |
| 35371016002 | D18A024-02 | EPA 353.2       | 422566   |                   |                  |
| 35371016003 | D18A024-03 | EPA 353.2       | 422566   |                   |                  |
| 35371016004 | D18A024-04 | EPA 353.2       | 422566   |                   |                  |
| 35371016005 | D18A024-05 | EPA 353.2       | 422566   |                   |                  |
| 35371016006 | D18A024-06 | EPA 353.2       | 422566   |                   |                  |
| 35371016007 | D18A024-07 | EPA 353.2       | 422566   |                   |                  |
| 35371016008 | D18A024-08 | EPA 353.2       | 422566   |                   |                  |
| 35371016009 | D18A024-09 | EPA 353.2       | 422566   |                   |                  |
| 35371016010 | D18A024-10 | EPA 353.2       | 422566   |                   |                  |
| 35371016011 | D18A024-11 | EPA 353.2       | 422566   |                   |                  |
| 35371016012 | D18A024-12 | EPA 353.2       | 422566   |                   |                  |
| 35371016013 | D18A024-13 | EPA 353.2       | 422566   |                   |                  |
| 35371016014 | D18A024-14 | EPA 353.2       | 422566   |                   |                  |
| 35371016001 | D18A024-01 | SM 5310B        | 422567   |                   |                  |
| 35371016002 | D18A024-02 | SM 5310B        | 422567   |                   |                  |
| 35371016003 | D18A024-03 | SM 5310B        | 422567   |                   |                  |
| 35371016004 | D18A024-04 | SM 5310B        | 422567   |                   |                  |

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: D18A024  
Pace Project No.: 35371016

| Lab ID      | Sample ID  | QC Batch Method | QC Batch | Analytical Method | Analytical Batch |
|-------------|------------|-----------------|----------|-------------------|------------------|
| 35371016005 | D18A024-05 | SM 5310B        | 422567   |                   |                  |
| 35371016006 | D18A024-06 | SM 5310B        | 422567   |                   |                  |
| 35371016007 | D18A024-07 | SM 5310B        | 422567   |                   |                  |
| 35371016008 | D18A024-08 | SM 5310B        | 422569   |                   |                  |
| 35371016009 | D18A024-09 | SM 5310B        | 422569   |                   |                  |
| 35371016010 | D18A024-10 | SM 5310B        | 422569   |                   |                  |
| 35371016011 | D18A024-11 | SM 5310B        | 422569   |                   |                  |
| 35371016012 | D18A024-12 | SM 5310B        | 422569   |                   |                  |
| 35371016013 | D18A024-13 | SM 5310B        | 422569   |                   |                  |
| 35371016014 | D18A024-14 | SM 5310B        | 422569   |                   |                  |

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SUBCONTRACT ORDER  
Deerhaven Generating Station  
D18A024

WO#: 35371016



35371016

SENDING LABORATORY:

Gainesville Regional Utilities  
Deerhaven Generating Station  
10001 NW 13th Street  
Gainesville, FL 32653  
Phone: 352-334-3434  
Fax: 352-334-3149  
Project Manager: Jeff Boudreau

RECEIVING LABORATORY:

Pace Analytical  
8 East Tower Circle  
Ormond Beach, FL 32174  
Phone :(386) 672-5668  
Fax: (386) 673-4001

| Analysis                                     | Expires         | Laboratory ID                   | Comments                     |
|--|-----------------|---------------------------------|------------------------------|
| <b>Sample Name: MWD-1-6 (R1T6)</b>           |                 |                                 |                              |
| <b>Sample ID: D18A024-01</b>                 | <b>Water</b>    | <b>Sampled: 21-Jan-18 16:42</b> | Conductivities in $\mu S/cm$ |
| D_Anions - Sulfates                          | 18-Feb-18 16:42 |                                 |                              |
| D_Gross Alpha                                | 16-Jul-18 16:42 |                                 | Cond = 544                   |
| D_NO3/NO2                                    | 18-Feb-18 16:42 |                                 |                              |
| D_TOC  | 18-Feb-18 16:42 |                                 |                              |
| D_Anions - Chlorides                         | 18-Feb-18 16:42 |                                 |                              |
| <i>Containers Supplied:</i>                  |                 |                                 |                              |
| D_HDPE, Chill @<6°C - 250mL (B)              |                 |                                 |                              |
| D_HDPE, H2SO4 Chill @<6°C - pH<2 - 250mL (C) |                 |                                 |                              |
| D_HDPE, HNO3 pH<2 - 1000mL (D)               |                 |                                 |                              |
| <b>Sample Name: MWB-2-1 (R2T1)</b>           |                 |                                 |                              |
| <b>Sample ID: D18A024-02</b>                 | <b>Water</b>    | <b>Sampled: 23-Jan-18 12:04</b> |                              |
| D_Gross Alpha                                | 18-Jul-18 12:04 |                                 | Cond = 55                    |
| D_NO3/NO2                                    | 20-Feb-18 12:04 |                                 |                              |
| D_Anions - Sulfates                          | 20-Feb-18 12:04 |                                 |                              |
| D_Anions - Chlorides                         | 20-Feb-18 12:04 |                                 |                              |
| D_TOC  | 20-Feb-18 12:04 |                                 |                              |
| <i>Containers Supplied:</i>                  |                 |                                 |                              |
| D_HDPE, Chill @<6°C - 250mL (B)              |                 |                                 |                              |
| D_HDPE, H2SO4 Chill @<6°C - pH<2 - 250mL (C) |                 |                                 |                              |
| D_HDPE, HNO3 pH<2 - 1000mL (D)               |                 |                                 |                              |

Released By: *Melby Phillips* Date: *1-29-18* via FedEx  
 Received By: *DA PAE* Date: *1/30/18* 1015  
 17.9 T301

Released By \_\_\_\_\_ Date \_\_\_\_\_ Received By \_\_\_\_\_ Date \_\_\_\_\_



**SUBCONTRACT ORDER**  
**Deerhaven Generating Station**  
**D18A024**

| Analysis                                     | Expires         | Laboratory ID                   | Comments                                  |
|--|-----------------|---------------------------------|---|
| <b>Sample Name: MWI-3-7 (R3T7)</b>           |                 |                                 | Conductivities in $\mu\text{S}/\text{cm}$ |
| <b>Sample ID: D18A024-03</b>                 | <b>Water</b>    | <b>Sampled: 26-Jan-18 15:38</b> |   |
| D_Anions - Chlorides                         | 23-Feb-18 15:38 |                                 |   |
| D_Anions - Sulfates                          | 23-Feb-18 15:38 |                                 |   |
| D_Gross Alpha                                | 21-Jul-18 15:38 |                                 | Cond = 3,065                              |
| D_NO3/NO2                                    | 23-Feb-18 15:38 |                                 |   |
| D_TOC  | 23-Feb-18 15:38 |                                 |   |
| <i>Containers Supplied:</i>                  |                 |                                 |   |
| D_HDPE, Chill @<6°C - 250mL (B)              |                 |                                 |   |
| D_HDPE, H2SO4 Chill @<6°C - pH<2 - 250mL (C) |                 |                                 |   |
| D_HDPE, HNO3 pH<2 - 1000mL (D)               |                 |                                 |   |
| <b>Sample Name: MWI-4-5 (R4T5B)</b>          |                 |                                 |   |
| <b>Sample ID: D18A024-04</b>                 | <b>Water</b>    | <b>Sampled: 24-Jan-18 09:10</b> |   |
| D_Anions - Sulfates                          | 21-Feb-18 09:10 |                                 |   |
| D_TOC  | 21-Feb-18 09:10 |                                 |   |
| D_Anions - Chlorides                         | 21-Feb-18 09:10 |                                 |   |
| D_Gross Alpha                                | 19-Jul-18 09:10 |                                 | Cond = 835                                |
| D_NO3/NO2                                    | 21-Feb-18 09:10 |                                 |   |
| <i>Containers Supplied:</i>                  |                 |                                 |   |
| D_HDPE, Chill @<6°C - 250mL (B)              |                 |                                 |   |
| D_HDPE, H2SO4 Chill @<6°C - pH<2 - 250mL (C) |                 |                                 |   |
| D_HDPE, HNO3 pH<2 - 1000mL (D)               |                 |                                 |   |
| <b>Sample Name: MWD-6-1 (R6T1B)</b>          |                 |                                 |   |
| <b>Sample ID: D18A024-05</b>                 | <b>Water</b>    | <b>Sampled: 21-Jan-18 10:52</b> |   |
| D_Anions - Chlorides                         | 18-Feb-18 10:52 |                                 |   |
| D_Anions - Sulfates                          | 18-Feb-18 10:52 |                                 |   |
| D_Gross Alpha                                | 16-Jul-18 10:52 |                                 | Cond = 342                                |
| D_NO3/NO2                                    | 18-Feb-18 10:52 |                                 |   |
| D_TOC  | 18-Feb-18 10:52 |                                 |   |
| <i>Containers Supplied:</i>                  |                 |                                 |   |
| D_HDPE, Chill @<6°C - 250mL (B)              |                 |                                 |   |
| D_HDPE, H2SO4 Chill @<6°C - pH<2 - 250mL (C) |                 |                                 |   |
| D_HDPE, HNO3 pH<2 - 1000mL (D)               |                 |                                 |   |

Released By: *Shelby Phillips* Date: *1-29-18* via FedEx

Received By: *Mr. DA PAVE* Date: *1/30/18 10:15*

Received By: \_\_\_\_\_ Date: *(79730)*

Released By: \_\_\_\_\_ Date: \_\_\_\_\_ Received By: \_\_\_\_\_ Date: \_\_\_\_\_



**SUBCONTRACT ORDER**  
**Deerhaven Generating Station**  
**D18A024**

| Analysis                                     | Expires         | Laboratory ID                   | Comments  |
|--|-----------------|---------------------------------|---|
| <b>Sample Name: MWC-11-4 (R11T4B)</b>        |                 |                                 | <i>Conductivities in <math>\mu\text{S}/\text{cm}</math></i> |
| <b>Sample ID: D18A024-12</b>                 | <b>Water</b>    | <b>Sampled: 26-Jan-18 08:42</b> |   |
| D_NO3/NO2                                    | 23-Feb-18 08:42 |                                 |   |
| D_Gross Alpha                                | 21-Jul-18 08:42 |                                 | Cond = 246  |
| D_TOC  | 23-Feb-18 08:42 |                                 |   |
| D_Anions - Sulfates                          | 23-Feb-18 08:42 |                                 |   |
| D_Anions - Chlorides                         | 23-Feb-18 08:42 |                                 |   |
| <i>Containers Supplied:</i>                  |                 |                                 |   |
| D_HDPE, Chill @<6°C - 250mL (B)              |                 |                                 |   |
| D_HDPE, H2SO4 Chill @<6°C - pH<2 - 250mL (C) |                 |                                 |   |
| D_HDPE, HNO3 pH<2 - 1000mL (D)               |                 |                                 |   |
| <b>Sample Name: MWC-DEEP (DEEP-1)</b>        |                 |                                 |   |
| <b>Sample ID: D18A024-13</b>                 | <b>Water</b>    | <b>Sampled: 25-Jan-18 16:47</b> |   |
| D_Anions - Sulfates                          | 22-Feb-18 16:47 |                                 |   |
| D_TOC  | 22-Feb-18 16:47 |                                 |   |
| D_Gross Alpha                                | 20-Jul-18 16:47 |                                 | Cond = 493  |
| D_Anions - Chlorides                         | 22-Feb-18 16:47 |                                 |   |
| D_NO3/NO2                                    | 22-Feb-18 16:47 |                                 |   |
| <i>Containers Supplied:</i>                  |                 |                                 |   |
| D_HDPE, Chill @<6°C - 250mL (B)              |                 |                                 |   |
| D_HDPE, H2SO4 Chill @<6°C - pH<2 - 250mL (C) |                 |                                 |   |
| D_HDPE, HNO3 pH<2 - 1000mL (D)               |                 |                                 |   |
| <b>Sample Name: EBLANK</b>                   |                 |                                 |   |
| <b>Sample ID: D18A024-14</b>                 | <b>Water</b>    | <b>Sampled: 25-Jan-18 12:27</b> |   |
| D_TOC  | 22-Feb-18 12:27 |                                 |   |
| D_Anions - Chlorides                         | 22-Feb-18 12:27 |                                 |   |
| D_Anions - Sulfates                          | 22-Feb-18 12:27 |                                 |   |
| D_Gross Alpha                                | 20-Jul-18 12:27 |                                 | Cond = <1   |
| D_NO3/NO2                                    | 22-Feb-18 12:27 |                                 |   |
| <i>Containers Supplied:</i>                  |                 |                                 |   |
| D_HDPE, Chill @<6°C - 250mL (B)              |                 |                                 |   |
| D_HDPE, H2SO4 Chill @<6°C - pH<2 - 250mL (C) |                 |                                 |   |
| D_HDPE, HNO3 pH<2 - 1000mL (D)               |                 |                                 |   |

Released By: *Shelly Phillips*      Date: *1-29-18*      via FedEx  
 Received By: *DA PACE*      Date: *1/30/18 1015*  
 Received By: \_\_\_\_\_      Date: *17.9 T301*

Released By \_\_\_\_\_ Date \_\_\_\_\_ Received By \_\_\_\_\_ Date \_\_\_\_\_





Document Name:  
Sample Condition Upon Receipt Form  
Document No.:  
F-FL-C-007 rev. 12

Document Revised:  
August 2, 2017  
Issuing Authority:  
Pace Florida Quality Office

Sample Condition Upon Receipt Form (SCUR)

**Project** **WO# : 35371016**  
**Project Manager/Client** **PM: JSB** **Due Date: 02/13/18**  
**CLIENT: DEELAB**

**Date and Initials of person:**  
 Examining contents: \_\_\_\_\_  
 Label: \_\_\_\_\_  
 Deliver: \_\_\_\_\_  
 pH: \_\_\_\_\_

Thermometer Used: T301 Date: 11/30/18 Time: 1015 Initials: SS

State of Origin: \_\_\_\_\_

Cooler #1 Temp. °C 0.4 (Visual) 0 (Correction Factor) 0.4 (Actual)  
 Cooler #2 Temp. °C 16.6 (Visual) 0 (Correction Factor) 16.6 (Actual)  
 Cooler #3 Temp. °C 17.9 (Visual) 0 (Correction Factor) 17.9 (Actual)  
 Cooler #4 Temp. °C 16.6 (Visual) 0 (Correction Factor) 16.6 (Actual)  
 Cooler #5 Temp. °C \_\_\_\_\_ (Visual) \_\_\_\_\_ (Correction Factor) \_\_\_\_\_ (Actual)  
 Cooler #6 Temp. °C \_\_\_\_\_ (Visual) \_\_\_\_\_ (Correction Factor) \_\_\_\_\_ (Actual)

- Samples on ice, cooling process has begun
- Samples on ice, cooling process has begun
- Samples on ice, cooling process has begun
- Samples on ice, cooling process has begun
- Samples on ice, cooling process has begun
- Samples on ice, cooling process has begun

Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace  Other \_\_\_\_\_  
 Shipping Method:  First Overnight  Priority Overnight  Standard Overnight  Ground  International Priority  
 Other \_\_\_\_\_

Billing:  Recipient  Sender  Third Party  Credit Card  Unknown

Tracking # 8106 7903 2877 / 8106 7903 2899 / 8106 7903 2903 / 8106 7903 2888

Custody Seal on Cooler/Box Present:  Yes  No Seals Intact:  Yes  No Ice:  Wet  Blue  Dry  None

Packing Material:  Bubble Wrap  Bubble Bags  None  Other \_\_\_\_\_

Samples shorted to lab (If Yes, complete) Shorted Date: \_\_\_\_\_ Shorted Time: \_\_\_\_\_ Qty: \_\_\_\_\_

Comments:

|   |  |  |
|---|--|--|
| Chain of Custody Present  | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Preservation Information:<br>Preservative: _____<br>Lot #/Trace #: _____<br>Date: _____ Time: _____<br>Initials: _____ |
| Chain of Custody Filled Out   | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |  |
| Relinquished Signature & Sampler Name COC   | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |  |
| Samples Arrived within Hold Time  | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |  |
| Rush TAT requested on COC   | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A |  |
| Sufficient Volume   | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |  |
| Correct Containers Used   | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |  |
| Containers Intact   | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |  |
| Sample Labels match COC (sample IDs & date/time of collection)  | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |  |
| All containers needing acid/base preservation have been checked.  | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |  |
| All Containers needing preservation are found to be in compliance with EPA recommendation:<br>Exceptions: VOA, Coliform, TOC, O&G, Carbamates | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |  |
| Headspace in VOA Vials? (>6mm):   | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A |  |
| Trip Blank Present:   | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A |  |

Client Notification/ Resolution:  
 Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution (use back for additional comments):  
 \_\_\_\_\_  
 \_\_\_\_\_



# Total Suspended Solids - Non-Filterable Residue - SM2540D

Date 1/25/18  
 Time 8:25  
 Analyst KSB  
 Batch 180801

Quarter: 1Q18  
12月  
 Duplicate Source: D18A024-01

| Sample ID  | ID    | Initial Filter Weight (g) | Sample Volume (mL) | Dry filter and Sample Final Wgt (g) | TSS, Final Result mg/L | Reporting Limit mg/L | Qual |
|------------|-------|---------------------------|--------------------|-------------------------------------|------------------------|----------------------|------|
| BLK1       | BLANK | 0.1229                    | 500                | 0.1227                              | -0.4                   | 1.0                  | U    |
| SRM1       | SRM   | 0.1158                    | 500                | 0.1234                              | 15.2                   | 1.0                  |      |
| D18A057-02 | PT    | 0.1195                    | 500                | 0.1613                              | 83.6                   | 1.0                  |      |
| D18A024-01 | R1T6  | 0.1146                    | 500                | 0.1165                              | 3.8                    | 1.0                  | I    |
| DUP1       | DUP   | 0.1076                    | 500                | 0.1098                              | 4.4                    | 1.0                  |      |
| D18A024-02 | R2T1  | 0.1077                    | 500                | 0.1078                              | 0.2                    | 1.0                  | U    |
| D18A024-04 | R4T5  | 0.1165                    | 500                | 0.1168                              | 0.6                    | 1.0                  | U    |
| D18A024-05 | R6T1  | 0.1179                    | 500                | 0.1178                              | -0.2                   | 1.0                  | U    |
| D18A024-06 | R6T4  | 0.1145                    | 500                | 0.1144                              | -0.2                   | 1.0                  | U    |
| D18A027-01 | SIS-1 | 0.1187                    | 500                | 0.1186                              | -0.2                   | 1.0                  | U    |
| D18A027-02 | SIS-2 | 0.1170                    | 500                | 0.1170                              | 0.0                    | 1.0                  | U    |
| D18A027-03 | SIS-3 | 0.1174                    | 500                | 0.1174                              | 0.0                    | 1.0                  | U    |
| D18A027-04 | SIS-4 | 0.1150                    | 500                | 0.1152                              | 0.4                    | 1.0                  | U    |
| D18A027-05 | LF-1  | 0.1167                    | 500                | 0.1165                              | -0.4                   | 1.0                  | U    |
| D18A027-08 | LF-4  | 0.1150                    | 500                | 0.1148                              | -0.4                   | 1.0                  | U    |
|            |       |                           |                    |                                     |                        |                      |      |
|            |       |                           |                    |                                     |                        |                      |      |
|            |       |                           |                    |                                     |                        |                      |      |
|            |       |                           |                    |                                     |                        |                      |      |
|            |       |                           |                    |                                     |                        |                      |      |
|            |       |                           |                    |                                     |                        |                      |      |
|            |       |                           |                    |                                     |                        |                      |      |
|            |       |                           |                    |                                     |                        |                      |      |
|            |       |                           |                    |                                     |                        |                      |      |
|            |       |                           |                    |                                     |                        |                      |      |
|            |       |                           |                    |                                     |                        |                      |      |
|            |       |                           |                    |                                     |                        |                      |      |
|            |       |                           |                    |                                     |                        |                      |      |
|            |       |                           |                    |                                     |                        |                      |      |
|            |       |                           |                    |                                     |                        |                      |      |

|                     |                  |             |
|---------------------|------------------|-------------|
| Balance S/N: U07797 | SRM TV, mg/L     | 20.7        |
|                     | SRM, mg/L        | 15.2        |
|                     | % Recovery       | % Range     |
| Oven S/N: U08230    | Low Range, mg/L  | 62.31884058 |
|                     | High Range, mg/L | 126.0869565 |

|           |         |
|-----------|---------|
| Sample    | 3.8     |
| Duplicate | 4.4     |
| %RPD      | 14.6341 |

Total Suspended Solids = (Dry Filter and Sample(g) - Initial Filter(g))\*1000000/Sample Volume(mL)

## Total Suspended Solids - Non-Filterable Residue - SM2540D

Date 1/29/18  
 Time 10:10  
 Analyst KSB  
 Batch 1808010

Quarter: 1Q18  
1 2 3 4  
 Duplicate Source: D18A024-07

| Sample ID  | ID              | Initial Filter Weight (g) | Sample Volume (mL) | Dry filter and Sample Final Wgt (g) | TSS, Final Result mg/L | Reporting Limit mg/L | Qual |
|------------|-----------------|---------------------------|--------------------|-------------------------------------|------------------------|----------------------|------|
| BLK2       | BLANK           | 0.1176                    | 500                | 0.1174                              | -0.4                   | 1.0                  | U    |
| DA81801    | SRM             | 0.1149                    | 500                | 0.1552                              | 80.6                   | 1.0                  |      |
| D18A024-03 | R3T7            | 0.1214                    | 500                | 0.1213                              | -0.2                   | 1.0                  | U    |
| D18A024-07 | R6T8            | 0.1147                    | 500                | 0.1146                              | -0.2                   | 1.0                  | U    |
| DUP2       | DUP             | 0.1184                    | 500                | 0.1180                              | -0.8                   | 1.0                  | U    |
| D18A024-08 | R6T12           | 0.1157                    | 500                | 0.1156                              | -0.2                   | 1.0                  | U    |
| D18A024-09 | R8T10           | 0.1164                    | 500                | 0.1164                              | 0.0                    | 1.0                  | U    |
| D18A024-10 | R9T5            | 0.1168                    | 500                | 0.1166                              | -0.4                   | 1.0                  | U    |
| D18A024-11 | R10T8           | 0.1168                    | 500                | 0.1161                              | -1.4                   | 1.0                  | U    |
| D18A024-12 | R11T4           | 0.1154                    | 500                | 0.1153                              | -0.2                   | 1.0                  | U    |
| D18A024-13 | DEEP            | 0.1196                    | 500                | 0.1194                              | -0.4                   | 1.0                  | U    |
| D18A024-14 | EQ. BLK         | 0.1148                    | 500                | 0.1148                              | 0.0                    | 1.0                  | U    |
| D18A027-06 | LF-2            | 0.1234                    | 500                | 0.1235                              | 0.2                    | 1.0                  | U    |
| D18A027-07 | LF-3            | 0.1176                    | 500                | 0.1176                              | 0.0                    | 1.0                  | U    |
| D18A024-11 | R10T8 - Confirm | 0.1160                    | 500                | 0.1160                              | 0.0                    | 1.0                  | U    |
|            |                 |                           |                    |                                     |                        |                      |      |
|            |                 |                           |                    |                                     |                        |                      |      |
|            |                 |                           |                    |                                     |                        |                      |      |
|            |                 |                           |                    |                                     |                        |                      |      |
|            |                 |                           |                    |                                     |                        |                      |      |
|            |                 |                           |                    |                                     |                        |                      |      |

Balance S/N: U07797

|                  |             |
|------------------|-------------|
| SRM TV, mg/L     | 82.0        |
| SRM, mg/L        | 80.6        |
| % Recovery       | % Range     |
| Low Range, mg/L  | 81.70731707 |
| High Range, mg/L | 111.3414634 |

Oven S/N: U08230

|           |   |
|-----------|---|
| Sample    | 0 |
| Duplicate | 0 |
| %RPD      | 0 |

Total Suspended Solids = (Dry Filter and Sample(g) - Initial Filter(g))\*1000000/Sample Volume(mL)

Reviewed By: 

# Total Dissolved Solids - Filterable Residue - SM2540C

Date 1/25/18  
 Time 8:25  
 Analyst KSB  
 Batch 1808012

Quarter: 1Q18  
 TWK# 1CCK  
 Duplicate Source: D18A024-01

| Sample ID  | ID    | Dish Weight (g) | Sample Volume (mL) | Dry Dish and Sample Final Wgt (g) | TDS, Final Result mg/L | Reporting Limit mg/L | Qual |
|------------|-------|-----------------|--------------------|-----------------------------------|------------------------|----------------------|------|
| BLK1       | BLANK | 72.6557         | 100                | 72.6555                           | -2                     | 10                   | U    |
| SRM1       | SRM   | 69.3269         | 100                | 69.3937                           | 668                    | 10                   |      |
| D18A057-02 | PT    | 64.4192         | 100                | 64.4385                           | 193                    | 10                   |      |
| D18A024-01 | R1T6  | 64.4018         | 100                | 64.4316                           | 298                    | 10                   |      |
| DUP1       | DUP   | 63.1507         | 100                | 63.1805                           | 298                    | 10                   |      |
| D18A024-02 | R2T1  | 76.4559         | 100                | 76.4590                           | 31                     | 10                   | I    |
| D18A024-04 | R4T5  | 77.9651         | 100                | 78.0151                           | 500                    | 10                   |      |
| D18A024-05 | R6T1  | 70.9823         | 100                | 71.0003                           | 180                    | 10                   |      |
| D18A024-06 | R6T4  | 70.4549         | 100                | 70.4737                           | 188                    | 10                   |      |
| D18A027-01 | SIS-1 | 78.7936         | 100                | 78.8178                           | 242                    | 10                   |      |
| D18A027-02 | SIS-2 | 65.2679         | 100                | 65.2926                           | 247                    | 10                   |      |
| D18A027-03 | SIS-3 | 66.9360         | 100                | 66.9637                           | 277                    | 10                   |      |
| D18A027-04 | SIS-4 | 67.0534         | 100                | 67.0905                           | 371                    | 10                   |      |
| D18A027-05 | LF-1  | 76.7567         | 100                | 76.7734                           | 167                    | 10                   |      |
| D18A027-08 | LF-4  | 75.0610         | 100                | 75.1817                           | 1207                   | 10                   |      |
|            |       |                 |                    |                                   |                        |                      |      |
|            |       |                 |                    |                                   |                        |                      |      |
|            |       |                 |                    |                                   |                        |                      |      |
|            |       |                 |                    |                                   |                        |                      |      |
|            |       |                 |                    |                                   |                        |                      |      |
|            |       |                 |                    |                                   |                        |                      |      |
|            |       |                 |                    |                                   |                        |                      |      |
|            |       |                 |                    |                                   |                        |                      |      |
|            |       |                 |                    |                                   |                        |                      |      |

Balance S/N: U07797

|                  |             |
|------------------|-------------|
| SRM TV, mg/L     | 672         |
| SRM, mg/L        | 668         |
| % Recovery       | 99.40       |
| Low Range, mg/L  | 90.0297619  |
| High Range, mg/L | 109.9702381 |
| % Range          |             |

Oven S/N: U08230

|           |     |
|-----------|-----|
| Sample    | 298 |
| Duplicate | 298 |
| %RPD      | 0   |

Total Dissolved Solids = (Dry Dish and Sample(g) - Dish Weight(g))\*1000000/Sample Volume(mL)

# Total Dissolved Solids - Filterable Residue - SM2540C

Date: 1/29/18  
 Time: 10:10  
 Analyst: KSB  
 Batch: 1808010

Quarter: 1Q18  
 + WK #1 CGK  
 Duplicate Source: D18A024-07

| Sample ID  | ID      | Dish Weight (g) | Sample Volume (mL) | Dry Dish and Sample Final Wgt (g) | TDS, Final Result mg/L | Reporting Limit mg/L | Qual |
|------------|---------|-----------------|--------------------|-----------------------------------|------------------------|----------------------|------|
| BLK2       | BLANK   | 75.5390         | 100                | 75.5391                           | 1                      | 10                   | U    |
| DA81801    | SRM     | 74.3010         | 100                | 74.3343                           | 333                    | 10                   |      |
| D18A024-03 | R3T7    | 78.9294         | 50                 | 79.0340                           | 2092                   | 20                   |      |
| D18A024-07 | R6T8    | 69.7042         | 100                | 69.7242                           | 200                    | 10                   |      |
| DUP2       | DUP     | 70.4351         | 100                | 70.4554                           | 203                    | 10                   |      |
| D18A024-08 | R6T12   | 65.0311         | 100                | 65.0422                           | 111                    | 10                   |      |
| D18A024-09 | R8T10   | 91.1380         | 100                | 91.1737                           | 357                    | 10                   |      |
| D18A024-10 | R9T5    | 84.1743         | 100                | 84.1949                           | 206                    | 10                   |      |
| D18A024-11 | R10T8   | 68.4820         | 100                | 68.4888                           | 68                     | 10                   |      |
| D18A024-12 | R11T4   | 66.6897         | 100                | 66.7054                           | 157                    | 10                   |      |
| D18A024-13 | DEEP    | 78.0784         | 100                | 78.1082                           | 298                    | 10                   |      |
| D18A024-14 | EQ. BLK | 78.5904         | 100                | 78.5901                           | -3                     | 10                   | U    |
| D18A027-06 | LF-2    | 81.8245         | 100                | 81.8965                           | 720                    | 10                   |      |
| D18A027-07 | LF-3    | 76.0426         | 100                | 76.1157                           | 731                    | 10                   |      |
|            |         |                 |                    |                                   |                        |                      |      |
|            |         |                 |                    |                                   |                        |                      |      |
|            |         |                 |                    |                                   |                        |                      |      |
|            |         |                 |                    |                                   |                        |                      |      |
|            |         |                 |                    |                                   |                        |                      |      |
|            |         |                 |                    |                                   |                        |                      |      |
|            |         |                 |                    |                                   |                        |                      |      |
|            |         |                 |                    |                                   |                        |                      |      |
|            |         |                 |                    |                                   |                        |                      |      |
|            |         |                 |                    |                                   |                        |                      |      |
|            |         |                 |                    |                                   |                        |                      |      |
|            |         |                 |                    |                                   |                        |                      |      |
|            |         |                 |                    |                                   |                        |                      |      |
|            |         |                 |                    |                                   |                        |                      |      |
|            |         |                 |                    |                                   |                        |                      |      |

|                  |       |
|------------------|-------|
| SRM TV, mg/L     | 339   |
| SRM, mg/L        | 333   |
| % Recovery       | 98.23 |
| Low Range, mg/L  | 294   |
| High Range, mg/L | 384   |

Balance S/N: U07797  
 Oven S/N: U08230

|           |          |
|-----------|----------|
| Sample    | 200      |
| Duplicate | 203      |
| %RPD      | 1.488834 |

Total Dissolved Solids = (Dry Dish and Sample(g) - Dish Weight(g)) \* 1000000 / Sample Volume(mL)

Reviewed By: JB

February 14, 2018

Mr. Jeffery Boudreau  
Deerhaven Lab  
P.O. Box 147117, Station D38  
Gainesville, FL 32614

RE: Project: D18A027  
Pace Project No.: 35371014

Dear Mr. Boudreau:

Enclosed are the analytical results for sample(s) received by the laboratory on January 30, 2018. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,



Jeff Baylor  
jeff.baylor@pacelabs.com  
(386)672-5668  
Project Manager

Enclosures

cc: Kent Brakefield  
Shelley Phillips, Deerhaven Lab



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: D18A027

Pace Project No.: 35371014

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### Pennsylvania Certification IDs

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601

L-A-B DOD-ELAP Accreditation #: L2417

Alabama Certification #: 41590

Arizona Certification #: AZ0734

Arkansas Certification

California Certification #: 04222CA

Colorado Certification

Connecticut Certification #: PH-0694

Delaware Certification

Florida/TNI Certification #: E87683

Georgia Certification #: C040

Guam Certification

Hawaii Certification

Idaho Certification

Illinois Certification

Indiana Certification

Iowa Certification #: 391

Kansas/TNI Certification #: E-10358

Kentucky Certification #: 90133

Louisiana DHH/TNI Certification #: LA140008

Louisiana DEQ/TNI Certification #: 4086

Maine Certification #: PA00091

Maryland Certification #: 308

Massachusetts Certification #: M-PA1457

Michigan/PADEP Certification

Missouri Certification #: 235

Montana Certification #: Cert 0082

Nebraska Certification #: NE-05-29-14

Nevada Certification #: PA014572015-1

New Hampshire/TNI Certification #: 2976

New Jersey/TNI Certification #: PA 051

New Mexico Certification #: PA01457

New York/TNI Certification #: 10888

North Carolina Certification #: 42706

North Dakota Certification #: R-190

Oregon/TNI Certification #: PA200002

Pennsylvania/TNI Certification #: 65-00282

Puerto Rico Certification #: PA01457

Rhode Island Certification #: 65-00282

South Dakota Certification

Tennessee Certification #: TN2867

Texas/TNI Certification #: T104704188-14-8

Utah/TNI Certification #: PA014572015-5

USDA Soil Permit #: P330-14-00213

Vermont Dept. of Health: ID# VT-0282

Virgin Island/PADEP Certification

Virginia/VELAP Certification #: 460198

Washington Certification #: C868

West Virginia DEP Certification #: 143

West Virginia DHHR Certification #: 9964C

Wisconsin Certification

Wyoming Certification #: 8TMS-L

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### Ormond Beach Certification IDs

8 East Tower Circle, Ormond Beach, FL 32174

Alabama Certification #: 41320

Connecticut Certification #: PH-0216

Delaware Certification: FL NELAC Reciprocity

Florida Certification #: E83079

Georgia Certification #: 955

Guam Certification: FL NELAC Reciprocity

Hawaii Certification: FL NELAC Reciprocity

Illinois Certification #: 200068

Indiana Certification: FL NELAC Reciprocity

Kansas Certification #: E-10383

Louisiana Certification #: FL NELAC Reciprocity

Louisiana Environmental Certificate #: 05007

Maryland Certification: #346

Michigan Certification #: 9911

Mississippi Certification: FL NELAC Reciprocity

Missouri Certification #: 236

Montana Certification #: Cert 0074

Nebraska Certification: NE-OS-28-14

Nevada Certification: FL NELAC Reciprocity

New Jersey Certification #: FL022

New York Certification #: 11608

North Carolina Environmental Certificate #: 667

North Carolina Certification #: 12710

Oklahoma Certification #: D9947

Pennsylvania Certification #: 68-00547

Puerto Rico Certification #: FL01264

South Carolina Certification: #96042001

Tennessee Certification #: TN02974

Texas Certification: FL NELAC Reciprocity

US Virgin Islands Certification: FL NELAC Reciprocity

Virginia Environmental Certification #: 460165

Wyoming Certification: FL NELAC Reciprocity

West Virginia Certification #: 9962C

Wisconsin Certification #: 399079670

Wyoming (EPA Region 8): FL NELAC Reciprocity

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: D18A027

Pace Project No.: 35371014

| Lab ID      | Sample ID  | Matrix | Date Collected | Date Received  |
|-------------|------------|--------|----------------|----------------|
| 35371014001 | D18A027-01 | Water  | 01/23/18 14:08 | 01/30/18 10:15 |
| 35371014002 | D18A027-02 | Water  | 01/24/18 08:08 | 01/30/18 10:15 |
| 35371014003 | D18A027-03 | Water  | 01/24/18 11:39 | 01/30/18 10:15 |
| 35371014004 | D18A027-04 | Water  | 01/24/18 13:34 | 01/30/18 10:15 |
| 35371014005 | D18A027-05 | Water  | 01/23/18 16:50 | 01/30/18 10:15 |
| 35371014006 | D18A027-06 | Water  | 01/25/18 09:22 | 01/30/18 10:15 |
| 35371014007 | D18A027-07 | Water  | 01/25/18 11:28 | 01/30/18 10:15 |
| 35371014008 | D18A027-08 | Water  | 01/24/18 14:49 | 01/30/18 10:15 |
| 35371014009 | D18A027-12 | Water  | 01/24/18 09:10 | 01/30/18 10:15 |
| 35371014010 | D18A027-13 | Water  | 01/23/18 15:25 | 01/30/18 10:15 |
| 35371014011 | D18A027-15 | Water  | 01/25/18 12:27 | 01/30/18 10:15 |

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: D18A027  
Pace Project No.: 35371014

| Lab ID      | Sample ID  | Method                   | Analysts | Analytes Reported | Laboratory |
|-------------|------------|--------------------------|----------|-------------------|------------|
| 35371014001 | D18A027-01 | EPA 903.1                | KAC      | 1                 | PASI-PA    |
|             |            | EPA 904.0                | JLW      | 1                 | PASI-PA    |
|             |            | Total Radium Calculation | CMC      | 1                 | PASI-PA    |
|             |            | EPA 300.0                | CMD      | 3                 | PASI-O     |
| 35371014002 | D18A027-02 | EPA 903.1                | KAC      | 1                 | PASI-PA    |
|             |            | EPA 904.0                | JLW      | 1                 | PASI-PA    |
|             |            | Total Radium Calculation | CMC      | 1                 | PASI-PA    |
|             |            | EPA 300.0                | CMD      | 3                 | PASI-O     |
| 35371014003 | D18A027-03 | EPA 903.1                | KAC      | 1                 | PASI-PA    |
|             |            | EPA 904.0                | JLW      | 1                 | PASI-PA    |
|             |            | Total Radium Calculation | CMC      | 1                 | PASI-PA    |
|             |            | EPA 300.0                | CMD      | 3                 | PASI-O     |
| 35371014004 | D18A027-04 | EPA 903.1                | KAC      | 1                 | PASI-PA    |
|             |            | EPA 904.0                | JLW      | 1                 | PASI-PA    |
|             |            | Total Radium Calculation | CMC      | 1                 | PASI-PA    |
|             |            | EPA 300.0                | CMD      | 3                 | PASI-O     |
| 35371014005 | D18A027-05 | EPA 903.1                | KAC      | 1                 | PASI-PA    |
|             |            | EPA 904.0                | JLW      | 1                 | PASI-PA    |
|             |            | Total Radium Calculation | CMC      | 1                 | PASI-PA    |
|             |            | EPA 300.0                | CMD      | 3                 | PASI-O     |
| 35371014006 | D18A027-06 | EPA 903.1                | KAC      | 1                 | PASI-PA    |
|             |            | EPA 904.0                | JLW      | 1                 | PASI-PA    |
|             |            | Total Radium Calculation | CMC      | 1                 | PASI-PA    |
|             |            | EPA 300.0                | CMD      | 3                 | PASI-O     |
| 35371014007 | D18A027-07 | EPA 903.1                | KAC      | 1                 | PASI-PA    |
|             |            | EPA 904.0                | JLW      | 1                 | PASI-PA    |
|             |            | Total Radium Calculation | CMC      | 1                 | PASI-PA    |
|             |            | EPA 300.0                | CMD      | 3                 | PASI-O     |
| 35371014008 | D18A027-08 | EPA 903.1                | KAC      | 1                 | PASI-PA    |
|             |            | EPA 904.0                | JLW      | 1                 | PASI-PA    |
|             |            | Total Radium Calculation | CMC      | 1                 | PASI-PA    |
|             |            | EPA 300.0                | CMD      | 3                 | PASI-O     |
| 35371014009 | D18A027-12 | EPA 903.1                | KAC      | 1                 | PASI-PA    |
|             |            | EPA 904.0                | JLW      | 1                 | PASI-PA    |
|             |            | Total Radium Calculation | CMC      | 1                 | PASI-PA    |
|             |            | EPA 300.0                | CMD      | 1                 | PASI-O     |
| 35371014010 | D18A027-13 | EPA 903.1                | KAC      | 1                 | PASI-PA    |

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**SAMPLE ANALYTE COUNT**

Project: D18A027

Pace Project No.: 35371014

| Lab ID      | Sample ID  | Method                   | Analysts | Analytes Reported | Laboratory |
|-------------|------------|--------------------------|----------|-------------------|------------|
| 35371014011 | D18A027-15 | EPA 904.0                | JLW      | 1                 | PASI-PA    |
|             |            | Total Radium Calculation | CMC      | 1                 | PASI-PA    |
|             |            | EPA 300.0                | CMD      | 1                 | PASI-O     |
|             |            | EPA 903.1                | KAC      | 1                 | PASI-PA    |
|             |            | EPA 904.0                | JLW      | 1                 | PASI-PA    |
|             |            | Total Radium Calculation | CMC      | 1                 | PASI-PA    |
|             |            | EPA 300.0                | CMD      | 1                 | PASI-O     |

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## ANALYTICAL RESULTS

Project: D18A027

Pace Project No.: 35371014

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**Sample: D18A027-01**      **Lab ID: 35371014001**      Collected: 01/23/18 14:08      Received: 01/30/18 10:15      Matrix: Water

| Parameters                     | Results     | Units                        | PQL   | MDL   | DF | Prepared | Analyzed       | CAS No.    | Qual |
|--------------------------------|-------------|------------------------------|-------|-------|----|----------|----------------|------------|------|
| <b>300.0 IC Anions 28 Days</b> |             | Analytical Method: EPA 300.0 |       |       |    |          |                |            |      |
| Chloride                       | <b>8.2</b>  | mg/L                         | 5.0   | 2.5   | 1  |          | 02/01/18 15:00 | 16887-00-6 |      |
| Fluoride                       | <b>0.20</b> | mg/L                         | 0.050 | 0.034 | 1  |          | 02/01/18 15:00 | 16984-48-8 |      |
| Sulfate                        | <b>32.6</b> | mg/L                         | 5.0   | 2.5   | 1  |          | 02/01/18 15:00 | 14808-79-8 |      |

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## ANALYTICAL RESULTS

Project: D18A027

Pace Project No.: 35371014

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**Sample: D18A027-02**      **Lab ID: 35371014002**      Collected: 01/24/18 08:08      Received: 01/30/18 10:15      Matrix: Water

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| Parameters                     | Results     | Units                        | PQL   | MDL   | DF | Prepared | Analyzed       | CAS No.    | Qual |
|--------------------------------|-------------|------------------------------|-------|-------|----|----------|----------------|------------|------|
| <b>300.0 IC Anions 28 Days</b> |             | Analytical Method: EPA 300.0 |       |       |    |          |                |            |      |
| Chloride                       | <b>5.3</b>  | mg/L                         | 5.0   | 2.5   | 1  |          | 02/02/18 02:23 | 16887-00-6 |      |
| Fluoride                       | <b>0.39</b> | mg/L                         | 0.050 | 0.034 | 1  |          | 02/02/18 02:23 | 16984-48-8 |      |
| Sulfate                        | <b>17.3</b> | mg/L                         | 5.0   | 2.5   | 1  |          | 02/02/18 02:23 | 14808-79-8 |      |

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## ANALYTICAL RESULTS

Project: D18A027

Pace Project No.: 35371014

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**Sample: D18A027-03**      **Lab ID: 35371014003**      Collected: 01/24/18 11:39      Received: 01/30/18 10:15      Matrix: Water

| Parameters                     | Results     | Units                        | PQL   | MDL   | DF | Prepared | Analyzed       | CAS No.    | Qual |
|--------------------------------|-------------|------------------------------|-------|-------|----|----------|----------------|------------|------|
| <b>300.0 IC Anions 28 Days</b> |             | Analytical Method: EPA 300.0 |       |       |    |          |                |            |      |
| Chloride                       | <b>10.0</b> | mg/L                         | 5.0   | 2.5   | 1  |          | 02/02/18 02:45 | 16887-00-6 |      |
| Fluoride                       | <b>0.13</b> | mg/L                         | 0.050 | 0.034 | 1  |          | 02/02/18 02:45 | 16984-48-8 |      |
| Sulfate                        | <b>35.9</b> | mg/L                         | 5.0   | 2.5   | 1  |          | 02/02/18 02:45 | 14808-79-8 |      |

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## ANALYTICAL RESULTS

Project: D18A027

Pace Project No.: 35371014

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**Sample: D18A027-04**      **Lab ID: 35371014004**      Collected: 01/24/18 13:34      Received: 01/30/18 10:15      Matrix: Water

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| Parameters                     | Results     | Units                        | PQL   | MDL   | DF | Prepared | Analyzed       | CAS No.    | Qual |
|--------------------------------|-------------|------------------------------|-------|-------|----|----------|----------------|------------|------|
| <b>300.0 IC Anions 28 Days</b> |             | Analytical Method: EPA 300.0 |       |       |    |          |                |            |      |
| Chloride                       | <b>11.9</b> | mg/L                         | 5.0   | 2.5   | 1  |          | 02/02/18 03:08 | 16887-00-6 |      |
| Fluoride                       | <b>0.16</b> | mg/L                         | 0.050 | 0.034 | 1  |          | 02/02/18 03:08 | 16984-48-8 |      |
| Sulfate                        | <b>40.3</b> | mg/L                         | 5.0   | 2.5   | 1  |          | 02/02/18 03:08 | 14808-79-8 |      |

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## ANALYTICAL RESULTS

Project: D18A027

Pace Project No.: 35371014

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**Sample: D18A027-05**      **Lab ID: 35371014005**      Collected: 01/23/18 16:50      Received: 01/30/18 10:15      Matrix: Water

| Parameters                     | Results      | Units                        | PQL   | MDL   | DF | Prepared | Analyzed       | CAS No.    | Qual |
|--------------------------------|--------------|------------------------------|-------|-------|----|----------|----------------|------------|------|
| <b>300.0 IC Anions 28 Days</b> |              | Analytical Method: EPA 300.0 |       |       |    |          |                |            |      |
| Chloride                       | <b>14.3</b>  | mg/L                         | 5.0   | 2.5   | 1  |          | 02/02/18 03:30 | 16887-00-6 |      |
| Fluoride                       | <b>0.057</b> | mg/L                         | 0.050 | 0.034 | 1  |          | 02/02/18 03:30 | 16984-48-8 |      |
| Sulfate                        | <b>21.4</b>  | mg/L                         | 5.0   | 2.5   | 1  |          | 02/02/18 03:30 | 14808-79-8 |      |

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## ANALYTICAL RESULTS

Project: D18A027

Pace Project No.: 35371014

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**Sample: D18A027-06**      **Lab ID: 35371014006**      Collected: 01/25/18 09:22      Received: 01/30/18 10:15      Matrix: Water

| Parameters                     | Results     | Units                        | PQL  | MDL   | DF | Prepared | Analyzed       | CAS No.    | Qual |
|--------------------------------|-------------|------------------------------|------|-------|----|----------|----------------|------------|------|
| <b>300.0 IC Anions 28 Days</b> |             | Analytical Method: EPA 300.0 |      |       |    |          |                |            |      |
| Chloride                       | <b>29.0</b> | mg/L                         | 10.0 | 5.0   | 2  |          | 02/01/18 11:28 | 16887-00-6 |      |
| Fluoride                       | <b>0.21</b> | mg/L                         | 0.10 | 0.068 | 2  |          | 02/01/18 11:28 | 16984-48-8 |      |
| Sulfate                        | <b>230</b>  | mg/L                         | 25.0 | 12.5  | 5  |          | 02/02/18 03:55 | 14808-79-8 |      |

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## ANALYTICAL RESULTS

Project: D18A027

Pace Project No.: 35371014

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**Sample: D18A027-07**      **Lab ID: 35371014007**      Collected: 01/25/18 11:28      Received: 01/30/18 10:15      Matrix: Water

| Parameters                     | Results     | Units                        | PQL   | MDL   | DF | Prepared | Analyzed       | CAS No.    | Qual |
|--------------------------------|-------------|------------------------------|-------|-------|----|----------|----------------|------------|------|
| <b>300.0 IC Anions 28 Days</b> |             | Analytical Method: EPA 300.0 |       |       |    |          |                |            |      |
| Chloride                       | <b>19.1</b> | mg/L                         | 5.0   | 2.5   | 1  |          | 02/01/18 11:50 | 16887-00-6 |      |
| Fluoride                       | <b>0.24</b> | mg/L                         | 0.050 | 0.034 | 1  |          | 02/01/18 11:50 | 16984-48-8 |      |
| Sulfate                        | <b>198</b>  | mg/L                         | 50.0  | 25.0  | 10 |          | 02/03/18 00:32 | 14808-79-8 |      |

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## ANALYTICAL RESULTS

Project: D18A027

Pace Project No.: 35371014

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**Sample: D18A027-08**      **Lab ID: 35371014008**      Collected: 01/24/18 14:49      Received: 01/30/18 10:15      Matrix: Water

| Parameters                     | Results     | Units                        | PQL  | MDL   | DF | Prepared | Analyzed       | CAS No.    | Qual |
|--------------------------------|-------------|------------------------------|------|-------|----|----------|----------------|------------|------|
| <b>300.0 IC Anions 28 Days</b> |             | Analytical Method: EPA 300.0 |      |       |    |          |                |            |      |
| Chloride                       | <b>56.9</b> | mg/L                         | 10.0 | 5.0   | 2  |          | 02/01/18 12:13 | 16887-00-6 |      |
| Fluoride                       | <b>0.13</b> | mg/L                         | 0.10 | 0.068 | 2  |          | 02/01/18 12:13 | 16984-48-8 |      |
| Sulfate                        | <b>451</b>  | mg/L                         | 100  | 50.0  | 20 |          | 02/03/18 00:54 | 14808-79-8 |      |

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### ANALYTICAL RESULTS

Project: D18A027

Pace Project No.: 35371014

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**Sample: D18A027-12**      **Lab ID: 35371014009**      Collected: 01/24/18 09:10      Received: 01/30/18 10:15      Matrix: Water

| Parameters                     | Results     | Units | PQL   | MDL   | DF | Prepared | Analyzed       | CAS No.    | Qual |
|--------------------------------|-------------|-------|-------|-------|----|----------|----------------|------------|------|
| <b>300.0 IC Anions 28 Days</b> |             |       |       |       |    |          |                |            |      |
| Analytical Method: EPA 300.0   |             |       |       |       |    |          |                |            |      |
| Fluoride                       | <b>0.22</b> | mg/L  | 0.050 | 0.034 | 1  |          | 02/01/18 12:35 | 16984-48-8 |      |

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### ANALYTICAL RESULTS

Project: D18A027

Pace Project No.: 35371014

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**Sample: D18A027-13**      **Lab ID: 35371014010**      Collected: 01/23/18 15:25      Received: 01/30/18 10:15      Matrix: Water

| Parameters                     | Results      | Units | PQL   | MDL   | DF | Prepared | Analyzed       | CAS No.    | Qual |
|--------------------------------|--------------|-------|-------|-------|----|----------|----------------|------------|------|
| <b>300.0 IC Anions 28 Days</b> |              |       |       |       |    |          |                |            |      |
| Analytical Method: EPA 300.0   |              |       |       |       |    |          |                |            |      |
| Fluoride                       | <b>0.074</b> | mg/L  | 0.050 | 0.034 | 1  |          | 02/01/18 12:57 | 16984-48-8 |      |

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## ANALYTICAL RESULTS

Project: D18A027

Pace Project No.: 35371014

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**Sample: D18A027-15**      **Lab ID: 35371014011**      Collected: 01/25/18 12:27      Received: 01/30/18 10:15      Matrix: Water

| Parameters                     | Results        | Units | PQL   | MDL   | DF | Prepared | Analyzed       | CAS No.    | Qual |
|--------------------------------|----------------|-------|-------|-------|----|----------|----------------|------------|------|
| <b>300.0 IC Anions 28 Days</b> |                |       |       |       |    |          |                |            |      |
| Analytical Method: EPA 300.0   |                |       |       |       |    |          |                |            |      |
| Fluoride                       | <b>0.034 U</b> | mg/L  | 0.050 | 0.034 | 1  |          | 02/01/18 14:05 | 16984-48-8 |      |

## REPORT OF LABORATORY ANALYSIS

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**QUALITY CONTROL DATA**

Project: D18A027  
Pace Project No.: 35371014

QC Batch: 422813 Analysis Method: EPA 300.0  
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions  
Associated Lab Samples: 35371014001, 35371014002, 35371014003, 35371014004, 35371014005

METHOD BLANK: 2301379 Matrix: Water  
Associated Lab Samples: 35371014001, 35371014002, 35371014003, 35371014004, 35371014005

| Parameter | Units | Blank Result | Reporting Limit | MDL   | Analyzed       | Qualifiers |
|-----------|-------|--------------|-----------------|-------|----------------|------------|
| Chloride  | mg/L  | 2.5 U        | 5.0             | 2.5   | 02/01/18 14:16 |            |
| Fluoride  | mg/L  | 0.034 U      | 0.050           | 0.034 | 02/01/18 14:16 |            |
| Sulfate   | mg/L  | 2.5 U        | 5.0             | 2.5   | 02/01/18 14:16 |            |

LABORATORY CONTROL SAMPLE: 2301380

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Chloride  | mg/L  | 50          | 48.2       | 96        | 90-110       |            |
| Fluoride  | mg/L  | 5           | 5.1        | 102       | 90-110       |            |
| Sulfate   | mg/L  | 50          | 49.0       | 98        | 90-110       |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2303419 2303420

| Parameter | Units | 35369720001 |   | MS          |       | MSD    |        | MS    |       | MSD    |   | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|-------------|---|-------------|-------|--------|--------|-------|-------|--------|---|--------------|-----|---------|------|
|           |       | Result      | U | Spike Conc. | Conc. | Result | Result | % Rec | % Rec |        |   |              |     |         |      |
| Chloride  | mg/L  | 2.5         | U | 50          | 50    | 47.6   | 47.6   | 95    | 95    | 90-110 | 0 | 20           |     |         |      |
| Fluoride  | mg/L  | 0.034       | U | 5           | 5     | 5.1    | 5.1    | 101   | 101   | 90-110 | 0 | 20           |     |         |      |
| Sulfate   | mg/L  | 2.5         | U | 50          | 50    | 48.4   | 48.4   | 97    | 97    | 90-110 | 0 | 20           |     |         |      |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2303421 2303422

| Parameter | Units | 35371014001 |   | MS          |       | MSD    |        | MS    |       | MSD    |   | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|-------------|---|-------------|-------|--------|--------|-------|-------|--------|---|--------------|-----|---------|------|
|           |       | Result      | U | Spike Conc. | Conc. | Result | Result | % Rec | % Rec |        |   |              |     |         |      |
| Chloride  | mg/L  | 8.2         | U | 50          | 50    | 57.0   | 57.1   | 98    | 98    | 90-110 | 0 | 20           |     |         |      |
| Fluoride  | mg/L  | 0.20        | U | 5           | 5     | 5.3    | 5.3    | 101   | 101   | 90-110 | 0 | 20           |     |         |      |
| Sulfate   | mg/L  | 32.6        | U | 50          | 50    | 85.3   | 85.5   | 105   | 106   | 90-110 | 0 | 20           |     |         |      |

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**REPORT OF LABORATORY ANALYSIS**

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### QUALITY CONTROL DATA

Project: D18A027

Pace Project No.: 35371014

QC Batch: 422814 Analysis Method: EPA 300.0  
 QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions  
 Associated Lab Samples: 35371014006, 35371014007, 35371014008, 35371014009, 35371014010, 35371014011

METHOD BLANK: 2301381 Matrix: Water  
 Associated Lab Samples: 35371014006, 35371014007, 35371014008, 35371014009, 35371014010, 35371014011

| Parameter | Units | Blank Result | Reporting Limit | MDL   | Analyzed       | Qualifiers |
|-----------|-------|--------------|-----------------|-------|----------------|------------|
| Chloride  | mg/L  | 2.5 U        | 5.0             | 2.5   | 02/01/18 10:21 |            |
| Fluoride  | mg/L  | 0.034 U      | 0.050           | 0.034 | 02/01/18 10:21 |            |
| Sulfate   | mg/L  | 2.5 U        | 5.0             | 2.5   | 02/01/18 10:21 |            |

LABORATORY CONTROL SAMPLE: 2301382

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Chloride  | mg/L  | 50          | 47.7       | 95        | 90-110       |            |
| Fluoride  | mg/L  | 5           | 4.9        | 99        | 90-110       |            |
| Sulfate   | mg/L  | 50          | 48.0       | 96        | 90-110       |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2303148 2303149

| Parameter | Units | 35371014010 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|--------------------|----------------|-----------------|-----------|------------|----------|-----------|--------------|-----|---------|------|
| Chloride  | mg/L  | 5.4                | 50             | 50              | 52.3      | 52.2       | 94       | 94        | 90-110       | 0   | 20      |      |
| Fluoride  | mg/L  | 0.074              | 5              | 5               | 4.9       | 4.9        | 97       | 97        | 90-110       | 0   | 20      |      |
| Sulfate   | mg/L  | 26.2               | 50             | 50              | 77.0      | 77.2       | 102      | 102       | 90-110       | 0   | 20      |      |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2303150 2303151

| Parameter | Units | 35371016005 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD     | Qual |
|-----------|-------|--------------------|----------------|-----------------|-----------|------------|----------|-----------|--------------|-----|-------------|------|
| Chloride  | mg/L  | 46.1               | 50             | 50              | 100       | 100        | 109      | 109       | 90-110       | 0   | 20 L        |      |
| Fluoride  | mg/L  | 0.21               | 5              | 5               | 5.1       | 5.2        | 99       | 99        | 90-110       | 0   | 20          |      |
| Sulfate   | mg/L  | 57.4               | 50             | 50              | 114       | 114        | 114      | 113       | 90-110       | 0   | 20 J(M1), L |      |

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**QUALITY CONTROL DATA**

Project: D18A027  
Pace Project No.: 35371014

QC Batch: 423206 Analysis Method: EPA 300.0  
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions  
Associated Lab Samples: 35371014007, 35371014008

METHOD BLANK: 2303352 Matrix: Water  
Associated Lab Samples: 35371014007, 35371014008

| Parameter | Units | Blank Result | Reporting Limit | MDL | Analyzed       | Qualifiers |
|-----------|-------|--------------|-----------------|-----|----------------|------------|
| Sulfate   | mg/L  | 2.5 U        | 5.0             | 2.5 | 02/02/18 15:43 |            |

LABORATORY CONTROL SAMPLE: 2303353

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Sulfate   | mg/L  | 50          | 49.1       | 98        | 90-110       |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2304669 2304670

| Parameter | Units | 35371538002 |            | 2304669        |                 | 2304670   |            | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|-------------|------------|----------------|-----------------|-----------|------------|--------------|-----|---------|------|
|           |       | MS Result   | MSD Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result |              |     |         |      |
| Sulfate   | mg/L  | 33.0        | 33.0       | 50             | 50              | 85.3      | 87.2       | 105          | 108 | 2       | 20   |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2304671 2304672

| Parameter | Units | 35369935010 |            | 2304671        |                 | 2304672   |            | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|-------------|------------|----------------|-----------------|-----------|------------|--------------|-----|---------|------|
|           |       | MS Result   | MSD Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result |              |     |         |      |
| Sulfate   | mg/L  | 8.1         | 8.1        | 50             | 50              | 57.5      | 57.8       | 99           | 99  | 0       | 20   |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: D18A027

Pace Project No.: 35371014

**Sample: D18A027-01**      **Lab ID: 35371014001**      Collected: 01/23/18 14:08      Received: 01/30/18 10:15      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters   | Method                   | Act ± Unc (MDC) Carr Trac                         | Units | Analyzed       | CAS No.    | Qual |
|--------------|--------------------------|---|-------|----------------|------------|------|
| Radium-226   | EPA 903.1                | <b>1.01U ± 0.526 (1.01)</b><br><b>C:NA T:79%</b>  | pCi/L | 02/12/18 20:17 | 13982-63-3 |      |
| Radium-228   | EPA 904.0                | <b>1.03U ± 0.520 (1.03)</b><br><b>C:73% T:82%</b> | pCi/L | 02/09/18 11:45 | 15262-20-1 |      |
| Total Radium | Total Radium Calculation | <b>2.04U ± 1.05 (2.04)</b>                        | pCi/L | 02/14/18 12:32 | 7440-14-4  |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: D18A027

Pace Project No.: 35371014

**Sample: D18A027-02**      **Lab ID: 35371014002**      Collected: 01/24/18 08:08      Received: 01/30/18 10:15      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters   | Method                   | Act ± Unc (MDC) Carr Trac                          | Units | Analyzed       | CAS No.    | Qual |
|--------------|--------------------------|--|-------|----------------|------------|------|
| Radium-226   | EPA 903.1                | <b>0.971U ± 0.541 (0.971)</b><br><b>C:NA T:85%</b> | pCi/L | 02/12/18 20:17 | 13982-63-3 |      |
| Radium-228   | EPA 904.0                | <b>0.752 ± 0.405 (0.736)</b><br><b>C:78% T:88%</b> | pCi/L | 02/09/18 11:45 | 15262-20-1 |      |
| Total Radium | Total Radium Calculation | <b>1.71U ± 0.946 (1.71)</b>                        | pCi/L | 02/14/18 12:32 | 7440-14-4  |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: D18A027

Pace Project No.: 35371014

**Sample: D18A027-03**      **Lab ID: 35371014003**      Collected: 01/24/18 11:39      Received: 01/30/18 10:15      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters   | Method                   | Act ± Unc (MDC) Carr Trac                          | Units | Analyzed       | CAS No.    | Qual |
|--------------|--------------------------|--|-------|----------------|------------|------|
| Radium-226   | EPA 903.1                | <b>0.887U ± 0.602 (0.887)</b><br><b>C:NA T:80%</b> | pCi/L | 02/12/18 20:17 | 13982-63-3 |      |
| Radium-228   | EPA 904.0                | <b>1.38 ± 0.586 (1.00)</b><br><b>C:72% T:88%</b>   | pCi/L | 02/09/18 11:45 | 15262-20-1 |      |
| Total Radium | Total Radium Calculation | <b>2.05 ± 1.19 (1.89)</b>                          | pCi/L | 02/14/18 12:32 | 7440-14-4  |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: D18A027

Pace Project No.: 35371014

**Sample: D18A027-04**      **Lab ID: 35371014004**      Collected: 01/24/18 13:34      Received: 01/30/18 10:15      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters   | Method                      | Act ± Unc (MDC) Carr Trac                           | Units | Analyzed       | CAS No.    | Qual |
|--------------|-----------------------------|---|-------|----------------|------------|------|
| Radium-226   | EPA 903.1                   | <b>0.986U ± 0.498 (0.986)</b><br><b>C:NA T:94%</b>  | pCi/L | 02/12/18 20:17 | 13982-63-3 |      |
| Radium-228   | EPA 904.0                   | <b>0.998U ± 0.472 (0.998)</b><br><b>C:73% T:80%</b> | pCi/L | 02/09/18 11:45 | 15262-20-1 |      |
| Total Radium | Total Radium<br>Calculation | <b>1.98U ± 0.970 (1.98)</b>                         | pCi/L | 02/14/18 12:32 | 7440-14-4  |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: D18A027

Pace Project No.: 35371014

**Sample: D18A027-05**      **Lab ID: 35371014005**      Collected: 01/23/18 16:50      Received: 01/30/18 10:15      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters   | Method                      | Act ± Unc (MDC) Carr Trac                           | Units | Analyzed       | CAS No.    | Qual |
|--------------|-----------------------------|---|-------|----------------|------------|------|
| Radium-226   | EPA 903.1                   | <b>0.519U ± 0.419 (0.519)</b><br><b>C:NA T:79%</b>  | pCi/L | 02/12/18 20:17 | 13982-63-3 |      |
| Radium-228   | EPA 904.0                   | <b>0.953U ± 0.463 (0.953)</b><br><b>C:70% T:83%</b> | pCi/L | 02/09/18 11:45 | 15262-20-1 |      |
| Total Radium | Total Radium<br>Calculation | <b>1.47U ± 0.882 (1.47)</b>                         | pCi/L | 02/14/18 12:32 | 7440-14-4  |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: D18A027

Pace Project No.: 35371014

**Sample: D18A027-06**      **Lab ID: 35371014006**      Collected: 01/25/18 09:22      Received: 01/30/18 10:15      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters   | Method                      | Act ± Unc (MDC) Carr Trac                  | Units | Analyzed       | CAS No.    | Qual |
|--------------|-----------------------------|--|-------|----------------|------------|------|
| Radium-226   | EPA 903.1                   | <b>0.922 ± 0.558 (0.611)</b><br>C:NA T:84% | pCi/L | 02/12/18 20:30 | 13982-63-3 |      |
| Radium-228   | EPA 904.0                   | <b>1.99 ± 0.632 (0.849)</b><br>C:71% T:82% | pCi/L | 02/09/18 11:40 | 15262-20-1 |      |
| Total Radium | Total Radium<br>Calculation | <b>2.91 ± 1.19 (1.46)</b>                  | pCi/L | 02/14/18 12:32 | 7440-14-4  |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: D18A027

Pace Project No.: 35371014

**Sample: D18A027-07**      **Lab ID: 35371014007**      Collected: 01/25/18 11:28      Received: 01/30/18 10:15      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters   | Method                      | Act ± Unc (MDC) Carr Trac                 | Units | Analyzed       | CAS No.    | Qual |
|--------------|-----------------------------|---|-------|----------------|------------|------|
| Radium-226   | EPA 903.1                   | <b>2.14 ± 0.804 (0.193)</b><br>C:NA T:79% | pCi/L | 02/12/18 20:30 | 13982-63-3 |      |
| Radium-228   | EPA 904.0                   | <b>1.97 ± 0.732 (1.17)</b><br>C:74% T:78% | pCi/L | 02/09/18 14:51 | 15262-20-1 |      |
| Total Radium | Total Radium<br>Calculation | <b>4.11 ± 1.54 (1.36)</b>                 | pCi/L | 02/14/18 12:32 | 7440-14-4  |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: D18A027

Pace Project No.: 35371014

**Sample: D18A027-08**      **Lab ID: 35371014008**      Collected: 01/24/18 14:49      Received: 01/30/18 10:15      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters   | Method                      | Act ± Unc (MDC) Carr Trac                  | Units | Analyzed       | CAS No.    | Qual |
|--------------|-----------------------------|--|-------|----------------|------------|------|
| Radium-226   | EPA 903.1                   | <b>0.816 ± 0.541 (0.631)</b><br>C:NA T:87% | pCi/L | 02/12/18 20:30 | 13982-63-3 |      |
| Radium-228   | EPA 904.0                   | <b>2.55 ± 0.736 (0.893)</b><br>C:78% T:79% | pCi/L | 02/09/18 14:51 | 15262-20-1 |      |
| Total Radium | Total Radium<br>Calculation | <b>3.37 ± 1.28 (1.52)</b>                  | pCi/L | 02/14/18 12:32 | 7440-14-4  |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: D18A027

Pace Project No.: 35371014

**Sample: D18A027-12**      **Lab ID: 35371014009**      Collected: 01/24/18 09:10      Received: 01/30/18 10:15      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters   | Method                      | Act ± Unc (MDC) Carr Trac                    | Units | Analyzed       | CAS No.    | Qual |
|--------------|-----------------------------|--|-------|----------------|------------|------|
| Radium-226   | EPA 903.1                   | <b>0.657 ± 0.453 (0.484)</b><br>C:NA T:88%   | pCi/L | 02/12/18 20:30 | 13982-63-3 |      |
| Radium-228   | EPA 904.0                   | <b>0.992U ± 0.450 (0.992)</b><br>C:81% T:85% | pCi/L | 02/09/18 14:51 | 15262-20-1 |      |
| Total Radium | Total Radium<br>Calculation | <b>1.48U ± 0.903 (1.48)</b>                  | pCi/L | 02/14/18 12:32 | 7440-14-4  |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: D18A027

Pace Project No.: 35371014

**Sample: D18A027-13**      **Lab ID: 35371014010**      Collected: 01/23/18 15:25      Received: 01/30/18 10:15      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters   | Method                   | Act ± Unc (MDC) Carr Trac                   | Units | Analyzed       | CAS No.    | Qual |
|--------------|--------------------------|---|-------|----------------|------------|------|
| Radium-226   | EPA 903.1                | <b>0.640U ± 0.472 (0.640)</b><br>C:NA T:80% | pCi/L | 02/12/18 20:30 | 13982-63-3 |      |
| Radium-228   | EPA 904.0                | <b>1.11U ± 0.492 (1.11)</b><br>C:75% T:77%  | pCi/L | 02/09/18 14:51 | 15262-20-1 |      |
| Total Radium | Total Radium Calculation | <b>1.75U ± 0.964 (1.75)</b>                 | pCi/L | 02/14/18 12:32 | 7440-14-4  |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: D18A027

Pace Project No.: 35371014

**Sample: D18A027-15**      **Lab ID: 35371014011**      Collected: 01/25/18 12:27      Received: 01/30/18 10:15      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters   | Method                      | Act ± Unc (MDC) Carr Trac                    | Units | Analyzed       | CAS No.    | Qual |
|--------------|-----------------------------|--|-------|----------------|------------|------|
| Radium-226   | EPA 903.1                   | <b>0.654U ± 0.321 (0.654)</b><br>C:NA T:84%  | pCi/L | 02/12/18 20:30 | 13982-63-3 |      |
| Radium-228   | EPA 904.0                   | <b>0.923U ± 0.416 (0.923)</b><br>C:73% T:89% | pCi/L | 02/09/18 14:51 | 15262-20-1 |      |
| Total Radium | Total Radium<br>Calculation | <b>1.58U ± 0.737 (1.58)</b>                  | pCi/L | 02/14/18 12:32 | 7440-14-4  |      |

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: D18A027

Pace Project No.: 35371014

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|                         |   |                       |                  |
|-------------------------|---|-----------------------|------------------|
| QC Batch:               | 287054  | Analysis Method:      | EPA 903.1        |
| QC Batch Method:        | EPA 903.1   | Analysis Description: | 903.1 Radium-226 |
| Associated Lab Samples: | 35371014001, 35371014002, 35371014003, 35371014004, 35371014005, 35371014006, 35371014007, 35371014008, 35371014009, 35371014010, 35371014011 |                       |                  |

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|                         |   |         |       |
|-------------------------|---|---------|-------|
| METHOD BLANK:           | 1407543   | Matrix: | Water |
| Associated Lab Samples: | 35371014001, 35371014002, 35371014003, 35371014004, 35371014005, 35371014006, 35371014007, 35371014008, 35371014009, 35371014010, 35371014011 |         |       |

| Parameter  | Act ± Unc (MDC) Carr Trac        | Units | Analyzed       | Qualifiers |
|------------|----------------------------------|-------|----------------|------------|
| Radium-226 | 0.131 ± 0.315 (0.609) C:NA T:92% | pCi/L | 02/12/18 20:17 |            |

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: D18A027

Pace Project No.: 35371014

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|                         |   |                       |                  |
|-------------------------|---|-----------------------|------------------|
| QC Batch:               | 287057  | Analysis Method:      | EPA 904.0        |
| QC Batch Method:        | EPA 904.0   | Analysis Description: | 904.0 Radium 228 |
| Associated Lab Samples: | 35371014001, 35371014002, 35371014003, 35371014004, 35371014005, 35371014006, 35371014007, 35371014008, 35371014009, 35371014010, 35371014011 |                       |                  |

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|                         |   |         |       |
|-------------------------|---|---------|-------|
| METHOD BLANK:           | 1407547   | Matrix: | Water |
| Associated Lab Samples: | 35371014001, 35371014002, 35371014003, 35371014004, 35371014005, 35371014006, 35371014007, 35371014008, 35371014009, 35371014010, 35371014011 |         |       |

| Parameter  | Act ± Unc (MDC) Carr Trac         | Units | Analyzed       | Qualifiers |
|------------|-----------------------------------|-------|----------------|------------|
| Radium-228 | 0.187 ± 0.304 (0.660) C:81% T:86% | pCi/L | 02/09/18 11:51 |            |

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## QUALIFIERS

Project: D18A027  
Pace Project No.: 35371014

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.  
ND - Not Detected at or above adjusted reporting limit.  
TNTC - Too Numerous To Count  
MDL - Adjusted Method Detection Limit.  
PQL - Practical Quantitation Limit.  
RL - Reporting Limit.  
S - Surrogate  
1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.  
Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.  
LCS(D) - Laboratory Control Sample (Duplicate)  
MS(D) - Matrix Spike (Duplicate)  
DUP - Sample Duplicate  
RPD - Relative Percent Difference  
NC - Not Calculable.  
SG - Silica Gel - Clean-Up  
U - Indicates the compound was analyzed for, but not detected.  
N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.  
Act - Activity  
Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval).  
Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)  
(MDC) - Minimum Detectable Concentration  
Trac - Tracer Recovery (%)  
Carr - Carrier Recovery (%)  
Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.  
TNI - The NELAC Institute.

### LABORATORIES

PASI-O Pace Analytical Services - Ormond Beach  
PASI-PA Pace Analytical Services - Greensburg

### ANALYTE QUALIFIERS

U Compound was analyzed for but not detected.  
J(M1) Estimated Value. Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.  
L Off-scale high. Actual value is known to be greater than value given.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: D18A027

Pace Project No.: 35371014

| Lab ID      | Sample ID  | QC Batch Method          | QC Batch | Analytical Method | Analytical Batch |
|-------------|------------|--------------------------|----------|-------------------|------------------|
| 35371014001 | D18A027-01 | EPA 903.1                | 287054   |                   |                  |
| 35371014002 | D18A027-02 | EPA 903.1                | 287054   |                   |                  |
| 35371014003 | D18A027-03 | EPA 903.1                | 287054   |                   |                  |
| 35371014004 | D18A027-04 | EPA 903.1                | 287054   |                   |                  |
| 35371014005 | D18A027-05 | EPA 903.1                | 287054   |                   |                  |
| 35371014006 | D18A027-06 | EPA 903.1                | 287054   |                   |                  |
| 35371014007 | D18A027-07 | EPA 903.1                | 287054   |                   |                  |
| 35371014008 | D18A027-08 | EPA 903.1                | 287054   |                   |                  |
| 35371014009 | D18A027-12 | EPA 903.1                | 287054   |                   |                  |
| 35371014010 | D18A027-13 | EPA 903.1                | 287054   |                   |                  |
| 35371014011 | D18A027-15 | EPA 903.1                | 287054   |                   |                  |
| 35371014001 | D18A027-01 | EPA 904.0                | 287057   |                   |                  |
| 35371014002 | D18A027-02 | EPA 904.0                | 287057   |                   |                  |
| 35371014003 | D18A027-03 | EPA 904.0                | 287057   |                   |                  |
| 35371014004 | D18A027-04 | EPA 904.0                | 287057   |                   |                  |
| 35371014005 | D18A027-05 | EPA 904.0                | 287057   |                   |                  |
| 35371014006 | D18A027-06 | EPA 904.0                | 287057   |                   |                  |
| 35371014007 | D18A027-07 | EPA 904.0                | 287057   |                   |                  |
| 35371014008 | D18A027-08 | EPA 904.0                | 287057   |                   |                  |
| 35371014009 | D18A027-12 | EPA 904.0                | 287057   |                   |                  |
| 35371014010 | D18A027-13 | EPA 904.0                | 287057   |                   |                  |
| 35371014011 | D18A027-15 | EPA 904.0                | 287057   |                   |                  |
| 35371014001 | D18A027-01 | Total Radium Calculation | 288089   |                   |                  |
| 35371014002 | D18A027-02 | Total Radium Calculation | 288089   |                   |                  |
| 35371014003 | D18A027-03 | Total Radium Calculation | 288089   |                   |                  |
| 35371014004 | D18A027-04 | Total Radium Calculation | 288089   |                   |                  |
| 35371014005 | D18A027-05 | Total Radium Calculation | 288089   |                   |                  |
| 35371014006 | D18A027-06 | Total Radium Calculation | 288089   |                   |                  |
| 35371014007 | D18A027-07 | Total Radium Calculation | 288089   |                   |                  |
| 35371014008 | D18A027-08 | Total Radium Calculation | 288089   |                   |                  |
| 35371014009 | D18A027-12 | Total Radium Calculation | 288089   |                   |                  |
| 35371014010 | D18A027-13 | Total Radium Calculation | 288089   |                   |                  |
| 35371014011 | D18A027-15 | Total Radium Calculation | 288089   |                   |                  |
| 35371014001 | D18A027-01 | EPA 300.0                | 422813   |                   |                  |
| 35371014002 | D18A027-02 | EPA 300.0                | 422813   |                   |                  |
| 35371014003 | D18A027-03 | EPA 300.0                | 422813   |                   |                  |
| 35371014004 | D18A027-04 | EPA 300.0                | 422813   |                   |                  |
| 35371014005 | D18A027-05 | EPA 300.0                | 422813   |                   |                  |
| 35371014006 | D18A027-06 | EPA 300.0                | 422814   |                   |                  |
| 35371014007 | D18A027-07 | EPA 300.0                | 422814   |                   |                  |
| 35371014007 | D18A027-07 | EPA 300.0                | 423206   |                   |                  |
| 35371014008 | D18A027-08 | EPA 300.0                | 422814   |                   |                  |
| 35371014008 | D18A027-08 | EPA 300.0                | 423206   |                   |                  |
| 35371014009 | D18A027-12 | EPA 300.0                | 422814   |                   |                  |
| 35371014010 | D18A027-13 | EPA 300.0                | 422814   |                   |                  |

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: D18A027  
Pace Project No.: 35371014

---

| <b>Lab ID</b> | <b>Sample ID</b> | <b>QC Batch Method</b> | <b>QC Batch</b> | <b>Analytical Method</b> | <b>Analytical Batch</b> |
|---------------|------------------|------------------------|-----------------|--------------------------|-------------------------|
| 35371014011   | D18A027-15       | EPA 300.0              | 422814          |                          |                         |

---

### REPORT OF LABORATORY ANALYSIS

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**SUBCONTRACT ORDER**  
**Deerhaven Generating Station**  
**D18A027**

**WO# : 35371014**



**SENDING LABORATORY:**

Gainesville Regional Utilities  
 Deerhaven Generating Station  
 10001 NW 13th Street  
 Gainesville, FL 32653  
 Phone: 352-334-3434  
 Fax: 352-334-3149  
 Project Manager: Jeff Boudreau

**RECEIVING LABORATORY:**

Pace Analytical  
 8 East Tower Circle  
 Ormond Beach, FL 32174  
 Phone : (386) 672-5668  
 Fax: (386) 673-4001

| Analysis                        | Expires         | Laboratory ID                   | Comments |
|---------------------------------|-----------------|---------------------------------|----------|
| <b>Sample Name: SIS-1</b>       |                 |                                 |          |
| <b>Sample ID: D18A027-01</b>    | <b>Water</b>    | <b>Sampled: 23-Jan-18 14:08</b> |          |
| D_Anions - Fluoride             | 20-Feb-18 14:08 |                                 |          |
| D_Anions - Sulfates             | 20-Feb-18 14:08 |                                 |          |
| D_Radium226+228_Combined        | 18-Jul-18 14:08 |                                 |          |
| D_Anions - Chlorides            | 20-Feb-18 14:08 |                                 |          |
| <i>Containers Supplied:</i>     |                 |                                 |          |
| D_HDPE, Chill @<6*C - 250mL (C) |                 |                                 |          |
| D_HDPE, HNO3 pH<2 - 2000mL (D)  |                 |                                 |          |
| <b>Sample Name: SIS-2</b>       |                 |                                 |          |
| <b>Sample ID: D18A027-02</b>    | <b>Water</b>    | <b>Sampled: 24-Jan-18 08:08</b> |          |
| D_Anions - Chlorides            | 21-Feb-18 08:08 |                                 |          |
| D_Anions - Fluoride             | 21-Feb-18 08:08 |                                 |          |
| D_Anions - Sulfates             | 21-Feb-18 08:08 |                                 |          |
| D_Radium226+228_Combined        | 19-Jul-18 08:08 |                                 |          |
| <i>Containers Supplied:</i>     |                 |                                 |          |
| D_HDPE, Chill @<6*C - 250mL (C) |                 |                                 |          |
| D_HDPE, HNO3 pH<2 - 2000mL (D)  |                 |                                 |          |
| <b>Sample Name: SIS-3</b>       |                 |                                 |          |
| <b>Sample ID: D18A027-03</b>    | <b>Water</b>    | <b>Sampled: 24-Jan-18 11:39</b> |          |
| D_Anions - Chlorides            | 21-Feb-18 11:39 |                                 |          |
| D_Radium226+228_Combined        | 19-Jul-18 11:39 |                                 |          |
| D_Anions - Fluoride             | 21-Feb-18 11:39 |                                 |          |
| D_Anions - Sulfates             | 21-Feb-18 11:39 |                                 |          |
| <i>Containers Supplied:</i>     |                 |                                 |          |
| D_HDPE, Chill @<6*C - 250mL (C) |                 |                                 |          |
| D_HDPE, HNO3 pH<2 - 2000mL (D)  |                 |                                 |          |

Released By: *Shelby Phillips*      Date: *1-29-18*     
 Received By: *via Fedex [Signature]*      Date: *1/30/18 1015*  
*17.9 T301*

Released By \_\_\_\_\_ Date \_\_\_\_\_ Received By \_\_\_\_\_ Date \_\_\_\_\_



**SUBCONTRACT ORDER**  
**Deerhaven Generating Station**  
**D18A027**

| Analysis                        | Expires         | Laboratory ID                  | Comments |
|---------------------------------|-----------------|--------------------------------|----------|
| <b>Sample Name: SIS-4</b>       |                 |                                |          |
| <b>Sample ID: D18A027-04</b>    | <b>Water</b>    | <b>Sampled:24-Jan-18 13:34</b> |          |
| D_Anions - Chlorides            | 21-Feb-18 13:34 |                                |          |
| D_Anions - Fluoride             | 21-Feb-18 13:34 |                                |          |
| D_Anions - Sulfates             | 21-Feb-18 13:34 |                                |          |
| D_Radium226+228_Combined        | 19-Jul-18 13:34 |                                |          |
| <i>Containers Supplied:</i>     |                 |                                |          |
| D_HDPE, Chill @<6*C - 250mL (C) |                 |                                |          |
| D_HDPE, HNO3 pH<2 - 2000mL (D)  |                 |                                |          |
| <b>Sample Name: LF-1</b>        |                 |                                |          |
| <b>Sample ID: D18A027-05</b>    | <b>Water</b>    | <b>Sampled:23-Jan-18 16:50</b> |          |
| D_Anions - Sulfates             | 20-Feb-18 16:50 |                                |          |
| D_Anions - Chlorides            | 20-Feb-18 16:50 |                                |          |
| D_Radium226+228_Combined        | 18-Jul-18 16:50 |                                |          |
| D_Anions - Fluoride             | 20-Feb-18 16:50 |                                |          |
| <i>Containers Supplied:</i>     |                 |                                |          |
| D_HDPE, Chill @<6*C - 250mL (C) |                 |                                |          |
| D_HDPE, HNO3 pH<2 - 2000mL (D)  |                 |                                |          |
| <b>Sample Name: LF-2</b>        |                 |                                |          |
| <b>Sample ID: D18A027-06</b>    | <b>Water</b>    | <b>Sampled:25-Jan-18 09:22</b> |          |
| D_Anions - Chlorides            | 22-Feb-18 09:22 |                                |          |
| D_Anions - Fluoride             | 22-Feb-18 09:22 |                                |          |
| D_Anions - Sulfates             | 22-Feb-18 09:22 |                                |          |
| D_Radium226+228_Combined        | 20-Jul-18 09:22 |                                |          |
| <i>Containers Supplied:</i>     |                 |                                |          |
| D_HDPE, Chill @<6*C - 250mL (C) |                 |                                |          |
| D_HDPE, HNO3 pH<2 - 2000mL (D)  |                 |                                |          |
| <b>Sample Name: LF-3</b>        |                 |                                |          |
| <b>Sample ID: D18A027-07</b>    | <b>Water</b>    | <b>Sampled:25-Jan-18 11:28</b> |          |
| D_Radium226+228_Combined        | 20-Jul-18 11:28 |                                |          |
| D_Anions - Chlorides            | 22-Feb-18 11:28 |                                |          |
| D_Anions - Fluoride             | 22-Feb-18 11:28 |                                |          |
| D_Anions - Sulfates             | 22-Feb-18 11:28 |                                |          |
| <i>Containers Supplied:</i>     |                 |                                |          |
| D_HDPE, Chill @<6*C - 250mL (C) |                 |                                |          |
| D_HDPE, HNO3 pH<2 - 2000mL (D)  |                 |                                |          |

Released By: Mully Kelly Date: 1-29-18 via Fedex
 Received By: M. A. PACE Date: 1/30/18 10:15  
 Received By: \_\_\_\_\_ Date: \_\_\_\_\_ 17.97301



**SUBCONTRACT ORDER**  
**Deerhaven Generating Station**  
**D18A027**

| Analysis                            | Expires         | Laboratory ID                  | Comments |
|-------------------------------------|-----------------|--------------------------------|----------|
| <b>Sample Name: LF-4</b>            |                 |                                |          |
| <b>Sample ID: D18A027-08</b>        | <b>Water</b>    | <b>Sampled:24-Jan-18 14:49</b> |          |
| D_Radium226+228_Combined            | 19-Jul-18 14:49 |                                |          |
| D_Anions - Sulfates                 | 21-Feb-18 14:49 |                                |          |
| D_Anions - Chlorides                | 21-Feb-18 14:49 |                                |          |
| D_Anions - Fluoride                 | 21-Feb-18 14:49 |                                |          |
| <i>Containers Supplied:</i>         |                 |                                |          |
| D_HDPE, Chill @<6*C - 250mL (C)     |                 |                                |          |
| D_HDPE, HNO3 pH<2 - 2000mL (D)      |                 |                                |          |
| <b>Sample Name: MWI-4-5 (R4T5B)</b> |                 |                                |          |
| <b>Sample ID: D18A027-12</b>        | <b>Water</b>    | <b>Sampled:24-Jan-18 09:10</b> |          |
| D_Anions - Fluoride                 | 21-Feb-18 09:10 |                                |          |
| D_Radium226+228_Combined            | 19-Jul-18 09:10 |                                |          |
| <i>Containers Supplied:</i>         |                 |                                |          |
| D_HDPE, Chill @<6*C - 250mL (C)     |                 |                                |          |
| D_HDPE, HNO3 pH<2 - 2000mL (D)      |                 |                                |          |
| <b>Sample Name: MWI-6-4 (R6T4B)</b> |                 |                                |          |
| <b>Sample ID: D18A027-13</b>        | <b>Water</b>    | <b>Sampled:23-Jan-18 15:25</b> |          |
| D_Anions - Fluoride                 | 20-Feb-18 15:25 |                                |          |
| D_Radium226+228_Combined            | 18-Jul-18 15:25 |                                |          |
| <i>Containers Supplied:</i>         |                 |                                |          |
| D_HDPE, Chill @<6*C - 250mL (C)     |                 |                                |          |
| D_HDPE, HNO3 pH<2 - 2000mL (D)      |                 |                                |          |
| <b>Sample Name: EBLANK</b>          |                 |                                |          |
| <b>Sample ID: D18A027-15</b>        | <b>Water</b>    | <b>Sampled:25-Jan-18 12:27</b> |          |
| D_Radium226+228_Combined            | 20-Jul-18 12:27 |                                |          |
| D_Anions - Fluoride                 | 22-Feb-18 12:27 |                                |          |
| <i>Containers Supplied:</i>         |                 |                                |          |
| D_HDPE, Chill @<6*C - 250mL (C)     |                 |                                |          |
| D_HDPE, HNO3 pH<2 - 2000mL (D)      |                 |                                |          |

Released By Melvin Phillips Date 1-29-18 via FedEx Received By Mr. PAUL PACE Date 1/30/18 1015  
 17.91301

Released By \_\_\_\_\_ Date \_\_\_\_\_ Received By \_\_\_\_\_ Date \_\_\_\_\_



Document Name:  
Sample Condition Upon Receipt Form  
Document No.:  
F-FL-C-007 rev. 12

Document Revised:  
August 2, 2017  
Issuing Authority:  
Pace Florida Quality Office

**WO#: 35371014**

**(SCUR)**

**Project #** PM: JSB **Due Date:** 02/13/18  
**Project Manager:** CLIENT: DEELAB  
**Client:**

**Date and Initials of person:**  
**Examining contents:** \_\_\_\_\_  
**Label:** \_\_\_\_\_  
**Deliver:** \_\_\_\_\_  
**pH:** \_\_\_\_\_

Thermometer Used: T301 Date: 11/30/18 Time: 10:15 Initials: SS

State of Origin: \_\_\_\_\_

Cooler #1 Temp. °C 0.4 (Visual) 0 (Correction Factor) 0.4 (Actual)  
Cooler #2 Temp. °C 16.6 (Visual) 0 (Correction Factor) 16.6 (Actual)  
Cooler #3 Temp. °C 17.9 (Visual) 0 (Correction Factor) 17.9 (Actual)  
Cooler #4 Temp. °C 16.6 (Visual) 0 (Correction Factor) 16.6 (Actual)  
Cooler #5 Temp. °C \_\_\_\_\_ (Visual) \_\_\_\_\_ (Correction Factor) \_\_\_\_\_ (Actual)  
Cooler #6 Temp. °C \_\_\_\_\_ (Visual) \_\_\_\_\_ (Correction Factor) \_\_\_\_\_ (Actual)

- Samples on ice, cooling process has begun
- Samples on ice, cooling process has begun
- Samples on ice, cooling process has begun
- Samples on ice, cooling process has begun
- Samples on ice, cooling process has begun
- Samples on ice, cooling process has begun

Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace  Other \_\_\_\_\_

Shipping Method:  First Overnight  Priority Overnight  Standard Overnight  Ground  International Priority  
 Other \_\_\_\_\_

Billing:  Recipient  Sender  Third Party  Credit Card  Unknown

Tracking # 8106 7903 2877 / 8106 7903 2899 / 8106 7903 2903 / 8106 7903 2888

Custody Seal on Cooler/Box Present:  Yes  No Seals intact:  Yes  No Ice: Wet Blue Dry None

Packing Material:  Bubble Wrap  Bubble Bags  None  Other \_\_\_\_\_

Samples shorted to lab (If Yes, complete) Shorted Date: \_\_\_\_\_ Shorted Time: \_\_\_\_\_ Qty: \_\_\_\_\_

**Comments:**

|   |  |  |
|---|--|--|
| Chain of Custody Present  | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Preservation Information:<br>Preservative: _____<br>Lot #/Trace #: _____<br>Date: _____ Time: _____<br>Initials: _____ |
| Chain of Custody Filled Out   | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |  |
| Relinquished Signature & Sampler Name COC   | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |  |
| Samples Arrived within Hold Time  | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |  |
| Rush TAT requested on COC   | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A |  |
| Sufficient Volume   | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |  |
| Correct Containers Used   | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |  |
| Containers Intact   | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |  |
| Sample Labels match COC (sample IDs & date/time of collection)  | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |  |
| All containers needing acid/base preservation have been checked.  | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |  |
| All Containers needing preservation are found to be in compliance with EPA recommendation:<br>Exceptions: VOA, Coliform, TOC, O&G, Carbamates | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A            |  |
| Headspace in VOA Vials? (>6mm):   | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A |  |
| Trip Blank Present:   | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A |  |

**Client Notification/ Resolution:**

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution (use back for additional comments): \_\_\_\_\_

Project Manager Review: \_\_\_\_\_

Date: \_\_\_\_\_



March 21, 2018

Service Request No:J1801275

Jeffery Boudreau  
Gainesville Regional Utilities  
10001 NW 13th St  
Gainesville, FL 32653

**Laboratory Results for: D18A028**

Dear Jeffery,

Enclosed are the results of the sample(s) submitted to our laboratory February 20, 2018  
For your reference, these analyses have been assigned our service request number **J1801275**.

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and ALS Environmental is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report. In accordance to the NELAC 2003 Standard, a statement on the estimated uncertainty of measurement of any quantitative analysis will be supplied upon request.

Respectfully submitted,

**ALS Group USA, Corp. dba ALS Environmental**

Gina Bondani  
Project Manager

ADDRESS 9143 Philips Highway, Suite 200, Jacksonville, FL 32256  
PHONE +1 904 739 2277 | FAX +1 904 739 2011  
ALS Group USA, Corp.  
dba ALS Environmental



---

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## Table of Contents

|                            |    |
|----------------------------|----|
| CoverLetter                | 1  |
| Table of Contents          | 2  |
| Narrative Documents        | 4  |
| Narrative Documents        | 5  |
| Sample Receipt Information | 6  |
| Sample Cross-Reference     | 7  |
| Chain Of Custody           | 8  |
| Miscellaneous Forms        | 13 |
| Qualifiers                 | 14 |
| Acronyms                   | 16 |
| Analyst Summary            | 17 |
| Sample Results             | 21 |
| Metals                     | 22 |
| D18A028-01 - Metals        | 23 |
| D18A028-02 - Metals        | 24 |
| D18A028-03 - Metals        | 25 |
| D18A028-04 - Metals        | 26 |
| D18A028-05 - Metals        | 27 |
| D18A028-06 - Metals        | 28 |
| D18A028-07 - Metals        | 29 |
| D18A028-08 - Metals        | 30 |
| D18A028-09 - Metals        | 31 |

## Table of Contents (continued)

|   |    |
|---|----|
| D18A028-10 - Metals                     | 32 |
| D18A028-11 - Metals                     | 33 |
| D18A028-12 - Metals                     | 34 |
| D18A028-13 - Metals                     | 35 |
| D18A028-14 - Metals                     | 36 |
| QC Summary Forms                        | 37 |
| Metals                                  | 38 |
| 200.7 - Inorganic Parameters            |    |
| Method Blank - Metals                   | 39 |
| J1801275-LCS - LCS Metals               | 40 |
| J1801275-002DMS D18A028-02 - DMS Metals | 42 |
| J1801275-008DMS D18A028-08 - DMS Metals | 43 |
| 200.8 - Inorganic Parameters            |    |
| J1801275-007DMS D18A028-07 - DMS Metals | 44 |





# Narrative Documents

**ALS Environmental—Jacksonville Laboratory**  
9143 Philips Highway, Suite 200, Jacksonville, FL 32256  
Phone (904) 739-2277 Fax (904) 739-2011  
[www.alsglobal.com](http://www.alsglobal.com)



**Client:** Gainesville Regional Utilities  
**Project:** D18A028  
**Sample Matrix:** Water

**Service Request:** J1801275  
**Date Received:** 2/20/18

### CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier II data deliverables, including results of QC samples analyzed from this delivery group. When appropriate to the procedure, method blank results have been reported with each analytical test. Analytical procedures performed by the lab are validated in accordance with NELAC standards. Parameters that are included in the NELAC Fields of Testing but are not included in the lab's NELAC accreditation are identified in the discussion of each analytical procedure.

#### Sample Receipt

14 water samples were received for analysis at ALS Environmental on 2/20/18. The samples were received in good condition and consistent with the accompanying chain of custody form. Samples are refrigerated at  $\leq 6^{\circ}\text{C}$  upon receipt at the lab except for aqueous samples designated for metals analyses, which are stored at room temperature.

#### Metals Analyses:

No significant data anomalies were noted with this analysis.

#### Revision Notes:

This revised report replaces the original report generated on 2/27/18 at 9:19am. The revised report includes additional metals analytes as requested by the client.

Approved by  Date 3/21/2018



## Sample Receipt Information

**ALS Environmental—Jacksonville Laboratory**  
9143 Philips Highway, Suite 200, Jacksonville, FL 32256  
Phone (904) 739-2277 Fax (904) 739-2011  
[www.alsglobal.com](http://www.alsglobal.com)

**Client:** Gainesville Regional Utilities  
**Project:** D18A028

**Service Request:**J1801275

**SAMPLE CROSS-REFERENCE**

| <u>SAMPLE #</u> | <u>CLIENT SAMPLE ID</u> | <u>DATE</u> | <u>TIME</u> |
|-----------------|-------------------------|-------------|-------------|
| J1801275-001    | D18A028-01              | 2/14/2018   | 1202        |
| J1801275-002    | D18A028-02              | 2/15/2018   | 1343        |
| J1801275-003    | D18A028-03              | 2/14/2018   | 1415        |
| J1801275-004    | D18A028-04              | 2/15/2018   | 1500        |
| J1801275-005    | D18A028-05              | 2/14/2018   | 1016        |
| J1801275-006    | D18A028-06              | 2/15/2018   | 1150        |
| J1801275-007    | D18A028-07              | 2/15/2018   | 1013        |
| J1801275-008    | D18A028-08              | 2/15/2018   | 0844        |
| J1801275-009    | D18A028-09              | 2/13/2018   | 1112        |
| J1801275-010    | D18A028-10              | 2/13/2018   | 1640        |
| J1801275-011    | D18A028-11              | 2/14/2018   | 0905        |
| J1801275-012    | D18A028-12              | 2/14/2018   | 1558        |
| J1801275-013    | D18A028-13              | 2/14/2018   | 1112        |
| J1801275-014    | D18A028-14              | 2/14/2018   | 1453        |

**Cooler Receipt Form**

Client: GRU Service Request #: 51801275  
 Project: D18A028 Shipping paid by ALS?  
 Cooler received on 02/20/18 and opened on 02/20/18 by MAJ Yes  No  N/A  
 COURIER: ALS UPS  FEDEX  DHL Client Other \_\_\_\_\_ Airbill # 812783248007

- 1 Were custody seals on outside of cooler? Yes  No   
 If yes, how many and where? #: \_\_\_ on lid other
- 2 Were seals intact and signature and date correct? Yes  No  N/A
- 3 Were custody papers properly filled out?  Yes  No  N/A
- 4 Temperature of cooler(s) upon receipt (Should be 0°C and ≤ 6°C) Ambient
- 5 Thermometer ID N/A
- 6 Temperature Blank Present? Yes  No
- 7 Were Ice or Ice Packs present Ice  Ice Packs  No
- 8 Did all bottles arrive in good condition (unbroken, etc....)?  Yes  No  N/A
- 9 Type of packing material present Netting  Vial Holder  Bubble Wrap  
 Paper  Styrofoam  Other  N/A
- 10 Were all bottle labels complete (sample ID, preservation, etc....)?  Yes  No  N/A
- 11 Did all bottle labels and tags agree with custody papers?  Yes  No  N/A
- 12 Were the correct bottles used for the tests indicated?  Yes  No  N/A
- 13 Were all of the preserved bottles received with the appropriate preservative?  
 HNO3 pH<2     H2SO4 pH<2     ZnAc2/NaOH pH>9     NaOH pH>12  
 HCl pH<2  
 Preservative additions noted below
- 14 Were all samples received within analysis holding times?  Yes  No  N/A
- 15 Were VOA vials free of air bubbles greater than 6mm? If present, note below Yes  No  N/A
- 16 Where did the bottles originate? ALS  Client

| Sample ID | Reagent | Lot # | ml added | Initials | Date/Time |
|-----------|---------|-------|----------|----------|-----------|
|           |         |       |          |          |           |
|           |         |       |          |          |           |
|           |         |       |          |          |           |
|           |         |       |          |          |           |
|           |         |       |          |          |           |
|           |         |       |          |          |           |
|           |         |       |          |          |           |
|           |         |       |          |          |           |
|           |         |       |          |          |           |
|           |         |       |          |          |           |

Additional comments and/or explanation of all discrepancies noted above:  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Client approval to run samples if discrepancies noted: \_\_\_\_\_ Date: \_\_\_\_\_



**SUBCONTRACT ORDER**  
**Deerhaven Generating Station**  
**D18A028**

51801275

**SENDING LABORATORY:**

Gainesville Regional Utilities  
 Deerhaven Generating Station  
 10001 NW 13th Street  
 Gainesville, FL 32653  
 Phone: 352-334-3434  
 Fax: 352-334-3149  
 Project Manager: Jeff Boudreau

**RECEIVING LABORATORY:**

ALS Global  
 9143 Philips Highway, Suite 200  
 Jacksonville, FL 32256  
 Phone : (904) 394-4426  
 Fax: (904) 739-2011

**J1801275**  
 Gainesville Regional Utilities  
 D18A028

**5**



| Analysis                             | Expires         | Laboratory ID                   | Comments |
|--------------------------------------|-----------------|---------------------------------|----------|
| <b>Sample Name: SIS-1</b>            |                 |                                 |          |
| <b>Sample ID: D18A028-01</b>         | <b>Water</b>    | <b>Sampled: 14-Feb-18 12:02</b> |          |
| D_Arsenic by 200.8                   | 13-Aug-18 12:02 |                                 |          |
| D_Lead by 200.8                      | 13-Aug-18 12:02 |                                 |          |
| D_Lithium by 200.7                   | 13-Aug-18 12:02 |                                 |          |
| D_Thallium by 200.8                  | 13-Aug-18 12:02 |                                 |          |
| D_Antimony by 200.8                  | 13-Aug-18 12:02 |                                 |          |
| <i>Containers Supplied:</i>          |                 |                                 |          |
| D_HDPE, HNO3 pH<2 - 250mL extra2 (B) |                 |                                 |          |
| <b>Sample Name: SIS-2</b>            |                 |                                 |          |
| <b>Sample ID: D18A028-02</b>         | <b>Water</b>    | <b>Sampled: 15-Feb-18 13:43</b> |          |
| D_Antimony by 200.8                  | 14-Aug-18 13:43 |                                 |          |
| D_Arsenic by 200.8                   | 14-Aug-18 13:43 |                                 |          |
| D_Lead by 200.8                      | 14-Aug-18 13:43 |                                 |          |
| D_Lithium by 200.7                   | 14-Aug-18 13:43 |                                 |          |
| D_Thallium by 200.8                  | 14-Aug-18 13:43 |                                 |          |
| <i>Containers Supplied:</i>          |                 |                                 |          |
| D_HDPE, HNO3 pH<2 - 250mL extra2 (B) |                 |                                 |          |
| <b>Sample Name: SIS-3</b>            |                 |                                 |          |
| <b>Sample ID: D18A028-03</b>         | <b>Water</b>    | <b>Sampled: 14-Feb-18 14:15</b> |          |
| D_Lithium by 200.7                   | 13-Aug-18 14:15 |                                 |          |
| D_Thallium by 200.8                  | 13-Aug-18 14:15 |                                 |          |
| D_Arsenic by 200.8                   | 13-Aug-18 14:15 |                                 |          |
| D_Antimony by 200.8                  | 13-Aug-18 14:15 |                                 |          |
| D_Lead by 200.8                      | 13-Aug-18 14:15 |                                 |          |
| <i>Containers Supplied:</i>          |                 |                                 |          |
| D_HDPE, HNO3 pH<2 - 250mL extra2 (B) |                 |                                 |          |

Released By: *Shelby Phillips* Date: *2-19-18* via FEDEX  
 Received By: *Shm* Date: *2/20/18* Ambient  
 0927

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Released By: \_\_\_\_\_ Date: \_\_\_\_\_ Received By: \_\_\_\_\_ Date: \_\_\_\_\_



**SUBCONTRACT ORDER**  
**Deerhaven Generating Station**  
**D18A028**

51801275

| Analysis | Expires | Laboratory ID | Comments |
|----------|---------|---------------|----------|
|----------|---------|---------------|----------|

|                                      |              |                                 |  |
|--------------------------------------|--------------|---------------------------------|--|
| <b>Sample Name: SIS-4</b>            |              |                                 |  |
| <b>Sample ID: D18A028-04</b>         | <b>Water</b> | <b>Sampled: 15-Feb-18 15:00</b> |  |
| D_Thallium by 200.8                  |              | 14-Aug-18 15:00                 |  |
| D_Arsenic by 200.8                   |              | 14-Aug-18 15:00                 |  |
| D_Lead by 200.8                      |              | 14-Aug-18 15:00                 |  |
| D_Lithium by 200.7                   |              | 14-Aug-18 15:00                 |  |
| D_Antimony by 200.8                  |              | 14-Aug-18 15:00                 |  |
| <i>Containers Supplied:</i>          |              |                                 |  |
| D_HDPE, HNO3 pH<2 - 250mL extra2 (B) |              |                                 |  |

|                                      |              |                                 |  |
|--------------------------------------|--------------|---------------------------------|--|
| <b>Sample Name: LF-1</b>             |              |                                 |  |
| <b>Sample ID: D18A028-05</b>         | <b>Water</b> | <b>Sampled: 14-Feb-18 10:16</b> |  |
| D_Thallium by 200.8                  |              | 13-Aug-18 10:16                 |  |
| D_Lithium by 200.7                   |              | 13-Aug-18 10:16                 |  |
| D_Lead by 200.8                      |              | 13-Aug-18 10:16                 |  |
| D_Antimony by 200.8                  |              | 13-Aug-18 10:16                 |  |
| D_Arsenic by 200.8                   |              | 13-Aug-18 10:16                 |  |
| <i>Containers Supplied:</i>          |              |                                 |  |
| D_HDPE, HNO3 pH<2 - 250mL extra2 (B) |              |                                 |  |

|                                      |              |                                 |  |
|--------------------------------------|--------------|---------------------------------|--|
| <b>Sample Name: LF-2</b>             |              |                                 |  |
| <b>Sample ID: D18A028-06</b>         | <b>Water</b> | <b>Sampled: 15-Feb-18 11:50</b> |  |
| D_Thallium by 200.8                  |              | 14-Aug-18 11:50                 |  |
| D_Antimony by 200.8                  |              | 14-Aug-18 11:50                 |  |
| D_Arsenic by 200.8                   |              | 14-Aug-18 11:50                 |  |
| D_Lead by 200.8                      |              | 14-Aug-18 11:50                 |  |
| D_Lithium by 200.7                   |              | 14-Aug-18 11:50                 |  |
| <i>Containers Supplied:</i>          |              |                                 |  |
| D_HDPE, HNO3 pH<2 - 250mL extra2 (B) |              |                                 |  |

|                                      |              |                                 |  |
|--------------------------------------|--------------|---------------------------------|--|
| <b>Sample Name: LF-3</b>             |              |                                 |  |
| <b>Sample ID: D18A028-07</b>         | <b>Water</b> | <b>Sampled: 15-Feb-18 10:13</b> |  |
| D_Arsenic by 200.8                   |              | 14-Aug-18 10:13                 |  |
| D_Lead by 200.8                      |              | 14-Aug-18 10:13                 |  |
| D_Lithium by 200.7                   |              | 14-Aug-18 10:13                 |  |
| D_Thallium by 200.8                  |              | 14-Aug-18 10:13                 |  |
| D_Antimony by 200.8                  |              | 14-Aug-18 10:13                 |  |
| <i>Containers Supplied:</i>          |              |                                 |  |
| D_HDPE, HNO3 pH<2 - 250mL extra2 (B) |              |                                 |  |

|                         |                |             |                |
|-------------------------|----------------|-------------|----------------|
| Released By             | Date           | Received By | Date           |
| <i>Shelley Phillips</i> | <i>2-19-18</i> | <i>Sh</i>   | <i>2/20/18</i> |

*via FEDEX*

*Ambient 0927*

|             |      |             |      |
|-------------|------|-------------|------|
| Released By | Date | Received By | Date |
|-------------|------|-------------|------|



**SUBCONTRACT ORDER**  
**Deerhaven Generating Station**  
**D18A028**

51801275

| Analysis                             | Expires         | Laboratory ID                   | Comments |
|--------------------------------------|-----------------|---------------------------------|----------|
| <b>Sample Name: LF-4</b>             |                 |                                 |          |
| <b>Sample ID: D18A028-08</b>         | <b>Water</b>    | <b>Sampled: 15-Feb-18 08:44</b> |          |
| D_Arsenic by 200.8                   | 14-Aug-18 08:44 |                                 |          |
| D_Thallium by 200.8                  | 14-Aug-18 08:44 |                                 |          |
| D_Lead by 200.8                      | 14-Aug-18 08:44 |                                 |          |
| D_Antimony by 200.8                  | 14-Aug-18 08:44 |                                 |          |
| D_Lithium by 200.7                   | 14-Aug-18 08:44 |                                 |          |
| <i>Containers Supplied:</i>          |                 |                                 |          |
| D_HDPE, HNO3 pH<2 - 250mL extra2 (B) |                 |                                 |          |
| <b>Sample Name: MWD-1-6 (R1T6)</b>   |                 |                                 |          |
| <b>Sample ID: D18A028-09</b>         | <b>Water</b>    | <b>Sampled: 13-Feb-18 11:12</b> |          |
| D_Arsenic by 200.8                   | 12-Aug-18 11:12 |                                 |          |
| D_Lithium by 200.7                   | 12-Aug-18 11:12 |                                 |          |
| <i>Containers Supplied:</i>          |                 |                                 |          |
| D_HDPE, HNO3 pH<2 - 250mL extra2 (B) |                 |                                 |          |
| <b>Sample Name: MWB-2-1 (R2T1)</b>   |                 |                                 |          |
| <b>Sample ID: D18A028-10</b>         | <b>Water</b>    | <b>Sampled: 13-Feb-18 16:40</b> |          |
| D_Lithium by 200.7                   | 12-Aug-18 16:40 |                                 |          |
| <i>Containers Supplied:</i>          |                 |                                 |          |
| D_HDPE, HNO3 pH<2 - 250mL extra (B)  |                 |                                 |          |
| <b>Sample Name: MWD-6-1 (R6T1B)</b>  |                 |                                 |          |
| <b>Sample ID: D18A028-11</b>         | <b>Water</b>    | <b>Sampled: 14-Feb-18 09:05</b> |          |
| D_Lithium by 200.7                   | 13-Aug-18 09:05 |                                 |          |
| <i>Containers Supplied:</i>          |                 |                                 |          |
| D_HDPE, HNO3 pH<2 - 250mL extra (B)  |                 |                                 |          |
| <b>Sample Name: MWI-4-5 (R4T5B)</b>  |                 |                                 |          |
| <b>Sample ID: D18A028-12</b>         | <b>Water</b>    | <b>Sampled: 14-Feb-18 15:58</b> |          |
| D_Thallium by 200.8                  | 13-Aug-18 15:58 |                                 |          |
| D_Lithium by 200.7                   | 13-Aug-18 15:58 |                                 |          |
| D_Lead by 200.8                      | 13-Aug-18 15:58 |                                 |          |
| D_Antimony by 200.8                  | 13-Aug-18 15:58 |                                 |          |
| D_Arsenic by 200.8                   | 13-Aug-18 15:58 |                                 |          |
| <i>Containers Supplied:</i>          |                 |                                 |          |
| D_HDPE, HNO3 pH<2 - 250mL extra2 (B) |                 |                                 |          |

*via FedEx*

*Ambient*

|                         |                |             |                |             |
|-------------------------|----------------|-------------|----------------|-------------|
| <i>Shelley Phillips</i> | <i>2-19-18</i> | <i>Sh S</i> | <i>2/20/18</i> | <i>0927</i> |
| Released By             | Date           | Received By | Date           |             |

|             |      |             |      |
|-------------|------|-------------|------|
| Released By | Date | Received By | Date |
|-------------|------|-------------|------|





**SUBCONTRACT ORDER**  
**Deerhaven Generating Station**  
**D18A028**

51801275

| Analysis                             | Expires         | Laboratory ID                   | Comments |
|--------------------------------------|-----------------|---------------------------------|----------|
| <b>Sample Name: MWI-6-4 (R6T4B)</b>  |                 |                                 |          |
| <b>Sample ID: D18A028-13</b>         | <b>Water</b>    | <b>Sampled: 14-Feb-18 11:12</b> |          |
| D_Antimony by 200.8                  | 13-Aug-18 11:12 |                                 |          |
| D_Arsenic by 200.8                   | 13-Aug-18 11:12 |                                 |          |
| D_Lead by 200.8                      | 13-Aug-18 11:12 |                                 |          |
| D_Lithium by 200.7                   | 13-Aug-18 11:12 |                                 |          |
| D_Thallium by 200.8                  | 13-Aug-18 11:12 |                                 |          |
| <i>Containers Supplied:</i>          |                 |                                 |          |
| D_HDPE, HNO3 pH<2 - 250mL extra2 (B) |                 |                                 |          |
| <b>Sample Name: EBLANK</b>           |                 |                                 |          |
| <b>Sample ID: D18A028-14</b>         | <b>Water</b>    | <b>Sampled: 14-Feb-18 14:53</b> |          |
| D_Lead by 200.8                      | 13-Aug-18 14:53 |                                 |          |
| D_Lithium by 200.7                   | 13-Aug-18 14:53 |                                 |          |
| D_Thallium by 200.8                  | 13-Aug-18 14:53 |                                 |          |
| D_Antimony by 200.8                  | 13-Aug-18 14:53 |                                 |          |
| D_Arsenic by 200.8                   | 13-Aug-18 14:53 |                                 |          |
| <i>Containers Supplied:</i>          |                 |                                 |          |
| D_HDPE, HNO3 pH<2 - 250mL extra2 (B) |                 |                                 |          |

|             |         |                  |             |         |                |
|-------------|---------|------------------|-------------|---------|----------------|
|             | 2/19/18 | <i>via FEDEX</i> |             | 2/20/18 | <i>Ambient</i> |
| Released By | Date    |                  | Received By | Date    | 0927           |
| Released By | Date    |                  | Received By | Date    |                |



## Miscellaneous Forms

**ALS Environmental—Jacksonville Laboratory**  
9143 Philips Highway, Suite 200, Jacksonville, FL 32256  
Phone (904) 739-2277 Fax (904) 739-2011  
[www.alsglobal.com](http://www.alsglobal.com)



## **FLORIDA DEP DATA QUALIFIERS**

- B Results based upon colony counts outside the acceptable range.
- D Measurement was made in the field.
- H Value based on field kit determination; results may not be accurate.
- I The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
- J Estimated value (one of the following reasons is discussed in the project case narrative).
1. The result may be inaccurate because the surrogate recovery limits have been exceeded.
  2. No known quality control criteria exists for the component.
  3. The reported value failed to meet the established quality control criteria for either precision or accuracy.
  4. The sample matrix interfered with the ability to make any accurate determination (e.g., primary and confirmation results show greater than 40% RPD).
  5. The data is questionable because of improper laboratory or field protocols (e.g., GC/MS Tune did not meet method criteria).
- K Off scale low. The value is less than the lowest calibration standard but greater than the method reporting limit (MRL).
- L Off scale high. The analyte is above the upper limit of the linear calibration range.
- M The MDL/MRL has been elevated because the analyte could not be accurately quantified due to matrix interference.
- N Presumptive evidence of the analyte. Confirmation was not performed.
- Q Sample held beyond the accepted holding time.
- T Value reported is less than the laboratory method detection limit. The value is reported for informational purposes only.
- U Indicates that the compound was analyzed for but not detected.
- V Indicates that the analyte was detected in both the sample and the associated method blank.
- Y The laboratory analysis was from an improperly preserved sample.
- Z Too many colonies were present (TNTC). The numeric value represents the filtration volume.



**Jacksonville Lab ID # for State Certifications<sup>1</sup>**

| <b>Agency</b>  | <b>Number</b>   | <b>Expiration Date</b> |
|--|-----------------|------------------------|
| Department of Defense  | 66206           | 7/31/2018              |
| Florida Department of Health                                   | E82502          | 6/30/2018              |
| Georgia Department of Natural Resources                        | 958             | 6/30/2018              |
| Kentucky Division of Waste Management                          | 123042          | 6/30/2018              |
| Louisiana Department of Environmental Quality                  | 02086           | 6/30/2018              |
| Maine Department of Health and Human Services                  | 2015002         | 2/3/2019               |
| North Carolina Department of Environment and Natural Resources | 527             | 12/31/2018             |
| Pennsylvania Department of Environmental Protection            | 68-04835        | 8/31/2018              |
| South Carolina Department of Health and Environmental Control  | 96021001        | 6/30/2018              |
| Texas Commission on Environmental Quality                      | T104704197-16-8 | 5/31/2018              |
| Virginia Environmental Accreditation Program                   | 460191          | 12/14/2018             |

<sup>1</sup> Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state or agency requirements. The test results meet requirements of the current NELAP/TNI standards or state or agency requirements, where applicable, except as noted in the laboratory case narrative provided. For a specific list of accredited analytes, refer to <http://www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads/North-America-Downloads>



## ACRONYMS

|            |  |
|------------|--|
| ASTM       | American Society for Testing and Materials   |
| A2LA       | American Association for Laboratory Accreditation  |
| CARB       | California Air Resources Board   |
| CAS Number | Chemical Abstract Service registry Number  |
| CFC        | Chlorofluorocarbon   |
| CFU        | Colony-Forming Unit  |
| DEC        | Department of Environmental Conservation   |
| DEQ        | Department of Environmental Quality  |
| DHS        | Department of Health Services  |
| DOE        | Department of Ecology  |
| DOH        | Department of Health   |
| EPA        | U. S. Environmental Protection Agency  |
| ELAP       | Environmental Laboratory Accreditation Program   |
| GC         | Gas Chromatography   |
| GC/MS      | Gas Chromatography/Mass Spectrometry   |
| LUFT       | Leaking Underground Fuel Tank  |
| M          | Modified   |
| MCL        | Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA. |
| MDL        | Method Detection Limit   |
| MPN        | Most Probable Number   |
| MRL        | Method Reporting Limit   |
| NA         | Not Applicable   |
| NC         | Not Calculated   |
| NCASI      | National Council of the Paper Industry for Air and Stream Improvement  |
| ND         | Not Detected   |
| NIOSH      | National Institute for Occupational Safety and Health  |
| PQL        | Practical Quantitation Limit   |
| RCRA       | Resource Conservation and Recovery Act   |
| SIM        | Selected Ion Monitoring  |
| TPH        | Total Petroleum Hydrocarbons   |
| tr         | Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.                           |

ALS Group USA, Corp.  
dba ALS Environmental

Analyst Summary report

**Client:** Gainesville Regional Utilities  
**Project:** D18A028

**Service Request:** J1801275

**Sample Name:** D18A028-01  
**Lab Code:** J1801275-001  
**Sample Matrix:** Water

**Date Collected:** 02/14/18  
**Date Received:** 02/20/18

**Analysis Method**  
200.7  
200.8

**Extracted/Digested By**  
EGARDNER  
CSULLIVAN

**Analyzed By**  
EGARDNER  
CSULLIVAN

**Sample Name:** D18A028-02  
**Lab Code:** J1801275-002  
**Sample Matrix:** Water

**Date Collected:** 02/15/18  
**Date Received:** 02/20/18

**Analysis Method**  
200.7  
200.8

**Extracted/Digested By**  
EGARDNER  
CSULLIVAN

**Analyzed By**  
EGARDNER  
CSULLIVAN

**Sample Name:** D18A028-03  
**Lab Code:** J1801275-003  
**Sample Matrix:** Water

**Date Collected:** 02/14/18  
**Date Received:** 02/20/18

**Analysis Method**  
200.7  
200.8

**Extracted/Digested By**  
EGARDNER  
CSULLIVAN

**Analyzed By**  
EGARDNER  
CSULLIVAN

**Sample Name:** D18A028-04  
**Lab Code:** J1801275-004  
**Sample Matrix:** Water

**Date Collected:** 02/15/18  
**Date Received:** 02/20/18

**Analysis Method**  
200.7  
200.8

**Extracted/Digested By**  
EGARDNER  
CSULLIVAN

**Analyzed By**  
EGARDNER  
CSULLIVAN

ALS Group USA, Corp.  
dba ALS Environmental

Analyst Summary report

**Client:** Gainesville Regional Utilities  
**Project:** D18A028

**Service Request:** J1801275

**Sample Name:** D18A028-05  
**Lab Code:** J1801275-005  
**Sample Matrix:** Water

**Date Collected:** 02/14/18  
**Date Received:** 02/20/18

**Analysis Method**  
200.7  
200.8

**Extracted/Digested By**  
EGARDNER  
CSULLIVAN

**Analyzed By**  
EGARDNER  
CSULLIVAN

**Sample Name:** D18A028-06  
**Lab Code:** J1801275-006  
**Sample Matrix:** Water

**Date Collected:** 02/15/18  
**Date Received:** 02/20/18

**Analysis Method**  
200.7  
200.8

**Extracted/Digested By**  
EGARDNER  
CSULLIVAN

**Analyzed By**  
EGARDNER  
CSULLIVAN

**Sample Name:** D18A028-07  
**Lab Code:** J1801275-007  
**Sample Matrix:** Water

**Date Collected:** 02/15/18  
**Date Received:** 02/20/18

**Analysis Method**  
200.7  
200.8

**Extracted/Digested By**  
EGARDNER  
CSULLIVAN

**Analyzed By**  
EGARDNER  
CSULLIVAN

**Sample Name:** D18A028-08  
**Lab Code:** J1801275-008  
**Sample Matrix:** Water

**Date Collected:** 02/15/18  
**Date Received:** 02/20/18

**Analysis Method**  
200.7  
200.8

**Extracted/Digested By**  
EGARDNER  
CSULLIVAN

**Analyzed By**  
EGARDNER  
CSULLIVAN

ALS Group USA, Corp.  
dba ALS Environmental

Analyst Summary report

**Client:** Gainesville Regional Utilities  
**Project:** D18A028

**Service Request:** J1801275

**Sample Name:** D18A028-09  
**Lab Code:** J1801275-009  
**Sample Matrix:** Water

**Date Collected:** 02/13/18  
**Date Received:** 02/20/18

**Analysis Method**  
200.7  
200.8

**Extracted/Digested By**  
EGARDNER  
CSULLIVAN

**Analyzed By**  
EGARDNER  
CSULLIVAN

**Sample Name:** D18A028-10  
**Lab Code:** J1801275-010  
**Sample Matrix:** Water

**Date Collected:** 02/13/18  
**Date Received:** 02/20/18

**Analysis Method**  
200.7

**Extracted/Digested By**  
EGARDNER

**Analyzed By**  
EGARDNER

**Sample Name:** D18A028-11  
**Lab Code:** J1801275-011  
**Sample Matrix:** Water

**Date Collected:** 02/14/18  
**Date Received:** 02/20/18

**Analysis Method**  
200.7

**Extracted/Digested By**  
EGARDNER

**Analyzed By**  
EGARDNER

**Sample Name:** D18A028-12  
**Lab Code:** J1801275-012  
**Sample Matrix:** Water

**Date Collected:** 02/14/18  
**Date Received:** 02/20/18

**Analysis Method**  
200.7  
200.8

**Extracted/Digested By**  
EGARDNER  
CSULLIVAN

**Analyzed By**  
EGARDNER  
CSULLIVAN



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Analyst Summary report

**Client:** Gainesville Regional Utilities  
**Project:** D18A028

**Service Request:** J1801275

**Sample Name:** D18A028-13  
**Lab Code:** J1801275-013  
**Sample Matrix:** Water

**Date Collected:** 02/14/18  
**Date Received:** 02/20/18

**Analysis Method**

200.7  
200.8

**Extracted/Digested By**

EGARDNER  
CSULLIVAN

**Analyzed By**

EGARDNER  
CSULLIVAN

**Sample Name:** D18A028-14  
**Lab Code:** J1801275-014  
**Sample Matrix:** Water

**Date Collected:** 02/14/18  
**Date Received:** 02/20/18

**Analysis Method**

200.7  
200.8

**Extracted/Digested By**

EGARDNER  
CSULLIVAN

**Analyzed By**

EGARDNER  
CSULLIVAN



# Sample Results

**ALS Environmental—Jacksonville Laboratory**  
9143 Philips Highway, Suite 200, Jacksonville, FL 32256  
Phone (904) 739-2277 Fax (904) 739-2011  
[www.alsglobal.com](http://www.alsglobal.com)



# Metals

**ALS Environmental—Jacksonville Laboratory**  
9143 Philips Highway, Suite 200, Jacksonville, FL 32256  
Phone (904)739-2277 Fax (904)739-2011  
[www.alsglobal.com](http://www.alsglobal.com)

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Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A028  
**Sample Matrix:** Water  
**Sample Name:** D18A028-01  
**Lab Code:** J1801275-001

**Service Request:** J1801275  
**Date Collected:** 02/14/18 12:02  
**Date Received:** 02/20/18 09:27  
**Basis:** NA

Inorganic Parameters

| Analyte Name      | Analysis Method | Result          | Units | PQL    | MDL     | Dil. | Date Analyzed  | Date Extracted | Q |
|-------------------|-----------------|-----------------|-------|--------|---------|------|----------------|----------------|---|
| Antimony, Total   | 200.8           | <b>0.07 I</b>   | ug/L  | 1.0    | 0.04    | 1    | 02/26/18 12:47 | 02/23/18       |   |
| Arsenic, Total    | 200.8           | <b>1.3</b>      | ug/L  | 1.0    | 0.10    | 1    | 02/26/18 12:47 | 02/23/18       |   |
| Barium, Total     | 200.7           | <b>0.015</b>    | mg/L  | 0.010  | 0.001   | 1    | 02/22/18 22:10 | 02/22/18       |   |
| Beryllium, Total  | 200.7           | 0.00006 U       | mg/L  | 0.0040 | 0.00006 | 1    | 02/22/18 22:09 | 02/22/18       |   |
| Boron, Total      | 200.7           | 0.025 U         | mg/L  | 0.050  | 0.025   | 1    | 02/22/18 22:10 | 02/22/18       |   |
| Cadmium, Total    | 200.7           | 0.0002 U        | mg/L  | 0.0050 | 0.0002  | 1    | 02/22/18 22:10 | 02/22/18       |   |
| Chromium, Total   | 200.7           | 0.0004 U        | mg/L  | 0.010  | 0.0004  | 1    | 02/22/18 22:10 | 02/22/18       |   |
| Cobalt, Total     | 200.7           | 0.003 U         | mg/L  | 0.010  | 0.003   | 1    | 02/22/18 22:10 | 02/22/18       |   |
| Lead, Total       | 200.8           | <b>0.12 I</b>   | ug/L  | 0.50   | 0.03    | 1    | 02/26/18 12:47 | 02/23/18       |   |
| Lithium, Total    | 200.7           | 0.002 U         | mg/L  | 0.10   | 0.002   | 1    | 02/22/18 22:08 | 02/22/18       |   |
| Molybdenum, Total | 200.7           | <b>0.006 I</b>  | mg/L  | 0.010  | 0.0003  | 1    | 02/22/18 22:10 | 02/22/18       |   |
| Selenium, Total   | 200.7           | <b>0.008 IV</b> | mg/L  | 0.010  | 0.002   | 1    | 02/22/18 22:10 | 02/22/18       |   |
| Thallium, Total   | 200.8           | 0.02 U          | ug/L  | 0.20   | 0.02    | 1    | 02/26/18 12:47 | 02/23/18       |   |

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Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A028  
**Sample Matrix:** Water  
**Sample Name:** D18A028-02  
**Lab Code:** J1801275-002

**Service Request:** J1801275  
**Date Collected:** 02/15/18 13:43  
**Date Received:** 02/20/18 09:27  
**Basis:** NA

Inorganic Parameters

| Analyte Name      | Analysis Method | Result         | Units | PQL    | MDL     | Dil. | Date Analyzed  | Date Extracted | Q |
|-------------------|-----------------|----------------|-------|--------|---------|------|----------------|----------------|---|
| Antimony, Total   | 200.8           | <b>0.2 I</b>   | ug/L  | 1.0    | 0.04    | 1    | 02/26/18 12:49 | 02/23/18       |   |
| Arsenic, Total    | 200.8           | <b>0.5 I</b>   | ug/L  | 1.0    | 0.10    | 1    | 02/26/18 12:49 | 02/23/18       |   |
| Barium, Total     | 200.7           | <b>0.006 I</b> | mg/L  | 0.010  | 0.001   | 1    | 02/22/18 22:14 | 02/22/18       |   |
| Beryllium, Total  | 200.7           | 0.00006 U      | mg/L  | 0.0040 | 0.00006 | 1    | 02/22/18 22:14 | 02/22/18       |   |
| Boron, Total      | 200.7           | <b>0.025 I</b> | mg/L  | 0.050  | 0.025   | 1    | 02/22/18 22:14 | 02/22/18       |   |
| Cadmium, Total    | 200.7           | 0.0002 U       | mg/L  | 0.0050 | 0.0002  | 1    | 02/22/18 22:14 | 02/22/18       |   |
| Chromium, Total   | 200.7           | 0.0004 U       | mg/L  | 0.010  | 0.0004  | 1    | 02/22/18 22:14 | 02/22/18       |   |
| Cobalt, Total     | 200.7           | 0.003 U        | mg/L  | 0.010  | 0.003   | 1    | 02/22/18 22:14 | 02/22/18       |   |
| Lead, Total       | 200.8           | <b>0.1 I</b>   | ug/L  | 0.50   | 0.03    | 1    | 02/26/18 12:49 | 02/23/18       |   |
| Lithium, Total    | 200.7           | 0.002 U        | mg/L  | 0.10   | 0.002   | 1    | 02/22/18 22:13 | 02/22/18       |   |
| Molybdenum, Total | 200.7           | <b>0.007 I</b> | mg/L  | 0.010  | 0.0003  | 1    | 02/22/18 22:14 | 02/22/18       |   |
| Selenium, Total   | 200.7           | <b>0.010 V</b> | mg/L  | 0.010  | 0.002   | 1    | 02/22/18 22:14 | 02/22/18       |   |
| Thallium, Total   | 200.8           | 0.02 U         | ug/L  | 0.20   | 0.02    | 1    | 02/26/18 12:49 | 02/23/18       |   |

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Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A028  
**Sample Matrix:** Water  
**Sample Name:** D18A028-03  
**Lab Code:** J1801275-003

**Service Request:** J1801275  
**Date Collected:** 02/14/18 14:15  
**Date Received:** 02/20/18 09:27  
**Basis:** NA

Inorganic Parameters

| Analyte Name      | Analysis Method | Result          | Units | PQL    | MDL     | Dil. | Date Analyzed  | Date Extracted | Q |
|-------------------|-----------------|-----------------|-------|--------|---------|------|----------------|----------------|---|
| Antimony, Total   | 200.8           | <b>0.2 I</b>    | ug/L  | 1.0    | 0.04    | 1    | 02/26/18 12:51 | 02/23/18       |   |
| Arsenic, Total    | 200.8           | <b>1.2</b>      | ug/L  | 1.0    | 0.10    | 1    | 02/26/18 12:51 | 02/23/18       |   |
| Barium, Total     | 200.7           | <b>0.013</b>    | mg/L  | 0.010  | 0.001   | 1    | 02/22/18 22:54 | 02/22/18       |   |
| Beryllium, Total  | 200.7           | 0.00006 U       | mg/L  | 0.0040 | 0.00006 | 1    | 02/22/18 22:54 | 02/22/18       |   |
| Boron, Total      | 200.7           | 0.025 U         | mg/L  | 0.050  | 0.025   | 1    | 02/22/18 22:54 | 02/22/18       |   |
| Cadmium, Total    | 200.7           | 0.0002 U        | mg/L  | 0.0050 | 0.0002  | 1    | 02/22/18 22:54 | 02/22/18       |   |
| Chromium, Total   | 200.7           | 0.0004 U        | mg/L  | 0.010  | 0.0004  | 1    | 02/22/18 22:54 | 02/22/18       |   |
| Cobalt, Total     | 200.7           | 0.003 U         | mg/L  | 0.010  | 0.003   | 1    | 02/22/18 22:54 | 02/22/18       |   |
| Lead, Total       | 200.8           | <b>0.07 I</b>   | ug/L  | 0.50   | 0.03    | 1    | 02/26/18 12:51 | 02/23/18       |   |
| Lithium, Total    | 200.7           | 0.002 U         | mg/L  | 0.10   | 0.002   | 1    | 02/22/18 22:53 | 02/22/18       |   |
| Molybdenum, Total | 200.7           | <b>0.006 I</b>  | mg/L  | 0.010  | 0.0003  | 1    | 02/22/18 22:54 | 02/22/18       |   |
| Selenium, Total   | 200.7           | <b>0.009 IV</b> | mg/L  | 0.010  | 0.002   | 1    | 02/22/18 22:54 | 02/22/18       |   |
| Thallium, Total   | 200.8           | 0.02 U          | ug/L  | 0.20   | 0.02    | 1    | 02/26/18 12:51 | 02/23/18       |   |

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Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A028  
**Sample Matrix:** Water  
**Sample Name:** D18A028-04  
**Lab Code:** J1801275-004

**Service Request:** J1801275  
**Date Collected:** 02/15/18 15:00  
**Date Received:** 02/20/18 09:27  
**Basis:** NA

Inorganic Parameters

| Analyte Name      | Analysis Method | Result          | Units | PQL    | MDL     | Dil. | Date Analyzed  | Date Extracted | Q |
|-------------------|-----------------|-----------------|-------|--------|---------|------|----------------|----------------|---|
| Antimony, Total   | 200.8           | <b>0.1 I</b>    | ug/L  | 1.0    | 0.04    | 1    | 02/26/18 12:52 | 02/23/18       |   |
| Arsenic, Total    | 200.8           | <b>1.3</b>      | ug/L  | 1.0    | 0.10    | 1    | 02/26/18 12:52 | 02/23/18       |   |
| Barium, Total     | 200.7           | <b>0.014</b>    | mg/L  | 0.010  | 0.001   | 1    | 02/22/18 23:14 | 02/22/18       |   |
| Beryllium, Total  | 200.7           | 0.00006 U       | mg/L  | 0.0040 | 0.00006 | 1    | 02/22/18 23:13 | 02/22/18       |   |
| Boron, Total      | 200.7           | 0.025 U         | mg/L  | 0.050  | 0.025   | 1    | 02/22/18 23:14 | 02/22/18       |   |
| Cadmium, Total    | 200.7           | 0.0002 U        | mg/L  | 0.0050 | 0.0002  | 1    | 02/22/18 23:14 | 02/22/18       |   |
| Chromium, Total   | 200.7           | 0.0004 U        | mg/L  | 0.010  | 0.0004  | 1    | 02/22/18 23:14 | 02/22/18       |   |
| Cobalt, Total     | 200.7           | 0.003 U         | mg/L  | 0.010  | 0.003   | 1    | 02/22/18 23:14 | 02/22/18       |   |
| Lead, Total       | 200.8           | <b>0.04 I</b>   | ug/L  | 0.50   | 0.03    | 1    | 02/26/18 12:52 | 02/23/18       |   |
| Lithium, Total    | 200.7           | 0.002 U         | mg/L  | 0.10   | 0.002   | 1    | 02/22/18 23:12 | 02/22/18       |   |
| Molybdenum, Total | 200.7           | <b>0.006 I</b>  | mg/L  | 0.010  | 0.0003  | 1    | 02/22/18 23:14 | 02/22/18       |   |
| Selenium, Total   | 200.7           | <b>0.009 IV</b> | mg/L  | 0.010  | 0.002   | 1    | 02/22/18 23:14 | 02/22/18       |   |
| Thallium, Total   | 200.8           | 0.02 U          | ug/L  | 0.20   | 0.02    | 1    | 02/26/18 12:52 | 02/23/18       |   |

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Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A028  
**Sample Matrix:** Water  
**Sample Name:** D18A028-05  
**Lab Code:** J1801275-005

**Service Request:** J1801275  
**Date Collected:** 02/14/18 10:16  
**Date Received:** 02/20/18 09:27  
**Basis:** NA

Inorganic Parameters

| Analyte Name      | Analysis Method | Result         | Units | PQL    | MDL     | Dil. | Date Analyzed  | Date Extracted | Q |
|-------------------|-----------------|----------------|-------|--------|---------|------|----------------|----------------|---|
| Antimony, Total   | 200.8           | <b>1.0 I</b>   | ug/L  | 1.0    | 0.04    | 1    | 02/26/18 12:54 | 02/23/18       |   |
| Arsenic, Total    | 200.8           | <b>0.4 I</b>   | ug/L  | 1.0    | 0.10    | 1    | 02/26/18 12:54 | 02/23/18       |   |
| Barium, Total     | 200.7           | <b>0.121</b>   | mg/L  | 0.010  | 0.001   | 1    | 02/22/18 23:18 | 02/22/18       |   |
| Beryllium, Total  | 200.7           | 0.00006 U      | mg/L  | 0.0040 | 0.00006 | 1    | 02/22/18 23:18 | 02/22/18       |   |
| Boron, Total      | 200.7           | <b>0.214</b>   | mg/L  | 0.050  | 0.025   | 1    | 02/22/18 23:18 | 02/22/18       |   |
| Cadmium, Total    | 200.7           | 0.0002 U       | mg/L  | 0.0050 | 0.0002  | 1    | 02/22/18 23:18 | 02/22/18       |   |
| Chromium, Total   | 200.7           | 0.0004 U       | mg/L  | 0.010  | 0.0004  | 1    | 02/22/18 23:18 | 02/22/18       |   |
| Cobalt, Total     | 200.7           | 0.003 U        | mg/L  | 0.010  | 0.003   | 1    | 02/22/18 23:18 | 02/22/18       |   |
| Lead, Total       | 200.8           | 0.03 U         | ug/L  | 0.50   | 0.03    | 1    | 02/26/18 12:54 | 02/23/18       |   |
| Lithium, Total    | 200.7           | 0.002 U        | mg/L  | 0.10   | 0.002   | 1    | 02/22/18 23:17 | 02/22/18       |   |
| Molybdenum, Total | 200.7           | <b>0.018</b>   | mg/L  | 0.010  | 0.0003  | 1    | 02/22/18 23:18 | 02/22/18       |   |
| Selenium, Total   | 200.7           | <b>0.013 V</b> | mg/L  | 0.010  | 0.002   | 1    | 02/22/18 23:18 | 02/22/18       |   |
| Thallium, Total   | 200.8           | <b>0.08 I</b>  | ug/L  | 0.20   | 0.02    | 1    | 02/26/18 12:54 | 02/23/18       |   |



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Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A028  
**Sample Matrix:** Water  
**Sample Name:** D18A028-06  
**Lab Code:** J1801275-006

**Service Request:** J1801275  
**Date Collected:** 02/15/18 11:50  
**Date Received:** 02/20/18 09:27

**Basis:** NA

Inorganic Parameters

| Analyte Name      | Analysis Method | Result         | Units | PQL    | MDL     | Dil. | Date Analyzed  | Date Extracted | Q |
|-------------------|-----------------|----------------|-------|--------|---------|------|----------------|----------------|---|
| Antimony, Total   | 200.8           | <b>1.0 I</b>   | ug/L  | 1.0    | 0.04    | 1    | 02/26/18 12:55 | 02/23/18       |   |
| Arsenic, Total    | 200.8           | <b>1.0</b>     | ug/L  | 1.0    | 0.10    | 1    | 02/26/18 12:55 | 02/23/18       |   |
| Barium, Total     | 200.7           | <b>0.105</b>   | mg/L  | 0.010  | 0.001   | 1    | 02/22/18 23:23 | 02/22/18       |   |
| Beryllium, Total  | 200.7           | 0.00006 U      | mg/L  | 0.0040 | 0.00006 | 1    | 02/22/18 23:23 | 02/22/18       |   |
| Boron, Total      | 200.7           | <b>0.315</b>   | mg/L  | 0.050  | 0.025   | 1    | 02/22/18 23:23 | 02/22/18       |   |
| Cadmium, Total    | 200.7           | 0.0002 U       | mg/L  | 0.0050 | 0.0002  | 1    | 02/22/18 23:23 | 02/22/18       |   |
| Chromium, Total   | 200.7           | <b>0.002 I</b> | mg/L  | 0.010  | 0.0004  | 1    | 02/22/18 23:23 | 02/22/18       |   |
| Cobalt, Total     | 200.7           | 0.003 U        | mg/L  | 0.010  | 0.003   | 1    | 02/22/18 23:23 | 02/22/18       |   |
| Lead, Total       | 200.8           | <b>0.09 I</b>  | ug/L  | 0.50   | 0.03    | 1    | 02/26/18 12:55 | 02/23/18       |   |
| Lithium, Total    | 200.7           | 0.002 U        | mg/L  | 0.10   | 0.002   | 1    | 02/22/18 23:22 | 02/22/18       |   |
| Molybdenum, Total | 200.7           | <b>0.034</b>   | mg/L  | 0.010  | 0.0003  | 1    | 02/22/18 23:23 | 02/22/18       |   |
| Selenium, Total   | 200.7           | <b>0.013 V</b> | mg/L  | 0.010  | 0.002   | 1    | 02/22/18 23:23 | 02/22/18       |   |
| Thallium, Total   | 200.8           | <b>0.08 I</b>  | ug/L  | 0.20   | 0.02    | 1    | 02/26/18 12:55 | 02/23/18       |   |

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Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A028  
**Sample Matrix:** Water  
**Sample Name:** D18A028-07  
**Lab Code:** J1801275-007

**Service Request:** J1801275  
**Date Collected:** 02/15/18 10:13  
**Date Received:** 02/20/18 09:27  
**Basis:** NA

Inorganic Parameters

| Analyte Name      | Analysis Method | Result    | Units | PQL    | MDL     | Dil. | Date Analyzed  | Date Extracted | Q |
|-------------------|-----------------|-----------|-------|--------|---------|------|----------------|----------------|---|
| Antimony, Total   | 200.8           | 2.3       | ug/L  | 1.0    | 0.04    | 1    | 02/26/18 12:57 | 02/23/18       |   |
| Arsenic, Total    | 200.8           | 1.4       | ug/L  | 1.0    | 0.10    | 1    | 02/26/18 12:57 | 02/23/18       |   |
| Barium, Total     | 200.7           | 0.061     | mg/L  | 0.010  | 0.001   | 1    | 02/22/18 23:28 | 02/22/18       |   |
| Beryllium, Total  | 200.7           | 0.00006 U | mg/L  | 0.0040 | 0.00006 | 1    | 02/22/18 23:28 | 02/22/18       |   |
| Boron, Total      | 200.7           | 1.36      | mg/L  | 0.050  | 0.025   | 1    | 02/22/18 23:28 | 02/22/18       |   |
| Cadmium, Total    | 200.7           | 0.0002 U  | mg/L  | 0.0050 | 0.0002  | 1    | 02/22/18 23:28 | 02/22/18       |   |
| Chromium, Total   | 200.7           | 0.002 I   | mg/L  | 0.010  | 0.0004  | 1    | 02/22/18 23:28 | 02/22/18       |   |
| Cobalt, Total     | 200.7           | 0.003 U   | mg/L  | 0.010  | 0.003   | 1    | 02/22/18 23:28 | 02/22/18       |   |
| Lead, Total       | 200.8           | 0.08 I    | ug/L  | 0.50   | 0.03    | 1    | 02/26/18 12:57 | 02/23/18       |   |
| Lithium, Total    | 200.7           | 0.008 I   | mg/L  | 0.10   | 0.002   | 1    | 02/22/18 23:27 | 02/22/18       |   |
| Molybdenum, Total | 200.7           | 0.350     | mg/L  | 0.010  | 0.0003  | 1    | 02/22/18 23:28 | 02/22/18       |   |
| Selenium, Total   | 200.7           | 0.012 V   | mg/L  | 0.010  | 0.002   | 1    | 02/22/18 23:28 | 02/22/18       |   |
| Thallium, Total   | 200.8           | 0.02 I    | ug/L  | 0.20   | 0.02    | 1    | 02/26/18 12:57 | 02/23/18       |   |

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Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A028  
**Sample Matrix:** Water  
**Sample Name:** D18A028-08  
**Lab Code:** J1801275-008

**Service Request:** J1801275  
**Date Collected:** 02/15/18 08:44  
**Date Received:** 02/20/18 09:27

**Basis:** NA

Inorganic Parameters

| Analyte Name      | Analysis Method | Result         | Units | PQL    | MDL     | Dil. | Date Analyzed  | Date Extracted | Q |
|-------------------|-----------------|----------------|-------|--------|---------|------|----------------|----------------|---|
| Antimony, Total   | 200.8           | <b>8.1</b>     | ug/L  | 1.0    | 0.04    | 1    | 02/26/18 13:07 | 02/23/18       |   |
| Arsenic, Total    | 200.8           | <b>2.1</b>     | ug/L  | 1.0    | 0.10    | 1    | 02/26/18 13:07 | 02/23/18       |   |
| Barium, Total     | 200.7           | <b>0.072</b>   | mg/L  | 0.010  | 0.001   | 1    | 02/22/18 23:33 | 02/22/18       |   |
| Beryllium, Total  | 200.7           | 0.00006 U      | mg/L  | 0.0040 | 0.00006 | 1    | 02/22/18 23:33 | 02/22/18       |   |
| Boron, Total      | 200.7           | <b>1.06</b>    | mg/L  | 0.050  | 0.025   | 1    | 02/22/18 23:33 | 02/22/18       |   |
| Cadmium, Total    | 200.7           | 0.0002 U       | mg/L  | 0.0050 | 0.0002  | 1    | 02/22/18 23:33 | 02/22/18       |   |
| Chromium, Total   | 200.7           | <b>0.001 I</b> | mg/L  | 0.010  | 0.0004  | 1    | 02/22/18 23:33 | 02/22/18       |   |
| Cobalt, Total     | 200.7           | 0.003 U        | mg/L  | 0.010  | 0.003   | 1    | 02/22/18 23:33 | 02/22/18       |   |
| Lead, Total       | 200.8           | 0.03 U         | ug/L  | 0.50   | 0.03    | 1    | 02/26/18 13:07 | 02/23/18       |   |
| Lithium, Total    | 200.7           | <b>0.27</b>    | mg/L  | 0.10   | 0.002   | 1    | 02/22/18 23:32 | 02/22/18       |   |
| Molybdenum, Total | 200.7           | <b>0.122</b>   | mg/L  | 0.010  | 0.0003  | 1    | 02/22/18 23:33 | 02/22/18       |   |
| Selenium, Total   | 200.7           | <b>0.014 V</b> | mg/L  | 0.010  | 0.002   | 1    | 02/22/18 23:33 | 02/22/18       |   |
| Thallium, Total   | 200.8           | <b>0.60</b>    | ug/L  | 0.20   | 0.02    | 1    | 02/26/18 13:07 | 02/23/18       |   |

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Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A028  
**Sample Matrix:** Water  
**Sample Name:** D18A028-09  
**Lab Code:** J1801275-009

**Service Request:** J1801275  
**Date Collected:** 02/13/18 11:12  
**Date Received:** 02/20/18 09:27  
**Basis:** NA

**Inorganic Parameters**

| <b>Analyte Name</b> | <b>Analysis Method</b> | <b>Result</b> | <b>Units</b> | <b>PQL</b> | <b>MDL</b> | <b>Dil.</b> | <b>Date Analyzed</b> | <b>Date Extracted</b> | <b>Q</b> |
|---------------------|------------------------|---------------|--------------|------------|------------|-------------|----------------------|-----------------------|----------|
| Arsenic, Total      | 200.8                  | <b>11.4</b>   | ug/L         | 1.0        | 0.10       | 1           | 02/26/18 13:09       | 02/23/18              |          |
| Lithium, Total      | 200.7                  | 0.002 U       | mg/L         | 0.10       | 0.002      | 1           | 02/22/18 23:57       | 02/22/18              |          |

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Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A028  
**Sample Matrix:** Water  
**Sample Name:** D18A028-10  
**Lab Code:** J1801275-010

**Service Request:** J1801275  
**Date Collected:** 02/13/18 16:40  
**Date Received:** 02/20/18 09:27  
**Basis:** NA

Inorganic Parameters

| Analyte Name   | Analysis Method | Result  | Units | PQL  | MDL   | Dil. | Date Analyzed  | Date Extracted | Q |
|----------------|-----------------|---------|-------|------|-------|------|----------------|----------------|---|
| Lithium, Total | 200.7           | 0.002 U | mg/L  | 0.10 | 0.002 | 1    | 02/23/18 00:02 | 02/22/18       |   |

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Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A028  
**Sample Matrix:** Water  
**Sample Name:** D18A028-11  
**Lab Code:** J1801275-011

**Service Request:** J1801275  
**Date Collected:** 02/14/18 09:05  
**Date Received:** 02/20/18 09:27  
**Basis:** NA

Inorganic Parameters

| Analyte Name   | Analysis Method | Result  | Units | PQL  | MDL   | Dil. | Date Analyzed  | Date Extracted | Q |
|----------------|-----------------|---------|-------|------|-------|------|----------------|----------------|---|
| Lithium, Total | 200.7           | 0.002 U | mg/L  | 0.10 | 0.002 | 1    | 02/23/18 00:06 | 02/22/18       |   |

ALS Group USA, Corp.  
dba ALS Environmental

Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A028  
**Sample Matrix:** Water  
**Sample Name:** D18A028-12  
**Lab Code:** J1801275-012

**Service Request:** J1801275  
**Date Collected:** 02/14/18 15:58  
**Date Received:** 02/20/18 09:27  
**Basis:** NA

Inorganic Parameters

| Analyte Name      | Analysis Method | Result         | Units | PQL    | MDL     | Dil. | Date Analyzed  | Date Extracted | Q |
|-------------------|-----------------|----------------|-------|--------|---------|------|----------------|----------------|---|
| Antimony, Total   | 200.8           | <b>0.06 I</b>  | ug/L  | 1.0    | 0.04    | 1    | 02/26/18 13:10 | 02/23/18       |   |
| Arsenic, Total    | 200.8           | <b>8.4</b>     | ug/L  | 1.0    | 0.10    | 1    | 02/26/18 13:10 | 02/23/18       |   |
| Barium, Total     | 200.7           | <b>0.014</b>   | mg/L  | 0.010  | 0.001   | 1    | 02/23/18 00:27 | 02/22/18       |   |
| Beryllium, Total  | 200.7           | 0.00006 U      | mg/L  | 0.0040 | 0.00006 | 1    | 02/23/18 00:27 | 02/22/18       |   |
| Boron, Total      | 200.7           | 0.025 U        | mg/L  | 0.050  | 0.025   | 1    | 02/23/18 00:27 | 02/22/18       |   |
| Cadmium, Total    | 200.7           | 0.0002 U       | mg/L  | 0.0050 | 0.0002  | 1    | 02/23/18 00:27 | 02/22/18       |   |
| Chromium, Total   | 200.7           | <b>0.001 I</b> | mg/L  | 0.010  | 0.0004  | 1    | 02/23/18 00:27 | 02/22/18       |   |
| Cobalt, Total     | 200.7           | 0.003 U        | mg/L  | 0.010  | 0.003   | 1    | 02/23/18 00:27 | 02/22/18       |   |
| Lead, Total       | 200.8           | <b>0.04 I</b>  | ug/L  | 0.50   | 0.03    | 1    | 02/26/18 13:10 | 02/23/18       |   |
| Lithium, Total    | 200.7           | 0.002 U        | mg/L  | 0.10   | 0.002   | 1    | 02/23/18 00:26 | 02/22/18       |   |
| Molybdenum, Total | 200.7           | <b>0.008 I</b> | mg/L  | 0.010  | 0.0003  | 1    | 02/23/18 00:27 | 02/22/18       |   |
| Selenium, Total   | 200.7           | <b>0.010 V</b> | mg/L  | 0.010  | 0.002   | 1    | 02/23/18 00:27 | 02/22/18       |   |
| Thallium, Total   | 200.8           | 0.02 U         | ug/L  | 0.20   | 0.02    | 1    | 02/26/18 13:10 | 02/23/18       |   |

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Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A028  
**Sample Matrix:** Water  
**Sample Name:** D18A028-13  
**Lab Code:** J1801275-013

**Service Request:** J1801275  
**Date Collected:** 02/14/18 11:12  
**Date Received:** 02/20/18 09:27  
**Basis:** NA

Inorganic Parameters

| Analyte Name      | Analysis Method | Result          | Units | PQL    | MDL     | Dil. | Date Analyzed  | Date Extracted | Q |
|-------------------|-----------------|-----------------|-------|--------|---------|------|----------------|----------------|---|
| Antimony, Total   | 200.8           | <b>0.1 I</b>    | ug/L  | 1.0    | 0.04    | 1    | 02/26/18 13:12 | 02/23/18       |   |
| Arsenic, Total    | 200.8           | <b>0.9 I</b>    | ug/L  | 1.0    | 0.10    | 1    | 02/26/18 13:12 | 02/23/18       |   |
| Barium, Total     | 200.7           | <b>0.015</b>    | mg/L  | 0.010  | 0.001   | 1    | 02/23/18 00:32 | 02/22/18       |   |
| Beryllium, Total  | 200.7           | 0.00006 U       | mg/L  | 0.0040 | 0.00006 | 1    | 02/23/18 00:32 | 02/22/18       |   |
| Boron, Total      | 200.7           | 0.025 U         | mg/L  | 0.050  | 0.025   | 1    | 02/23/18 00:32 | 02/22/18       |   |
| Cadmium, Total    | 200.7           | 0.0002 U        | mg/L  | 0.0050 | 0.0002  | 1    | 02/23/18 00:32 | 02/22/18       |   |
| Chromium, Total   | 200.7           | 0.0004 U        | mg/L  | 0.010  | 0.0004  | 1    | 02/23/18 00:32 | 02/22/18       |   |
| Cobalt, Total     | 200.7           | 0.003 U         | mg/L  | 0.010  | 0.003   | 1    | 02/23/18 00:32 | 02/22/18       |   |
| Lead, Total       | 200.8           | <b>0.03 I</b>   | ug/L  | 0.50   | 0.03    | 1    | 02/26/18 13:12 | 02/23/18       |   |
| Lithium, Total    | 200.7           | 0.002 U         | mg/L  | 0.10   | 0.002   | 1    | 02/23/18 00:31 | 02/22/18       |   |
| Molybdenum, Total | 200.7           | <b>0.007 I</b>  | mg/L  | 0.010  | 0.0003  | 1    | 02/23/18 00:32 | 02/22/18       |   |
| Selenium, Total   | 200.7           | <b>0.009 IV</b> | mg/L  | 0.010  | 0.002   | 1    | 02/23/18 00:32 | 02/22/18       |   |
| Thallium, Total   | 200.8           | <b>0.06 I</b>   | ug/L  | 0.20   | 0.02    | 1    | 02/26/18 13:12 | 02/23/18       |   |



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Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A028  
**Sample Matrix:** Water  
**Sample Name:** D18A028-14  
**Lab Code:** J1801275-014

**Service Request:** J1801275  
**Date Collected:** 02/14/18 14:53  
**Date Received:** 02/20/18 09:27  
**Basis:** NA

Inorganic Parameters

| Analyte Name      | Analysis Method | Result          | Units | PQL    | MDL     | Dil. | Date Analyzed  | Date Extracted | Q |
|-------------------|-----------------|-----------------|-------|--------|---------|------|----------------|----------------|---|
| Antimony, Total   | 200.8           | 0.04 U          | ug/L  | 1.0    | 0.04    | 1    | 02/26/18 13:13 | 02/23/18       |   |
| Arsenic, Total    | 200.8           | 0.10 U          | ug/L  | 1.0    | 0.10    | 1    | 02/26/18 13:13 | 02/23/18       |   |
| Barium, Total     | 200.7           | 0.001 U         | mg/L  | 0.010  | 0.001   | 1    | 02/23/18 00:37 | 02/22/18       |   |
| Beryllium, Total  | 200.7           | 0.00006 U       | mg/L  | 0.0040 | 0.00006 | 1    | 02/23/18 00:37 | 02/22/18       |   |
| Boron, Total      | 200.7           | 0.025 U         | mg/L  | 0.050  | 0.025   | 1    | 02/23/18 00:37 | 02/22/18       |   |
| Cadmium, Total    | 200.7           | 0.0002 U        | mg/L  | 0.0050 | 0.0002  | 1    | 02/23/18 00:37 | 02/22/18       |   |
| Chromium, Total   | 200.7           | 0.0004 U        | mg/L  | 0.010  | 0.0004  | 1    | 02/23/18 00:37 | 02/22/18       |   |
| Cobalt, Total     | 200.7           | 0.003 U         | mg/L  | 0.010  | 0.003   | 1    | 02/23/18 00:37 | 02/22/18       |   |
| Lead, Total       | 200.8           | 0.03 U          | ug/L  | 0.50   | 0.03    | 1    | 02/26/18 13:13 | 02/23/18       |   |
| Lithium, Total    | 200.7           | 0.002 U         | mg/L  | 0.10   | 0.002   | 1    | 02/23/18 00:36 | 02/22/18       |   |
| Molybdenum, Total | 200.7           | 0.0003 U        | mg/L  | 0.010  | 0.0003  | 1    | 02/23/18 00:37 | 02/22/18       |   |
| Selenium, Total   | 200.7           | <b>0.002 IV</b> | mg/L  | 0.010  | 0.002   | 1    | 02/23/18 00:37 | 02/22/18       |   |
| Thallium, Total   | 200.8           | 0.02 U          | ug/L  | 0.20   | 0.02    | 1    | 02/26/18 13:13 | 02/23/18       |   |



## QC Summary Forms

**ALS Environmental - Jacksonville Laboratory**  
9143 Philips Highway, Suite 200, Jacksonville, FL 32256  
Phone (904) 739-2277 Fax (904) 739-2011  
[www.alsglobal.com](http://www.alsglobal.com)



# Metals

**ALS Environmental—Jacksonville Laboratory**  
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Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A028  
**Sample Matrix:** Water  
**Sample Name:** Method Blank  
**Lab Code:** J1801275-MB

**Service Request:** J1801275  
**Date Collected:** NA  
**Date Received:** NA  
**Basis:** NA

Inorganic Parameters

| Analyte Name      | Analysis Method | Result         | Units | PQL    | MDL     | Dil. | Date Analyzed  | Date Extracted | Q |
|-------------------|-----------------|----------------|-------|--------|---------|------|----------------|----------------|---|
| Antimony, Total   | 200.8           | 0.04 U         | ug/L  | 1.0    | 0.04    | 1    | 02/26/18 12:44 | 02/23/18       |   |
| Arsenic, Total    | 200.8           | 0.10 U         | ug/L  | 1.0    | 0.10    | 1    | 02/26/18 12:44 | 02/23/18       |   |
| Barium, Total     | 200.7           | 0.001 U        | mg/L  | 0.010  | 0.001   | 1    | 02/22/18 21:55 | 02/22/18       |   |
| Beryllium, Total  | 200.7           | 0.00006 U      | mg/L  | 0.0040 | 0.00006 | 1    | 02/22/18 21:54 | 02/22/18       |   |
| Boron, Total      | 200.7           | 0.025 U        | mg/L  | 0.050  | 0.025   | 1    | 02/22/18 21:55 | 02/22/18       |   |
| Cadmium, Total    | 200.7           | 0.0002 U       | mg/L  | 0.0050 | 0.0002  | 1    | 02/22/18 21:55 | 02/22/18       |   |
| Chromium, Total   | 200.7           | 0.0004 U       | mg/L  | 0.010  | 0.0004  | 1    | 02/22/18 21:55 | 02/22/18       |   |
| Cobalt, Total     | 200.7           | 0.003 U        | mg/L  | 0.010  | 0.003   | 1    | 02/22/18 21:55 | 02/22/18       |   |
| Lead, Total       | 200.8           | 0.03 U         | ug/L  | 0.50   | 0.03    | 1    | 02/26/18 12:44 | 02/23/18       |   |
| Lithium, Total    | 200.7           | 0.002 U        | mg/L  | 0.10   | 0.002   | 1    | 02/22/18 21:53 | 02/22/18       |   |
| Molybdenum, Total | 200.7           | 0.0003 U       | mg/L  | 0.010  | 0.0003  | 1    | 02/22/18 21:55 | 02/22/18       |   |
| Selenium, Total   | 200.7           | <b>0.002 I</b> | mg/L  | 0.010  | 0.002   | 1    | 02/22/18 21:55 | 02/22/18       |   |
| Thallium, Total   | 200.8           | 0.02 U         | ug/L  | 0.20   | 0.02    | 1    | 02/26/18 12:44 | 02/23/18       |   |

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QA/QC Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A028  
**Sample Matrix:** Water

**Service Request:** J1801275  
**Date Analyzed:** 02/26/18

**Lab Control Sample Summary**  
**Inorganic Parameters**

**Units:**ug/L  
**Basis:**NA

**Lab Control Sample**  
J1801275-LCS

| <b>Analyte Name</b> | <b>Analytical Method</b> | <b>Result</b> | <b>Spike Amount</b> | <b>% Rec</b> | <b>% Rec Limits</b> |
|---------------------|--------------------------|---------------|---------------------|--------------|---------------------|
| Antimony, Total     | 200.8                    | 51.4          | 50.0                | 103          | 85-115              |
| Arsenic, Total      | 200.8                    | 51.3          | 50.0                | 103          | 85-115              |
| Lead, Total         | 200.8                    | 25.4          | 25.0                | 102          | 85-115              |
| Thallium, Total     | 200.8                    | 9.82          | 10.0                | 98           | 85-115              |

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QA/QC Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A028  
**Sample Matrix:** Water

**Service Request:** J1801275  
**Date Analyzed:** 02/22/18

**Lab Control Sample Summary**  
**Inorganic Parameters**

**Units:**mg/L  
**Basis:**NA

**Lab Control Sample**  
J1801275-LCS

| <b>Analyte Name</b> | <b>Analytical Method</b> | <b>Result</b> | <b>Spike Amount</b> | <b>% Rec</b> | <b>% Rec Limits</b> |
|---------------------|--------------------------|---------------|---------------------|--------------|---------------------|
| Barium, Total       | 200.7                    | 0.518         | 0.500               | 104          | 85-115              |
| Beryllium, Total    | 200.7                    | 0.208         | 0.200               | 104          | 85-115              |
| Boron, Total        | 200.7                    | 2.57          | 2.50                | 103          | 85-115              |
| Cadmium, Total      | 200.7                    | 0.257         | 0.250               | 103          | 85-115              |
| Chromium, Total     | 200.7                    | 0.511         | 0.500               | 102          | 85-115              |
| Cobalt, Total       | 200.7                    | 0.521         | 0.500               | 104          | 85-115              |
| Lithium, Total      | 200.7                    | 5.12          | 5.00                | 102          | 85-115              |
| Molybdenum, Total   | 200.7                    | 0.515         | 0.500               | 103          | 85-115              |
| Selenium, Total     | 200.7                    | 0.533         | 0.500               | 107          | 85-115              |

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QA/QC Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A028  
**Sample Matrix:** Water

**Service Request:** J1801275  
**Date Collected:** 02/15/18  
**Date Received:** 02/20/18  
**Date Analyzed:** 02/22/18  
**Date Extracted:** 02/22/18

**Duplicate Matrix Spike Summary  
Inorganic Parameters**

**Sample Name:** D18A028-02  
**Lab Code:** J1801275-002  
**Analysis Method:** 200.7  
**Prep Method:** EPA 3005A

**Units:** mg/L  
**Basis:** NA

| Analyte Name      | Sample Result | Result | Matrix Spike<br>J1801275-002MS |       | Duplicate Matrix Spike<br>J1801275-002DMS |              | % Rec Limits | RPD    | RPD Limit |       |
|-------------------|---------------|--------|--------------------------------|-------|---|--------------|--------------|--------|-----------|-------|
|                   |               |        | Spike Amount                   | % Rec | Result                                    | Spike Amount |              |        |           | % Rec |
| Barium, Total     | 0.006 I       | 0.512  | 0.500                          | 101   | 0.515                                     | 0.500        | 102          | 70-130 | <1        | 20    |
| Beryllium, Total  | 0.00006 U     | 0.208  | 0.200                          | 104   | 0.209                                     | 0.200        | 105          | 70-130 | <1        | 20    |
| Boron, Total      | 0.025 I       | 2.58   | 2.50                           | 102   | 2.62                                      | 2.50         | 104          | 70-130 | 2         | 20    |
| Cadmium, Total    | 0.0002 U      | 0.252  | 0.250                          | 101   | 0.256                                     | 0.250        | 102          | 70-130 | 2         | 20    |
| Chromium, Total   | 0.0004 U      | 0.503  | 0.500                          | 101   | 0.510                                     | 0.500        | 102          | 70-130 | 1         | 20    |
| Cobalt, Total     | 0.003 U       | 0.504  | 0.500                          | 101   | 0.511                                     | 0.500        | 102          | 70-130 | 1         | 20    |
| Molybdenum, Total | 0.007 I       | 0.519  | 0.500                          | 102   | 0.528                                     | 0.500        | 104          | 70-130 | 2         | 20    |
| Selenium, Total   | 0.010 V       | 0.540  | 0.500                          | 106   | 0.549                                     | 0.500        | 108          | 70-130 | 2         | 20    |
| Lithium, Total    | 0.002 U       | 5.01   | 5.00                           | 100   | 5.12                                      | 5.00         | 102          | 70-130 | 2         | 20    |

Results flagged with an asterisk (\*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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QA/QC Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A028  
**Sample Matrix:** Water

**Service Request:** J1801275  
**Date Collected:** 02/15/18  
**Date Received:** 02/20/18  
**Date Analyzed:** 02/22/18  
**Date Extracted:** 02/22/18

**Duplicate Matrix Spike Summary**  
**Inorganic Parameters**

**Sample Name:** D18A028-08  
**Lab Code:** J1801275-008  
**Analysis Method:** 200.7  
**Prep Method:** EPA 3005A

**Units:** mg/L  
**Basis:** NA

| Analyte Name      | Sample    |        | Matrix Spike |       | Duplicate Matrix Spike |              | % Rec Limits | RPD    | RPD Limit |       |
|-------------------|-----------|--------|--------------|-------|------------------------|--------------|--------------|--------|-----------|-------|
|                   | Result    | Result | Spike Amount | % Rec | Result                 | Spike Amount |              |        |           | % Rec |
| Barium, Total     | 0.072     | 0.600  | 0.500        | 106   | 0.590                  | 0.500        | 104          | 70-130 | 2         | 20    |
| Beryllium, Total  | 0.00006 U | 0.216  | 0.200        | 108   | 0.212                  | 0.200        | 106          | 70-130 | 2         | 20    |
| Boron, Total      | 1.06      | 3.80   | 2.50         | 110   | 3.73                   | 2.50         | 107          | 70-130 | 2         | 20    |
| Cadmium, Total    | 0.0002 U  | 0.265  | 0.250        | 106   | 0.264                  | 0.250        | 106          | 70-130 | <1        | 20    |
| Chromium, Total   | 0.001 I   | 0.527  | 0.500        | 105   | 0.521                  | 0.500        | 104          | 70-130 | 1         | 20    |
| Cobalt, Total     | 0.003 U   | 0.522  | 0.500        | 104   | 0.518                  | 0.500        | 104          | 70-130 | <1        | 20    |
| Molybdenum, Total | 0.122     | 0.664  | 0.500        | 108   | 0.658                  | 0.500        | 107          | 70-130 | <1        | 20    |
| Selenium, Total   | 0.014 V   | 0.571  | 0.500        | 111   | 0.568                  | 0.500        | 111          | 70-130 | <1        | 20    |
| Lithium, Total    | 0.27      | 5.65   | 5.00         | 108   | 5.56                   | 5.00         | 106          | 70-130 | 1         | 20    |

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QA/QC Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A028  
**Sample Matrix:** Water

**Service Request:** J1801275  
**Date Collected:** 02/15/18  
**Date Received:** 02/20/18  
**Date Analyzed:** 02/26/18  
**Date Extracted:** 02/23/18

**Duplicate Matrix Spike Summary  
Inorganic Parameters**

**Sample Name:** D18A028-07  
**Lab Code:** J1801275-007  
**Analysis Method:** 200.8  
**Prep Method:** EPA 3005A

**Units:** ug/L  
**Basis:** NA

| Analyte Name    | Sample Result | Result | Matrix Spike<br>J1801275-007MS |       | Duplicate Matrix Spike<br>J1801275-007DMS |              | % Rec Limits | RPD    | RPD Limit |       |
|-----------------|---------------|--------|--------------------------------|-------|---|--------------|--------------|--------|-----------|-------|
|                 |               |        | Spike Amount                   | % Rec | Result                                    | Spike Amount |              |        |           | % Rec |
| Antimony, Total | 2.3           | 54.1   | 50.0                           | 104   | 55.3                                      | 50.0         | 106          | 70-130 | 2         | 20    |
| Arsenic, Total  | 1.4           | 53.6   | 50.0                           | 104   | 53.0                                      | 50.0         | 103          | 70-130 | 1         | 20    |
| Lead, Total     | 0.08 I        | 25.0   | 25.0                           | 100   | 25.3                                      | 25.0         | 101          | 70-130 | 1         | 20    |
| Thallium, Total | 0.02 I        | 9.83   | 10.0                           | 98    | 9.97                                      | 10.0         | 99           | 70-130 | 1         | 20    |

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Florida Department of Health Certification E52099

March 21, 2018

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Deerhaven Laboratory  
Station D-38  
Gainesville, FL/USA 32614-7117

RE: Environmental

Enclosed are the results of analyses for samples received by the laboratory on 2/19/2018. If you have any questions concerning this report, please feel free to contact me.

Please note that all results were determined in accordance with NELAP requirements. All data is subject to a degree of uncertainty. Kanapaha Lab uncertainty is based upon LCS quality control statistics.

Sincerely,

Jaclyn M Dihos  
Laboratory Supervisor



Deerhaven Laboratory  
Station D-38  
Gainesville, FL/USA 32614-7117

Project: Environmental  
Project Number: D18A028  
Project Manager: Jeff Boudreau

**Reported:**  
03/21/2018 12:11

### ANALYTICAL REPORT FOR SAMPLES

| <b>Laboratory ID</b> | <b>Sample ID</b>             | <b>Matrix</b> | <b>Date Sampled</b> | <b>Date Received</b> |
|----------------------|------------------------------|---------------|---------------------|----------------------|
| K18B057-01           | D18A028-01 (SIS-1)           | Groundwater   | 02/14/2018 12:02    | 02/19/2018 12:00     |
| K18B057-02           | D18A028-02 (SIS-2)           | Groundwater   | 02/15/2018 13:43    | 02/19/2018 12:00     |
| K18B057-03           | D18A028-03 (SIS-3)           | Groundwater   | 02/14/2018 14:15    | 02/19/2018 12:00     |
| K18B057-04           | D18A028-04 (SIS-4)           | Groundwater   | 02/15/2018 15:00    | 02/19/2018 12:00     |
| K18B057-05           | D18A028-05 (LF-1)            | Groundwater   | 02/14/2018 10:16    | 02/19/2018 12:00     |
| K18B057-06           | D18A028-06 (LF-2)            | Groundwater   | 02/15/2018 11:50    | 02/19/2018 12:00     |
| K18B057-07           | D18A028-07 (LF-3)            | Groundwater   | 02/15/2018 10:13    | 02/19/2018 12:00     |
| K18B057-08           | D18A028-08 (LF-4)            | Groundwater   | 02/15/2018 08:44    | 02/19/2018 12:00     |
| K18B057-09           | D18A028-12 (MWI-4-5 (R4T5B)) | Groundwater   | 02/14/2018 15:58    | 02/19/2018 12:00     |
| K18B057-10           | D18A028-13 (MWI-6-4 (R6T4B)) | Groundwater   | 02/14/2018 11:12    | 02/19/2018 12:00     |
| K18B057-11           | D18A028-14 (EBLANK)          | Groundwater   | 02/14/2018 14:53    | 02/19/2018 12:00     |



Deerhaven Laboratory  
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Project: Environmental  
Project Number: D18A028  
Project Manager: Jeff Boudreau

**Reported:**  
03/21/2018 12:11

**D18A028-01 (SIS-1)**  
**K18B057-01 (Groundwater, Grab)**  
Collected: 02/14/2018 12:02 pm

| Analyte | Result | Qual | MDL | PQL | Units | Dil | Prepared | Analyzed | Method |
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|

**Laboratory: Kanapaha Laboratory**

**Metals by EPA 200 Series Methods**

|         |       |   |       |       |      |   |            |            |           |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|
| Mercury | 0.100 | U | 0.100 | 0.400 | ug/L | 1 | 02/20/2018 | 02/20/2018 | EPA 245.1 |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|

**D18A028-02 (SIS-2)**  
**K18B057-02 (Groundwater, Grab)**  
Collected: 02/15/2018 1:43 pm

| Analyte | Result | Qual | MDL | PQL | Units | Dil | Prepared | Analyzed | Method |
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|

**Laboratory: Kanapaha Laboratory**

**Metals by EPA 200 Series Methods**

|         |       |   |       |       |      |   |            |            |           |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|
| Mercury | 0.100 | U | 0.100 | 0.400 | ug/L | 1 | 02/20/2018 | 02/20/2018 | EPA 245.1 |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|

**D18A028-03 (SIS-3)**  
**K18B057-03 (Groundwater, Grab)**  
Collected: 02/14/2018 2:15 pm

| Analyte | Result | Qual | MDL | PQL | Units | Dil | Prepared | Analyzed | Method |
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|

**Laboratory: Kanapaha Laboratory**

**Metals by EPA 200 Series Methods**

|         |       |   |       |       |      |   |            |            |           |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|
| Mercury | 0.100 | U | 0.100 | 0.400 | ug/L | 1 | 02/20/2018 | 02/20/2018 | EPA 245.1 |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|

**D18A028-04 (SIS-4)**  
**K18B057-04 (Groundwater, Grab)**  
Collected: 02/15/2018 3:00 pm

| Analyte | Result | Qual | MDL | PQL | Units | Dil | Prepared | Analyzed | Method |
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|

**Laboratory: Kanapaha Laboratory**

**Metals by EPA 200 Series Methods**

|         |       |   |       |       |      |   |            |            |           |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|
| Mercury | 0.100 | U | 0.100 | 0.400 | ug/L | 1 | 02/20/2018 | 02/20/2018 | EPA 245.1 |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|



Deerhaven Laboratory  
Station D-38  
Gainesville, FL/USA 32614-7117

Project: Environmental  
Project Number: D18A028  
Project Manager: Jeff Boudreau

**Reported:**  
03/21/2018 12:11

**D18A028-05 (LF-1)**  
**K18B057-05 (Groundwater, Grab)**  
Collected: 02/14/2018 10:16 am

| Analyte | Result | Qual | MDL | PQL | Units | Dil | Prepared | Analyzed | Method |
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|

**Laboratory: Kanapaha Laboratory**

**Metals by EPA 200 Series Methods**

|         |       |   |       |       |      |   |            |            |           |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|
| Mercury | 0.100 | U | 0.100 | 0.400 | ug/L | 1 | 02/20/2018 | 02/20/2018 | EPA 245.1 |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|

**D18A028-06 (LF-2)**  
**K18B057-06 (Groundwater, Grab)**  
Collected: 02/15/2018 11:50 am

| Analyte | Result | Qual | MDL | PQL | Units | Dil | Prepared | Analyzed | Method |
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|

**Laboratory: Kanapaha Laboratory**

**Metals by EPA 200 Series Methods**

|         |       |   |       |       |      |   |            |            |           |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|
| Mercury | 0.100 | U | 0.100 | 0.400 | ug/L | 1 | 02/20/2018 | 02/20/2018 | EPA 245.1 |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|

**D18A028-07 (LF-3)**  
**K18B057-07 (Groundwater, Grab)**  
Collected: 02/15/2018 10:13 am

| Analyte | Result | Qual | MDL | PQL | Units | Dil | Prepared | Analyzed | Method |
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|

**Laboratory: Kanapaha Laboratory**

**Metals by EPA 200 Series Methods**

|         |       |   |       |       |      |   |            |            |           |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|
| Mercury | 0.100 | U | 0.100 | 0.400 | ug/L | 1 | 02/20/2018 | 02/20/2018 | EPA 245.1 |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|

**D18A028-08 (LF-4)**  
**K18B057-08 (Groundwater, Grab)**  
Collected: 02/15/2018 8:44 am

| Analyte | Result | Qual | MDL | PQL | Units | Dil | Prepared | Analyzed | Method |
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|

**Laboratory: Kanapaha Laboratory**

**Metals by EPA 200 Series Methods**

|         |       |   |       |       |      |   |            |            |           |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|
| Mercury | 0.100 | U | 0.100 | 0.400 | ug/L | 1 | 02/20/2018 | 02/20/2018 | EPA 245.1 |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|



Deerhaven Laboratory  
Station D-38  
Gainesville, FL/USA 32614-7117

Project: Environmental  
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Project Manager: Jeff Boudreau

**Reported:**  
03/21/2018 12:11

**D18A028-12 (MWI-4-5 (R4T5B))**  
**K18B057-09 (Groundwater, Grab)**  
Collected: 02/14/2018 3:58 pm

| Analyte | Result | Qual | MDL | PQL | Units | Dil | Prepared | Analyzed | Method |
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|

**Laboratory: Kanapaha Laboratory**

**Metals by EPA 200 Series Methods**

|         |       |   |       |       |      |   |            |            |           |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|
| Mercury | 0.100 | U | 0.100 | 0.400 | ug/L | 1 | 02/20/2018 | 02/20/2018 | EPA 245.1 |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|

**D18A028-13 (MWI-6-4 (R6T4B))**  
**K18B057-10 (Groundwater, Grab)**  
Collected: 02/14/2018 11:12 am

| Analyte | Result | Qual | MDL | PQL | Units | Dil | Prepared | Analyzed | Method |
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|

**Laboratory: Kanapaha Laboratory**

**Metals by EPA 200 Series Methods**

|         |       |   |       |       |      |   |            |            |           |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|
| Mercury | 0.100 | U | 0.100 | 0.400 | ug/L | 1 | 02/20/2018 | 02/20/2018 | EPA 245.1 |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|

**D18A028-14 (EBLANK)**  
**K18B057-11 (Groundwater, Grab)**  
Collected: 02/14/2018 2:53 pm

| Analyte | Result | Qual | MDL | PQL | Units | Dil | Prepared | Analyzed | Method |
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|

**Laboratory: Kanapaha Laboratory**

**Metals by EPA 200 Series Methods**

|         |       |   |       |       |      |   |            |            |           |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|
| Mercury | 0.100 | U | 0.100 | 0.400 | ug/L | 1 | 02/20/2018 | 02/20/2018 | EPA 245.1 |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|



Deerhaven Laboratory  
Station D-38  
Gainesville, FL/USA 32614-7117

Project: Environmental  
Project Number: D18A028  
Project Manager: Jeff Boudreau

**Reported:**  
03/21/2018 12:11

### Metals by EPA 200 Series Methods - Quality Control Laboratory: Kanapaha Laboratory

| Analyte                                | Result | Qual | MDL                       | PQL   | Units | Spike Level                    | Source Result | %REC | % REC Limits | RSD    | RSD Limit |
|--|--------|------|---------------------------|-------|-------|--------------------------------|---------------|------|--------------|--------|-----------|
| <b>Batch B18B145 - MERCURY</b>         |        |      |                           |       |       |                                |               |      |              |        |           |
| <b>Blank (B18B145-BLK1)</b>            |        |      |                           |       |       | Prepared & Analyzed: 2/20/2018 |               |      |              |        |           |
| Mercury                                | 0.100  | U    | 0.100                     | 0.400 | ug/L  |                                |               |      |              |        | NR        |
| <b>Blank (B18B145-BLK2)</b>            |        |      |                           |       |       | Prepared & Analyzed: 2/20/2018 |               |      |              |        |           |
| Mercury                                | 0.100  | U    | 0.100                     | 0.400 | ug/L  |                                |               |      |              |        | NR        |
| <b>Blank (B18B145-BLK3)</b>            |        |      |                           |       |       | Prepared & Analyzed: 2/20/2018 |               |      |              |        |           |
| Mercury                                | 0.100  | U    | 0.100                     | 0.400 | ug/L  |                                |               |      |              |        | NR        |
| <b>LCS (B18B145-BS1)</b>               |        |      |                           |       |       | Prepared & Analyzed: 2/20/2018 |               |      |              |        |           |
| Mercury                                | 19.5   |      |                           |       | ug/L  | 20.0                           |               | 97.7 | 90-110       | 0.475  |           |
| <b>LCS (B18B145-BS2)</b>               |        |      |                           |       |       | Prepared & Analyzed: 2/20/2018 |               |      |              |        |           |
| Mercury                                | 19.5   |      |                           |       | ug/L  | 20.0                           |               | 97.6 | 90-110       | 0.475  |           |
| <b>LCS (B18B145-BS3)</b>               |        |      |                           |       |       | Prepared & Analyzed: 2/20/2018 |               |      |              |        |           |
| Mercury                                | 19.4   |      |                           |       | ug/L  | 20.0                           |               | 96.8 | 90-110       | 0.475  |           |
| <b>Duplicate (B18B145-DUP1)</b>        |        |      | <b>Source: K18B057-10</b> |       |       | Prepared & Analyzed: 2/20/2018 |               |      |              |        |           |
| Mercury                                | 0.100  | U    | 0.100                     | 0.400 | ug/L  |                                | ND            |      |              |        | NR        |
| <b>Duplicate (B18B145-DUP2)</b>        |        |      | <b>Source: K18B058-01</b> |       |       | Prepared & Analyzed: 2/20/2018 |               |      |              |        |           |
| Mercury                                | 0.100  | U    | 0.100                     | 0.400 | ug/L  |                                | ND            |      |              |        | NR        |
| <b>Matrix Spike (B18B145-MS1)</b>      |        |      | <b>Source: K18B057-10</b> |       |       | Prepared & Analyzed: 2/20/2018 |               |      |              |        |           |
| Mercury                                | 1.98   |      | 0.100                     | 0.400 | ug/L  | 2.00                           | ND            | 99.1 | 90-110       | 0.240  |           |
| <b>Matrix Spike (B18B145-MS2)</b>      |        |      | <b>Source: K18B058-01</b> |       |       | Prepared & Analyzed: 2/20/2018 |               |      |              |        |           |
| Mercury                                | 2.00   |      | 0.100                     | 0.400 | ug/L  | 2.00                           | ND            | 100  | 90-110       | 0.0639 |           |
| <b>Matrix Spike Dup (B18B145-MSD1)</b> |        |      | <b>Source: K18B057-10</b> |       |       | Prepared & Analyzed: 2/20/2018 |               |      |              |        |           |
| Mercury                                | 1.97   |      | 0.100                     | 0.400 | ug/L  | 2.00                           | ND            | 98.7 | 90-110       | 0.240  |           |
| <b>Matrix Spike Dup (B18B145-MSD2)</b> |        |      | <b>Source: K18B058-01</b> |       |       | Prepared & Analyzed: 2/20/2018 |               |      |              |        |           |
| Mercury                                | 2.00   |      | 0.100                     | 0.400 | ug/L  | 2.00                           | ND            | 99.9 | 90-110       | 0.0639 |           |



Deerhaven Laboratory  
Station D-38  
Gainesville, FL/USA 32614-7117

Project: Environmental  
Project Number: D18A028  
Project Manager: Jeff Boudreau

**Reported:**  
03/21/2018 12:11

### Notes and Definitions

| <u>Qualifier</u> | <u>Description</u>  |
|------------------|---|
| NR               | Not Reported  |
| RSD              | Relative Standard Deviation   |
| U                | Compound was analyzed for but not detected                              |
| N                | Presumptive evidence of presence of material                            |
| L                | Off-scale high. Actual value is known to be greater than value given    |
| I                | The reported value is between the laboratory MDL and the laboratory PQL |
| V                | Analyte was detected in both the sample and the associated method blank |





**SUBCONTRACT ORDER**  
**Deerhaven Generating Station**  
**D18A028**

**SENDING LABORATORY:**

Gainesville Regional Utilities  
 Deerhaven Generating Station  
 10001 NW 13th Street  
 Gainesville, FL 32653  
 Phone: 352-334-3434  
 Fax: 352-334-3149  
 Project Manager: Jeff Boudreau

**RECEIVING LABORATORY:**

Kanapaha Laboratory  
 3901 SW 63rd BLVD  
 Gainesville, FL/USA 32608  
 Phone :352-393-6777  
 Fax: 352-334-2732

| Analysis                      | Expires         | Laboratory ID                   | Comments          |
|-------------------------------|-----------------|---------------------------------|-------------------|
| <b>Sample Name: SIS-1</b>     |                 |                                 |                   |
| <b>Sample ID: D18A028-01</b>  | <b>Water</b>    | <b>Sampled: 14-Feb-18 12:02</b> | <i>K18B057-01</i> |
| K_Beryllium                   | 13-Aug-18 12:02 |                                 |                   |
| K_Cadmium                     | 13-Aug-18 12:02 |                                 |                   |
| K_Chromium                    | 13-Aug-18 12:02 |                                 |                   |
| K_Cobalt                      | 13-Aug-18 12:02 |                                 |                   |
| K_Mercury, cold vapor         | 14-Mar-18 12:02 |                                 |                   |
| K_Molybdenum                  | 13-Aug-18 12:02 |                                 |                   |
| K_Selenium                    | 13-Aug-18 12:02 |                                 |                   |
| K_Barium                      | 13-Aug-18 12:02 |                                 |                   |
| <i>Containers Supplied:</i>   |                 |                                 |                   |
| D_HDPE, HNO3 pH<2 - 500mL (A) |                 |                                 |                   |
| <b>Sample Name: SIS-2</b>     |                 |                                 |                   |
| <b>Sample ID: D18A028-02</b>  | <b>Water</b>    | <b>Sampled: 15-Feb-18 13:43</b> | <i>K18B057-02</i> |
| K_Barium                      | 14-Aug-18 13:43 |                                 |                   |
| K_Selenium                    | 14-Aug-18 13:43 |                                 |                   |
| K_Molybdenum                  | 14-Aug-18 13:43 |                                 |                   |
| K_Mercury, cold vapor         | 15-Mar-18 13:43 |                                 |                   |
| K_Cobalt                      | 14-Aug-18 13:43 |                                 |                   |
| K_Chromium                    | 14-Aug-18 13:43 |                                 |                   |
| K_Beryllium                   | 14-Aug-18 13:43 |                                 |                   |
| K_Cadmium                     | 14-Aug-18 13:43 |                                 |                   |
| <i>Containers Supplied:</i>   |                 |                                 |                   |
| D_HDPE, HNO3 pH<2 - 500mL (A) |                 |                                 |                   |

*via Inter-office (I-O) mail*

|                        |                |                   |                        |
|------------------------|----------------|-------------------|------------------------|
| <i>Shelby Phillips</i> | <i>2-19-18</i> | <i>Jody M DeB</i> | <i>02-19-18 @ 1200</i> |
| Released By            | Date           | Received By       | Date                   |
| Released By            | Date           | Received By       | Date                   |



**SUBCONTRACT ORDER**  
**Deerhaven Generating Station**  
**D18A028**

| Analysis                      | Expires         | Laboratory ID                   | Comments          |
|-------------------------------|-----------------|---------------------------------|-------------------|
| <b>Sample Name: SIS-3</b>     |                 |                                 |                   |
| <b>Sample ID: D18A028-03</b>  | <b>Water</b>    | <b>Sampled: 14-Feb-18 14:15</b> | <b>K18B057-03</b> |
| K_Cobalt                      | 13-Aug-18 14:15 |                                 |                   |
| K_Mercury, cold vapor         | 14-Mar-18 14:15 |                                 |                   |
| K_Molybdenum                  | 13-Aug-18 14:15 |                                 |                   |
| K_Cadmium                     | 13-Aug-18 14:15 |                                 |                   |
| K_Barium                      | 13-Aug-18 14:15 |                                 |                   |
| K_Beryllium                   | 13-Aug-18 14:15 |                                 |                   |
| K_Selenium                    | 13-Aug-18 14:15 |                                 |                   |
| K_Chromium                    | 13-Aug-18 14:15 |                                 |                   |
| <i>Containers Supplied:</i>   |                 |                                 |                   |
| D_HDPE, HNO3 pH<2 - 500mL (A) |                 |                                 |                   |
| <b>Sample Name: SIS-4</b>     |                 |                                 |                   |
| <b>Sample ID: D18A028-04</b>  | <b>Water</b>    | <b>Sampled: 15-Feb-18 15:00</b> | <b>K18B057-04</b> |
| K_Molybdenum                  | 14-Aug-18 15:00 |                                 |                   |
| K_Selenium                    | 14-Aug-18 15:00 |                                 |                   |
| K_Mercury, cold vapor         | 15-Mar-18 15:00 |                                 |                   |
| K_Cobalt                      | 14-Aug-18 15:00 |                                 |                   |
| K_Cadmium                     | 14-Aug-18 15:00 |                                 |                   |
| K_Beryllium                   | 14-Aug-18 15:00 |                                 |                   |
| K_Barium                      | 14-Aug-18 15:00 |                                 |                   |
| K_Chromium                    | 14-Aug-18 15:00 |                                 |                   |
| <i>Containers Supplied:</i>   |                 |                                 |                   |
| D_HDPE, HNO3 pH<2 - 500mL (A) |                 |                                 |                   |
| <b>Sample Name: LF-1</b>      |                 |                                 |                   |
| <b>Sample ID: D18A028-05</b>  | <b>Water</b>    | <b>Sampled: 14-Feb-18 10:16</b> | <b>K18B057-05</b> |
| K_Chromium                    | 13-Aug-18 10:16 |                                 |                   |
| K_Selenium                    | 13-Aug-18 10:16 |                                 |                   |
| K_Molybdenum                  | 13-Aug-18 10:16 |                                 |                   |
| K_Barium                      | 13-Aug-18 10:16 |                                 |                   |
| K_Cobalt                      | 13-Aug-18 10:16 |                                 |                   |
| K_Cadmium                     | 13-Aug-18 10:16 |                                 |                   |
| K_Beryllium                   | 13-Aug-18 10:16 |                                 |                   |
| K_Mercury, cold vapor         | 14-Mar-18 10:16 |                                 |                   |
| <i>Containers Supplied:</i>   |                 |                                 |                   |
| D_HDPE, HNO3 pH<2 - 500mL (A) |                 |                                 |                   |

|                        |                |                     |                    |                        |
|------------------------|----------------|---------------------|--------------------|------------------------|
| <i>Shelby Phillips</i> | <i>2-19-18</i> | <i>via I-O mail</i> | <i>Jack M Debb</i> | <i>02-19-18 @ 1200</i> |
| Released By            | Date           |                     | Received By        | Date                   |
| Released By            | Date           |                     | Received By        | Date                   |



**SUBCONTRACT ORDER**  
**Deerhaven Generating Station**  
**D18A028**

| Analysis                      | Expires         | Laboratory ID                   | Comments          |
|-------------------------------|-----------------|---------------------------------|-------------------|
| <b>Sample Name: LF-2</b>      |                 |                                 |                   |
| <b>Sample ID: D18A028-06</b>  | <b>Water</b>    | <b>Sampled: 15-Feb-18 11:50</b> | <b>K18B057-06</b> |
| K_Chromium                    | 14-Aug-18 11:50 |                                 |                   |
| K_Barium                      | 14-Aug-18 11:50 |                                 |                   |
| K_Beryllium                   | 14-Aug-18 11:50 |                                 |                   |
| K_Cobalt                      | 14-Aug-18 11:50 |                                 |                   |
| K_Mercury, cold vapor         | 15-Mar-18 11:50 |                                 |                   |
| K_Molybdenum                  | 14-Aug-18 11:50 |                                 |                   |
| K_Selenium                    | 14-Aug-18 11:50 |                                 |                   |
| K_Cadmium                     | 14-Aug-18 11:50 |                                 |                   |
| <i>Containers Supplied:</i>   |                 |                                 |                   |
| D_HDPE, HNO3 pH<2 - 500mL (A) |                 |                                 |                   |
| <b>Sample Name: LF-3</b>      |                 |                                 |                   |
| <b>Sample ID: D18A028-07</b>  | <b>Water</b>    | <b>Sampled: 15-Feb-18 10:13</b> | <b>K18B057-07</b> |
| K_Mercury, cold vapor         | 15-Mar-18 10:13 |                                 |                   |
| K_Barium                      | 14-Aug-18 10:13 |                                 |                   |
| K_Beryllium                   | 14-Aug-18 10:13 |                                 |                   |
| K_Cadmium                     | 14-Aug-18 10:13 |                                 |                   |
| K_Chromium                    | 14-Aug-18 10:13 |                                 |                   |
| K_Cobalt                      | 14-Aug-18 10:13 |                                 |                   |
| K_Molybdenum                  | 14-Aug-18 10:13 |                                 |                   |
| K_Selenium                    | 14-Aug-18 10:13 |                                 |                   |
| <i>Containers Supplied:</i>   |                 |                                 |                   |
| D_HDPE, HNO3 pH<2 - 500mL (A) |                 |                                 |                   |
| <b>Sample Name: LF-4</b>      |                 |                                 |                   |
| <b>Sample ID: D18A028-08</b>  | <b>Water</b>    | <b>Sampled: 15-Feb-18 08:44</b> | <b>K18B057-08</b> |
| K_Chromium                    | 14-Aug-18 08:44 |                                 |                   |
| K_Cadmium                     | 14-Aug-18 08:44 |                                 |                   |
| K_Beryllium                   | 14-Aug-18 08:44 |                                 |                   |
| K_Barium                      | 14-Aug-18 08:44 |                                 |                   |
| K_Molybdenum                  | 14-Aug-18 08:44 |                                 |                   |
| K_Cobalt                      | 14-Aug-18 08:44 |                                 |                   |
| K_Selenium                    | 14-Aug-18 08:44 |                                 |                   |
| K_Mercury, cold vapor         | 15-Mar-18 08:44 |                                 |                   |
| <i>Containers Supplied:</i>   |                 |                                 |                   |
| D_HDPE, HNO3 pH<2 - 500mL (A) |                 |                                 |                   |

Released By: *Shelby Phillips* Date: *2-19-18* via Fed. mail Received By: *John M DeB* Date: *02-19-18 @ 1200*

Released By \_\_\_\_\_ Date \_\_\_\_\_ Received By \_\_\_\_\_ Date \_\_\_\_\_



**SUBCONTRACT ORDER**  
**Deerhaven Generating Station**  
**D18A028**

| Analysis                            | Expires         | Laboratory ID                   | Comments          |
|-------------------------------------|-----------------|---------------------------------|-------------------|
| <b>Sample Name: MWI-4-5 (R4T5B)</b> |                 |                                 |                   |
| <b>Sample ID: D18A028-12</b>        | <b>Water</b>    | <b>Sampled: 14-Feb-18 15:58</b> | <i>K18B057-09</i> |
| K_Cadmium                           | 13-Aug-18 15:58 |                                 |                   |
| K_Molybdenum                        | 13-Aug-18 15:58 |                                 |                   |
| K_Chromium                          | 13-Aug-18 15:58 |                                 |                   |
| K_Cobalt                            | 13-Aug-18 15:58 |                                 |                   |
| K_Mercury, cold vapor               | 14-Mar-18 15:58 |                                 |                   |
| K_Selenium                          | 13-Aug-18 15:58 |                                 |                   |
| K_Barium                            | 13-Aug-18 15:58 |                                 |                   |
| K_Beryllium                         | 13-Aug-18 15:58 |                                 |                   |
| <i>Containers Supplied:</i>         |                 |                                 |                   |
| D_HDPE, HNO3 pH<2 - 500mL (A)       |                 |                                 |                   |
| <b>Sample Name: MWI-6-4 (R6T4B)</b> |                 |                                 |                   |
| <b>Sample ID: D18A028-13</b>        | <b>Water</b>    | <b>Sampled: 14-Feb-18 11:12</b> | <i>K18B057-10</i> |
| K_Beryllium                         | 13-Aug-18 11:12 |                                 |                   |
| K_Cobalt                            | 13-Aug-18 11:12 |                                 |                   |
| K_Mercury, cold vapor               | 14-Mar-18 11:12 |                                 |                   |
| K_Molybdenum                        | 13-Aug-18 11:12 |                                 |                   |
| K_Selenium                          | 13-Aug-18 11:12 |                                 |                   |
| K_Cadmium                           | 13-Aug-18 11:12 |                                 |                   |
| K_Barium                            | 13-Aug-18 11:12 |                                 |                   |
| K_Chromium                          | 13-Aug-18 11:12 |                                 |                   |
| <i>Containers Supplied:</i>         |                 |                                 |                   |
| D_HDPE, HNO3 pH<2 - 500mL (A)       |                 |                                 |                   |
| <b>Sample Name: EBLANK</b>          |                 |                                 |                   |
| <b>Sample ID: D18A028-14</b>        | <b>Water</b>    | <b>Sampled: 14-Feb-18 14:53</b> | <i>K18B057-11</i> |
| K_Barium                            | 13-Aug-18 14:53 |                                 |                   |
| K_Beryllium                         | 13-Aug-18 14:53 |                                 |                   |
| K_Molybdenum                        | 13-Aug-18 14:53 |                                 |                   |
| K_Mercury, cold vapor               | 14-Mar-18 14:53 |                                 |                   |
| K_Cobalt                            | 13-Aug-18 14:53 |                                 |                   |
| K_Cadmium                           | 13-Aug-18 14:53 |                                 |                   |
| K_Selenium                          | 13-Aug-18 14:53 |                                 |                   |
| K_Chromium                          | 13-Aug-18 14:53 |                                 |                   |
| <i>Containers Supplied:</i>         |                 |                                 |                   |
| D_HDPE, HNO3 pH<2 - 500mL (A)       |                 |                                 |                   |

*via I-O mail*

|                         |                |                     |                       |
|-------------------------|----------------|---------------------|-----------------------|
| <i>Shelley Phillips</i> | <i>2-19-18</i> | <i>John M. DeCh</i> | <i>02-19-18 @1200</i> |
| Released By             | Date           | Received By         | Date                  |
| Released By             | Date           | Received By         | Date                  |

# Total Suspended Solids - Non-Filterable Residue - SM2540D

Date 2/20/18  
 Time 8:35  
 Analyst KSB  
 Batch 1803008

Quarter: #2 CCR

Duplicate Source: D18A028-01

| Sample ID  | ID     | Initial Filter Weight (g) | Sample Volume (mL) | Dry filter and Sample Final Wgt (g) | TSS, Final Result mg/L | Reporting Limit mg/L | Qual |
|------------|--------|---------------------------|--------------------|-------------------------------------|------------------------|----------------------|------|
| BLK        | BLK1   | 0.1149                    | 500                | 0.1148                              | -0.2                   | 1.0                  | U    |
| SRM        | SRM1   | 0.1174                    | 500                | 0.1571                              | 79.4                   | 1.0                  |      |
| D18A028-01 | SIS-1  | 0.1211                    | 500                | 0.1210                              | -0.2                   | 1.0                  | U    |
| DUP1       | SIS-1  | 0.1138                    | 500                | 0.1138                              | 0.0                    | 1.0                  | U    |
| D18A028-02 | SIS-2  | 0.1190                    | 500                | 0.1191                              | 0.2                    | 1.0                  | U    |
| D18A028-03 | SIS-3  | 0.1169                    | 500                | 0.1170                              | 0.2                    | 1.0                  | U    |
| D18A028-04 | SIS-4  | 0.1131                    | 500                | 0.1140                              | 1.8                    | 1.0                  | I    |
| D18A028-05 | LF-1   | 0.1177                    | 500                | 0.1176                              | -0.2                   | 1.0                  | U    |
| D18A028-06 | LF-2   | 0.1192                    | 500                | 0.1201                              | 1.8                    | 1.0                  | I    |
| D18A028-07 | LF-3   | 0.1152                    | 500                | 0.1152                              | 0.0                    | 1.0                  | U    |
| D18A028-08 | LF-4   | 0.1175                    | 500                | 0.1178                              | 0.6                    | 1.0                  | U    |
| D18A028-09 | R1T6   | 0.1202                    | 500                | 0.1233                              | 6.2                    | 1.0                  |      |
| D18A028-10 | R2T1   | 0.1124                    | 500                | 0.1121                              | -0.6                   | 1.0                  | U    |
| D18A028-11 | R6T1   | 0.1151                    | 500                | 0.1150                              | -0.2                   | 1.0                  | U    |
| D18A028-12 | R4T5   | 0.1141                    | 500                | 0.1141                              | 0.0                    | 1.0                  | U    |
| D18A028-13 | R6T4   | 0.1152                    | 500                | 0.1151                              | -0.2                   | 1.0                  | U    |
| D18A028-14 | EBLANK | 0.1211                    | 500                | 0.1210                              | -0.2                   | 1.0                  | U    |
|            |        |                           |                    |                                     |                        |                      |      |
|            |        |                           |                    |                                     |                        |                      |      |
|            |        |                           |                    |                                     |                        |                      |      |
|            |        |                           |                    |                                     |                        |                      |      |
|            |        |                           |                    |                                     |                        |                      |      |
|            |        |                           |                    |                                     |                        |                      |      |
|            |        |                           |                    |                                     |                        |                      |      |

|                     |                  |             |
|---------------------|------------------|-------------|
| Balance S/N: U07797 | SRM TV, mg/L     | 82.0        |
|                     | SRM, mg/L        | 79.4        |
| Oven S/N: U08230    | % Recovery       | 96.83       |
|                     | Low Range, mg/L  | 67.0        |
|                     | High Range, mg/L | 91.3        |
|                     | % Range          | 81.70731707 |
|                     |                  | 111.3414634 |

Total Suspended Solids = (Dry Filter and Sample(g) - Initial Filter(g)) \* 1000000 / Sample Volume (mL)

|           |   |
|-----------|---|
| Sample    | 0 |
| Duplicate | 0 |
| %RPD      | 0 |

Reviewed By: JB



March 28, 2018

Service Request No:J1801277

Jeffery Boudreau  
Gainesville Regional Utilities  
10001 NW 13th St  
Gainesville, FL 32653

**Laboratory Results for: D18A033**

Dear Jeffery,

Enclosed are the results of the sample(s) submitted to our laboratory February 20, 2018  
For your reference, these analyses have been assigned our service request number **J1801277**.

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and ALS Environmental is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report. In accordance to the NELAC 2003 Standard, a statement on the estimated uncertainty of measurement of any quantitative analysis will be supplied upon request.

Respectfully submitted,

**ALS Group USA, Corp. dba ALS Environmental**

Gina Bondani  
Project Manager

ADDRESS 9143 Philips Highway, Suite 200, Jacksonville, FL 32256  
PHONE +1 904 739 2277 | FAX +1 904 739 2011  
ALS Group USA, Corp.  
dba ALS Environmental



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## Table of Contents

|                              |    |
|------------------------------|----|
| CoverLetter                  | 1  |
| Table of Contents            | 2  |
| Narrative Documents          | 4  |
| Narrative Documents          | 5  |
| Hit Summary List             | 6  |
| Sample Receipt Information   | 7  |
| Sample Cross-Reference       | 8  |
| Chain Of Custody             | 9  |
| Miscellaneous Forms          | 11 |
| Qualifiers                   | 12 |
| Acronyms                     | 14 |
| Analyst Summary              | 15 |
| Sample Results               | 16 |
| Metals                       | 17 |
| D18A033-01 - Metals          | 18 |
| QC Summary Forms             | 19 |
| Metals                       | 20 |
| 200.7 - Inorganic Parameters |    |
| Method Blank - Metals        | 21 |
| Method Blank - Metals        | 22 |
| J1801277-LCS1 - LCS Metals   | 23 |
| J1801277-LCS2 - LCS Metals   | 25 |

## **Table of Contents (continued)**

|   |    |
|---|----|
| 200.8 - Inorganic Parameters            |    |
| J1801277-001DMS D18A033-01 - DMS Metals | 26 |





# Narrative Documents

**ALS Environmental—Jacksonville Laboratory**  
9143 Philips Highway, Suite 200, Jacksonville, FL 32256  
Phone (904) 739-2277 Fax (904) 739-2011  
[www.alsglobal.com](http://www.alsglobal.com)



**Client:** Gainesville Regional Utilities  
**Project:** D18A033  
**Sample Matrix:** Water

**Service Request:** J1801277  
**Date Received:** 2/20/18

### CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier II data deliverables, including results of QC samples analyzed from this delivery group. When appropriate to the procedure, method blank results have been reported with each analytical test. Analytical procedures performed by the lab are validated in accordance with NELAC standards. Parameters that are included in the NELAC Fields of Testing but are not included in the lab's NELAC accreditation are identified in the discussion of each analytical procedure.

#### Sample Receipt

1 water samples were received for analysis at ALS Environmental on 2/20/18. The samples were received in good condition and consistent with the accompanying chain of custody form. Samples are refrigerated at  $\leq 6^{\circ}\text{C}$  upon receipt at the lab except for aqueous samples designated for metals analyses, which are stored at room temperature.

#### Metals Analyses:

No significant data anomalies were noted with this analysis.

#### Revision Notes:

This revised report replaces the original report generated on 2/23/18 at 4:10pm. This revised report includes additional metals not originally requested.

Approved by  Date 3/28/2018

**SAMPLE DETECTION SUMMARY****CLIENT ID: D18A033-01****Lab ID: J1801277-001**

| <b>Analyte</b>  | <b>Results</b> | <b>Flag</b> | <b>MDL</b> | <b>PQL</b> | <b>Units</b> | <b>Method</b> |
|-----------------|----------------|-------------|------------|------------|--------------|---------------|
| Selenium, Total | 0.003          | IV          | 0.002      | 0.010      | mg/L         | 200.7         |



## Sample Receipt Information

**ALS Environmental—Jacksonville Laboratory**  
9143 Philips Highway, Suite 200, Jacksonville, FL 32256  
Phone (904) 739-2277 Fax (904) 739-2011  
[www.alsglobal.com](http://www.alsglobal.com)

**Client:** Gainesville Regional Utilities  
**Project:** D18A033

**Service Request:**J1801277

**SAMPLE CROSS-REFERENCE**

| <u>SAMPLE #</u> | <u>CLIENT SAMPLE ID</u> | <u>DATE</u> | <u>TIME</u> |
|-----------------|-------------------------|-------------|-------------|
| J1801277-001    | D18A033-01              | 2/9/2018    | 1045        |

**Cooler Receipt Form**

Client: GRU Service Request #: 51801277  
 Project: D18A033 Shipping paid by ALS?  
 Cooler received on 02/20/18 and opened on 02/20/18 by MRS Yes  No  N/A  
 COURIER: ALS UPS  FEDEX DHL Client Other \_\_\_\_\_ Airbill # 8127832480007

- 1 Were custody seals on outside of cooler? Yes  No   
 If yes, how many and where? #: \_\_\_ on lid other
- 2 Were seals intact and signature and date correct? Yes  No  N/A
- 3 Were custody papers properly filled out? Yes  No  N/A
- 4 Temperature of cooler(s) upon receipt (Should be 0°C and ≤ 6°C) Ambient \_\_\_\_\_  
 5 Thermometer ID N/A \_\_\_\_\_
- 6 Temperature Blank Present? Yes  No
- 7 Were Ice or Ice Packs present Ice  Ice Packs  No
- 8 Did all bottles arrive in good condition (unbroken, etc....)?  Yes  No  N/A
- 9 Type of packing material present Netting  Vial Holder  Bubble Wrap  
 Paper  Styrofoam  Other  N/A
- 10 Were all bottle labels complete (sample ID, preservation, etc....)?  Yes  No  N/A
- 11 Did all bottle labels and tags agree with custody papers?  Yes  No  N/A
- 12 Were the correct bottles used for the tests indicated?  Yes  No  N/A
- 13 Were all of the preserved bottles received with the appropriate preservative?  Yes  No  N/A  
HNO3 pH<2 H2SO4 pH<2 ZnAc2/NaOH pH>9 NaOH pH>12 HCl pH<2  
 Preservative additions noted below
- 14 Were all samples received within analysis holding times?  Yes  No  N/A
- 15 Were VOA vials free of air bubbles greater than 6mm? If present, note below Yes  No  N/A
- 16 Where did the bottles originate? ALS  Client

| Sample ID | Reagent | Lot # | ml added | Initials Date/Time |
|-----------|---------|-------|----------|--------------------|
|           |         |       |          |                    |
|           |         |       |          |                    |
|           |         |       |          |                    |
|           |         |       |          |                    |
|           |         |       |          |                    |
|           |         |       |          |                    |
|           |         |       |          |                    |
|           |         |       |          |                    |
|           |         |       |          |                    |
|           |         |       |          |                    |

Additional comments and/or explanation of all discrepancies noted above:  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Client approval to run samples if discrepancies noted: \_\_\_\_\_ Date: \_\_\_\_\_



**SUBCONTRACT ORDER**  
**Deerhaven Generating Station**  
**D18A033**

51861277

**SENDING LABORATORY:**

Gainesville Regional Utilities  
 Deerhaven Generating Station  
 10001 NW 13th Street  
 Gainesville, FL 32653  
 Phone: 352-334-3434  
 Fax: 352-334-3149  
 Project Manager: Jeff Boudreau

**RECEIVING LABORATORY:**

ALS Global  
 9143 Philips Highway, Suite 200  
 Jacksonville, FL 32256  
 Phone : (904) 394-4426  
 Fax: (904) 739-2011

**J1801277**  
 Gainesville Regional Utilities  
 D18A033

**5**



| Analysis                             | Expires         | Laboratory ID                  | Comments |
|--------------------------------------|-----------------|--------------------------------|----------|
| <b>Sample Name: Barnstead</b>        |                 |                                |          |
| <b>Sample ID: D18A033-01</b>         | <b>Water</b>    | <b>Sampled:09-Feb-18 10:45</b> |          |
| D_Thallium by 200.8                  | 08-Aug-18 10:45 |                                |          |
| D_Lithium by 200.7                   | 08-Aug-18 10:45 |                                |          |
| D_Lead by 200.8                      | 08-Aug-18 10:45 |                                |          |
| D_Arsenic by 200.8                   | 08-Aug-18 10:45 |                                |          |
| D_Antimony by 200.8                  | 08-Aug-18 10:45 |                                |          |
| <i>Containers Supplied:</i>          |                 |                                |          |
| D_HDPE, HNO3 pH<2 - 250mL extra2 (D) |                 |                                |          |

|                         |                |                  |             |                |                |
|-------------------------|----------------|------------------|-------------|----------------|----------------|
| <i>Shelley Phillips</i> | <i>2-19-18</i> | <i>Via Fedex</i> | <i>Sh S</i> | <i>2/20/18</i> | <i>Ambient</i> |
| Released By             | Date           |                  | Received By | Date           | <i>0927</i>    |
| Released By             | Date           |                  | Received By | Date           |                |



## Miscellaneous Forms

**ALS Environmental—Jacksonville Laboratory**  
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Phone (904) 739-2277 Fax (904) 739-2011  
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## **FLORIDA DEP DATA QUALIFIERS**

- B Results based upon colony counts outside the acceptable range.
- D Measurement was made in the field.
- H Value based on field kit determination; results may not be accurate.
- I The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
- J Estimated value (one of the following reasons is discussed in the project case narrative).
1. The result may be inaccurate because the surrogate recovery limits have been exceeded.
  2. No known quality control criteria exists for the component.
  3. The reported value failed to meet the established quality control criteria for either precision or accuracy.
  4. The sample matrix interfered with the ability to make any accurate determination (e.g., primary and confirmation results show greater than 40% RPD).
  5. The data is questionable because of improper laboratory or field protocols (e.g., GC/MS Tune did not meet method criteria).
- K Off scale low. The value is less than the lowest calibration standard but greater than the method reporting limit (MRL).
- L Off scale high. The analyte is above the upper limit of the linear calibration range.
- M The MDL/MRL has been elevated because the analyte could not be accurately quantified due to matrix interference.
- N Presumptive evidence of the analyte. Confirmation was not performed.
- Q Sample held beyond the accepted holding time.
- T Value reported is less than the laboratory method detection limit. The value is reported for informational purposes only.
- U Indicates that the compound was analyzed for but not detected.
- V Indicates that the analyte was detected in both the sample and the associated method blank.
- Y The laboratory analysis was from an improperly preserved sample.
- Z Too many colonies were present (TNTC). The numeric value represents the filtration volume.



**Jacksonville Lab ID # for State Certifications<sup>1</sup>**

| <b>Agency</b>  | <b>Number</b>   | <b>Expiration Date</b> |
|--|-----------------|------------------------|
| Department of Defense  | 66206           | 7/31/2018              |
| Florida Department of Health                                   | E82502          | 6/30/2018              |
| Georgia Department of Natural Resources                        | 958             | 6/30/2018              |
| Kentucky Division of Waste Management                          | 123042          | 6/30/2018              |
| Louisiana Department of Environmental Quality                  | 02086           | 6/30/2018              |
| Maine Department of Health and Human Services                  | 2015002         | 2/3/2019               |
| North Carolina Department of Environment and Natural Resources | 527             | 12/31/2018             |
| Pennsylvania Department of Environmental Protection            | 68-04835        | 8/31/2018              |
| South Carolina Department of Health and Environmental Control  | 96021001        | 6/30/2018              |
| Texas Commission on Environmental Quality                      | T104704197-16-8 | 5/31/2018              |
| Virginia Environmental Accreditation Program                   | 460191          | 12/14/2018             |

<sup>1</sup> Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state or agency requirements. The test results meet requirements of the current NELAP/TNI standards or state or agency requirements, where applicable, except as noted in the laboratory case narrative provided. For a specific list of accredited analytes, refer to <http://www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads/North-America-Downloads>



## ACRONYMS

|            |  |
|------------|--|
| ASTM       | American Society for Testing and Materials   |
| A2LA       | American Association for Laboratory Accreditation  |
| CARB       | California Air Resources Board   |
| CAS Number | Chemical Abstract Service registry Number  |
| CFC        | Chlorofluorocarbon   |
| CFU        | Colony-Forming Unit  |
| DEC        | Department of Environmental Conservation   |
| DEQ        | Department of Environmental Quality  |
| DHS        | Department of Health Services  |
| DOE        | Department of Ecology  |
| DOH        | Department of Health   |
| EPA        | U. S. Environmental Protection Agency  |
| ELAP       | Environmental Laboratory Accreditation Program   |
| GC         | Gas Chromatography   |
| GC/MS      | Gas Chromatography/Mass Spectrometry   |
| LUFT       | Leaking Underground Fuel Tank  |
| M          | Modified   |
| MCL        | Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA. |
| MDL        | Method Detection Limit   |
| MPN        | Most Probable Number   |
| MRL        | Method Reporting Limit   |
| NA         | Not Applicable   |
| NC         | Not Calculated   |
| NCASI      | National Council of the Paper Industry for Air and Stream Improvement  |
| ND         | Not Detected   |
| NIOSH      | National Institute for Occupational Safety and Health  |
| PQL        | Practical Quantitation Limit   |
| RCRA       | Resource Conservation and Recovery Act   |
| SIM        | Selected Ion Monitoring  |
| TPH        | Total Petroleum Hydrocarbons   |
| tr         | Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.                           |

**ALS Group USA, Corp.**

dba ALS Environmental

Analyst Summary report

**Client:** Gainesville Regional Utilities  
**Project:** D18A033

**Service Request:** J1801277

**Sample Name:** D18A033-01  
**Lab Code:** J1801277-001  
**Sample Matrix:** Water

**Date Collected:** 02/9/18  
**Date Received:** 02/20/18

**Analysis Method**

200.7  
200.8

**Extracted/Digested By**

EGARDNER  
CSULLIVAN

**Analyzed By**

EGARDNER  
CSULLIVAN



# Sample Results

**ALS Environmental—Jacksonville Laboratory**  
9143 Philips Highway, Suite 200, Jacksonville, FL 32256  
Phone (904) 739-2277 Fax (904) 739-2011  
[www.alsglobal.com](http://www.alsglobal.com)



# Metals

**ALS Environmental—Jacksonville Laboratory**  
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Phone (904)739-2277 Fax (904)739-2011  
[www.alsglobal.com](http://www.alsglobal.com)

ALS Group USA, Corp.  
dba ALS Environmental

Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A033  
**Sample Matrix:** Water  
**Sample Name:** D18A033-01  
**Lab Code:** J1801277-001

**Service Request:** J1801277  
**Date Collected:** 02/09/18 10:45  
**Date Received:** 02/20/18 09:27  
**Basis:** NA

Inorganic Parameters

| Analyte Name      | Analysis Method | Result          | Units | PQL    | MDL     | Dil. | Date Analyzed  | Date Extracted | Q |
|-------------------|-----------------|-----------------|-------|--------|---------|------|----------------|----------------|---|
| Antimony, Total   | 200.8           | 0.04 U          | ug/L  | 1.0    | 0.04    | 1    | 02/22/18 15:27 | 02/21/18       |   |
| Arsenic, Total    | 200.8           | 0.10 U          | ug/L  | 1.0    | 0.10    | 1    | 02/22/18 15:27 | 02/21/18       |   |
| Barium, Total     | 200.7           | 0.001 U         | mg/L  | 0.010  | 0.001   | 1    | 02/21/18 22:06 | 02/21/18       |   |
| Beryllium, Total  | 200.7           | 0.00006 U       | mg/L  | 0.0040 | 0.00006 | 1    | 03/27/18 21:03 | 03/27/18       |   |
| Cadmium, Total    | 200.7           | 0.0002 U        | mg/L  | 0.0050 | 0.0002  | 1    | 03/27/18 21:03 | 03/27/18       |   |
| Chromium, Total   | 200.7           | 0.0004 U        | mg/L  | 0.010  | 0.0004  | 1    | 02/21/18 22:06 | 02/21/18       |   |
| Cobalt, Total     | 200.7           | 0.003 U         | mg/L  | 0.010  | 0.003   | 1    | 03/27/18 21:03 | 03/27/18       |   |
| Lead, Total       | 200.8           | 0.03 U          | ug/L  | 0.50   | 0.03    | 1    | 02/22/18 15:27 | 02/21/18       |   |
| Lithium, Total    | 200.7           | 0.002 U         | mg/L  | 0.10   | 0.002   | 1    | 02/21/18 22:04 | 02/21/18       |   |
| Molybdenum, Total | 200.7           | 0.0003 U        | mg/L  | 0.010  | 0.0003  | 1    | 02/21/18 22:06 | 02/21/18       |   |
| Selenium, Total   | 200.7           | <b>0.003 IV</b> | mg/L  | 0.010  | 0.002   | 1    | 02/21/18 22:06 | 02/21/18       |   |
| Thallium, Total   | 200.8           | 0.02 U          | ug/L  | 0.20   | 0.02    | 1    | 02/22/18 15:27 | 02/21/18       |   |



## QC Summary Forms

**ALS Environmental - Jacksonville Laboratory**  
9143 Philips Highway, Suite 200, Jacksonville, FL 32256  
Phone (904) 739-2277 Fax (904) 739-2011  
[www.alsglobal.com](http://www.alsglobal.com)





# Metals

**ALS Environmental—Jacksonville Laboratory**  
9143 Philips Highway, Suite 200, Jacksonville, FL 32256  
Phone (904)739-2277 Fax (904)739-2011  
[www.alsglobal.com](http://www.alsglobal.com)

ALS Group USA, Corp.  
dba ALS Environmental

Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A033  
**Sample Matrix:** Water  
**Sample Name:** Method Blank  
**Lab Code:** J1801277-MB1

**Service Request:** J1801277  
**Date Collected:** NA  
**Date Received:** NA  
**Basis:** NA

Inorganic Parameters

| Analyte Name      | Analysis Method | Result         | Units | PQL   | MDL    | Dil. | Date Analyzed  | Date Extracted | Q |
|-------------------|-----------------|----------------|-------|-------|--------|------|----------------|----------------|---|
| Antimony, Total   | 200.8           | <b>0.1 I</b>   | ug/L  | 1.0   | 0.04   | 1    | 02/22/18 15:10 | 02/21/18       |   |
| Arsenic, Total    | 200.8           | 0.10 U         | ug/L  | 1.0   | 0.10   | 1    | 02/22/18 15:10 | 02/21/18       |   |
| Barium, Total     | 200.7           | 0.001 U        | mg/L  | 0.010 | 0.001  | 1    | 02/21/18 19:48 | 02/21/18       |   |
| Chromium, Total   | 200.7           | 0.0004 U       | mg/L  | 0.010 | 0.0004 | 1    | 02/21/18 19:48 | 02/21/18       |   |
| Lead, Total       | 200.8           | 0.03 U         | ug/L  | 0.50  | 0.03   | 1    | 02/22/18 15:10 | 02/21/18       |   |
| Lithium, Total    | 200.7           | 0.002 U        | mg/L  | 0.10  | 0.002  | 1    | 02/21/18 19:47 | 02/21/18       |   |
| Molybdenum, Total | 200.7           | 0.0003 U       | mg/L  | 0.010 | 0.0003 | 1    | 02/21/18 19:48 | 02/21/18       |   |
| Selenium, Total   | 200.7           | <b>0.003 I</b> | mg/L  | 0.010 | 0.002  | 1    | 02/21/18 19:48 | 02/21/18       |   |
| Thallium, Total   | 200.8           | 0.02 U         | ug/L  | 0.20  | 0.02   | 1    | 02/22/18 15:10 | 02/21/18       |   |

ALS Group USA, Corp.  
dba ALS Environmental

Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A033  
**Sample Matrix:** Water  
**Sample Name:** Method Blank  
**Lab Code:** J1801277-MB2

**Service Request:** J1801277  
**Date Collected:** NA  
**Date Received:** NA  
**Basis:** NA

Inorganic Parameters

| Analyte Name      | Analysis Method | Result         | Units | PQL    | MDL     | Dil. | Date Analyzed  | Date Extracted | Q |
|-------------------|-----------------|----------------|-------|--------|---------|------|----------------|----------------|---|
| Barium, Total     | 200.7           | 0.001 U        | mg/L  | 0.010  | 0.001   | 1    | 03/27/18 20:48 | 03/27/18       |   |
| Beryllium, Total  | 200.7           | 0.00006 U      | mg/L  | 0.0040 | 0.00006 | 1    | 03/27/18 20:48 | 03/27/18       |   |
| Cadmium, Total    | 200.7           | 0.0002 U       | mg/L  | 0.0050 | 0.0002  | 1    | 03/27/18 20:48 | 03/27/18       |   |
| Chromium, Total   | 200.7           | <b>0.001 I</b> | mg/L  | 0.010  | 0.0004  | 1    | 03/27/18 20:48 | 03/27/18       |   |
| Cobalt, Total     | 200.7           | 0.003 U        | mg/L  | 0.010  | 0.003   | 1    | 03/27/18 20:48 | 03/27/18       |   |
| Lithium, Total    | 200.7           | 0.002 U        | mg/L  | 0.10   | 0.002   | 1    | 03/27/18 20:47 | 03/27/18       |   |
| Molybdenum, Total | 200.7           | 0.0003 U       | mg/L  | 0.010  | 0.0003  | 1    | 03/27/18 20:48 | 03/27/18       |   |
| Selenium, Total   | 200.7           | <b>0.003 I</b> | mg/L  | 0.010  | 0.002   | 1    | 03/27/18 20:48 | 03/27/18       |   |

ALS Group USA, Corp.  
dba ALS Environmental

QA/QC Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A033  
**Sample Matrix:** Water

**Service Request:** J1801277  
**Date Analyzed:** 02/22/18

**Lab Control Sample Summary**  
**Inorganic Parameters**

**Units:**ug/L  
**Basis:**NA

**Lab Control Sample**  
J1801277-LCS1

| <b>Analyte Name</b> | <b>Analytical Method</b> | <b>Result</b> | <b>Spike Amount</b> | <b>% Rec</b> | <b>% Rec Limits</b> |
|---------------------|--------------------------|---------------|---------------------|--------------|---------------------|
| Antimony, Total     | 200.8                    | 51.0          | 50.0                | 102          | 85-115              |
| Arsenic, Total      | 200.8                    | 51.7          | 50.0                | 103          | 85-115              |
| Lead, Total         | 200.8                    | 25.1          | 25.0                | 100          | 85-115              |
| Thallium, Total     | 200.8                    | 10.2          | 10.0                | 102          | 85-115              |

ALS Group USA, Corp.  
dba ALS Environmental

QA/QC Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A033  
**Sample Matrix:** Water

**Service Request:** J1801277  
**Date Analyzed:** 02/21/18

**Lab Control Sample Summary**  
**Inorganic Parameters**

**Units:**mg/L  
**Basis:**NA

**Lab Control Sample**  
J1801277-LCS1

| <b>Analyte Name</b> | <b>Analytical Method</b> | <b>Result</b> | <b>Spike Amount</b> | <b>% Rec</b> | <b>% Rec Limits</b> |
|---------------------|--------------------------|---------------|---------------------|--------------|---------------------|
| Barium, Total       | 200.7                    | 0.496         | 0.500               | 99           | 85-115              |
| Chromium, Total     | 200.7                    | 0.507         | 0.500               | 101          | 85-115              |
| Lithium, Total      | 200.7                    | 4.93          | 5.00                | 99           | 85-115              |
| Molybdenum, Total   | 200.7                    | 0.495         | 0.500               | 99           | 85-115              |
| Selenium, Total     | 200.7                    | 0.497         | 0.500               | 99           | 85-115              |

ALS Group USA, Corp.  
dba ALS Environmental

QA/QC Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A033  
**Sample Matrix:** Water

**Service Request:** J1801277  
**Date Analyzed:** 03/27/18  
**Date Extracted:** 03/27/18

**Lab Control Sample Summary**  
**Inorganic Parameters**

**Analysis Method:** 200.7  
**Prep Method:** EPA 3005A

**Units:** mg/L  
**Basis:** NA  
**Analysis Lot:** 585121

**Lab Control Sample**  
**J1801277-LCS2**

| <b>Analyte Name</b> | <b>Result</b> | <b>Spike Amount</b> | <b>% Rec</b> | <b>% Rec Limits</b> |
|---------------------|---------------|---------------------|--------------|---------------------|
| Barium, Total       | 0.507         | 0.500               | 101          | 85-115              |
| Beryllium, Total    | 0.202         | 0.200               | 101          | 85-115              |
| Cadmium, Total      | 0.254         | 0.250               | 102          | 85-115              |
| Chromium, Total     | 0.515         | 0.500               | 103          | 85-115              |
| Cobalt, Total       | 0.525         | 0.500               | 105          | 85-115              |
| Lithium, Total      | 5.03          | 5.00                | 101          | 85-115              |
| Molybdenum, Total   | 0.511         | 0.500               | 102          | 85-115              |
| Selenium, Total     | 0.505         | 0.500               | 101          | 85-115              |

ALS Group USA, Corp.  
dba ALS Environmental

QA/QC Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A033  
**Sample Matrix:** Water

**Service Request:** J1801277  
**Date Collected:** 02/09/18  
**Date Received:** 02/20/18  
**Date Analyzed:** 02/22/18  
**Date Extracted:** 02/21/18

**Duplicate Matrix Spike Summary  
Inorganic Parameters**

**Sample Name:** D18A033-01  
**Lab Code:** J1801277-001  
**Analysis Method:** 200.8  
**Prep Method:** EPA 3005A

**Units:** ug/L  
**Basis:** NA

| Analyte Name    | Sample Result | Result | Matrix Spike<br>J1801277-001MS |       | Duplicate Matrix Spike<br>J1801277-001DMS |              | % Rec Limits | RPD    | RPD Limit |       |
|-----------------|---------------|--------|--------------------------------|-------|---|--------------|--------------|--------|-----------|-------|
|                 |               |        | Spike Amount                   | % Rec | Result                                    | Spike Amount |              |        |           | % Rec |
| Antimony, Total | 0.04 U        | 51.2   | 50.0                           | 102   | 51.4                                      | 50.0         | 103          | 70-130 | <1        | 20    |
| Arsenic, Total  | 0.1 U         | 51.4   | 50.0                           | 103   | 50.4                                      | 50.0         | 101          | 70-130 | 2         | 20    |
| Lead, Total     | 0.03 U        | 25.4   | 25.0                           | 102   | 25.4                                      | 25.0         | 101          | 70-130 | <1        | 20    |
| Thallium, Total | 0.02 U        | 10.3   | 10.0                           | 103   | 10.1                                      | 10.0         | 101          | 70-130 | 1         | 20    |

Results flagged with an asterisk (\*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

March 08, 2018

Mr. Jeffery Boudreau  
Deerhaven Lab  
P.O. Box 147117, Station D38  
Gainesville, FL 32614

RE: Project: D18A028  
Pace Project No.: 35375377

Dear Mr. Boudreau:

Enclosed are the analytical results for sample(s) received by the laboratory on February 20, 2018. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,



Jeff Baylor  
jeff.baylor@pacelabs.com  
(386)672-5668  
Project Manager

Enclosures

cc: Kent Brakefield  
Shelley Phillips, Deerhaven Lab



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: D18A028

Pace Project No.: 35375377

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### Pennsylvania Certification IDs

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601

L-A-B DOD-ELAP Accreditation #: L2417

Alabama Certification #: 41590

Arizona Certification #: AZ0734

Arkansas Certification

California Certification #: 04222CA

Colorado Certification

Connecticut Certification #: PH-0694

Delaware Certification

Florida/TNI Certification #: E87683

Georgia Certification #: C040

Guam Certification

Hawaii Certification

Idaho Certification

Illinois Certification

Indiana Certification

Iowa Certification #: 391

Kansas/TNI Certification #: E-10358

Kentucky Certification #: 90133

Louisiana DHH/TNI Certification #: LA140008

Louisiana DEQ/TNI Certification #: 4086

Maine Certification #: PA00091

Maryland Certification #: 308

Massachusetts Certification #: M-PA1457

Michigan/PADEP Certification

Missouri Certification #: 235

Montana Certification #: Cert 0082

Nebraska Certification #: NE-05-29-14

Nevada Certification #: PA014572015-1

New Hampshire/TNI Certification #: 2976

New Jersey/TNI Certification #: PA 051

New Mexico Certification #: PA01457

New York/TNI Certification #: 10888

North Carolina Certification #: 42706

North Dakota Certification #: R-190

Oregon/TNI Certification #: PA200002

Pennsylvania/TNI Certification #: 65-00282

Puerto Rico Certification #: PA01457

Rhode Island Certification #: 65-00282

South Dakota Certification

Tennessee Certification #: TN2867

Texas/TNI Certification #: T104704188-14-8

Utah/TNI Certification #: PA014572015-5

USDA Soil Permit #: P330-14-00213

Vermont Dept. of Health: ID# VT-0282

Virgin Island/PADEP Certification

Virginia/VELAP Certification #: 460198

Washington Certification #: C868

West Virginia DEP Certification #: 143

West Virginia DHHR Certification #: 9964C

Wisconsin Certification

Wyoming Certification #: 8TMS-L

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### Ormond Beach Certification IDs

8 East Tower Circle, Ormond Beach, FL 32174

Alabama Certification #: 41320

Connecticut Certification #: PH-0216

Delaware Certification: FL NELAC Reciprocity

Florida Certification #: E83079

Georgia Certification #: 955

Guam Certification: FL NELAC Reciprocity

Hawaii Certification: FL NELAC Reciprocity

Illinois Certification #: 200068

Indiana Certification: FL NELAC Reciprocity

Kansas Certification #: E-10383

Louisiana Certification #: FL NELAC Reciprocity

Louisiana Environmental Certificate #: 05007

Maryland Certification: #346

Michigan Certification #: 9911

Mississippi Certification: FL NELAC Reciprocity

Missouri Certification #: 236

Montana Certification #: Cert 0074

Nebraska Certification: NE-OS-28-14

Nevada Certification: FL NELAC Reciprocity

New Jersey Certification #: FL022

New York Certification #: 11608

North Carolina Environmental Certificate #: 667

North Carolina Certification #: 12710

Oklahoma Certification #: D9947

Pennsylvania Certification #: 68-00547

Puerto Rico Certification #: FL01264

South Carolina Certification: #96042001

Tennessee Certification #: TN02974

Texas Certification: FL NELAC Reciprocity

US Virgin Islands Certification: FL NELAC Reciprocity

Virginia Environmental Certification #: 460165

Wyoming Certification: FL NELAC Reciprocity

West Virginia Certification #: 9962C

Wisconsin Certification #: 399079670

Wyoming (EPA Region 8): FL NELAC Reciprocity

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: D18A028

Pace Project No.: 35375377

| Lab ID      | Sample ID  | Matrix | Date Collected | Date Received  |
|-------------|------------|--------|----------------|----------------|
| 35375377001 | D18A028-01 | Water  | 02/14/18 12:02 | 02/20/18 11:15 |
| 35375377002 | D18A028-02 | Water  | 02/15/18 13:43 | 02/20/18 11:15 |
| 35375377003 | D18A028-03 | Water  | 02/14/18 14:15 | 02/20/18 11:15 |
| 35375377004 | D18A028-04 | Water  | 02/15/18 15:00 | 02/20/18 11:15 |
| 35375377005 | D18A028-05 | Water  | 02/14/18 10:16 | 02/20/18 11:15 |
| 35375377006 | D18A028-06 | Water  | 02/15/18 11:50 | 02/20/18 11:15 |
| 35375377007 | D18A028-07 | Water  | 02/15/18 10:13 | 02/20/18 11:15 |
| 35375377008 | D18A028-08 | Water  | 02/15/18 08:44 | 02/20/18 11:15 |
| 35375377009 | D18A028-12 | Water  | 02/14/18 15:58 | 02/20/18 11:15 |
| 35375377010 | D18A028-13 | Water  | 02/14/18 11:12 | 02/20/18 11:15 |
| 35375377011 | D18A028-14 | Water  | 02/14/18 14:53 | 02/20/18 11:15 |

## REPORT OF LABORATORY ANALYSIS

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**SAMPLE ANALYTE COUNT**

Project: D18A028  
Pace Project No.: 35375377

| Lab ID      | Sample ID  | Method                   | Analysts | Analytes Reported | Laboratory |
|-------------|------------|--------------------------|----------|-------------------|------------|
| 35375377001 | D18A028-01 | EPA 903.1                | KAC      | 1                 | PASI-PA    |
|             |            | EPA 904.0                | JLW      | 1                 | PASI-PA    |
|             |            | Total Radium Calculation | JAL      | 1                 | PASI-PA    |
|             |            | EPA 300.0                | CMB      | 1                 | PASI-O     |
| 35375377002 | D18A028-02 | EPA 903.1                | KAC      | 1                 | PASI-PA    |
|             |            | EPA 904.0                | JLW      | 1                 | PASI-PA    |
|             |            | Total Radium Calculation | JAL      | 1                 | PASI-PA    |
|             |            | EPA 300.0                | CMB      | 1                 | PASI-O     |
| 35375377003 | D18A028-03 | EPA 903.1                | KAC      | 1                 | PASI-PA    |
|             |            | EPA 904.0                | JLW      | 1                 | PASI-PA    |
|             |            | Total Radium Calculation | JAL      | 1                 | PASI-PA    |
|             |            | EPA 300.0                | CMB      | 1                 | PASI-O     |
| 35375377004 | D18A028-04 | EPA 903.1                | KAC      | 1                 | PASI-PA    |
|             |            | EPA 904.0                | JLW      | 1                 | PASI-PA    |
|             |            | Total Radium Calculation | JAL      | 1                 | PASI-PA    |
|             |            | EPA 300.0                | CMB      | 1                 | PASI-O     |
| 35375377005 | D18A028-05 | EPA 903.1                | KAC      | 1                 | PASI-PA    |
|             |            | EPA 904.0                | JLW      | 1                 | PASI-PA    |
|             |            | Total Radium Calculation | JAL      | 1                 | PASI-PA    |
|             |            | EPA 300.0                | CMB      | 1                 | PASI-O     |
| 35375377006 | D18A028-06 | EPA 903.1                | KAC      | 1                 | PASI-PA    |
|             |            | EPA 904.0                | JLW      | 1                 | PASI-PA    |
|             |            | Total Radium Calculation | JAL      | 1                 | PASI-PA    |
|             |            | EPA 300.0                | CMB      | 1                 | PASI-O     |
| 35375377007 | D18A028-07 | EPA 903.1                | KAC      | 1                 | PASI-PA    |
|             |            | EPA 904.0                | JLW      | 1                 | PASI-PA    |
|             |            | Total Radium Calculation | JAL      | 1                 | PASI-PA    |
|             |            | EPA 300.0                | CMB      | 1                 | PASI-O     |
| 35375377008 | D18A028-08 | EPA 903.1                | KAC      | 1                 | PASI-PA    |
|             |            | EPA 904.0                | JLW      | 1                 | PASI-PA    |
|             |            | Total Radium Calculation | JAL      | 1                 | PASI-PA    |
|             |            | EPA 300.0                | CMB      | 1                 | PASI-O     |
| 35375377009 | D18A028-12 | EPA 903.1                | KAC      | 1                 | PASI-PA    |
|             |            | EPA 904.0                | JLW      | 1                 | PASI-PA    |
|             |            | Total Radium Calculation | JAL      | 1                 | PASI-PA    |
|             |            | EPA 300.0                | CMB      | 1                 | PASI-O     |
| 35375377010 | D18A028-13 | EPA 903.1                | KAC      | 1                 | PASI-PA    |

**REPORT OF LABORATORY ANALYSIS**

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### SAMPLE ANALYTE COUNT

Project: D18A028

Pace Project No.: 35375377

| Lab ID      | Sample ID  | Method                   | Analysts | Analytes Reported | Laboratory |
|-------------|------------|--------------------------|----------|-------------------|------------|
| 35375377011 | D18A028-14 | EPA 904.0                | JLW      | 1                 | PASI-PA    |
|             |            | Total Radium Calculation | JAL      | 1                 | PASI-PA    |
|             |            | EPA 300.0                | CMB      | 1                 | PASI-O     |
|             |            | EPA 903.1                | KAC      | 1                 | PASI-PA    |
|             |            | EPA 904.0                | JLW      | 1                 | PASI-PA    |
|             |            | Total Radium Calculation | JAL      | 1                 | PASI-PA    |
|             |            | EPA 300.0                | CMB      | 1                 | PASI-O     |

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: D18A028

Pace Project No.: 35375377

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**Sample: D18A028-01**      **Lab ID: 35375377001**      Collected: 02/14/18 12:02      Received: 02/20/18 11:15      Matrix: Water

| Parameters                     | Results     | Units | PQL   | MDL   | DF | Prepared | Analyzed       | CAS No.    | Qual |
|--------------------------------|-------------|-------|-------|-------|----|----------|----------------|------------|------|
| <b>300.0 IC Anions 28 Days</b> |             |       |       |       |    |          |                |            |      |
| Analytical Method: EPA 300.0   |             |       |       |       |    |          |                |            |      |
| Fluoride                       | <b>0.20</b> | mg/L  | 0.050 | 0.034 | 1  |          | 02/24/18 16:19 | 16984-48-8 |      |

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: D18A028

Pace Project No.: 35375377

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**Sample: D18A028-02**      **Lab ID: 35375377002**      Collected: 02/15/18 13:43      Received: 02/20/18 11:15      Matrix: Water

| Parameters                     | Results     | Units | PQL   | MDL   | DF | Prepared | Analyzed       | CAS No.    | Qual |
|--------------------------------|-------------|-------|-------|-------|----|----------|----------------|------------|------|
| <b>300.0 IC Anions 28 Days</b> |             |       |       |       |    |          |                |            |      |
| Analytical Method: EPA 300.0   |             |       |       |       |    |          |                |            |      |
| Fluoride                       | <b>0.37</b> | mg/L  | 0.050 | 0.034 | 1  |          | 02/24/18 16:41 | 16984-48-8 |      |

## REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: D18A028

Pace Project No.: 35375377

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**Sample: D18A028-03**      **Lab ID: 35375377003**      Collected: 02/14/18 14:15      Received: 02/20/18 11:15      Matrix: Water

| Parameters                     | Results     | Units | PQL   | MDL   | DF | Prepared | Analyzed       | CAS No.    | Qual |
|--------------------------------|-------------|-------|-------|-------|----|----------|----------------|------------|------|
| <b>300.0 IC Anions 28 Days</b> |             |       |       |       |    |          |                |            |      |
| Analytical Method: EPA 300.0   |             |       |       |       |    |          |                |            |      |
| Fluoride                       | <b>0.16</b> | mg/L  | 0.050 | 0.034 | 1  |          | 02/24/18 17:03 | 16984-48-8 |      |

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: D18A028

Pace Project No.: 35375377

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**Sample: D18A028-04**      **Lab ID: 35375377004**      Collected: 02/15/18 15:00      Received: 02/20/18 11:15      Matrix: Water

| Parameters                     | Results     | Units | PQL   | MDL   | DF | Prepared | Analyzed       | CAS No.    | Qual |
|--------------------------------|-------------|-------|-------|-------|----|----------|----------------|------------|------|
| <b>300.0 IC Anions 28 Days</b> |             |       |       |       |    |          |                |            |      |
| Analytical Method: EPA 300.0   |             |       |       |       |    |          |                |            |      |
| Fluoride                       | <b>0.19</b> | mg/L  | 0.050 | 0.034 | 1  |          | 02/24/18 18:09 | 16984-48-8 |      |

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### ANALYTICAL RESULTS

Project: D18A028

Pace Project No.: 35375377

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**Sample: D18A028-05**      **Lab ID: 35375377005**      Collected: 02/14/18 10:16      Received: 02/20/18 11:15      Matrix: Water

| Parameters                     | Results      | Units | PQL   | MDL   | DF | Prepared | Analyzed       | CAS No.    | Qual |
|--------------------------------|--------------|-------|-------|-------|----|----------|----------------|------------|------|
| <b>300.0 IC Anions 28 Days</b> |              |       |       |       |    |          |                |            |      |
| Analytical Method: EPA 300.0   |              |       |       |       |    |          |                |            |      |
| Fluoride                       | <b>0.076</b> | mg/L  | 0.050 | 0.034 | 1  |          | 02/24/18 18:31 | 16984-48-8 |      |

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### ANALYTICAL RESULTS

Project: D18A028

Pace Project No.: 35375377

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**Sample: D18A028-06**      **Lab ID: 35375377006**      Collected: 02/15/18 11:50      Received: 02/20/18 11:15      Matrix: Water

| Parameters                     | Results     | Units | PQL  | MDL   | DF | Prepared | Analyzed       | CAS No.    | Qual |
|--------------------------------|-------------|-------|------|-------|----|----------|----------------|------------|------|
| <b>300.0 IC Anions 28 Days</b> |             |       |      |       |    |          |                |            |      |
| Analytical Method: EPA 300.0   |             |       |      |       |    |          |                |            |      |
| Fluoride                       | <b>0.23</b> | mg/L  | 0.10 | 0.068 | 2  |          | 02/24/18 19:37 | 16984-48-8 |      |

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### ANALYTICAL RESULTS

Project: D18A028

Pace Project No.: 35375377

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**Sample: D18A028-07**      **Lab ID: 35375377007**      Collected: 02/15/18 10:13      Received: 02/20/18 11:15      Matrix: Water

| Parameters                     | Results     | Units | PQL  | MDL  | DF | Prepared | Analyzed       | CAS No.    | Qual |
|--------------------------------|-------------|-------|------|------|----|----------|----------------|------------|------|
| <b>300.0 IC Anions 28 Days</b> |             |       |      |      |    |          |                |            |      |
| Analytical Method: EPA 300.0   |             |       |      |      |    |          |                |            |      |
| Fluoride                       | <b>0.32</b> | mg/L  | 0.25 | 0.17 | 5  |          | 02/24/18 19:59 | 16984-48-8 |      |

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## ANALYTICAL RESULTS

Project: D18A028

Pace Project No.: 35375377

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**Sample: D18A028-08**      **Lab ID: 35375377008**      Collected: 02/15/18 08:44      Received: 02/20/18 11:15      Matrix: Water

| Parameters                     | Results     | Units | PQL  | MDL   | DF | Prepared | Analyzed       | CAS No.    | Qual |
|--------------------------------|-------------|-------|------|-------|----|----------|----------------|------------|------|
| <b>300.0 IC Anions 28 Days</b> |             |       |      |       |    |          |                |            |      |
| Analytical Method: EPA 300.0   |             |       |      |       |    |          |                |            |      |
| Fluoride                       | <b>0.17</b> | mg/L  | 0.10 | 0.068 | 2  |          | 02/25/18 13:25 | 16984-48-8 |      |

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### ANALYTICAL RESULTS

Project: D18A028

Pace Project No.: 35375377

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**Sample: D18A028-12**      **Lab ID: 35375377009**      Collected: 02/14/18 15:58      Received: 02/20/18 11:15      Matrix: Water

| Parameters                     | Results     | Units | PQL   | MDL   | DF | Prepared | Analyzed       | CAS No.    | Qual |
|--------------------------------|-------------|-------|-------|-------|----|----------|----------------|------------|------|
| <b>300.0 IC Anions 28 Days</b> |             |       |       |       |    |          |                |            |      |
| Analytical Method: EPA 300.0   |             |       |       |       |    |          |                |            |      |
| Fluoride                       | <b>0.28</b> | mg/L  | 0.050 | 0.034 | 1  |          | 02/24/18 20:43 | 16984-48-8 |      |

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### ANALYTICAL RESULTS

Project: D18A028

Pace Project No.: 35375377

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**Sample: D18A028-13**      **Lab ID: 35375377010**      Collected: 02/14/18 11:12      Received: 02/20/18 11:15      Matrix: Water

| Parameters                     | Results                      | Units | PQL   | MDL   | DF | Prepared | Analyzed       | CAS No.    | Qual |
|--------------------------------|------------------------------|-------|-------|-------|----|----------|----------------|------------|------|
| <b>300.0 IC Anions 28 Days</b> | Analytical Method: EPA 300.0 |       |       |       |    |          |                |            |      |
| Fluoride                       | <b>0.080</b>                 | mg/L  | 0.050 | 0.034 | 1  |          | 02/24/18 21:05 | 16984-48-8 |      |

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### ANALYTICAL RESULTS

Project: D18A028

Pace Project No.: 35375377

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**Sample: D18A028-14**      **Lab ID: 35375377011**      Collected: 02/14/18 14:53      Received: 02/20/18 11:15      Matrix: Water

| Parameters                     | Results                      | Units | PQL   | MDL   | DF | Prepared | Analyzed       | CAS No.    | Qual |
|--------------------------------|------------------------------|-------|-------|-------|----|----------|----------------|------------|------|
| <b>300.0 IC Anions 28 Days</b> | Analytical Method: EPA 300.0 |       |       |       |    |          |                |            |      |
| Fluoride                       | <b>0.034 U</b>               | mg/L  | 0.050 | 0.034 | 1  |          | 02/24/18 21:27 | 16984-48-8 |      |

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### QUALITY CONTROL DATA

Project: D18A028

Pace Project No.: 35375377

QC Batch: 428530 Analysis Method: EPA 300.0  
 QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions  
 Associated Lab Samples: 35375377001, 35375377002, 35375377003, 35375377004, 35375377005, 35375377006, 35375377007, 35375377008, 35375377009, 35375377010, 35375377011

METHOD BLANK: 2331286 Matrix: Water  
 Associated Lab Samples: 35375377001, 35375377002, 35375377003, 35375377004, 35375377005, 35375377006, 35375377007, 35375377008, 35375377009, 35375377010, 35375377011

| Parameter | Units | Blank Result | Reporting Limit | MDL   | Analyzed       | Qualifiers |
|-----------|-------|--------------|-----------------|-------|----------------|------------|
| Fluoride  | mg/L  | 0.034 U      | 0.050           | 0.034 | 02/24/18 12:16 |            |

LABORATORY CONTROL SAMPLE: 2331287

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Fluoride  | mg/L  | 5           | 5.0        | 99        | 90-110       |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2331288 2331289

| Parameter | Units | 35375377005 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|--------------------|----------------|-----------------|-----------|------------|----------|-----------|--------------|-----|---------|------|
| Fluoride  | mg/L  | 0.076              | 5              | 5               | 5.1       | 5.1        | 101      | 101       | 90-110       | 0   | 20      |      |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2331290 2331291

| Parameter | Units | 35376065002 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|--------------------|----------------|-----------------|-----------|------------|----------|-----------|--------------|-----|---------|------|
| Fluoride  | mg/L  | 0.42               | 5              | 5               | 5.2       | 5.4        | 96       | 100       | 90-110       | 4   | 20      |      |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

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### QUALITY CONTROL DATA

Project: D18A028  
Pace Project No.: 35375377

QC Batch: 428594      Analysis Method: EPA 300.0  
QC Batch Method: EPA 300.0      Analysis Description: 300.0 IC Anions  
Associated Lab Samples: 35375377008

METHOD BLANK: 2331496      Matrix: Water  
Associated Lab Samples: 35375377008

| Parameter | Units | Blank Result | Reporting Limit | MDL   | Analyzed       | Qualifiers |
|-----------|-------|--------------|-----------------|-------|----------------|------------|
| Fluoride  | mg/L  | 0.034 U      | 0.050           | 0.034 | 02/25/18 12:40 |            |

LABORATORY CONTROL SAMPLE: 2331497

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Fluoride  | mg/L  | 5           | 4.8        | 97        | 90-110       |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2331498      2331499

| Parameter | Units | 35375865017 Result | MS          | MSD         | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|--------------------|-------------|-------------|-----------|------------|----------|-----------|--------------|-----|---------|------|
|           |       |                    | Spike Conc. | Spike Conc. |           |            |          |           |              |     |         |      |
| Fluoride  | mg/L  | 0.68               | 50          | 50          | 48.4      | 48.7       | 95       | 96        | 90-110       | 1   | 20      |      |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2331500      2331501

| Parameter | Units | 35375969001 Result | MS          | MSD         | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|--------------------|-------------|-------------|-----------|------------|----------|-----------|--------------|-----|---------|------|
|           |       |                    | Spike Conc. | Spike Conc. |           |            |          |           |              |     |         |      |
| Fluoride  | mg/L  | 0.72               | 10          | 10          | 10.4      | 10.5       | 97       | 97        | 90-110       | 1   | 20      |      |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: D18A028

Pace Project No.: 35375377

**Sample: D18A028-01**      **Lab ID: 35375377001**      Collected: 02/14/18 12:02      Received: 02/20/18 11:15      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters   | Method                      | Act ± Unc (MDC) Carr Trac                    | Units | Analyzed       | CAS No.    | Qual |
|--------------|-----------------------------|--|-------|----------------|------------|------|
| Radium-226   | EPA 903.1                   | <b>0.833U ± 0.499 (0.833)</b><br>C:NA T:92%  | pCi/L | 03/06/18 15:29 | 13982-63-3 |      |
| Radium-228   | EPA 904.0                   | <b>0.925U ± 0.402 (0.925)</b><br>C:67% T:82% | pCi/L | 03/05/18 12:03 | 15262-20-1 |      |
| Total Radium | Total Radium<br>Calculation | <b>1.76U ± 0.901 (1.76)</b>                  | pCi/L | 03/08/18 16:11 | 7440-14-4  |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: D18A028

Pace Project No.: 35375377

**Sample: D18A028-02**      **Lab ID: 35375377002**      Collected: 02/15/18 13:43      Received: 02/20/18 11:15      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters   | Method                      | Act ± Unc (MDC) Carr Trac                    | Units | Analyzed       | CAS No.    | Qual |
|--------------|-----------------------------|--|-------|----------------|------------|------|
| Radium-226   | EPA 903.1                   | <b>0.811 ± 0.593 (0.663)</b><br>C:NA T:93%   | pCi/L | 03/06/18 15:06 | 13982-63-3 |      |
| Radium-228   | EPA 904.0                   | <b>0.713U ± 0.342 (0.713)</b><br>C:70% T:90% | pCi/L | 03/05/18 12:04 | 15262-20-1 |      |
| Total Radium | Total Radium<br>Calculation | <b>1.38U ± 0.935 (1.38)</b>                  | pCi/L | 03/08/18 16:11 | 7440-14-4  |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: D18A028

Pace Project No.: 35375377

**Sample: D18A028-03**      **Lab ID: 35375377003**      Collected: 02/14/18 14:15      Received: 02/20/18 11:15      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters   | Method                   | Act ± Unc (MDC) Carr Trac                           | Units | Analyzed       | CAS No.    | Qual |
|--------------|--------------------------|---|-------|----------------|------------|------|
| Radium-226   | EPA 903.1                | <b>0.782U ± 0.452 (0.782)</b><br><b>C:NA T:100%</b> | pCi/L | 03/06/18 14:52 | 13982-63-3 |      |
| Radium-228   | EPA 904.0                | <b>0.759U ± 0.351 (0.759)</b><br><b>C:68% T:85%</b> | pCi/L | 03/05/18 12:04 | 15262-20-1 |      |
| Total Radium | Total Radium Calculation | <b>1.54U ± 0.803 (1.54)</b>                         | pCi/L | 03/08/18 16:11 | 7440-14-4  |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: D18A028

Pace Project No.: 35375377

**Sample: D18A028-04**      **Lab ID: 35375377004**      Collected: 02/15/18 15:00      Received: 02/20/18 11:15      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters   | Method                      | Act ± Unc (MDC) Carr Trac                    | Units | Analyzed       | CAS No.    | Qual |
|--------------|-----------------------------|--|-------|----------------|------------|------|
| Radium-226   | EPA 903.1                   | <b>0.659 ± 0.516 (0.606)</b><br>C:NA T:98%   | pCi/L | 03/06/18 15:18 | 13982-63-3 |      |
| Radium-228   | EPA 904.0                   | <b>0.889U ± 0.410 (0.889)</b><br>C:75% T:86% | pCi/L | 03/05/18 12:04 | 15262-20-1 |      |
| Total Radium | Total Radium<br>Calculation | <b>1.50U ± 0.926 (1.50)</b>                  | pCi/L | 03/08/18 16:11 | 7440-14-4  |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: D18A028

Pace Project No.: 35375377

**Sample: D18A028-05**      **Lab ID: 35375377005**      Collected: 02/14/18 10:16      Received: 02/20/18 11:15      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters   | Method                      | Act ± Unc (MDC) Carr Trac                   | Units | Analyzed       | CAS No.    | Qual |
|--------------|-----------------------------|---|-------|----------------|------------|------|
| Radium-226   | EPA 903.1                   | <b>1.11 ± 0.701 (0.792)</b><br>C:NA T:90%   | pCi/L | 03/06/18 15:31 | 13982-63-3 |      |
| Radium-228   | EPA 904.0                   | <b>0.729 ± 0.392 (0.691)</b><br>C:71% T:88% | pCi/L | 03/05/18 12:04 | 15262-20-1 |      |
| Total Radium | Total Radium<br>Calculation | <b>1.84 ± 1.09 (1.48)</b>                   | pCi/L | 03/08/18 16:11 | 7440-14-4  |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: D18A028

Pace Project No.: 35375377

**Sample: D18A028-06**      **Lab ID: 35375377006**      Collected: 02/15/18 11:50      Received: 02/20/18 11:15      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters   | Method                      | Act ± Unc (MDC) Carr Trac                    | Units | Analyzed       | CAS No.    | Qual |
|--------------|-----------------------------|--|-------|----------------|------------|------|
| Radium-226   | EPA 903.1                   | <b>1.52 ± 0.785 (0.659)</b><br>C:NA T:87%    | pCi/L | 03/06/18 15:40 | 13982-63-3 |      |
| Radium-228   | EPA 904.0                   | <b>0.809U ± 0.440 (0.809)</b><br>C:69% T:89% | pCi/L | 03/05/18 12:04 | 15262-20-1 |      |
| Total Radium | Total Radium<br>Calculation | <b>2.30 ± 1.23 (1.47)</b>                    | pCi/L | 03/08/18 16:11 | 7440-14-4  |      |

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## ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: D18A028

Pace Project No.: 35375377

**Sample: D18A028-07**      **Lab ID: 35375377007**      Collected: 02/15/18 10:13      Received: 02/20/18 11:15      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters   | Method                      | Act ± Unc (MDC) Carr Trac                    | Units | Analyzed       | CAS No.    | Qual |
|--------------|-----------------------------|--|-------|----------------|------------|------|
| Radium-226   | EPA 903.1                   | <b>1.99 ± 0.877 (0.635)</b><br>C:NA T:93%    | pCi/L | 03/06/18 15:19 | 13982-63-3 |      |
| Radium-228   | EPA 904.0                   | <b>0.840U ± 0.458 (0.840)</b><br>C:69% T:77% | pCi/L | 03/05/18 12:04 | 15262-20-1 |      |
| Total Radium | Total Radium<br>Calculation | <b>2.77 ± 1.34 (1.48)</b>                    | pCi/L | 03/08/18 16:11 | 7440-14-4  |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: D18A028

Pace Project No.: 35375377

**Sample: D18A028-08**      **Lab ID: 35375377008**      Collected: 02/15/18 08:44      Received: 02/20/18 11:15      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters   | Method                      | Act ± Unc (MDC) Carr Trac                  | Units | Analyzed       | CAS No.    | Qual |
|--------------|-----------------------------|--|-------|----------------|------------|------|
| Radium-226   | EPA 903.1                   | <b>0.778 ± 0.569 (0.636)</b><br>C:NA T:92% | pCi/L | 03/06/18 15:31 | 13982-63-3 |      |
| Radium-228   | EPA 904.0                   | <b>1.60 ± 0.586 (0.842)</b><br>C:69% T:74% | pCi/L | 03/05/18 12:04 | 15262-20-1 |      |
| Total Radium | Total Radium<br>Calculation | <b>2.38 ± 1.16 (1.48)</b>                  | pCi/L | 03/08/18 16:11 | 7440-14-4  |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: D18A028

Pace Project No.: 35375377

**Sample: D18A028-12**      **Lab ID: 35375377009**      Collected: 02/14/18 15:58      Received: 02/20/18 11:15      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters   | Method                      | Act ± Unc (MDC) Carr Trac                    | Units | Analyzed       | CAS No.    | Qual |
|--------------|-----------------------------|--|-------|----------------|------------|------|
| Radium-226   | EPA 903.1                   | <b>1.07U ± 0.582 (1.07)</b><br>C:NA T:91%    | pCi/L | 03/06/18 15:19 | 13982-63-3 |      |
| Radium-228   | EPA 904.0                   | <b>0.768U ± 0.421 (0.768)</b><br>C:71% T:83% | pCi/L | 03/05/18 12:04 | 15262-20-1 |      |
| Total Radium | Total Radium<br>Calculation | <b>1.84U ± 1.00 (1.84)</b>                   | pCi/L | 03/08/18 16:11 | 7440-14-4  |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: D18A028

Pace Project No.: 35375377

**Sample: D18A028-13**      **Lab ID: 35375377010**      Collected: 02/14/18 11:12      Received: 02/20/18 11:15      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters   | Method                      | Act ± Unc (MDC) Carr Trac                    | Units | Analyzed       | CAS No.    | Qual |
|--------------|-----------------------------|--|-------|----------------|------------|------|
| Radium-226   | EPA 903.1                   | <b>0.842U ± 0.357 (0.842)</b><br>C:NA T:94%  | pCi/L | 03/06/18 15:19 | 13982-63-3 |      |
| Radium-228   | EPA 904.0                   | <b>0.718U ± 0.322 (0.718)</b><br>C:71% T:93% | pCi/L | 03/05/18 12:05 | 15262-20-1 |      |
| Total Radium | Total Radium<br>Calculation | <b>1.56U ± 0.678 (1.56)</b>                  | pCi/L | 03/08/18 16:11 | 7440-14-4  |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: D18A028

Pace Project No.: 35375377

**Sample: D18A028-14**      **Lab ID: 35375377011**      Collected: 02/14/18 14:53      Received: 02/20/18 11:15      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters   | Method                   | Act ± Unc (MDC) Carr Trac                    | Units | Analyzed       | CAS No.    | Qual |
|--------------|--------------------------|--|-------|----------------|------------|------|
| Radium-226   | EPA 903.1                | <b>0.584U ± 0.444 (0.584)</b><br>C:NA T:95%  | pCi/L | 03/06/18 15:45 | 13982-63-3 |      |
| Radium-228   | EPA 904.0                | <b>0.901U ± 0.451 (0.901)</b><br>C:72% T:76% | pCi/L | 03/05/18 12:05 | 15262-20-1 |      |
| Total Radium | Total Radium Calculation | <b>1.49U ± 0.894 (1.49)</b>                  | pCi/L | 03/08/18 16:11 | 7440-14-4  |      |

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: D18A028

Pace Project No.: 35375377

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|                         |   |                       |                  |
|-------------------------|---|-----------------------|------------------|
| QC Batch:               | 289712  | Analysis Method:      | EPA 903.1        |
| QC Batch Method:        | EPA 903.1   | Analysis Description: | 903.1 Radium-226 |
| Associated Lab Samples: | 35375377001, 35375377002, 35375377003, 35375377004, 35375377005, 35375377006, 35375377007, 35375377008, 35375377009, 35375377010, 35375377011 |                       |                  |

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|                         |   |         |       |
|-------------------------|---|---------|-------|
| METHOD BLANK:           | 1419147   | Matrix: | Water |
| Associated Lab Samples: | 35375377001, 35375377002, 35375377003, 35375377004, 35375377005, 35375377006, 35375377007, 35375377008, 35375377009, 35375377010, 35375377011 |         |       |

| Parameter  | Act ± Unc (MDC) Carr Trac        | Units | Analyzed       | Qualifiers |
|------------|----------------------------------|-------|----------------|------------|
| Radium-226 | 0.323 ± 0.450 (0.751) C:NA T:96% | pCi/L | 03/06/18 15:06 |            |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: D18A028

Pace Project No.: 35375377

QC Batch: 289716

Analysis Method: EPA 904.0

QC Batch Method: EPA 904.0

Analysis Description: 904.0 Radium 228

Associated Lab Samples: 35375377001, 35375377002, 35375377003, 35375377004, 35375377005, 35375377006, 35375377007, 35375377008, 35375377009, 35375377010, 35375377011

METHOD BLANK: 1419151

Matrix: Water

Associated Lab Samples: 35375377001, 35375377002, 35375377003, 35375377004, 35375377005, 35375377006, 35375377007, 35375377008, 35375377009, 35375377010, 35375377011

| Parameter  | Act ± Unc (MDC) Carr Trac         | Units | Analyzed       | Qualifiers |
|------------|-----------------------------------|-------|----------------|------------|
| Radium-228 | 0.273 ± 0.320 (0.671) C:73% T:82% | pCi/L | 03/05/18 12:01 |            |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: D18A028  
Pace Project No.: 35375377

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval).

Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### LABORATORIES

PASI-O Pace Analytical Services - Ormond Beach

PASI-PA Pace Analytical Services - Greensburg

### ANALYTE QUALIFIERS

U Compound was analyzed for but not detected.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: D18A028  
Pace Project No.: 35375377

| Lab ID      | Sample ID  | QC Batch Method          | QC Batch | Analytical Method | Analytical Batch |
|-------------|------------|--------------------------|----------|-------------------|------------------|
| 35375377001 | D18A028-01 | EPA 903.1                | 289712   |                   |                  |
| 35375377002 | D18A028-02 | EPA 903.1                | 289712   |                   |                  |
| 35375377003 | D18A028-03 | EPA 903.1                | 289712   |                   |                  |
| 35375377004 | D18A028-04 | EPA 903.1                | 289712   |                   |                  |
| 35375377005 | D18A028-05 | EPA 903.1                | 289712   |                   |                  |
| 35375377006 | D18A028-06 | EPA 903.1                | 289712   |                   |                  |
| 35375377007 | D18A028-07 | EPA 903.1                | 289712   |                   |                  |
| 35375377008 | D18A028-08 | EPA 903.1                | 289712   |                   |                  |
| 35375377009 | D18A028-12 | EPA 903.1                | 289712   |                   |                  |
| 35375377010 | D18A028-13 | EPA 903.1                | 289712   |                   |                  |
| 35375377011 | D18A028-14 | EPA 903.1                | 289712   |                   |                  |
| 35375377001 | D18A028-01 | EPA 904.0                | 289716   |                   |                  |
| 35375377002 | D18A028-02 | EPA 904.0                | 289716   |                   |                  |
| 35375377003 | D18A028-03 | EPA 904.0                | 289716   |                   |                  |
| 35375377004 | D18A028-04 | EPA 904.0                | 289716   |                   |                  |
| 35375377005 | D18A028-05 | EPA 904.0                | 289716   |                   |                  |
| 35375377006 | D18A028-06 | EPA 904.0                | 289716   |                   |                  |
| 35375377007 | D18A028-07 | EPA 904.0                | 289716   |                   |                  |
| 35375377008 | D18A028-08 | EPA 904.0                | 289716   |                   |                  |
| 35375377009 | D18A028-12 | EPA 904.0                | 289716   |                   |                  |
| 35375377010 | D18A028-13 | EPA 904.0                | 289716   |                   |                  |
| 35375377011 | D18A028-14 | EPA 904.0                | 289716   |                   |                  |
| 35375377001 | D18A028-01 | Total Radium Calculation | 290633   |                   |                  |
| 35375377002 | D18A028-02 | Total Radium Calculation | 290633   |                   |                  |
| 35375377003 | D18A028-03 | Total Radium Calculation | 290633   |                   |                  |
| 35375377004 | D18A028-04 | Total Radium Calculation | 290633   |                   |                  |
| 35375377005 | D18A028-05 | Total Radium Calculation | 290633   |                   |                  |
| 35375377006 | D18A028-06 | Total Radium Calculation | 290633   |                   |                  |
| 35375377007 | D18A028-07 | Total Radium Calculation | 290633   |                   |                  |
| 35375377008 | D18A028-08 | Total Radium Calculation | 290633   |                   |                  |
| 35375377009 | D18A028-12 | Total Radium Calculation | 290633   |                   |                  |
| 35375377010 | D18A028-13 | Total Radium Calculation | 290633   |                   |                  |
| 35375377011 | D18A028-14 | Total Radium Calculation | 290633   |                   |                  |
| 35375377001 | D18A028-01 | EPA 300.0                | 428530   |                   |                  |
| 35375377002 | D18A028-02 | EPA 300.0                | 428530   |                   |                  |
| 35375377003 | D18A028-03 | EPA 300.0                | 428530   |                   |                  |
| 35375377004 | D18A028-04 | EPA 300.0                | 428530   |                   |                  |
| 35375377005 | D18A028-05 | EPA 300.0                | 428530   |                   |                  |
| 35375377006 | D18A028-06 | EPA 300.0                | 428530   |                   |                  |
| 35375377007 | D18A028-07 | EPA 300.0                | 428530   |                   |                  |
| 35375377008 | D18A028-08 | EPA 300.0                | 428530   |                   |                  |
| 35375377008 | D18A028-08 | EPA 300.0                | 428594   |                   |                  |
| 35375377009 | D18A028-12 | EPA 300.0                | 428530   |                   |                  |
| 35375377010 | D18A028-13 | EPA 300.0                | 428530   |                   |                  |
| 35375377011 | D18A028-14 | EPA 300.0                | 428530   |                   |                  |

### REPORT OF LABORATORY ANALYSIS

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SUBCONTRACT ORDER  
Deerhaven Generating Station  
D18A028

WO#: 35375377  
35375377

**SENDING LABORATORY:**

Gainesville Regional Utilities  
Deerhaven Generating Station  
10001 NW 13th Street  
Gainesville, FL 32653  
Phone: 352-334-3434  
Fax: 352-334-3149  
Project Manager: Jeff Boudreau

**RECEIVING LABORATORY:**

Pace Analytical  
8 East Tower Circle  
Ormond Beach, FL 32174  
Phone : (386) 672-5668  
Fax: (386) 673-4001

| Analysis                                  | Expires                         | Laboratory ID | Comments |
|---|---------------------------------|---------------|----------|
| <b>Sample Name: SIS-1</b>                 |                                 |               |          |
| <b>Sample ID: D18A028-01</b> <b>Water</b> | <b>Sampled: 14-Feb-18 12:02</b> |               |          |
| D_Radium226+228_Combined                  | 09-Aug-18 12:02                 |               |          |
| D_Anions - Fluoride                       | 14-Mar-18 12:02                 |               |          |
| <i>Containers Supplied:</i>               |                                 |               |          |
| D_HDPE, Chill @<6°C - 250mL (C)           |                                 |               |          |
| D_HDPE, HNO3 pH<2 - 2000mL (D)            |                                 |               |          |
| <b>Sample Name: SIS-2</b>                 |                                 |               |          |
| <b>Sample ID: D18A028-02</b> <b>Water</b> | <b>Sampled: 15-Feb-18 13:43</b> |               |          |
| D_Anions - Fluoride                       | 15-Mar-18 13:43                 |               |          |
| D_Radium226+228_Combined                  | 10-Aug-18 13:43                 |               |          |
| <i>Containers Supplied:</i>               |                                 |               |          |
| D_HDPE, Chill @<6°C - 250mL (C)           |                                 |               |          |
| D_HDPE, HNO3 pH<2 - 2000mL (D)            |                                 |               |          |
| <b>Sample Name: SIS-3</b>                 |                                 |               |          |
| <b>Sample ID: D18A028-03</b> <b>Water</b> | <b>Sampled: 14-Feb-18 14:15</b> |               |          |
| D_Anions - Fluoride                       | 14-Mar-18 14:15                 |               |          |
| D_Radium226+228_Combined                  | 09-Aug-18 14:15                 |               |          |
| <i>Containers Supplied:</i>               |                                 |               |          |
| D_HDPE, Chill @<6°C - 250mL (C)           |                                 |               |          |
| D_HDPE, HNO3 pH<2 - 2000mL (D)            |                                 |               |          |
| <b>Sample Name: SIS-4</b>                 |                                 |               |          |
| <b>Sample ID: D18A028-04</b> <b>Water</b> | <b>Sampled: 15-Feb-18 15:00</b> |               |          |
| D_Anions - Fluoride                       | 15-Mar-18 15:00                 |               |          |
| D_Radium226+228_Combined                  | 10-Aug-18 15:00                 |               |          |
| <i>Containers Supplied:</i>               |                                 |               |          |
| D_HDPE, Chill @<6°C - 250mL (C)           |                                 |               |          |
| D_HDPE, HNO3 pH<2 - 2000mL (D)            |                                 |               |          |

Released By: *Shelley Phillips*      Date: *2-19-18*      Received By: *DA PACE*      Date: *2/20/18 1115*  
*via FEDEX*  
*22.7° T301*



**SUBCONTRACT ORDER**  
**Deerhaven Generating Station**  
**D18A028**

| Analysis                            | Expires         | Laboratory ID                   | Comments |
|-------------------------------------|-----------------|---------------------------------|----------|
| <b>Sample Name: LF-1</b>            |                 |                                 |          |
| <b>Sample ID: D18A028-05</b>        | <b>Water</b>    | <b>Sampled: 14-Feb-18 10:16</b> |          |
| D_Radium226+228_Combined            | 09-Aug-18 10:16 |                                 |          |
| D_Anions - Fluoride                 | 14-Mar-18 10:16 |                                 |          |
| <i>Containers Supplied:</i>         |                 |                                 |          |
| D_HDPE, Chill @<6*C - 250mL (C)     |                 |                                 |          |
| D_HDPE, HNO3 pH<2 - 2000mL (D)      |                 |                                 |          |
| <b>Sample Name: LF-2</b>            |                 |                                 |          |
| <b>Sample ID: D18A028-06</b>        | <b>Water</b>    | <b>Sampled: 15-Feb-18 11:50</b> |          |
| D_Radium226+228_Combined            | 10-Aug-18 11:50 |                                 |          |
| D_Anions - Fluoride                 | 15-Mar-18 11:50 |                                 |          |
| <i>Containers Supplied:</i>         |                 |                                 |          |
| D_HDPE, Chill @<6*C - 250mL (C)     |                 |                                 |          |
| D_HDPE, HNO3 pH<2 - 2000mL (D)      |                 |                                 |          |
| <b>Sample Name: LF-3</b>            |                 |                                 |          |
| <b>Sample ID: D18A028-07</b>        | <b>Water</b>    | <b>Sampled: 15-Feb-18 10:13</b> |          |
| D_Anions - Fluoride                 | 15-Mar-18 10:13 |                                 |          |
| D_Radium226+228_Combined            | 10-Aug-18 10:13 |                                 |          |
| <i>Containers Supplied:</i>         |                 |                                 |          |
| D_HDPE, Chill @<6*C - 250mL (C)     |                 |                                 |          |
| D_HDPE, HNO3 pH<2 - 2000mL (D)      |                 |                                 |          |
| <b>Sample Name: LF-4</b>            |                 |                                 |          |
| <b>Sample ID: D18A028-08</b>        | <b>Water</b>    | <b>Sampled: 15-Feb-18 08:44</b> |          |
| D_Anions - Fluoride                 | 15-Mar-18 08:44 |                                 |          |
| D_Radium226+228_Combined            | 10-Aug-18 08:44 |                                 |          |
| <i>Containers Supplied:</i>         |                 |                                 |          |
| D_HDPE, Chill @<6*C - 250mL (C)     |                 |                                 |          |
| D_HDPE, HNO3 pH<2 - 2000mL (D)      |                 |                                 |          |
| <b>Sample Name: MWI-4-5 (R4T5B)</b> |                 |                                 |          |
| <b>Sample ID: D18A028-12</b>        | <b>Water</b>    | <b>Sampled: 14-Feb-18 15:58</b> |          |
| D_Anions - Fluoride                 | 14-Mar-18 15:58 |                                 |          |
| D_Radium226+228_Combined            | 09-Aug-18 15:58 |                                 |          |
| <i>Containers Supplied:</i>         |                 |                                 |          |
| D_HDPE, Chill @<6*C - 250mL (C)     |                 |                                 |          |
| D_HDPE, HNO3 pH<2 - 2000mL (D)      |                 |                                 |          |

Released By: Shelby Phillips Date: 2-19-18 <sup>via FEDEX</sup>  
 Received By: DA PACE Date: 2/20/18 11:15  
22.7° 7301

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Released By: \_\_\_\_\_ Date: \_\_\_\_\_ Received By: \_\_\_\_\_ Date: \_\_\_\_\_



**SUBCONTRACT ORDER**  
**Deerhaven Generating Station**  
**D18A028**

| Analysis                            | Expires         | Laboratory ID                   | Comments |
|-------------------------------------|-----------------|---------------------------------|----------|
| <b>Sample Name: MWI-6-4 (R6T4B)</b> |                 |                                 |          |
| <b>Sample ID: D18A028-13</b>        | <b>Water</b>    | <b>Sampled: 14-Feb-18 11:12</b> |          |
| D_Anions - Fluoride                 | 14-Mar-18 11:12 |                                 |          |
| D_Radium226+228_Combined            | 09-Aug-18 11:12 |                                 |          |
| <i>Containers Supplied:</i>         |                 |                                 |          |
| D_HDPE, Chill @<6°C - 250mL (C)     |                 |                                 |          |
| D_HDPE, HNO3 pH<2 - 2000mL (D)      |                 |                                 |          |
| <b>Sample Name: EBLANK</b>          |                 |                                 |          |
| <b>Sample ID: D18A028-14</b>        | <b>Water</b>    | <b>Sampled: 14-Feb-18 14:53</b> |          |
| D_Radium226+228_Combined            | 09-Aug-18 14:53 |                                 |          |
| D_Anions - Fluoride                 | 14-Mar-18 14:53 |                                 |          |
| <i>Containers Supplied:</i>         |                 |                                 |          |
| D_HDPE, Chill @<6°C - 250mL (C)     |                 |                                 |          |
| D_HDPE, HNO3 pH<2 - 2000mL (D)      |                 |                                 |          |

Released By *Shelby Phillips* Date *2-19-18* *via FEDEX* Received By *MAITIA PACE* Date *2/20/18 1115*  
*22.7 T301*

Released By \_\_\_\_\_ Date \_\_\_\_\_ Received By \_\_\_\_\_ Date \_\_\_\_\_



Document Name:  
Sample Condition Upon Receipt Form  
Document No.:  
F-FL-C-007 rev. 12

Document Revised:  
August 2, 2017  
Issuing Authority:  
Pace Florida Quality Office

**Sample Condition Upon Receipt Form (SCUR)**

**Project #**  
**Project Manager:**  
**Client:**

**WO# : 35375377**  
**PM: JSB**      **Due Date: 03/08/18**  
**CLIENT: DEELAB**

**Date and Initials of person:**  
**Examining contents:** \_\_\_\_\_  
**Label:** \_\_\_\_\_  
**Deliver:** \_\_\_\_\_  
**pH:** \_\_\_\_\_

Thermometer Used: T301      Date: 2/20/18      Time: 1115      Initials: SS

State of Origin: \_\_\_\_\_

Cooler #1 Temp. °C 0.4 (Visual) 0.0 (Correction Factor) 0.4 (Actual)  
Cooler #2 Temp. °C 22.7 (Visual) 0 (Correction Factor) 22.7 (Actual)  
Cooler #3 Temp. °C 22.6 (Visual) 0 (Correction Factor) 22.6 (Actual)  
Cooler #4 Temp. °C \_\_\_\_\_ (Visual) \_\_\_\_\_ (Correction Factor) \_\_\_\_\_ (Actual)  
Cooler #5 Temp. °C \_\_\_\_\_ (Visual) \_\_\_\_\_ (Correction Factor) \_\_\_\_\_ (Actual)  
Cooler #6 Temp. °C \_\_\_\_\_ (Visual) \_\_\_\_\_ (Correction Factor) \_\_\_\_\_ (Actual)

- Samples on ice, cooling process has begun
- Samples on ice, cooling process has begun
- Samples on ice, cooling process has begun
- Samples on ice, cooling process has begun
- Samples on ice, cooling process has begun
- Samples on ice, cooling process has begun

Courier:  Fed Ex     UPS     USPS     Client     Commercial     Pace     Other \_\_\_\_\_  
Shipping Method:     First Overnight     Priority Overnight     Standard Overnight     Ground     International Priority  
 Other \_\_\_\_\_

Billing:     Recipient     Sender     Third Party     Credit Card     Unknown

Tracking # 8127 8324 8078 / 8127 8324 8090 / 8127 8324 8089

Custody Seal on Cooler/Box Present:     Yes     No      Seals intact:     Yes     No      Ice:     Wet     Blue     Dry     None

Packing Material:     Bubble Wrap     Bubble Bags     None     Other \_\_\_\_\_

Samples shorted to lab (If Yes, complete)      Shorted Date: \_\_\_\_\_      Shorted Time: \_\_\_\_\_      Qty: \_\_\_\_\_

**Comments:**

|   |  |   |
|---|--|---|
| Chain of Custody Present  | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |   |
| Chain of Custody Filled Out   | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |   |
| Relinquished Signature & Sampler Name COC   | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |   |
| Samples Arrived within Hold Time  | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |   |
| Rush TAT requested on COC   | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A |   |
| Sufficient Volume   | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |   |
| Correct Containers Used   | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |   |
| Containers Intact   | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |   |
| Sample Labels match COC (sample IDs & date/time of collection)  | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |   |
| All containers needing acid/base preservation have been checked.  | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Preservative: _____<br>Lot #/Trace #: _____<br>Date: _____ Time: _____<br>Initials: _____ |
| All Containers needing preservation are found to be in compliance with EPA recommendation:<br>Exceptions: VOA, Coliform, TOC, O&G, Carbamates | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |   |
| Headspace in VOA Vials? (>6mm):   | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A |   |
| Trip Blank Present:   | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A |   |

**Client Notification/ Resolution:**  
Person Contacted: \_\_\_\_\_      Date/Time: \_\_\_\_\_

**Comments/ Resolution (use back for additional comments):**  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Project Manager Review: \_\_\_\_\_

Date: \_\_\_\_\_



March 23, 2018

Service Request No:J1801928

Jeffery Boudreau  
Gainesville Regional Utilities  
10001 NW 13th St  
Gainesville, FL 32653

**Laboratory Results for: D18A034**

Dear Jeffery,

Enclosed are the results of the sample(s) submitted to our laboratory March 14, 2018  
For your reference, these analyses have been assigned our service request number **J1801928**.

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and ALS Environmental is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report. In accordance to the NELAC 2003 Standard, a statement on the estimated uncertainty of measurement of any quantitative analysis will be supplied upon request.

Respectfully submitted,

**ALS Group USA, Corp. dba ALS Environmental**

Gina Bondani  
Project Manager

ADDRESS 9143 Philips Highway, Suite 200, Jacksonville, FL 32256  
PHONE +1 904 739 2277 | FAX +1 904 739 2011  
ALS Group USA, Corp.  
dba ALS Environmental



# Narrative Documents

**ALS Environmental—Jacksonville Laboratory**  
9143 Philips Highway, Suite 200, Jacksonville, FL 32256  
Phone (904) 739-2277 Fax (904) 739-2011  
[www.alsglobal.com](http://www.alsglobal.com)



**Client:** Gainesville Regional Utilities  
**Project:** D18A034  
**Sample Matrix:** Water

**Service Request:** J1801928  
**Date Received:** 3/14/18

### CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier II data deliverables, including results of QC samples analyzed from this delivery group. When appropriate to the procedure, method blank results have been reported with each analytical test. Analytical procedures performed by the lab are validated in accordance with NELAC standards. Parameters that are included in the NELAC Fields of Testing but are not included in the lab's NELAC accreditation are identified in the discussion of each analytical procedure.

#### Sample Receipt

Samples were received for analysis at ALS Environmental and were received in good condition and consistent with the accompanying chain of custody form. Samples are refrigerated at  $\leq 6^{\circ}\text{C}$  upon receipt at the lab except for aqueous samples designated for metals analyses, which are stored at room temperature.

#### Analyses Notes:

No significant data anomalies were noted with this analysis.

Approved by  Date 3/23/2018



**SAMPLE DETECTION SUMMARY**

**CLIENT ID: D18A034-01**

**Lab ID: J1801928-001**

| <b>Analyte</b>  | <b>Results</b> | <b>Flag</b> | <b>MDL</b> | <b>PQL</b> | <b>Units</b> | <b>Method</b> |
|-----------------|----------------|-------------|------------|------------|--------------|---------------|
| Selenium, Total | 0.005          | IV          | 0.002      | 0.010      | mg/L         | 200.7         |





## Sample Receipt Information

**ALS Environmental—Jacksonville Laboratory**  
9143 Philips Highway, Suite 200, Jacksonville, FL 32256  
Phone (904) 739-2277 Fax (904) 739-2011  
[www.alsglobal.com](http://www.alsglobal.com)

**Client:** Gainesville Regional Utilities  
**Project:** D18A034

**Service Request:**J1801928

**SAMPLE CROSS-REFERENCE**

| <u>SAMPLE #</u> | <u>CLIENT SAMPLE ID</u> | <u>DATE</u> | <u>TIME</u> |
|-----------------|-------------------------|-------------|-------------|
| J1801928-001    | D18A034-01              | 3/5/2018    | 1323        |

**Cooler Receipt Form**

Client: Bainbridge Regional Utility Service Request #: 51861928  
 Project: D18A034 Shipping paid by ALS?  
 Cooler received on 3/14/18 and opened on 5/14/18 by RJ Yes  No  N/A  
 COURIER: ALS UPS  FEDEX  DHL Client Other \_\_\_\_\_ Airbill # 2127 8329 8115

- 1 Were custody seals on outside of cooler? Yes  No   
 If yes, how many and where? #: \_\_\_ on lid other
- 2 Were seals intact and signature and date correct? Yes  No  N/A
- 3 Were custody papers properly filled out? Yes  No  N/A
- 4 Temperature of cooler(s) upon receipt (Should be 0°C and ≤ 6°C) ambient
- 5 Thermometer ID none
- 6 Temperature Blank Present? Yes  No
- 7 Were Ice or Ice Packs present Ice  Ice Packs  No
- 8 Did all bottles arrive in good condition (unbroken, etc....)? Yes  No  N/A
- 9 Type of packing material present Netting  Vial Holder  Bubble Wrap   
 Paper  Styrofoam  Other  N/A
- 10 Were all bottle labels complete (sample ID, preservation, etc....)? Yes  No  N/A
- 11 Did all bottle labels and tags agree with custody papers? Yes  No  N/A
- 12 Were the correct bottles used for the tests indicated? Yes  No  N/A
- 13 Were all of the preserved bottles received with the appropriate preservative? Yes  No  N/A  
HNO3 pH<2 H2SO4 pH<2 ZnAc2/NaOH pH>9 NaOH pH>12 HCl pH<2  
Preservative additions noted below
- 14 Were all samples received within analysis holding times? Yes  No  N/A
- 15 Were VOA vials free of air bubbles greater than 6mm? If present, note below Yes  No  N/A
- 16 Where did the bottles originate? ALS  Client

| Sample ID | Reagent | Lot # | ml added | Initials Date/Time |
|-----------|---------|-------|----------|--------------------|
|           |         |       |          |                    |
|           |         |       |          |                    |
|           |         |       |          |                    |
|           |         |       |          |                    |
|           |         |       |          |                    |
|           |         |       |          |                    |
|           |         |       |          |                    |
|           |         |       |          |                    |
|           |         |       |          |                    |
|           |         |       |          |                    |

Additional comments and/or explanation of all discrepancies noted above:  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Client approval to run samples if discrepancies noted: \_\_\_\_\_ Date: \_\_\_\_\_



**SUBCONTRACT ORDER**  
**Deerhaven Generating Station**  
**D18A034**

5/801928

**SENDING LABORATORY:**

Gainesville Regional Utilities  
 Deerhaven Generating Station  
 10001 NW 13th Street  
 Gainesville, FL 32653  
 Phone: 352-334-3434  
 Fax: 352-334-3149  
 Project Manager: Jeff Boudreau

**RECEIVING LABORATORY:**

ALS Global  
 9143 Philips Highway, Suite 200  
 Jacksonville, FL 32256  
 Phone : (904) 394-4426  
 Fax: (904) 739-2011

**J1801928**  
 Gainesville Regional Utilities  
 D18A034

**5**



| Analysis                             | Expires         | Laboratory ID                  | Comments               |  |
|--------------------------------------|-----------------|--------------------------------|------------------------|--|
| <b>Sample Name: Barnstead</b>        |                 |                                |                        |  |
| <b>Sample ID: D18A034-01</b>         | <b>Water</b>    | <b>Sampled:05-Mar-18 13:23</b> |                        |  |
| K_Selenium                           | 01-Sep-18 13:23 |                                | Run 200.7 for all 'k-' |  |
| K_Molybdenum                         | 01-Sep-18 13:23 |                                |                        |  |
| K_Cobalt                             | 01-Sep-18 13:23 |                                |                        |  |
| K_Chromium                           | 01-Sep-18 13:23 |                                |                        |  |
| K_Cadmium                            | 01-Sep-18 13:23 |                                |                        |  |
| K_Beryllium                          | 01-Sep-18 13:23 |                                |                        |  |
| K_Barium                             | 01-Sep-18 13:23 |                                |                        |  |
| D_Thallium by 200.8                  | 01-Sep-18 13:23 |                                |                        |  |
| D_Lithium by 200.7                   | 01-Sep-18 13:23 |                                |                        |  |
| D_Lead by 200.8                      | 01-Sep-18 13:23 |                                |                        |  |
| D_Arsenic by 200.8                   | 01-Sep-18 13:23 |                                |                        |  |
| D_Antimony by 200.8                  | 01-Sep-18 13:23 |                                |                        |  |
| <i>Containers Supplied:</i>          |                 |                                |                        |  |
| D_HDPE, HNO3 pH<2 - 250mL extra2 (D) |                 |                                |                        |  |

|                 |                  |                 |                     |
|-----------------|------------------|-----------------|---------------------|
| <i>Phillips</i> | <i>via FEDEX</i> | <i>Phillips</i> | <i>Phillips</i>     |
| Released By     | Date             | Received By     | Date                |
|                 | <i>3/10/18</i>   |                 | <i>3/14/18 1400</i> |
| Released By     | Date             | Received By     | Date                |



## Miscellaneous Forms

**ALS Environmental—Jacksonville Laboratory**  
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## **FLORIDA DEP DATA QUALIFIERS**

- B Results based upon colony counts outside the acceptable range.
- D Measurement was made in the field.
- H Value based on field kit determination; results may not be accurate.
- I The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
- J Estimated value (one of the following reasons is discussed in the project case narrative).
1. The result may be inaccurate because the surrogate recovery limits have been exceeded.
  2. No known quality control criteria exists for the component.
  3. The reported value failed to meet the established quality control criteria for either precision or accuracy.
  4. The sample matrix interfered with the ability to make any accurate determination (e.g., primary and confirmation results show greater than 40% RPD).
  5. The data is questionable because of improper laboratory or field protocols (e.g., GC/MS Tune did not meet method criteria).
- K Off scale low. The value is less than the lowest calibration standard but greater than the method reporting limit (MRL).
- L Off scale high. The analyte is above the upper limit of the linear calibration range.
- M The MDL/MRL has been elevated because the analyte could not be accurately quantified due to matrix interference.
- N Presumptive evidence of the analyte. Confirmation was not performed.
- Q Sample held beyond the accepted holding time.
- T Value reported is less than the laboratory method detection limit. The value is reported for informational purposes only.
- U Indicates that the compound was analyzed for but not detected.
- V Indicates that the analyte was detected in both the sample and the associated method blank.
- Y The laboratory analysis was from an improperly preserved sample.
- Z Too many colonies were present (TNTC). The numeric value represents the filtration volume.



**Jacksonville Lab ID # for State Certifications<sup>1</sup>**

| <b>Agency</b>  | <b>Number</b>   | <b>Expiration Date</b> |
|--|-----------------|------------------------|
| Department of Defense  | 66206           | 7/31/2018              |
| Florida Department of Health                                   | E82502          | 6/30/2018              |
| Georgia Department of Natural Resources                        | 958             | 6/30/2018              |
| Kentucky Division of Waste Management                          | 123042          | 6/30/2018              |
| Louisiana Department of Environmental Quality                  | 02086           | 6/30/2018              |
| Maine Department of Health and Human Services                  | 2015002         | 2/3/2019               |
| North Carolina Department of Environment and Natural Resources | 527             | 12/31/2018             |
| Pennsylvania Department of Environmental Protection            | 68-04835        | 8/31/2018              |
| South Carolina Department of Health and Environmental Control  | 96021001        | 6/30/2018              |
| Texas Commission on Environmental Quality                      | T104704197-16-8 | 5/31/2018              |
| Virginia Environmental Accreditation Program                   | 460191          | 12/14/2018             |

<sup>1</sup> Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state or agency requirements. The test results meet requirements of the current NELAP/TNI standards or state or agency requirements, where applicable, except as noted in the laboratory case narrative provided. For a specific list of accredited analytes, refer to <http://www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads/North-America-Downloads>



## ACRONYMS

|            |  |
|------------|--|
| ASTM       | American Society for Testing and Materials   |
| A2LA       | American Association for Laboratory Accreditation  |
| CARB       | California Air Resources Board   |
| CAS Number | Chemical Abstract Service registry Number  |
| CFC        | Chlorofluorocarbon   |
| CFU        | Colony-Forming Unit  |
| DEC        | Department of Environmental Conservation   |
| DEQ        | Department of Environmental Quality  |
| DHS        | Department of Health Services  |
| DOE        | Department of Ecology  |
| DOH        | Department of Health   |
| EPA        | U. S. Environmental Protection Agency  |
| ELAP       | Environmental Laboratory Accreditation Program   |
| GC         | Gas Chromatography   |
| GC/MS      | Gas Chromatography/Mass Spectrometry   |
| LUFT       | Leaking Underground Fuel Tank  |
| M          | Modified   |
| MCL        | Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA. |
| MDL        | Method Detection Limit   |
| MPN        | Most Probable Number   |
| MRL        | Method Reporting Limit   |
| NA         | Not Applicable   |
| NC         | Not Calculated   |
| NCASI      | National Council of the Paper Industry for Air and Stream Improvement  |
| ND         | Not Detected   |
| NIOSH      | National Institute for Occupational Safety and Health  |
| PQL        | Practical Quantitation Limit   |
| RCRA       | Resource Conservation and Recovery Act   |
| SIM        | Selected Ion Monitoring  |
| TPH        | Total Petroleum Hydrocarbons   |
| tr         | Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.                           |



**ALS Group USA, Corp.**

dba ALS Environmental

Analyst Summary report

**Client:** Gainesville Regional Utilities  
**Project:** D18A034

**Service Request:** J1801928

**Sample Name:** D18A034-01  
**Lab Code:** J1801928-001  
**Sample Matrix:** Water

**Date Collected:** 03/5/18  
**Date Received:** 03/14/18

**Analysis Method**

200.7  
200.8

**Extracted/Digested By**

EGARDNER  
CSULLIVAN

**Analyzed By**

EGARDNER  
CSULLIVAN



# Sample Results

**ALS Environmental—Jacksonville Laboratory**  
9143 Philips Highway, Suite 200, Jacksonville, FL 32256  
Phone (904) 739-2277 Fax (904) 739-2011  
[www.alsglobal.com](http://www.alsglobal.com)



## Metals

**ALS Environmental—Jacksonville Laboratory**  
9143 Philips Highway, Suite 200, Jacksonville, FL 32256  
Phone (904)739-2277 Fax (904)739-2011  
[www.alsglobal.com](http://www.alsglobal.com)

ALS Group USA, Corp.  
dba ALS Environmental

Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A034  
**Sample Matrix:** Water  
**Sample Name:** D18A034-01  
**Lab Code:** J1801928-001

**Service Request:** J1801928  
**Date Collected:** 03/05/18 13:23  
**Date Received:** 03/14/18 14:00  
**Basis:** NA

Inorganic Parameters

| Analyte Name      | Analysis Method | Result          | Units | PQL    | MDL     | Dil. | Date Analyzed  | Date Extracted | Q |
|-------------------|-----------------|-----------------|-------|--------|---------|------|----------------|----------------|---|
| Antimony, Total   | 200.8           | 0.04 U          | ug/L  | 1.0    | 0.04    | 1    | 03/20/18 18:37 | 03/20/18       |   |
| Arsenic, Total    | 200.8           | 0.10 U          | ug/L  | 1.0    | 0.10    | 1    | 03/20/18 18:37 | 03/20/18       |   |
| Barium, Total     | 200.7           | 0.001 U         | mg/L  | 0.010  | 0.001   | 1    | 03/21/18 00:49 | 03/19/18       |   |
| Beryllium, Total  | 200.7           | 0.00006 U       | mg/L  | 0.0040 | 0.00006 | 1    | 03/21/18 00:48 | 03/19/18       |   |
| Cadmium, Total    | 200.7           | 0.0002 U        | mg/L  | 0.0050 | 0.0002  | 1    | 03/21/18 00:49 | 03/19/18       |   |
| Chromium, Total   | 200.7           | 0.0004 U        | mg/L  | 0.010  | 0.0004  | 1    | 03/21/18 00:49 | 03/19/18       |   |
| Cobalt, Total     | 200.7           | 0.003 U         | mg/L  | 0.010  | 0.003   | 1    | 03/21/18 00:49 | 03/19/18       |   |
| Lead, Total       | 200.8           | 0.03 U          | ug/L  | 0.50   | 0.03    | 1    | 03/20/18 18:37 | 03/20/18       |   |
| Lithium, Total    | 200.7           | 0.002 U         | mg/L  | 0.10   | 0.002   | 1    | 03/21/18 00:47 | 03/19/18       |   |
| Molybdenum, Total | 200.7           | 0.0003 U        | mg/L  | 0.010  | 0.0003  | 1    | 03/21/18 00:49 | 03/19/18       |   |
| Selenium, Total   | 200.7           | <b>0.005 IV</b> | mg/L  | 0.010  | 0.002   | 1    | 03/21/18 18:58 | 03/19/18       |   |
| Thallium, Total   | 200.8           | 0.02 U          | ug/L  | 0.20   | 0.02    | 1    | 03/20/18 18:37 | 03/20/18       |   |



## QC Summary Forms

**ALS Environmental - Jacksonville Laboratory**  
9143 Philips Highway, Suite 200, Jacksonville, FL 32256  
Phone (904) 739-2277 Fax (904) 739-2011  
[www.alsglobal.com](http://www.alsglobal.com)



# Metals

**ALS Environmental—Jacksonville Laboratory**  
9143 Philips Highway, Suite 200, Jacksonville, FL 32256  
Phone (904)739-2277 Fax (904)739-2011  
[www.alsglobal.com](http://www.alsglobal.com)

ALS Group USA, Corp.  
dba ALS Environmental

Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A034  
**Sample Matrix:** Water  
**Sample Name:** Method Blank  
**Lab Code:** J1801928-MB

**Service Request:** J1801928  
**Date Collected:** NA  
**Date Received:** NA  
**Basis:** NA

Inorganic Parameters

| Analyte Name      | Analysis Method | Result         | Units | PQL    | MDL     | Dil. | Date Analyzed  | Date Extracted | Q |
|-------------------|-----------------|----------------|-------|--------|---------|------|----------------|----------------|---|
| Antimony, Total   | 200.8           | 0.04 U         | ug/L  | 1.0    | 0.04    | 1    | 03/20/18 18:34 | 03/20/18       |   |
| Arsenic, Total    | 200.8           | 0.1 U          | ug/L  | 1.0    | 0.1     | 1    | 03/20/18 18:34 | 03/20/18       |   |
| Barium, Total     | 200.7           | 0.001 U        | mg/L  | 0.010  | 0.001   | 1    | 03/21/18 00:34 | 03/19/18       |   |
| Beryllium, Total  | 200.7           | 0.00006 U      | mg/L  | 0.0040 | 0.00006 | 1    | 03/21/18 00:34 | 03/19/18       |   |
| Cadmium, Total    | 200.7           | 0.0002 U       | mg/L  | 0.0050 | 0.0002  | 1    | 03/21/18 00:34 | 03/19/18       |   |
| Chromium, Total   | 200.7           | 0.0004 U       | mg/L  | 0.010  | 0.0004  | 1    | 03/21/18 00:34 | 03/19/18       |   |
| Cobalt, Total     | 200.7           | 0.003 U        | mg/L  | 0.010  | 0.003   | 1    | 03/21/18 00:34 | 03/19/18       |   |
| Lead, Total       | 200.8           | <b>0.05 I</b>  | ug/L  | 0.50   | 0.03    | 1    | 03/20/18 18:34 | 03/20/18       |   |
| Lithium, Total    | 200.7           | 0.002 U        | mg/L  | 0.10   | 0.002   | 1    | 03/21/18 00:33 | 03/19/18       |   |
| Molybdenum, Total | 200.7           | 0.0003 U       | mg/L  | 0.010  | 0.0003  | 1    | 03/21/18 00:34 | 03/19/18       |   |
| Selenium, Total   | 200.7           | <b>0.002 I</b> | mg/L  | 0.010  | 0.002   | 1    | 03/21/18 18:54 | 03/19/18       |   |
| Thallium, Total   | 200.8           | 0.02 U         | ug/L  | 0.20   | 0.02    | 1    | 03/20/18 18:34 | 03/20/18       |   |

ALS Group USA, Corp.  
dba ALS Environmental

QA/QC Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A034  
**Sample Matrix:** Water

**Service Request:** J1801928  
**Date Analyzed:** 03/20/18

**Lab Control Sample Summary**  
**Inorganic Parameters**

**Units:**ug/L  
**Basis:**NA

**Lab Control Sample**  
J1801928-LCS

| <b>Analyte Name</b> | <b>Analytical Method</b> | <b>Result</b> | <b>Spike Amount</b> | <b>% Rec</b> | <b>% Rec Limits</b> |
|---------------------|--------------------------|---------------|---------------------|--------------|---------------------|
| Antimony, Total     | 200.8                    | 47.9          | 50.0                | 96           | 85-115              |
| Arsenic, Total      | 200.8                    | 46.3          | 50.0                | 93           | 85-115              |
| Lead, Total         | 200.8                    | 24.3          | 25.0                | 97           | 85-115              |
| Thallium, Total     | 200.8                    | 9.67          | 10.0                | 97           | 85-115              |



ALS Group USA, Corp.  
dba ALS Environmental

QA/QC Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A034  
**Sample Matrix:** Water

**Service Request:** J1801928  
**Date Analyzed:** 03/21/18

**Lab Control Sample Summary**  
**Inorganic Parameters**

**Units:**mg/L  
**Basis:**NA

**Lab Control Sample**  
J1801928-LCS

| <b>Analyte Name</b> | <b>Analytical Method</b> | <b>Result</b> | <b>Spike Amount</b> | <b>% Rec</b> | <b>% Rec Limits</b> |
|---------------------|--------------------------|---------------|---------------------|--------------|---------------------|
| Barium, Total       | 200.7                    | 0.492         | 0.500               | 98           | 85-115              |
| Beryllium, Total    | 200.7                    | 0.196         | 0.200               | 98           | 85-115              |
| Cadmium, Total      | 200.7                    | 0.245         | 0.250               | 98           | 85-115              |
| Chromium, Total     | 200.7                    | 0.505         | 0.500               | 101          | 85-115              |
| Cobalt, Total       | 200.7                    | 0.516         | 0.500               | 103          | 85-115              |
| Lithium, Total      | 200.7                    | 4.87          | 5.00                | 97           | 85-115              |
| Molybdenum, Total   | 200.7                    | 0.494         | 0.500               | 99           | 85-115              |
| Selenium, Total     | 200.7                    | 0.494         | 0.500               | 99           | 85-115              |

ALS Group USA, Corp.  
dba ALS Environmental

QA/QC Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A034  
**Sample Matrix:** Water

**Service Request:** J1801928  
**Date Collected:** 03/05/18  
**Date Received:** 03/14/18  
**Date Analyzed:** 03/20/18  
**Date Extracted:** 03/20/18

**Duplicate Matrix Spike Summary  
Inorganic Parameters**

**Sample Name:** D18A034-01  
**Lab Code:** J1801928-001  
**Analysis Method:** 200.8  
**Prep Method:** EPA 3005A

**Units:** ug/L  
**Basis:** NA

| Analyte Name    | Sample Result | Result | Matrix Spike<br>J1801928-001MS |       | Duplicate Matrix Spike<br>J1801928-001DMS |              | % Rec Limits | RPD    | RPD Limit |       |
|-----------------|---------------|--------|--------------------------------|-------|---|--------------|--------------|--------|-----------|-------|
|                 |               |        | Spike Amount                   | % Rec | Result                                    | Spike Amount |              |        |           | % Rec |
| Antimony, Total | 0.04 U        | 48.7   | 50.0                           | 97    | 48.2                                      | 50.0         | 96           | 70-130 | 1         | 20    |
| Arsenic, Total  | 0.1 U         | 48.3   | 50.0                           | 97    | 48.1                                      | 50.0         | 96           | 70-130 | <1        | 20    |
| Lead, Total     | 0.03 U        | 24.0   | 25.0                           | 96    | 24.2                                      | 25.0         | 97           | 70-130 | <1        | 20    |
| Thallium, Total | 0.02 U        | 9.63   | 10.0                           | 96    | 9.63                                      | 10.0         | 96           | 70-130 | <1        | 20    |

Results flagged with an asterisk (\*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.



March 23, 2018

Service Request No:J1801895

Jeffery Boudreau  
Gainesville Regional Utilities  
10001 NW 13th St  
Gainesville, FL 32653

**Laboratory Results for: D18A029**

Dear Jeffery,

Enclosed are the results of the sample(s) submitted to our laboratory March 14, 2018  
For your reference, these analyses have been assigned our service request number **J1801895**.

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and ALS Environmental is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report. In accordance to the NELAC 2003 Standard, a statement on the estimated uncertainty of measurement of any quantitative analysis will be supplied upon request.

Respectfully submitted,

**ALS Group USA, Corp. dba ALS Environmental**

Gina Bondani  
Project Manager

ADDRESS 9143 Philips Highway, Suite 200, Jacksonville, FL 32256  
PHONE +1 904 739 2277 | FAX +1 904 739 2011  
ALS Group USA, Corp.  
dba ALS Environmental



---

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## Table of Contents

|                            |    |
|----------------------------|----|
| CoverLetter                | 1  |
| Table of Contents          | 2  |
| Narrative Documents        | 4  |
| Narrative Documents        | 5  |
| Hit Summary List           | 6  |
| Sample Receipt Information | 9  |
| Sample Cross-Reference     | 10 |
| Chain Of Custody           | 11 |
| Miscellaneous Forms        | 18 |
| Qualifiers                 | 19 |
| Acronyms                   | 21 |
| Analyst Summary            | 22 |
| Sample Results             | 26 |
| Metals                     | 27 |
| D18A029-01 - Metals        | 28 |
| D18A029-02 - Metals        | 29 |
| D18A029-03 - Metals        | 30 |
| D18A029-04 - Metals        | 31 |
| D18A029-05 - Metals        | 32 |
| D18A029-06 - Metals        | 33 |
| D18A029-07 - Metals        | 34 |
| D18A029-08 - Metals        | 35 |

## Table of Contents (continued)

|   |    |
|---|----|
| D18A029-09 - Metals                     | 36 |
| D18A029-10 - Metals                     | 37 |
| D18A029-11 - Metals                     | 38 |
| D18A029-12 - Metals                     | 39 |
| D18A029-13 - Metals                     | 40 |
| D18A029-14 - Metals                     | 41 |
| QC Summary Forms                        | 42 |
| Metals                                  | 43 |
| 200.7 - Inorganic Parameters            |    |
| Method Blank - Metals                   | 44 |
| J1801895-LCS - LCS Metals               | 45 |
| J1801895-006DMS D18A029-06 - DMS Metals | 47 |
| J1801895-010DMS D18A029-10 - DMS Metals | 48 |
| 200.8 - Inorganic Parameters            |    |
| J1801895-007DMS D18A029-07 - DMS Metals | 49 |



# Narrative Documents

**ALS Environmental—Jacksonville Laboratory**  
9143 Philips Highway, Suite 200, Jacksonville, FL 32256  
Phone (904) 739-2277 Fax (904) 739-2011  
[www.alsglobal.com](http://www.alsglobal.com)



**Client:** Gainesville Regional Utilities  
**Project:** D18A029  
**Sample Matrix:** Water

**Service Request:** J1801895  
**Date Received:** 3/14/18

### CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier II data deliverables, including results of QC samples analyzed from this delivery group. When appropriate to the procedure, method blank results have been reported with each analytical test. Analytical procedures performed by the lab are validated in accordance with NELAC standards. Parameters that are included in the NELAC Fields of Testing but are not included in the lab's NELAC accreditation are identified in the discussion of each analytical procedure.

#### Sample Receipt

Samples were received for analysis at ALS Environmental and were received in good condition and consistent with the accompanying chain of custody form. Samples are refrigerated at  $\leq 6^{\circ}\text{C}$  upon receipt at the lab except for aqueous samples designated for metals analyses, which are stored at room temperature.

#### Analyses Notes:

No significant data anomalies were noted with this analysis.

Approved by  Date 3/23/2018



**SAMPLE DETECTION SUMMARY**

**CLIENT ID: D18A029-01 Lab ID: J1801895-001**

| Analyte           | Results | Flag | MDL    | PQL   | Units | Method |
|-------------------|---------|------|--------|-------|-------|--------|
| Antimony, Total   | 0.1     | I    | 0.04   | 1.0   | ug/L  | 200.8  |
| Arsenic, Total    | 2.7     |      | 0.10   | 1.0   | ug/L  | 200.8  |
| Barium, Total     | 0.033   |      | 0.001  | 0.010 | mg/L  | 200.7  |
| Lead, Total       | 0.04    | I    | 0.03   | 0.50  | ug/L  | 200.8  |
| Molybdenum, Total | 0.006   | I    | 0.0003 | 0.010 | mg/L  | 200.7  |
| Selenium, Total   | 0.011   | V    | 0.002  | 0.010 | mg/L  | 200.7  |
| Thallium, Total   | 0.03    | I    | 0.02   | 0.20  | ug/L  | 200.8  |

**CLIENT ID: D18A029-02 Lab ID: J1801895-002**

| Analyte           | Results | Flag | MDL    | PQL   | Units | Method |
|-------------------|---------|------|--------|-------|-------|--------|
| Antimony, Total   | 0.6     | I    | 0.04   | 1.0   | ug/L  | 200.8  |
| Arsenic, Total    | 0.9     | I    | 0.10   | 1.0   | ug/L  | 200.8  |
| Barium, Total     | 0.011   |      | 0.001  | 0.010 | mg/L  | 200.7  |
| Lead, Total       | 0.03    | I    | 0.03   | 0.50  | ug/L  | 200.8  |
| Molybdenum, Total | 0.008   | I    | 0.0003 | 0.010 | mg/L  | 200.7  |
| Selenium, Total   | 0.010   | V    | 0.002  | 0.010 | mg/L  | 200.7  |

**CLIENT ID: D18A029-03 Lab ID: J1801895-003**

| Analyte           | Results | Flag | MDL    | PQL   | Units | Method |
|-------------------|---------|------|--------|-------|-------|--------|
| Antimony, Total   | 0.09    | I    | 0.04   | 1.0   | ug/L  | 200.8  |
| Arsenic, Total    | 3.8     |      | 0.10   | 1.0   | ug/L  | 200.8  |
| Barium, Total     | 0.019   |      | 0.001  | 0.010 | mg/L  | 200.7  |
| Chromium, Total   | 0.001   | I    | 0.0004 | 0.010 | mg/L  | 200.7  |
| Lead, Total       | 0.04    | I    | 0.03   | 0.50  | ug/L  | 200.8  |
| Molybdenum, Total | 0.006   | I    | 0.0003 | 0.010 | mg/L  | 200.7  |
| Selenium, Total   | 0.009   | IV   | 0.002  | 0.010 | mg/L  | 200.7  |
| Thallium, Total   | 0.02    | I    | 0.02   | 0.20  | ug/L  | 200.8  |

**CLIENT ID: D18A029-04 Lab ID: J1801895-004**

| Analyte           | Results | Flag | MDL    | PQL   | Units | Method |
|-------------------|---------|------|--------|-------|-------|--------|
| Antimony, Total   | 0.1     | I    | 0.04   | 1.0   | ug/L  | 200.8  |
| Arsenic, Total    | 2.1     |      | 0.10   | 1.0   | ug/L  | 200.8  |
| Barium, Total     | 0.055   |      | 0.001  | 0.010 | mg/L  | 200.7  |
| Chromium, Total   | 0.001   | I    | 0.0004 | 0.010 | mg/L  | 200.7  |
| Lead, Total       | 0.04    | I    | 0.03   | 0.50  | ug/L  | 200.8  |
| Molybdenum, Total | 0.005   | I    | 0.0003 | 0.010 | mg/L  | 200.7  |
| Selenium, Total   | 0.007   | IV   | 0.002  | 0.010 | mg/L  | 200.7  |

**CLIENT ID: D18A029-05 Lab ID: J1801895-005**

| Analyte         | Results | Flag | MDL   | PQL   | Units | Method |
|-----------------|---------|------|-------|-------|-------|--------|
| Antimony, Total | 0.1     | I    | 0.04  | 1.0   | ug/L  | 200.8  |
| Arsenic, Total  | 0.3     | I    | 0.10  | 1.0   | ug/L  | 200.8  |
| Barium, Total   | 0.048   |      | 0.001 | 0.010 | mg/L  | 200.7  |





**SAMPLE DETECTION SUMMARY**

**CLIENT ID: D18A029-05** **Lab ID: J1801895-005**

| Analyte           | Results | Flag | MDL    | PQL   | Units | Method |
|-------------------|---------|------|--------|-------|-------|--------|
| Molybdenum, Total | 0.004   | I    | 0.0003 | 0.010 | mg/L  | 200.7  |
| Selenium, Total   | 0.006   | IV   | 0.002  | 0.010 | mg/L  | 200.7  |
| Thallium, Total   | 0.07    | I    | 0.02   | 0.20  | ug/L  | 200.8  |

**CLIENT ID: D18A029-06** **Lab ID: J1801895-006**

| Analyte           | Results | Flag | MDL     | PQL    | Units | Method |
|-------------------|---------|------|---------|--------|-------|--------|
| Antimony, Total   | 0.2     | I    | 0.04    | 1.0    | ug/L  | 200.8  |
| Arsenic, Total    | 3.2     |      | 0.10    | 1.0    | ug/L  | 200.8  |
| Barium, Total     | 0.153   |      | 0.001   | 0.010  | mg/L  | 200.7  |
| Beryllium, Total  | 0.0010  | I    | 0.00006 | 0.0040 | mg/L  | 200.7  |
| Chromium, Total   | 0.005   | I    | 0.0004  | 0.010  | mg/L  | 200.7  |
| Cobalt, Total     | 0.003   | I    | 0.003   | 0.010  | mg/L  | 200.7  |
| Lead, Total       | 0.60    |      | 0.03    | 0.50   | ug/L  | 200.8  |
| Molybdenum, Total | 0.008   | I    | 0.0003  | 0.010  | mg/L  | 200.7  |
| Selenium, Total   | 0.008   | IV   | 0.002   | 0.010  | mg/L  | 200.7  |
| Thallium, Total   | 0.07    | I    | 0.02    | 0.20   | ug/L  | 200.8  |

**CLIENT ID: D18A029-07** **Lab ID: J1801895-007**

| Analyte           | Results | Flag | MDL    | PQL   | Units | Method |
|-------------------|---------|------|--------|-------|-------|--------|
| Antimony, Total   | 1.1     |      | 0.04   | 1.0   | ug/L  | 200.8  |
| Arsenic, Total    | 1.3     |      | 0.10   | 1.0   | ug/L  | 200.8  |
| Barium, Total     | 0.069   |      | 0.001  | 0.010 | mg/L  | 200.7  |
| Chromium, Total   | 0.003   | I    | 0.0004 | 0.010 | mg/L  | 200.7  |
| Lithium, Total    | 0.006   | I    | 0.002  | 0.10  | mg/L  | 200.7  |
| Molybdenum, Total | 0.196   |      | 0.0003 | 0.010 | mg/L  | 200.7  |
| Selenium, Total   | 0.009   | IV   | 0.002  | 0.010 | mg/L  | 200.7  |
| Thallium, Total   | 0.06    | I    | 0.02   | 0.20  | ug/L  | 200.8  |

**CLIENT ID: D18A029-08** **Lab ID: J1801895-008**

| Analyte           | Results | Flag | MDL    | PQL   | Units | Method |
|-------------------|---------|------|--------|-------|-------|--------|
| Antimony, Total   | 3.0     |      | 0.04   | 1.0   | ug/L  | 200.8  |
| Arsenic, Total    | 2.7     |      | 0.10   | 1.0   | ug/L  | 200.8  |
| Barium, Total     | 0.065   |      | 0.001  | 0.010 | mg/L  | 200.7  |
| Chromium, Total   | 0.003   | I    | 0.0004 | 0.010 | mg/L  | 200.7  |
| Lithium, Total    | 0.28    |      | 0.002  | 0.10  | mg/L  | 200.7  |
| Molybdenum, Total | 0.092   |      | 0.0003 | 0.010 | mg/L  | 200.7  |
| Selenium, Total   | 0.013   | V    | 0.002  | 0.010 | mg/L  | 200.7  |
| Thallium, Total   | 0.51    |      | 0.02   | 0.20  | ug/L  | 200.8  |

**CLIENT ID: D18A029-12** **Lab ID: J1801895-012**

| Analyte        | Results | Flag | MDL   | PQL   | Units | Method |
|----------------|---------|------|-------|-------|-------|--------|
| Arsenic, Total | 14.8    |      | 0.10  | 1.0   | ug/L  | 200.8  |
| Barium, Total  | 0.014   |      | 0.001 | 0.010 | mg/L  | 200.7  |

**SAMPLE DETECTION SUMMARY**

|                              |                             |
|------------------------------|-----------------------------|
| <b>CLIENT ID: D18A029-12</b> | <b>Lab ID: J1801895-012</b> |
|------------------------------|-----------------------------|

| Analyte           | Results | Flag | MDL    | PQL   | Units | Method |
|-------------------|---------|------|--------|-------|-------|--------|
| Chromium, Total   | 0.003   | I    | 0.0004 | 0.010 | mg/L  | 200.7  |
| Molybdenum, Total | 0.007   | I    | 0.0003 | 0.010 | mg/L  | 200.7  |
| Selenium, Total   | 0.009   | IV   | 0.002  | 0.010 | mg/L  | 200.7  |

|                              |                             |
|------------------------------|-----------------------------|
| <b>CLIENT ID: D18A029-13</b> | <b>Lab ID: J1801895-013</b> |
|------------------------------|-----------------------------|

| Analyte           | Results | Flag | MDL    | PQL   | Units | Method |
|-------------------|---------|------|--------|-------|-------|--------|
| Arsenic, Total    | 1.2     |      | 0.10   | 1.0   | ug/L  | 200.8  |
| Barium, Total     | 0.021   |      | 0.001  | 0.010 | mg/L  | 200.7  |
| Chromium, Total   | 0.001   | I    | 0.0004 | 0.010 | mg/L  | 200.7  |
| Molybdenum, Total | 0.006   | I    | 0.0003 | 0.010 | mg/L  | 200.7  |
| Selenium, Total   | 0.011   | V    | 0.002  | 0.010 | mg/L  | 200.7  |

|                              |                             |
|------------------------------|-----------------------------|
| <b>CLIENT ID: D18A029-14</b> | <b>Lab ID: J1801895-014</b> |
|------------------------------|-----------------------------|

| Analyte         | Results | Flag | MDL    | PQL   | Units | Method |
|-----------------|---------|------|--------|-------|-------|--------|
| Chromium, Total | 0.003   | I    | 0.0004 | 0.010 | mg/L  | 200.7  |
| Selenium, Total | 0.004   | IV   | 0.002  | 0.010 | mg/L  | 200.7  |



## Sample Receipt Information

**ALS Environmental—Jacksonville Laboratory**  
9143 Philips Highway, Suite 200, Jacksonville, FL 32256  
Phone (904) 739-2277 Fax (904) 739-2011  
[www.alsglobal.com](http://www.alsglobal.com)

**Client:** Gainesville Regional Utilities  
**Project:** D18A029

**Service Request:**J1801895

**SAMPLE CROSS-REFERENCE**

| <u>SAMPLE #</u> | <u>CLIENT SAMPLE ID</u> | <u>DATE</u> | <u>TIME</u> |
|-----------------|-------------------------|-------------|-------------|
| J1801895-001    | D18A029-01              | 3/7/2018    | 1118        |
| J1801895-002    | D18A029-02              | 3/8/2018    | 0936        |
| J1801895-003    | D18A029-03              | 3/7/2018    | 1336        |
| J1801895-004    | D18A029-04              | 3/7/2018    | 1531        |
| J1801895-005    | D18A029-05              | 3/7/2018    | 0929        |
| J1801895-006    | D18A029-06              | 3/8/2018    | 1113        |
| J1801895-007    | D18A029-07              | 3/8/2018    | 1256        |
| J1801895-008    | D18A029-08              | 3/8/2018    | 1450        |
| J1801895-009    | D18A029-09              | 3/6/2018    | 1114        |
| J1801895-010    | D18A029-10              | 3/6/2018    | 1526        |
| J1801895-011    | D18A029-11              | 3/7/2018    | 0825        |
| J1801895-012    | D18A029-12              | 3/8/2018    | 0818        |
| J1801895-013    | D18A029-13              | 3/7/2018    | 1031        |
| J1801895-014    | D18A029-14              | 3/7/2018    | 1614        |

**Cooler Receipt Form**

Client: Bainbridge Regional Service Request #: 51801895  
 Project: D18A034 Shipping paid by ALS? Yes  No  N/A  
 Cooler received on 3/14/18 and opened on 5/14/18 by RJ  
 COURIER: ALS  UPS  FEDEX  DHL Client Other \_\_\_\_\_ Airbill # 9127 8324 8115

- 1 Were custody seals on outside of cooler? Yes  No   
 If yes, how many and where? #: \_\_\_ on lid other
- 2 Were seals intact and signature and date correct? Yes  No  N/A
- 3 Were custody papers properly filled out? Yes  No  N/A
- 4 Temperature of cooler(s) upon receipt (Should be 0°C and ≤ 6°C) ambient
- 5 Thermometer ID None
- 6 Temperature Blank Present? Yes  No
- 7 Were Ice or Ice Packs present Ice  Ice Packs  No
- 8 Did all bottles arrive in good condition (unbroken, etc....)? Yes  No  N/A
- 9 Type of packing material present Netting  Vial Holder  Bubble Wrap   
 Paper  Styrofoam  Other  N/A
- 10 Were all bottle labels complete (sample ID, preservation, etc....)? Yes  No  N/A
- 11 Did all bottle labels and tags agree with custody papers? Yes  No  N/A
- 12 Were the correct bottles used for the tests indicated? Yes  No  N/A
- 13 Were all of the preserved bottles received with the appropriate preservative? Yes  No  N/A   
 HNO3 pH<2 H2SO4 pH<2 ZnAc2/NaOH pH>9 NaOH pH>12 HCl pH<2  
 Preservative additions noted below
- 14 Were all samples received within analysis holding times? Yes  No  N/A
- 15 Were VOA vials free of air bubbles greater than 6mm? If present, note below Yes  No  N/A
- 16 Where did the bottles originate? ALS  Client

| Sample ID | Reagent | Lot # | ml added | Initials | Date/Time |
|-----------|---------|-------|----------|----------|-----------|
|           |         |       |          |          |           |
|           |         |       |          |          |           |
|           |         |       |          |          |           |
|           |         |       |          |          |           |
|           |         |       |          |          |           |
|           |         |       |          |          |           |
|           |         |       |          |          |           |
|           |         |       |          |          |           |
|           |         |       |          |          |           |
|           |         |       |          |          |           |

Additional comments and/or explanation of all discrepancies noted above:  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Client approval to run samples if discrepancies noted: \_\_\_\_\_ Date: \_\_\_\_\_



**SUBCONTRACT ORDER**  
**Deerhaven Generating Station**  
**D18A029**

51801895

**SENDING LABORATORY:**

Gainesville Regional Utilities  
 Deerhaven Generating Station  
 10001 NW 13th Street  
 Gainesville, FL 32653  
 Phone: 352-334-3434  
 Fax: 352-334-3149  
 Project Manager: Jeff Boudreau

**RECEIVING LABORATORY:**

ALS Global  
 9143 Philips Highway, Suite 200  
 Jacksonville, FL 32256  
 Phone : (904) 394-4426  
 Fax: (904) 739-2011

**J1801895**  
 Gainesville Regional Utilities  
 D18A029

**5**



| Analysis                             | Expires         | Laboratory ID                  | Comments   |  |
|--------------------------------------|-----------------|--------------------------------|--|--|
| <b>Sample Name: SIS-1</b>            |                 |                                |  |  |
| <b>Sample ID: D18A029-01</b>         | <b>Water</b>    | <b>Sampled:07-Mar-18 11:18</b> |  |  |
| K_Chromium ✓                         | 03-Sep-18 11:18 |                                | <p>all 'k-' to be 1 only 200.7</p> <p>NO.7</p> <p>Ba, Be, Cd, Co, Cr,<br/>Li, Mo, Se</p> |  |
| D_Antimony by 200.8                  | 03-Sep-18 11:18 |                                |  |  |
| K_Selenium                           | 03-Sep-18 11:18 |                                |  |  |
| K_Cobalt ✓                           | 03-Sep-18 11:18 |                                |  |  |
| K_Cadmium ✓                          | 03-Sep-18 11:18 |                                |  |  |
| K_Beryllium ✓                        | 03-Sep-18 11:18 |                                |  |  |
| K_Barium ✓                           | 03-Sep-18 11:18 |                                |  |  |
| D_Thallium by 200.8                  | 03-Sep-18 11:18 |                                |  |  |
| D_Lithium by 200.7 ✓                 | 03-Sep-18 11:18 |                                |  |  |
| D_Lead by 200.8                      | 03-Sep-18 11:18 |                                |  |  |
| D_Arsenic by 200.8                   | 03-Sep-18 11:18 |                                |  |  |
| K_Molybdenum ✓                       | 03-Sep-18 11:18 |                                |  |  |
| <i>Containers Supplied:</i>          |                 |                                |  |  |
| D_HDPE, HNO3 pH<2 - 250mL extra2 (B) |                 |                                |  |  |
| <b>Sample Name: SIS-2</b>            |                 |                                |  |  |
| <b>Sample ID: D18A029-02</b>         | <b>Water</b>    | <b>Sampled:08-Mar-18 09:36</b> |  |  |
| K_Barium                             | 04-Sep-18 09:36 |                                |  |  |
| K_Beryllium                          | 04-Sep-18 09:36 |                                |  |  |
| K_Selenium                           | 04-Sep-18 09:36 |                                |  |  |
| K_Molybdenum                         | 04-Sep-18 09:36 |                                |  |  |
| K_Cobalt                             | 04-Sep-18 09:36 |                                |  |  |
| K_Chromium                           | 04-Sep-18 09:36 |                                |  |  |
| D_Thallium by 200.8                  | 04-Sep-18 09:36 |                                |  |  |
| D_Lithium by 200.7                   | 04-Sep-18 09:36 |                                |  |  |
| D_Lead by 200.8                      | 04-Sep-18 09:36 |                                |  |  |
| D_Arsenic by 200.8                   | 04-Sep-18 09:36 |                                |  |  |
| D_Antimony by 200.8                  | 04-Sep-18 09:36 |                                |  |  |
| K_Cadmium                            | 04-Sep-18 09:36 |                                |  |  |
| <i>Containers Supplied:</i>          |                 |                                |  |  |
| D_HDPE, HNO3 pH<2 - 250mL extra2 (B) |                 |                                |  |  |

|                         |                |                     |                     |
|-------------------------|----------------|---------------------|---------------------|
| Released By             | Date           | Received By         | Date                |
| <i>Shelley Phillips</i> | <i>3-12-18</i> | <i>Teresa Futch</i> | <i>3/14/18 1400</i> |
| Released By             | Date           | Received By         | Date                |



**SUBCONTRACT ORDER**  
**Deerhaven Generating Station**  
**D18A029**

31801895

| Analysis                             | Expires         | Laboratory ID                  | Comments                           |   |
|--------------------------------------|-----------------|--------------------------------|------------------------------------|---|
| <b>Sample Name: SIS-3</b>            |                 |                                |                                    |   |
| <b>Sample ID: D18A029-03</b>         | <b>Water</b>    | <b>Sampled:07-Mar-18 13:36</b> |                                    |   |
| K_Molybdenum                         | 03-Sep-18 13:36 |                                | all 'K_' are to be<br>run by 200.7 |   |
| D_Lead by 200.8                      | 03-Sep-18 13:36 |                                |                                    |   |
| D_Lithium by 200.7                   | 03-Sep-18 13:36 |                                |                                    |   |
| D_Thallium by 200.8                  | 03-Sep-18 13:36 |                                |                                    |   |
| K_Barium                             | 03-Sep-18 13:36 |                                |                                    |   |
| K_Beryllium                          | 03-Sep-18 13:36 |                                |                                    |   |
| K_Cadmium                            | 03-Sep-18 13:36 |                                |                                    |   |
| K_Cobalt                             | 03-Sep-18 13:36 |                                |                                    |   |
| D_Antimony by 200.8                  | 03-Sep-18 13:36 |                                |                                    |   |
| K_Selenium                           | 03-Sep-18 13:36 |                                |                                    |   |
| D_Arsenic by 200.8                   | 03-Sep-18 13:36 |                                |                                    |   |
| K_Chromium                           | 03-Sep-18 13:36 |                                |                                    |   |
| <i>Containers Supplied:</i>          |                 |                                |                                    |   |
| D_HDPE, HNO3 pH<2 - 250mL extra2 (B) |                 |                                |                                    |   |
| <b>Sample Name: SIS-4</b>            |                 |                                |                                    |   |
| <b>Sample ID: D18A029-04</b>         | <b>Water</b>    | <b>Sampled:07-Mar-18 15:31</b> |                                    |   |
| K_Barium                             | 03-Sep-18 15:31 |                                |                                    | ↓ |
| K_Selenium                           | 03-Sep-18 15:31 |                                |                                    |   |
| K_Molybdenum                         | 03-Sep-18 15:31 |                                |                                    |   |
| K_Cobalt                             | 03-Sep-18 15:31 |                                |                                    |   |
| K_Chromium                           | 03-Sep-18 15:31 |                                |                                    |   |
| K_Beryllium                          | 03-Sep-18 15:31 |                                |                                    |   |
| D_Thallium by 200.8                  | 03-Sep-18 15:31 |                                |                                    |   |
| D_Lithium by 200.7                   | 03-Sep-18 15:31 |                                |                                    |   |
| D_Lead by 200.8                      | 03-Sep-18 15:31 |                                |                                    |   |
| D_Arsenic by 200.8                   | 03-Sep-18 15:31 |                                |                                    |   |
| D_Antimony by 200.8                  | 03-Sep-18 15:31 |                                |                                    |   |
| K_Cadmium                            | 03-Sep-18 15:31 |                                |                                    |   |
| <i>Containers Supplied:</i>          |                 |                                |                                    |   |
| D_HDPE, HNO3 pH<2 - 250mL extra2 (B) |                 |                                |                                    |   |

Released By: *Shelby Phillips* Date: *3/12/18* via FEDEX

Received By: *Tenue Futch* Date: *3/14/18 1400*

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Released By: \_\_\_\_\_ Date: \_\_\_\_\_ Received By: \_\_\_\_\_ Date: \_\_\_\_\_



**SUBCONTRACT ORDER**  
**Deerhaven Generating Station**  
**D18A029**

51801895

| Analysis | Expires | Laboratory ID | Comments |
|----------|---------|---------------|----------|
|----------|---------|---------------|----------|

Sample Name: LF-1

Sample ID: D18A029-05      Water      Sampled: 07-Mar-18 09:29

|                     |                 |
|---------------------|-----------------|
| K_Molybdenum        | 03-Sep-18 09:29 |
| D_Lithium by 200.7  | 03-Sep-18 09:29 |
| D_Thallium by 200.8 | 03-Sep-18 09:29 |
| K_Barium            | 03-Sep-18 09:29 |
| D_Antimony by 200.8 | 03-Sep-18 09:29 |
| K_Cobalt            | 03-Sep-18 09:29 |
| K_Chromium          | 03-Sep-18 09:29 |
| K_Cadmium           | 03-Sep-18 09:29 |
| K_Beryllium         | 03-Sep-18 09:29 |
| K_Selenium          | 03-Sep-18 09:29 |
| D_Lead by 200.8     | 03-Sep-18 09:29 |
| D_Arsenic by 200.8  | 03-Sep-18 09:29 |

note all 'k-' are  
to be run by 200.7

Containers Supplied:

D\_HDPE, HNO3 pH<2 - 250mL extra2 (B)

Sample Name: LF-2

Sample ID: D18A029-06      Water      Sampled: 08-Mar-18 11:13

|                     |                 |
|---------------------|-----------------|
| K_Molybdenum        | 04-Sep-18 11:13 |
| D_Thallium by 200.8 | 04-Sep-18 11:13 |
| D_Lithium by 200.7  | 04-Sep-18 11:13 |
| K_Beryllium         | 04-Sep-18 11:13 |
| D_Lead by 200.8     | 04-Sep-18 11:13 |
| D_Arsenic by 200.8  | 04-Sep-18 11:13 |
| K_Barium            | 04-Sep-18 11:13 |
| D_Antimony by 200.8 | 04-Sep-18 11:13 |
| K_Cobalt            | 04-Sep-18 11:13 |
| K_Chromium          | 04-Sep-18 11:13 |
| K_Cadmium           | 04-Sep-18 11:13 |
| K_Selenium          | 04-Sep-18 11:13 |

all 'k-' to be run  
by 200.7

Containers Supplied:

D\_HDPE, HNO3 pH<2 - 250mL extra2 (B)

|                                      |                      |                                 |                           |
|--------------------------------------|----------------------|---------------------------------|---------------------------|
| Released By: <i>Anthony Phillips</i> | Date: <i>3-12-18</i> | Received By: <i>Venue Futch</i> | Date: <i>3/14/18 1400</i> |
|--------------------------------------|----------------------|---------------------------------|---------------------------|

|             |      |             |      |
|-------------|------|-------------|------|
| Released By | Date | Received By | Date |
|-------------|------|-------------|------|





**SUBCONTRACT ORDER**  
**Deerhaven Generating Station**  
**D18A029**

| Analysis | Expires | Laboratory ID | Comments |
|----------|---------|---------------|----------|
|----------|---------|---------------|----------|

**Sample Name: LF-3**

**Sample ID: D18A029-07**      **Water**      **Sampled:08-Mar-18 12:56**

|                     |                 |
|---------------------|-----------------|
| D_Thallium by 200.8 | 04-Sep-18 12:56 |
| K_Beryllium         | 04-Sep-18 12:56 |
| K_Cadmium           | 04-Sep-18 12:56 |
| D_Antimony by 200.8 | 04-Sep-18 12:56 |
| D_Arsenic by 200.8  | 04-Sep-18 12:56 |
| D_Lithium by 200.7  | 04-Sep-18 12:56 |
| K_Barium            | 04-Sep-18 12:56 |
| K_Selenium          | 04-Sep-18 12:56 |
| K_Chromium          | 04-Sep-18 12:56 |
| K_Cobalt            | 04-Sep-18 12:56 |
| K_Molybdenum        | 04-Sep-18 12:56 |
| D_Lead by 200.8     | 04-Sep-18 12:56 |

*Containers Supplied:*

D\_HDPE, HNO3 pH<2 - 250mL extra2 (B)

all 'K' auto  
be analyzed by  
method 200.7

**Sample Name: LF-4**

**Sample ID: D18A029-08**      **Water**      **Sampled:08-Mar-18 14:50**

|                     |                 |
|---------------------|-----------------|
| D_Lead by 200.8     | 04-Sep-18 14:50 |
| D_Arsenic by 200.8  | 04-Sep-18 14:50 |
| D_Antimony by 200.8 | 04-Sep-18 14:50 |
| K_Selenium          | 04-Sep-18 14:50 |
| K_Beryllium         | 04-Sep-18 14:50 |
| K_Molybdenum        | 04-Sep-18 14:50 |
| K_Cobalt            | 04-Sep-18 14:50 |
| K_Chromium          | 04-Sep-18 14:50 |
| K_Barium            | 04-Sep-18 14:50 |
| D_Thallium by 200.8 | 04-Sep-18 14:50 |
| D_Lithium by 200.7  | 04-Sep-18 14:50 |
| K_Cadmium           | 04-Sep-18 14:50 |

*Containers Supplied:*

D\_HDPE, HNO3 pH<2 - 250mL extra2 (B)

**Sample Name: MWD-1-6 (R1T6)**

**Sample ID: D18A029-09**      **Water**      **Sampled:06-Mar-18 11:14**

|                    |                 |
|--------------------|-----------------|
| D_Lithium by 200.7 | 02-Sep-18 11:14 |
|--------------------|-----------------|

*Containers Supplied:*

D\_HDPE, HNO3 pH<2 - 250mL extra (B)

**Sample Name: MWB-2-1 (R2T1)**

**Sample ID: D18A029-10**      **Water**      **Sampled:06-Mar-18 15:26**

|                    |                 |
|--------------------|-----------------|
| D_Lithium by 200.7 | 02-Sep-18 15:26 |
|--------------------|-----------------|

*Containers Supplied:*

D\_HDPE, HNO3 pH<2 - 250mL extra (B)

|                                    |                      |                                |                           |
|------------------------------------|----------------------|--------------------------------|---------------------------|
| Released By: <i>Shelby Phillip</i> | Date: <i>3/12/18</i> | Received By: <i>Gene Futch</i> | Date: <i>3/14/18 1400</i> |
|------------------------------------|----------------------|--------------------------------|---------------------------|

|             |      |             |      |
|-------------|------|-------------|------|
| Released By | Date | Received By | Date |
|-------------|------|-------------|------|



**SUBCONTRACT ORDER**  
**Deerhaven Generating Station**  
**D18A029**

| Analysis                             | Expires         | Laboratory ID                  | Comments                      |  |
|--------------------------------------|-----------------|--------------------------------|-------------------------------|--|
| <b>Sample Name: MWD-6-1 (R6T1B)</b>  |                 |                                |                               |  |
| <b>Sample ID: D18A029-11</b>         | <b>Water</b>    | <b>Sampled:07-Mar-18 08:25</b> |                               |  |
| D_Lithium by 200.7                   | 03-Sep-18 08:25 |                                |                               |  |
| <i>Containers Supplied:</i>          |                 |                                |                               |  |
| D_HDPE, HNO3 pH<2 - 250mL extra (B)  |                 |                                |                               |  |
| <b>Sample Name: MWI-4-5 (R4T5B)</b>  |                 |                                |                               |  |
| <b>Sample ID: D18A029-12</b>         | <b>Water</b>    | <b>Sampled:08-Mar-18 08:18</b> |                               |  |
| K_Cobalt                             | 04-Sep-18 08:18 |                                | all "K" to be<br>run by 200.7 |  |
| D_Lithium by 200.7                   | 04-Sep-18 08:18 |                                |                               |  |
| D_Lead by 200.8                      | 04-Sep-18 08:18 |                                |                               |  |
| D_Thallium by 200.8                  | 04-Sep-18 08:18 |                                |                               |  |
| K_Barium                             | 04-Sep-18 08:18 |                                |                               |  |
| K_Beryllium                          | 04-Sep-18 08:18 |                                |                               |  |
| K_Molybdenum                         | 04-Sep-18 08:18 |                                |                               |  |
| K_Chromium                           | 04-Sep-18 08:18 |                                |                               |  |
| K_Cadmium                            | 04-Sep-18 08:18 |                                |                               |  |
| D_Arsenic by 200.8                   | 04-Sep-18 08:18 |                                |                               |  |
| D_Antimony by 200.8                  | 04-Sep-18 08:18 |                                |                               |  |
| K_Selenium                           | 04-Sep-18 08:18 |                                |                               |  |
| <i>Containers Supplied:</i>          |                 |                                |                               |  |
| D_HDPE, HNO3 pH<2 - 250mL extra2 (B) |                 |                                |                               |  |
| <b>Sample Name: MWI-6-4 (R6T4B)</b>  |                 |                                |                               |  |
| <b>Sample ID: D18A029-13</b>         | <b>Water</b>    | <b>Sampled:07-Mar-18 10:31</b> |                               |  |
| D_Antimony by 200.8                  | 03-Sep-18 10:31 |                                |                               |  |
| K_Selenium                           | 03-Sep-18 10:31 |                                |                               |  |
| D_Lead by 200.8                      | 03-Sep-18 10:31 |                                |                               |  |
| K_Molybdenum                         | 03-Sep-18 10:31 |                                |                               |  |
| D_Lithium by 200.7                   | 03-Sep-18 10:31 |                                |                               |  |
| D_Arsenic by 200.8                   | 03-Sep-18 10:31 |                                |                               |  |
| K_Chromium                           | 03-Sep-18 10:31 |                                |                               |  |
| K_Cadmium                            | 03-Sep-18 10:31 |                                |                               |  |
| K_Beryllium                          | 03-Sep-18 10:31 |                                |                               |  |
| K_Barium                             | 03-Sep-18 10:31 |                                |                               |  |
| D_Thallium by 200.8                  | 03-Sep-18 10:31 |                                |                               |  |
| K_Cobalt                             | 03-Sep-18 10:31 |                                |                               |  |
| <i>Containers Supplied:</i>          |                 |                                |                               |  |
| D_HDPE, HNO3 pH<2 - 250mL extra2 (B) |                 |                                |                               |  |

Released By: *Kelly Phillips* Date: *3-12-18* via FEDEX  
 Received By: *Tommy Fitch* Date: *3/14/18 1400*

Released By \_\_\_\_\_ Date \_\_\_\_\_ Received By \_\_\_\_\_ Date \_\_\_\_\_



**SUBCONTRACT ORDER**  
**Deerhaven Generating Station**  
**D18A029**

| Analysis                             | Expires         | Laboratory ID                   | Comments                        |  |
|--------------------------------------|-----------------|---------------------------------|---------------------------------|--|
| <b>Sample Name: EBLANK</b>           |                 |                                 |                                 |  |
| <b>Sample ID: D18A029-14</b>         | <b>Water</b>    | <b>Sampled: 07-Mar-18 16:14</b> |                                 |  |
| D_Lithium by 200.7                   | 03-Sep-18 16:14 |                                 | cell 'K-' to be<br>run by 200.7 |  |
| D_Antimony by 200.8                  | 03-Sep-18 16:14 |                                 |                                 |  |
| D_Lead by 200.8                      | 03-Sep-18 16:14 |                                 |                                 |  |
| K_Molybdenum                         | 03-Sep-18 16:14 |                                 |                                 |  |
| D_Arsenic by 200.8                   | 03-Sep-18 16:14 |                                 |                                 |  |
| K_Chromium                           | 03-Sep-18 16:14 |                                 |                                 |  |
| K_Cadmium                            | 03-Sep-18 16:14 |                                 |                                 |  |
| K_Beryllium                          | 03-Sep-18 16:14 |                                 |                                 |  |
| K_Barium                             | 03-Sep-18 16:14 |                                 |                                 |  |
| D_Thallium by 200.8                  | 03-Sep-18 16:14 |                                 |                                 |  |
| K_Selenium                           | 03-Sep-18 16:14 |                                 |                                 |  |
| K_Cobalt                             | 03-Sep-18 16:14 |                                 |                                 |  |
| <i>Containers Supplied:</i>          |                 |                                 |                                 |  |
| D_HDPE, HNO3 pH<2 - 250mL extra2 (B) |                 |                                 |                                 |  |

|                         |                  |                     |      |
|-------------------------|------------------|---------------------|------|
| <i>Shelley Phillips</i> | <i>via FEDEX</i> | <i>James Futch</i>  |      |
| <i>3-12-18</i>          |                  | <i>5/14/18 1400</i> |      |
| Released By             | Date             | Received By         | Date |
| Released By             | Date             | Received By         | Date |



## Miscellaneous Forms

**ALS Environmental—Jacksonville Laboratory**  
9143 Philips Highway, Suite 200, Jacksonville, FL 32256  
Phone (904) 739-2277 Fax (904) 739-2011  
[www.alsglobal.com](http://www.alsglobal.com)



## **FLORIDA DEP DATA QUALIFIERS**

- B Results based upon colony counts outside the acceptable range.
- D Measurement was made in the field.
- H Value based on field kit determination; results may not be accurate.
- I The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
- J Estimated value (one of the following reasons is discussed in the project case narrative).
1. The result may be inaccurate because the surrogate recovery limits have been exceeded.
  2. No known quality control criteria exists for the component.
  3. The reported value failed to meet the established quality control criteria for either precision or accuracy.
  4. The sample matrix interfered with the ability to make any accurate determination (e.g., primary and confirmation results show greater than 40% RPD).
  5. The data is questionable because of improper laboratory or field protocols (e.g., GC/MS Tune did not meet method criteria).
- K Off scale low. The value is less than the lowest calibration standard but greater than the method reporting limit (MRL).
- L Off scale high. The analyte is above the upper limit of the linear calibration range.
- M The MDL/MRL has been elevated because the analyte could not be accurately quantified due to matrix interference.
- N Presumptive evidence of the analyte. Confirmation was not performed.
- Q Sample held beyond the accepted holding time.
- T Value reported is less than the laboratory method detection limit. The value is reported for informational purposes only.
- U Indicates that the compound was analyzed for but not detected.
- V Indicates that the analyte was detected in both the sample and the associated method blank.
- Y The laboratory analysis was from an improperly preserved sample.
- Z Too many colonies were present (TNTC). The numeric value represents the filtration volume.



**Jacksonville Lab ID # for State Certifications<sup>1</sup>**

| <b>Agency</b>  | <b>Number</b>   | <b>Expiration Date</b> |
|--|-----------------|------------------------|
| Department of Defense  | 66206           | 7/31/2018              |
| Florida Department of Health                                   | E82502          | 6/30/2018              |
| Georgia Department of Natural Resources                        | 958             | 6/30/2018              |
| Kentucky Division of Waste Management                          | 123042          | 6/30/2018              |
| Louisiana Department of Environmental Quality                  | 02086           | 6/30/2018              |
| Maine Department of Health and Human Services                  | 2015002         | 2/3/2019               |
| North Carolina Department of Environment and Natural Resources | 527             | 12/31/2018             |
| Pennsylvania Department of Environmental Protection            | 68-04835        | 8/31/2018              |
| South Carolina Department of Health and Environmental Control  | 96021001        | 6/30/2018              |
| Texas Commission on Environmental Quality                      | T104704197-16-8 | 5/31/2018              |
| Virginia Environmental Accreditation Program                   | 460191          | 12/14/2018             |

<sup>1</sup> Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state or agency requirements. The test results meet requirements of the current NELAP/TNI standards or state or agency requirements, where applicable, except as noted in the laboratory case narrative provided. For a specific list of accredited analytes, refer to <http://www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads/North-America-Downloads>



## ACRONYMS

|            |  |
|------------|--|
| ASTM       | American Society for Testing and Materials   |
| A2LA       | American Association for Laboratory Accreditation  |
| CARB       | California Air Resources Board   |
| CAS Number | Chemical Abstract Service registry Number  |
| CFC        | Chlorofluorocarbon   |
| CFU        | Colony-Forming Unit  |
| DEC        | Department of Environmental Conservation   |
| DEQ        | Department of Environmental Quality  |
| DHS        | Department of Health Services  |
| DOE        | Department of Ecology  |
| DOH        | Department of Health   |
| EPA        | U. S. Environmental Protection Agency  |
| ELAP       | Environmental Laboratory Accreditation Program   |
| GC         | Gas Chromatography   |
| GC/MS      | Gas Chromatography/Mass Spectrometry   |
| LUFT       | Leaking Underground Fuel Tank  |
| M          | Modified   |
| MCL        | Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA. |
| MDL        | Method Detection Limit   |
| MPN        | Most Probable Number   |
| MRL        | Method Reporting Limit   |
| NA         | Not Applicable   |
| NC         | Not Calculated   |
| NCASI      | National Council of the Paper Industry for Air and Stream Improvement  |
| ND         | Not Detected   |
| NIOSH      | National Institute for Occupational Safety and Health  |
| PQL        | Practical Quantitation Limit   |
| RCRA       | Resource Conservation and Recovery Act   |
| SIM        | Selected Ion Monitoring  |
| TPH        | Total Petroleum Hydrocarbons   |
| tr         | Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.                           |

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dba ALS Environmental

Analyst Summary report

**Client:** Gainesville Regional Utilities  
**Project:** D18A029

**Service Request:** J1801895

**Sample Name:** D18A029-01  
**Lab Code:** J1801895-001  
**Sample Matrix:** Water

**Date Collected:** 03/7/18  
**Date Received:** 03/14/18

**Analysis Method**  
200.7  
200.8

**Extracted/Digested By**  
EGARDNER  
CSULLIVAN

**Analyzed By**  
EGARDNER  
CSULLIVAN

**Sample Name:** D18A029-02  
**Lab Code:** J1801895-002  
**Sample Matrix:** Water

**Date Collected:** 03/8/18  
**Date Received:** 03/14/18

**Analysis Method**  
200.7  
200.8

**Extracted/Digested By**  
EGARDNER  
CSULLIVAN

**Analyzed By**  
EGARDNER  
CSULLIVAN

**Sample Name:** D18A029-03  
**Lab Code:** J1801895-003  
**Sample Matrix:** Water

**Date Collected:** 03/7/18  
**Date Received:** 03/14/18

**Analysis Method**  
200.7  
200.8

**Extracted/Digested By**  
EGARDNER  
CSULLIVAN

**Analyzed By**  
EGARDNER  
CSULLIVAN

**Sample Name:** D18A029-04  
**Lab Code:** J1801895-004  
**Sample Matrix:** Water

**Date Collected:** 03/7/18  
**Date Received:** 03/14/18

**Analysis Method**  
200.7  
200.8

**Extracted/Digested By**  
EGARDNER  
CSULLIVAN

**Analyzed By**  
EGARDNER  
CSULLIVAN



ALS Group USA, Corp.  
dba ALS Environmental

Analyst Summary report

**Client:** Gainesville Regional Utilities  
**Project:** D18A029

**Service Request:** J1801895

**Sample Name:** D18A029-05  
**Lab Code:** J1801895-005  
**Sample Matrix:** Water

**Date Collected:** 03/7/18  
**Date Received:** 03/14/18

**Analysis Method**  
200.7  
200.8

**Extracted/Digested By**  
EGARDNER  
CSULLIVAN

**Analyzed By**  
EGARDNER  
CSULLIVAN

**Sample Name:** D18A029-06  
**Lab Code:** J1801895-006  
**Sample Matrix:** Water

**Date Collected:** 03/8/18  
**Date Received:** 03/14/18

**Analysis Method**  
200.7  
200.8

**Extracted/Digested By**  
EGARDNER  
CSULLIVAN

**Analyzed By**  
EGARDNER  
CSULLIVAN

**Sample Name:** D18A029-07  
**Lab Code:** J1801895-007  
**Sample Matrix:** Water

**Date Collected:** 03/8/18  
**Date Received:** 03/14/18

**Analysis Method**  
200.7  
200.8

**Extracted/Digested By**  
EGARDNER  
CSULLIVAN

**Analyzed By**  
EGARDNER  
CSULLIVAN

**Sample Name:** D18A029-08  
**Lab Code:** J1801895-008  
**Sample Matrix:** Water

**Date Collected:** 03/8/18  
**Date Received:** 03/14/18

**Analysis Method**  
200.7  
200.8

**Extracted/Digested By**  
EGARDNER  
CSULLIVAN

**Analyzed By**  
EGARDNER  
CSULLIVAN

ALS Group USA, Corp.  
dba ALS Environmental

Analyst Summary report

**Client:** Gainesville Regional Utilities  
**Project:** D18A029

**Service Request:** J1801895

**Sample Name:** D18A029-09  
**Lab Code:** J1801895-009  
**Sample Matrix:** Water

**Date Collected:** 03/6/18  
**Date Received:** 03/14/18

**Analysis Method**  
200.7

**Extracted/Digested By**  
EGARDNER

**Analyzed By**  
EGARDNER

**Sample Name:** D18A029-10  
**Lab Code:** J1801895-010  
**Sample Matrix:** Water

**Date Collected:** 03/6/18  
**Date Received:** 03/14/18

**Analysis Method**  
200.7

**Extracted/Digested By**  
EGARDNER

**Analyzed By**  
EGARDNER

**Sample Name:** D18A029-11  
**Lab Code:** J1801895-011  
**Sample Matrix:** Water

**Date Collected:** 03/7/18  
**Date Received:** 03/14/18

**Analysis Method**  
200.7

**Extracted/Digested By**  
EGARDNER

**Analyzed By**  
EGARDNER

**Sample Name:** D18A029-12  
**Lab Code:** J1801895-012  
**Sample Matrix:** Water

**Date Collected:** 03/8/18  
**Date Received:** 03/14/18

**Analysis Method**  
200.7  
200.8

**Extracted/Digested By**  
EGARDNER  
CSULLIVAN

**Analyzed By**  
EGARDNER  
CSULLIVAN

ALS Group USA, Corp.  
dba ALS Environmental

Analyst Summary report

**Client:** Gainesville Regional Utilities  
**Project:** D18A029

**Service Request:** J1801895

**Sample Name:** D18A029-13  
**Lab Code:** J1801895-013  
**Sample Matrix:** Water

**Date Collected:** 03/7/18  
**Date Received:** 03/14/18

**Analysis Method**

200.7  
200.8

**Extracted/Digested By**

EGARDNER  
CSULLIVAN

**Analyzed By**

EGARDNER  
CSULLIVAN

**Sample Name:** D18A029-14  
**Lab Code:** J1801895-014  
**Sample Matrix:** Water

**Date Collected:** 03/7/18  
**Date Received:** 03/14/18

**Analysis Method**

200.7  
200.8

**Extracted/Digested By**

EGARDNER  
CSULLIVAN

**Analyzed By**

EGARDNER  
CSULLIVAN



# Sample Results

**ALS Environmental—Jacksonville Laboratory**  
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[www.alsglobal.com](http://www.alsglobal.com)



# Metals

**ALS Environmental—Jacksonville Laboratory**  
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Phone (904)739-2277 Fax (904)739-2011  
[www.alsglobal.com](http://www.alsglobal.com)

ALS Group USA, Corp.  
dba ALS Environmental

Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A029  
**Sample Matrix:** Water  
**Sample Name:** D18A029-01  
**Lab Code:** J1801895-001

**Service Request:** J1801895  
**Date Collected:** 03/07/18 11:18  
**Date Received:** 03/14/18 14:00  
**Basis:** NA

Inorganic Parameters

| Analyte Name      | Analysis Method | Result         | Units | PQL    | MDL     | Dil. | Date Analyzed  | Date Extracted | Q |
|-------------------|-----------------|----------------|-------|--------|---------|------|----------------|----------------|---|
| Antimony, Total   | 200.8           | <b>0.1 I</b>   | ug/L  | 1.0    | 0.04    | 1    | 03/16/18 17:35 | 03/16/18       |   |
| Arsenic, Total    | 200.8           | <b>2.7</b>     | ug/L  | 1.0    | 0.10    | 1    | 03/16/18 17:35 | 03/16/18       |   |
| Barium, Total     | 200.7           | <b>0.033</b>   | mg/L  | 0.010  | 0.001   | 1    | 03/20/18 21:56 | 03/16/18       |   |
| Beryllium, Total  | 200.7           | 0.00006 U      | mg/L  | 0.0040 | 0.00006 | 1    | 03/20/18 21:55 | 03/16/18       |   |
| Cadmium, Total    | 200.7           | 0.0002 U       | mg/L  | 0.0050 | 0.0002  | 1    | 03/20/18 21:56 | 03/16/18       |   |
| Chromium, Total   | 200.7           | 0.0004 U       | mg/L  | 0.010  | 0.0004  | 1    | 03/20/18 21:56 | 03/16/18       |   |
| Cobalt, Total     | 200.7           | 0.003 U        | mg/L  | 0.010  | 0.003   | 1    | 03/20/18 21:56 | 03/16/18       |   |
| Lead, Total       | 200.8           | <b>0.04 I</b>  | ug/L  | 0.50   | 0.03    | 1    | 03/16/18 17:35 | 03/16/18       |   |
| Lithium, Total    | 200.7           | 0.002 U        | mg/L  | 0.10   | 0.002   | 1    | 03/20/18 21:54 | 03/16/18       |   |
| Molybdenum, Total | 200.7           | <b>0.006 I</b> | mg/L  | 0.010  | 0.0003  | 1    | 03/20/18 21:56 | 03/16/18       |   |
| Selenium, Total   | 200.7           | <b>0.011 V</b> | mg/L  | 0.010  | 0.002   | 1    | 03/20/18 21:56 | 03/16/18       |   |
| Thallium, Total   | 200.8           | <b>0.03 I</b>  | ug/L  | 0.20   | 0.02    | 1    | 03/16/18 17:35 | 03/16/18       |   |

ALS Group USA, Corp.  
dba ALS Environmental

Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A029  
**Sample Matrix:** Water  
**Sample Name:** D18A029-02  
**Lab Code:** J1801895-002

**Service Request:** J1801895  
**Date Collected:** 03/08/18 09:36  
**Date Received:** 03/14/18 14:00  
**Basis:** NA

Inorganic Parameters

| Analyte Name      | Analysis Method | Result         | Units | PQL    | MDL     | Dil. | Date Analyzed  | Date Extracted | Q |
|-------------------|-----------------|----------------|-------|--------|---------|------|----------------|----------------|---|
| Antimony, Total   | 200.8           | <b>0.6 I</b>   | ug/L  | 1.0    | 0.04    | 1    | 03/16/18 17:36 | 03/16/18       |   |
| Arsenic, Total    | 200.8           | <b>0.9 I</b>   | ug/L  | 1.0    | 0.10    | 1    | 03/16/18 17:36 | 03/16/18       |   |
| Barium, Total     | 200.7           | <b>0.011</b>   | mg/L  | 0.010  | 0.001   | 1    | 03/20/18 22:00 | 03/16/18       |   |
| Beryllium, Total  | 200.7           | 0.00006 U      | mg/L  | 0.0040 | 0.00006 | 1    | 03/20/18 22:00 | 03/16/18       |   |
| Cadmium, Total    | 200.7           | 0.0002 U       | mg/L  | 0.0050 | 0.0002  | 1    | 03/20/18 22:00 | 03/16/18       |   |
| Chromium, Total   | 200.7           | 0.0004 U       | mg/L  | 0.010  | 0.0004  | 1    | 03/20/18 22:00 | 03/16/18       |   |
| Cobalt, Total     | 200.7           | 0.003 U        | mg/L  | 0.010  | 0.003   | 1    | 03/20/18 22:00 | 03/16/18       |   |
| Lead, Total       | 200.8           | <b>0.03 I</b>  | ug/L  | 0.50   | 0.03    | 1    | 03/16/18 17:36 | 03/16/18       |   |
| Lithium, Total    | 200.7           | 0.002 U        | mg/L  | 0.10   | 0.002   | 1    | 03/20/18 21:59 | 03/16/18       |   |
| Molybdenum, Total | 200.7           | <b>0.008 I</b> | mg/L  | 0.010  | 0.0003  | 1    | 03/20/18 22:00 | 03/16/18       |   |
| Selenium, Total   | 200.7           | <b>0.010 V</b> | mg/L  | 0.010  | 0.002   | 1    | 03/20/18 22:00 | 03/16/18       |   |
| Thallium, Total   | 200.8           | 0.02 U         | ug/L  | 0.20   | 0.02    | 1    | 03/16/18 17:36 | 03/16/18       |   |

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Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A029  
**Sample Matrix:** Water  
**Sample Name:** D18A029-03  
**Lab Code:** J1801895-003

**Service Request:** J1801895  
**Date Collected:** 03/07/18 13:36  
**Date Received:** 03/14/18 14:00  
**Basis:** NA

Inorganic Parameters

| Analyte Name      | Analysis Method | Result          | Units | PQL    | MDL     | Dil. | Date Analyzed  | Date Extracted | Q |
|-------------------|-----------------|-----------------|-------|--------|---------|------|----------------|----------------|---|
| Antimony, Total   | 200.8           | <b>0.09 I</b>   | ug/L  | 1.0    | 0.04    | 1    | 03/16/18 17:38 | 03/16/18       |   |
| Arsenic, Total    | 200.8           | <b>3.8</b>      | ug/L  | 1.0    | 0.10    | 1    | 03/16/18 17:38 | 03/16/18       |   |
| Barium, Total     | 200.7           | <b>0.019</b>    | mg/L  | 0.010  | 0.001   | 1    | 03/20/18 22:05 | 03/16/18       |   |
| Beryllium, Total  | 200.7           | 0.00006 U       | mg/L  | 0.0040 | 0.00006 | 1    | 03/20/18 22:05 | 03/16/18       |   |
| Cadmium, Total    | 200.7           | 0.0002 U        | mg/L  | 0.0050 | 0.0002  | 1    | 03/20/18 22:05 | 03/16/18       |   |
| Chromium, Total   | 200.7           | <b>0.001 I</b>  | mg/L  | 0.010  | 0.0004  | 1    | 03/20/18 22:05 | 03/16/18       |   |
| Cobalt, Total     | 200.7           | 0.003 U         | mg/L  | 0.010  | 0.003   | 1    | 03/20/18 22:05 | 03/16/18       |   |
| Lead, Total       | 200.8           | <b>0.04 I</b>   | ug/L  | 0.50   | 0.03    | 1    | 03/16/18 17:38 | 03/16/18       |   |
| Lithium, Total    | 200.7           | 0.002 U         | mg/L  | 0.10   | 0.002   | 1    | 03/20/18 22:04 | 03/16/18       |   |
| Molybdenum, Total | 200.7           | <b>0.006 I</b>  | mg/L  | 0.010  | 0.0003  | 1    | 03/20/18 22:05 | 03/16/18       |   |
| Selenium, Total   | 200.7           | <b>0.009 IV</b> | mg/L  | 0.010  | 0.002   | 1    | 03/20/18 22:05 | 03/16/18       |   |
| Thallium, Total   | 200.8           | <b>0.02 I</b>   | ug/L  | 0.20   | 0.02    | 1    | 03/16/18 17:38 | 03/16/18       |   |



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Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A029  
**Sample Matrix:** Water  
**Sample Name:** D18A029-04  
**Lab Code:** J1801895-004

**Service Request:** J1801895  
**Date Collected:** 03/07/18 15:31  
**Date Received:** 03/14/18 14:00  
**Basis:** NA

Inorganic Parameters

| Analyte Name      | Analysis Method | Result          | Units | PQL    | MDL     | Dil. | Date Analyzed  | Date Extracted | Q |
|-------------------|-----------------|-----------------|-------|--------|---------|------|----------------|----------------|---|
| Antimony, Total   | 200.8           | <b>0.1 I</b>    | ug/L  | 1.0    | 0.04    | 1    | 03/16/18 17:42 | 03/16/18       |   |
| Arsenic, Total    | 200.8           | <b>2.1</b>      | ug/L  | 1.0    | 0.10    | 1    | 03/16/18 17:42 | 03/16/18       |   |
| Barium, Total     | 200.7           | <b>0.055</b>    | mg/L  | 0.010  | 0.001   | 1    | 03/20/18 22:10 | 03/16/18       |   |
| Beryllium, Total  | 200.7           | 0.00006 U       | mg/L  | 0.0040 | 0.00006 | 1    | 03/20/18 22:10 | 03/16/18       |   |
| Cadmium, Total    | 200.7           | 0.0002 U        | mg/L  | 0.0050 | 0.0002  | 1    | 03/20/18 22:10 | 03/16/18       |   |
| Chromium, Total   | 200.7           | <b>0.001 I</b>  | mg/L  | 0.010  | 0.0004  | 1    | 03/20/18 22:10 | 03/16/18       |   |
| Cobalt, Total     | 200.7           | 0.003 U         | mg/L  | 0.010  | 0.003   | 1    | 03/20/18 22:10 | 03/16/18       |   |
| Lead, Total       | 200.8           | <b>0.04 I</b>   | ug/L  | 0.50   | 0.03    | 1    | 03/16/18 17:42 | 03/16/18       |   |
| Lithium, Total    | 200.7           | 0.002 U         | mg/L  | 0.10   | 0.002   | 1    | 03/20/18 22:09 | 03/16/18       |   |
| Molybdenum, Total | 200.7           | <b>0.005 I</b>  | mg/L  | 0.010  | 0.0003  | 1    | 03/20/18 22:10 | 03/16/18       |   |
| Selenium, Total   | 200.7           | <b>0.007 IV</b> | mg/L  | 0.010  | 0.002   | 1    | 03/20/18 22:10 | 03/16/18       |   |
| Thallium, Total   | 200.8           | 0.02 U          | ug/L  | 0.20   | 0.02    | 1    | 03/16/18 17:42 | 03/16/18       |   |

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Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A029  
**Sample Matrix:** Water  
**Sample Name:** D18A029-05  
**Lab Code:** J1801895-005

**Service Request:** J1801895  
**Date Collected:** 03/07/18 09:29  
**Date Received:** 03/14/18 14:00  
**Basis:** NA

Inorganic Parameters

| Analyte Name      | Analysis Method | Result          | Units | PQL    | MDL     | Dil. | Date Analyzed  | Date Extracted | Q |
|-------------------|-----------------|-----------------|-------|--------|---------|------|----------------|----------------|---|
| Antimony, Total   | 200.8           | <b>0.1 I</b>    | ug/L  | 1.0    | 0.04    | 1    | 03/16/18 17:44 | 03/16/18       |   |
| Arsenic, Total    | 200.8           | <b>0.3 I</b>    | ug/L  | 1.0    | 0.10    | 1    | 03/16/18 17:44 | 03/16/18       |   |
| Barium, Total     | 200.7           | <b>0.048</b>    | mg/L  | 0.010  | 0.001   | 1    | 03/20/18 22:15 | 03/16/18       |   |
| Beryllium, Total  | 200.7           | 0.00006 U       | mg/L  | 0.0040 | 0.00006 | 1    | 03/20/18 22:14 | 03/16/18       |   |
| Cadmium, Total    | 200.7           | 0.0002 U        | mg/L  | 0.0050 | 0.0002  | 1    | 03/20/18 22:15 | 03/16/18       |   |
| Chromium, Total   | 200.7           | 0.0004 U        | mg/L  | 0.010  | 0.0004  | 1    | 03/20/18 22:15 | 03/16/18       |   |
| Cobalt, Total     | 200.7           | 0.003 U         | mg/L  | 0.010  | 0.003   | 1    | 03/20/18 22:15 | 03/16/18       |   |
| Lead, Total       | 200.8           | 0.03 U          | ug/L  | 0.50   | 0.03    | 1    | 03/16/18 17:44 | 03/16/18       |   |
| Lithium, Total    | 200.7           | 0.002 U         | mg/L  | 0.10   | 0.002   | 1    | 03/20/18 22:13 | 03/16/18       |   |
| Molybdenum, Total | 200.7           | <b>0.004 I</b>  | mg/L  | 0.010  | 0.0003  | 1    | 03/20/18 22:15 | 03/16/18       |   |
| Selenium, Total   | 200.7           | <b>0.006 IV</b> | mg/L  | 0.010  | 0.002   | 1    | 03/20/18 22:15 | 03/16/18       |   |
| Thallium, Total   | 200.8           | <b>0.07 I</b>   | ug/L  | 0.20   | 0.02    | 1    | 03/16/18 17:44 | 03/16/18       |   |

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Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A029  
**Sample Matrix:** Water  
**Sample Name:** D18A029-06  
**Lab Code:** J1801895-006

**Service Request:** J1801895  
**Date Collected:** 03/08/18 11:13  
**Date Received:** 03/14/18 14:00  
**Basis:** NA

Inorganic Parameters

| Analyte Name      | Analysis Method | Result          | Units | PQL    | MDL     | Dil. | Date Analyzed  | Date Extracted | Q |
|-------------------|-----------------|-----------------|-------|--------|---------|------|----------------|----------------|---|
| Antimony, Total   | 200.8           | <b>0.2 I</b>    | ug/L  | 1.0    | 0.04    | 1    | 03/16/18 17:46 | 03/16/18       |   |
| Arsenic, Total    | 200.8           | <b>3.2</b>      | ug/L  | 1.0    | 0.10    | 1    | 03/16/18 17:46 | 03/16/18       |   |
| Barium, Total     | 200.7           | <b>0.153</b>    | mg/L  | 0.010  | 0.001   | 1    | 03/20/18 22:19 | 03/16/18       |   |
| Beryllium, Total  | 200.7           | <b>0.0010 I</b> | mg/L  | 0.0040 | 0.00006 | 1    | 03/20/18 22:19 | 03/16/18       |   |
| Cadmium, Total    | 200.7           | 0.0002 U        | mg/L  | 0.0050 | 0.0002  | 1    | 03/20/18 22:20 | 03/16/18       |   |
| Chromium, Total   | 200.7           | <b>0.005 I</b>  | mg/L  | 0.010  | 0.0004  | 1    | 03/20/18 22:20 | 03/16/18       |   |
| Cobalt, Total     | 200.7           | <b>0.003 I</b>  | mg/L  | 0.010  | 0.003   | 1    | 03/20/18 22:20 | 03/16/18       |   |
| Lead, Total       | 200.8           | <b>0.60</b>     | ug/L  | 0.50   | 0.03    | 1    | 03/16/18 17:46 | 03/16/18       |   |
| Lithium, Total    | 200.7           | 0.002 U         | mg/L  | 0.10   | 0.002   | 1    | 03/20/18 22:18 | 03/16/18       |   |
| Molybdenum, Total | 200.7           | <b>0.008 I</b>  | mg/L  | 0.010  | 0.0003  | 1    | 03/20/18 22:20 | 03/16/18       |   |
| Selenium, Total   | 200.7           | <b>0.008 IV</b> | mg/L  | 0.010  | 0.002   | 1    | 03/20/18 22:20 | 03/16/18       |   |
| Thallium, Total   | 200.8           | <b>0.07 I</b>   | ug/L  | 0.20   | 0.02    | 1    | 03/16/18 17:46 | 03/16/18       |   |

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Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A029  
**Sample Matrix:** Water  
**Sample Name:** D18A029-07  
**Lab Code:** J1801895-007

**Service Request:** J1801895  
**Date Collected:** 03/08/18 12:56  
**Date Received:** 03/14/18 14:00  
**Basis:** NA

Inorganic Parameters

| Analyte Name      | Analysis Method | Result          | Units | PQL    | MDL     | Dil. | Date Analyzed  | Date Extracted | Q |
|-------------------|-----------------|-----------------|-------|--------|---------|------|----------------|----------------|---|
| Antimony, Total   | 200.8           | <b>1.1</b>      | ug/L  | 1.0    | 0.04    | 1    | 03/16/18 17:47 | 03/16/18       |   |
| Arsenic, Total    | 200.8           | <b>1.3</b>      | ug/L  | 1.0    | 0.10    | 1    | 03/16/18 17:47 | 03/16/18       |   |
| Barium, Total     | 200.7           | <b>0.069</b>    | mg/L  | 0.010  | 0.001   | 1    | 03/20/18 23:14 | 03/16/18       |   |
| Beryllium, Total  | 200.7           | 0.00006 U       | mg/L  | 0.0040 | 0.00006 | 1    | 03/20/18 23:13 | 03/16/18       |   |
| Cadmium, Total    | 200.7           | 0.0002 U        | mg/L  | 0.0050 | 0.0002  | 1    | 03/20/18 23:14 | 03/16/18       |   |
| Chromium, Total   | 200.7           | <b>0.003 I</b>  | mg/L  | 0.010  | 0.0004  | 1    | 03/20/18 23:14 | 03/16/18       |   |
| Cobalt, Total     | 200.7           | 0.003 U         | mg/L  | 0.010  | 0.003   | 1    | 03/20/18 23:14 | 03/16/18       |   |
| Lead, Total       | 200.8           | 0.03 U          | ug/L  | 0.50   | 0.03    | 1    | 03/16/18 17:47 | 03/16/18       |   |
| Lithium, Total    | 200.7           | <b>0.006 I</b>  | mg/L  | 0.10   | 0.002   | 1    | 03/20/18 23:12 | 03/16/18       |   |
| Molybdenum, Total | 200.7           | <b>0.196</b>    | mg/L  | 0.010  | 0.0003  | 1    | 03/20/18 23:14 | 03/16/18       |   |
| Selenium, Total   | 200.7           | <b>0.009 IV</b> | mg/L  | 0.010  | 0.002   | 1    | 03/20/18 23:14 | 03/16/18       |   |
| Thallium, Total   | 200.8           | <b>0.06 I</b>   | ug/L  | 0.20   | 0.02    | 1    | 03/16/18 17:47 | 03/16/18       |   |

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Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A029  
**Sample Matrix:** Water  
**Sample Name:** D18A029-08  
**Lab Code:** J1801895-008

**Service Request:** J1801895  
**Date Collected:** 03/08/18 14:50  
**Date Received:** 03/14/18 14:00  
**Basis:** NA

Inorganic Parameters

| Analyte Name      | Analysis Method | Result         | Units | PQL    | MDL     | Dil. | Date Analyzed  | Date Extracted | Q |
|-------------------|-----------------|----------------|-------|--------|---------|------|----------------|----------------|---|
| Antimony, Total   | 200.8           | <b>3.0</b>     | ug/L  | 1.0    | 0.04    | 1    | 03/16/18 17:52 | 03/16/18       |   |
| Arsenic, Total    | 200.8           | <b>2.7</b>     | ug/L  | 1.0    | 0.10    | 1    | 03/16/18 17:52 | 03/16/18       |   |
| Barium, Total     | 200.7           | <b>0.065</b>   | mg/L  | 0.010  | 0.001   | 1    | 03/20/18 23:25 | 03/16/18       |   |
| Beryllium, Total  | 200.7           | 0.00006 U      | mg/L  | 0.0040 | 0.00006 | 1    | 03/20/18 23:24 | 03/16/18       |   |
| Cadmium, Total    | 200.7           | 0.0002 U       | mg/L  | 0.0050 | 0.0002  | 1    | 03/20/18 23:25 | 03/16/18       |   |
| Chromium, Total   | 200.7           | <b>0.003 I</b> | mg/L  | 0.010  | 0.0004  | 1    | 03/20/18 23:25 | 03/16/18       |   |
| Cobalt, Total     | 200.7           | 0.003 U        | mg/L  | 0.010  | 0.003   | 1    | 03/20/18 23:25 | 03/16/18       |   |
| Lead, Total       | 200.8           | 0.03 U         | ug/L  | 0.50   | 0.03    | 1    | 03/16/18 17:52 | 03/16/18       |   |
| Lithium, Total    | 200.7           | <b>0.28</b>    | mg/L  | 0.10   | 0.002   | 1    | 03/20/18 23:23 | 03/16/18       |   |
| Molybdenum, Total | 200.7           | <b>0.092</b>   | mg/L  | 0.010  | 0.0003  | 1    | 03/20/18 23:25 | 03/16/18       |   |
| Selenium, Total   | 200.7           | <b>0.013 V</b> | mg/L  | 0.010  | 0.002   | 1    | 03/20/18 23:25 | 03/16/18       |   |
| Thallium, Total   | 200.8           | <b>0.51</b>    | ug/L  | 0.20   | 0.02    | 1    | 03/16/18 17:52 | 03/16/18       |   |

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Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A029  
**Sample Matrix:** Water  
**Sample Name:** D18A029-09  
**Lab Code:** J1801895-009

**Service Request:** J1801895  
**Date Collected:** 03/06/18 11:14  
**Date Received:** 03/14/18 14:00  
**Basis:** NA

**Inorganic Parameters**

| <b>Analyte Name</b> | <b>Analysis Method</b> | <b>Result</b> | <b>Units</b> | <b>PQL</b> | <b>MDL</b> | <b>Dil.</b> | <b>Date Analyzed</b> | <b>Date Extracted</b> | <b>Q</b> |
|---------------------|------------------------|---------------|--------------|------------|------------|-------------|----------------------|-----------------------|----------|
| Lithium, Total      | 200.7                  | 0.002 U       | mg/L         | 0.10       | 0.002      | 1           | 03/20/18 23:28       | 03/16/18              |          |

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Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A029  
**Sample Matrix:** Water  
**Sample Name:** D18A029-10  
**Lab Code:** J1801895-010

**Service Request:** J1801895  
**Date Collected:** 03/06/18 15:26  
**Date Received:** 03/14/18 14:00  
**Basis:** NA

Inorganic Parameters

| Analyte Name   | Analysis Method | Result  | Units | PQL  | MDL   | Dil. | Date Analyzed  | Date Extracted | Q |
|----------------|-----------------|---------|-------|------|-------|------|----------------|----------------|---|
| Lithium, Total | 200.7           | 0.002 U | mg/L  | 0.10 | 0.002 | 1    | 03/20/18 23:33 | 03/16/18       |   |

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Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A029  
**Sample Matrix:** Water  
**Sample Name:** D18A029-11  
**Lab Code:** J1801895-011

**Service Request:** J1801895  
**Date Collected:** 03/07/18 08:25  
**Date Received:** 03/14/18 14:00  
**Basis:** NA

Inorganic Parameters

| Analyte Name   | Analysis Method | Result  | Units | PQL  | MDL   | Dil. | Date Analyzed  | Date Extracted | Q |
|----------------|-----------------|---------|-------|------|-------|------|----------------|----------------|---|
| Lithium, Total | 200.7           | 0.002 U | mg/L  | 0.10 | 0.002 | 1    | 03/20/18 23:58 | 03/16/18       |   |



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Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A029  
**Sample Matrix:** Water  
**Sample Name:** D18A029-12  
**Lab Code:** J1801895-012

**Service Request:** J1801895  
**Date Collected:** 03/08/18 08:18  
**Date Received:** 03/14/18 14:00  
**Basis:** NA

Inorganic Parameters

| Analyte Name      | Analysis Method | Result          | Units | PQL    | MDL     | Dil. | Date Analyzed  | Date Extracted | Q |
|-------------------|-----------------|-----------------|-------|--------|---------|------|----------------|----------------|---|
| Antimony, Total   | 200.8           | 0.04 U          | ug/L  | 1.0    | 0.04    | 1    | 03/16/18 17:53 | 03/16/18       |   |
| Arsenic, Total    | 200.8           | <b>14.8</b>     | ug/L  | 1.0    | 0.10    | 1    | 03/16/18 17:53 | 03/16/18       |   |
| Barium, Total     | 200.7           | <b>0.014</b>    | mg/L  | 0.010  | 0.001   | 1    | 03/21/18 00:04 | 03/16/18       |   |
| Beryllium, Total  | 200.7           | 0.00006 U       | mg/L  | 0.0040 | 0.00006 | 1    | 03/21/18 00:03 | 03/16/18       |   |
| Cadmium, Total    | 200.7           | 0.0002 U        | mg/L  | 0.0050 | 0.0002  | 1    | 03/21/18 00:04 | 03/16/18       |   |
| Chromium, Total   | 200.7           | <b>0.003 I</b>  | mg/L  | 0.010  | 0.0004  | 1    | 03/21/18 00:04 | 03/16/18       |   |
| Cobalt, Total     | 200.7           | 0.003 U         | mg/L  | 0.010  | 0.003   | 1    | 03/21/18 00:04 | 03/16/18       |   |
| Lead, Total       | 200.8           | 0.03 U          | ug/L  | 0.50   | 0.03    | 1    | 03/16/18 17:53 | 03/16/18       |   |
| Lithium, Total    | 200.7           | 0.002 U         | mg/L  | 0.10   | 0.002   | 1    | 03/21/18 00:03 | 03/16/18       |   |
| Molybdenum, Total | 200.7           | <b>0.007 I</b>  | mg/L  | 0.010  | 0.0003  | 1    | 03/21/18 00:04 | 03/16/18       |   |
| Selenium, Total   | 200.7           | <b>0.009 IV</b> | mg/L  | 0.010  | 0.002   | 1    | 03/21/18 00:04 | 03/16/18       |   |
| Thallium, Total   | 200.8           | 0.02 U          | ug/L  | 0.20   | 0.02    | 1    | 03/16/18 17:53 | 03/16/18       |   |

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Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A029  
**Sample Matrix:** Water  
**Sample Name:** D18A029-13  
**Lab Code:** J1801895-013

**Service Request:** J1801895  
**Date Collected:** 03/07/18 10:31  
**Date Received:** 03/14/18 14:00  
**Basis:** NA

Inorganic Parameters

| Analyte Name      | Analysis Method | Result         | Units | PQL    | MDL     | Dil. | Date Analyzed  | Date Extracted | Q |
|-------------------|-----------------|----------------|-------|--------|---------|------|----------------|----------------|---|
| Antimony, Total   | 200.8           | 0.04 U         | ug/L  | 1.0    | 0.04    | 1    | 03/16/18 17:55 | 03/16/18       |   |
| Arsenic, Total    | 200.8           | <b>1.2</b>     | ug/L  | 1.0    | 0.10    | 1    | 03/16/18 17:55 | 03/16/18       |   |
| Barium, Total     | 200.7           | <b>0.021</b>   | mg/L  | 0.010  | 0.001   | 1    | 03/21/18 00:24 | 03/16/18       |   |
| Beryllium, Total  | 200.7           | 0.00006 U      | mg/L  | 0.0040 | 0.00006 | 1    | 03/21/18 00:24 | 03/16/18       |   |
| Cadmium, Total    | 200.7           | 0.0002 U       | mg/L  | 0.0050 | 0.0002  | 1    | 03/21/18 00:24 | 03/16/18       |   |
| Chromium, Total   | 200.7           | <b>0.001 I</b> | mg/L  | 0.010  | 0.0004  | 1    | 03/21/18 00:24 | 03/16/18       |   |
| Cobalt, Total     | 200.7           | 0.003 U        | mg/L  | 0.010  | 0.003   | 1    | 03/21/18 00:24 | 03/16/18       |   |
| Lead, Total       | 200.8           | 0.03 U         | ug/L  | 0.50   | 0.03    | 1    | 03/16/18 17:55 | 03/16/18       |   |
| Lithium, Total    | 200.7           | 0.002 U        | mg/L  | 0.10   | 0.002   | 1    | 03/21/18 00:23 | 03/16/18       |   |
| Molybdenum, Total | 200.7           | <b>0.006 I</b> | mg/L  | 0.010  | 0.0003  | 1    | 03/21/18 00:24 | 03/16/18       |   |
| Selenium, Total   | 200.7           | <b>0.011 V</b> | mg/L  | 0.010  | 0.002   | 1    | 03/21/18 18:33 | 03/16/18       |   |
| Thallium, Total   | 200.8           | 0.02 U         | ug/L  | 0.20   | 0.02    | 1    | 03/16/18 17:55 | 03/16/18       |   |

ALS Group USA, Corp.  
dba ALS Environmental

Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A029  
**Sample Matrix:** Water  
**Sample Name:** D18A029-14  
**Lab Code:** J1801895-014

**Service Request:** J1801895  
**Date Collected:** 03/07/18 16:14  
**Date Received:** 03/14/18 14:00  
**Basis:** NA

Inorganic Parameters

| Analyte Name      | Analysis Method | Result          | Units | PQL    | MDL     | Dil. | Date Analyzed  | Date Extracted | Q |
|-------------------|-----------------|-----------------|-------|--------|---------|------|----------------|----------------|---|
| Antimony, Total   | 200.8           | 0.04 U          | ug/L  | 1.0    | 0.04    | 1    | 03/16/18 17:56 | 03/16/18       |   |
| Arsenic, Total    | 200.8           | 0.10 U          | ug/L  | 1.0    | 0.10    | 1    | 03/16/18 17:56 | 03/16/18       |   |
| Barium, Total     | 200.7           | 0.001 U         | mg/L  | 0.010  | 0.001   | 1    | 03/21/18 00:29 | 03/16/18       |   |
| Beryllium, Total  | 200.7           | 0.00006 U       | mg/L  | 0.0040 | 0.00006 | 1    | 03/21/18 00:29 | 03/16/18       |   |
| Cadmium, Total    | 200.7           | 0.0002 U        | mg/L  | 0.0050 | 0.0002  | 1    | 03/21/18 00:29 | 03/16/18       |   |
| Chromium, Total   | 200.7           | <b>0.003 I</b>  | mg/L  | 0.010  | 0.0004  | 1    | 03/21/18 00:29 | 03/16/18       |   |
| Cobalt, Total     | 200.7           | 0.003 U         | mg/L  | 0.010  | 0.003   | 1    | 03/21/18 00:29 | 03/16/18       |   |
| Lead, Total       | 200.8           | 0.03 U          | ug/L  | 0.50   | 0.03    | 1    | 03/16/18 17:56 | 03/16/18       |   |
| Lithium, Total    | 200.7           | 0.002 U         | mg/L  | 0.10   | 0.002   | 1    | 03/21/18 00:28 | 03/16/18       |   |
| Molybdenum, Total | 200.7           | 0.0003 U        | mg/L  | 0.010  | 0.0003  | 1    | 03/21/18 00:29 | 03/16/18       |   |
| Selenium, Total   | 200.7           | <b>0.004 IV</b> | mg/L  | 0.010  | 0.002   | 1    | 03/21/18 18:37 | 03/16/18       |   |
| Thallium, Total   | 200.8           | 0.02 U          | ug/L  | 0.20   | 0.02    | 1    | 03/16/18 17:56 | 03/16/18       |   |



# QC Summary Forms

**ALS Environmental - Jacksonville Laboratory**  
9143 Philips Highway, Suite 200, Jacksonville, FL 32256  
Phone (904) 739-2277 Fax (904) 739-2011  
[www.alsglobal.com](http://www.alsglobal.com)



# Metals

**ALS Environmental—Jacksonville Laboratory**  
9143 Philips Highway, Suite 200, Jacksonville, FL 32256  
Phone (904)739-2277 Fax (904)739-2011  
[www.alsglobal.com](http://www.alsglobal.com)

ALS Group USA, Corp.  
dba ALS Environmental

Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A029  
**Sample Matrix:** Water  
**Sample Name:** Method Blank  
**Lab Code:** J1801895-MB

**Service Request:** J1801895  
**Date Collected:** NA  
**Date Received:** NA  
**Basis:** NA

Inorganic Parameters

| Analyte Name      | Analysis Method | Result         | Units | PQL    | MDL     | Dil. | Date Analyzed  | Date Extracted | Q |
|-------------------|-----------------|----------------|-------|--------|---------|------|----------------|----------------|---|
| Antimony, Total   | 200.8           | 0.04 U         | ug/L  | 1.0    | 0.04    | 1    | 03/16/18 17:09 | 03/16/18       |   |
| Arsenic, Total    | 200.8           | 0.1 U          | ug/L  | 1.0    | 0.1     | 1    | 03/16/18 17:09 | 03/16/18       |   |
| Barium, Total     | 200.7           | 0.001 U        | mg/L  | 0.010  | 0.001   | 1    | 03/17/18 01:13 | 03/16/18       |   |
| Beryllium, Total  | 200.7           | 0.00006 U      | mg/L  | 0.0040 | 0.00006 | 1    | 03/17/18 01:13 | 03/16/18       |   |
| Cadmium, Total    | 200.7           | 0.0002 U       | mg/L  | 0.0050 | 0.0002  | 1    | 03/17/18 01:13 | 03/16/18       |   |
| Chromium, Total   | 200.7           | 0.0004 U       | mg/L  | 0.010  | 0.0004  | 1    | 03/17/18 01:13 | 03/16/18       |   |
| Cobalt, Total     | 200.7           | 0.003 U        | mg/L  | 0.010  | 0.003   | 1    | 03/17/18 01:13 | 03/16/18       |   |
| Lead, Total       | 200.8           | 0.03 U         | ug/L  | 0.50   | 0.03    | 1    | 03/16/18 17:09 | 03/16/18       |   |
| Lithium, Total    | 200.7           | 0.002 U        | mg/L  | 0.10   | 0.002   | 1    | 03/17/18 01:11 | 03/16/18       |   |
| Molybdenum, Total | 200.7           | 0.0003 U       | mg/L  | 0.010  | 0.0003  | 1    | 03/17/18 01:13 | 03/16/18       |   |
| Selenium, Total   | 200.7           | <b>0.004 I</b> | mg/L  | 0.010  | 0.002   | 1    | 03/17/18 01:13 | 03/16/18       |   |
| Thallium, Total   | 200.8           | 0.02 U         | ug/L  | 0.20   | 0.02    | 1    | 03/16/18 17:09 | 03/16/18       |   |

ALS Group USA, Corp.  
dba ALS Environmental

QA/QC Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A029  
**Sample Matrix:** Water

**Service Request:** J1801895  
**Date Analyzed:** 03/16/18

**Lab Control Sample Summary**  
**Inorganic Parameters**

**Units:**ug/L  
**Basis:**NA

**Lab Control Sample**  
J1801895-LCS

| <b>Analyte Name</b> | <b>Analytical Method</b> | <b>Result</b> | <b>Spike Amount</b> | <b>% Rec</b> | <b>% Rec Limits</b> |
|---------------------|--------------------------|---------------|---------------------|--------------|---------------------|
| Antimony, Total     | 200.8                    | 49.5          | 50.0                | 99           | 85-115              |
| Arsenic, Total      | 200.8                    | 48.8          | 50.0                | 98           | 85-115              |
| Lead, Total         | 200.8                    | 24.6          | 25.0                | 99           | 85-115              |
| Thallium, Total     | 200.8                    | 9.71          | 10.0                | 97           | 85-115              |

ALS Group USA, Corp.  
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QA/QC Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A029  
**Sample Matrix:** Water

**Service Request:** J1801895  
**Date Analyzed:** 03/17/18

**Lab Control Sample Summary**  
**Inorganic Parameters**

**Units:**mg/L  
**Basis:**NA

**Lab Control Sample**  
J1801895-LCS

| <b>Analyte Name</b> | <b>Analytical Method</b> | <b>Result</b> | <b>Spike Amount</b> | <b>% Rec</b> | <b>% Rec Limits</b> |
|---------------------|--------------------------|---------------|---------------------|--------------|---------------------|
| Barium, Total       | 200.7                    | 0.475         | 0.500               | 95           | 85-115              |
| Beryllium, Total    | 200.7                    | 0.192         | 0.200               | 96           | 85-115              |
| Cadmium, Total      | 200.7                    | 0.237         | 0.250               | 95           | 85-115              |
| Chromium, Total     | 200.7                    | 0.474         | 0.500               | 95           | 85-115              |
| Cobalt, Total       | 200.7                    | 0.476         | 0.500               | 95           | 85-115              |
| Lithium, Total      | 200.7                    | 4.92          | 5.00                | 98           | 85-115              |
| Molybdenum, Total   | 200.7                    | 0.479         | 0.500               | 96           | 85-115              |
| Selenium, Total     | 200.7                    | 0.488         | 0.500               | 98           | 85-115              |



ALS Group USA, Corp.  
dba ALS Environmental

QA/QC Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A029  
**Sample Matrix:** Water

**Service Request:** J1801895  
**Date Collected:** 03/08/18  
**Date Received:** 03/14/18  
**Date Analyzed:** 03/20/18  
**Date Extracted:** 03/16/18

**Duplicate Matrix Spike Summary  
Inorganic Parameters**

**Sample Name:** D18A029-06  
**Lab Code:** J1801895-006  
**Analysis Method:** 200.7  
**Prep Method:** EPA 3005A

**Units:** mg/L  
**Basis:** NA

| Analyte Name      | Sample Result | Result | Matrix Spike<br>J1801895-006MS |       | Duplicate Matrix Spike<br>J1801895-006DMS |              | % Rec Limits | RPD    | RPD Limit |       |
|-------------------|---------------|--------|--------------------------------|-------|---|--------------|--------------|--------|-----------|-------|
|                   |               |        | Spike Amount                   | % Rec | Result                                    | Spike Amount |              |        |           | % Rec |
| Barium, Total     | 0.153         | 0.682  | 0.500                          | 106   | 0.671                                     | 0.500        | 104          | 70-130 | 2         | 20    |
| Beryllium, Total  | 0.0010 I      | 0.216  | 0.200                          | 108   | 0.212                                     | 0.200        | 106          | 70-130 | 2         | 20    |
| Cadmium, Total    | 0.0002 U      | 0.262  | 0.250                          | 105   | 0.260                                     | 0.250        | 104          | 70-130 | <1        | 20    |
| Chromium, Total   | 0.005 I       | 0.541  | 0.500                          | 107   | 0.536                                     | 0.500        | 106          | 70-130 | <1        | 20    |
| Cobalt, Total     | 0.003 I       | 0.553  | 0.500                          | 110   | 0.548                                     | 0.500        | 109          | 70-130 | <1        | 20    |
| Molybdenum, Total | 0.008 I       | 0.538  | 0.500                          | 106   | 0.534                                     | 0.500        | 105          | 70-130 | <1        | 20    |
| Selenium, Total   | 0.008 IV      | 0.529  | 0.500                          | 104   | 0.531                                     | 0.500        | 105          | 70-130 | <1        | 20    |
| Lithium, Total    | 0.002 U       | 5.37   | 5.00                           | 107   | 5.36                                      | 5.00         | 107          | 70-130 | <1        | 20    |

Results flagged with an asterisk (\*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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dba ALS Environmental

QA/QC Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A029  
**Sample Matrix:** Water

**Service Request:** J1801895  
**Date Collected:** 03/06/18  
**Date Received:** 03/14/18  
**Date Analyzed:** 03/20/18  
**Date Extracted:** 03/16/18

**Duplicate Matrix Spike Summary  
Inorganic Parameters**

**Sample Name:** D18A029-10  
**Lab Code:** J1801895-010  
**Analysis Method:** 200.7  
**Prep Method:** EPA 3005A

**Units:** mg/L  
**Basis:** NA

| Analyte Name   | Sample Result | Result | Matrix Spike<br>J1801895-010MS |       | Duplicate Matrix Spike<br>J1801895-010DMS |              | % Rec Limits | RPD    | RPD Limit |       |
|----------------|---------------|--------|--------------------------------|-------|---|--------------|--------------|--------|-----------|-------|
|                |               |        | Spike Amount                   | % Rec | Result                                    | Spike Amount |              |        |           | % Rec |
| Lithium, Total | 0.002 U       | 5.25   | 5.00                           | 105   | 5.24                                      | 5.00         | 105          | 70-130 | <1        | 20    |

Results flagged with an asterisk (\*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.  
dba ALS Environmental

QA/QC Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A029  
**Sample Matrix:** Water

**Service Request:** J1801895  
**Date Collected:** 03/08/18  
**Date Received:** 03/14/18  
**Date Analyzed:** 03/16/18  
**Date Extracted:** 03/16/18

**Duplicate Matrix Spike Summary  
Inorganic Parameters**

**Sample Name:** D18A029-07  
**Lab Code:** J1801895-007  
**Analysis Method:** 200.8  
**Prep Method:** EPA 3005A

**Units:** ug/L  
**Basis:** NA

| Analyte Name    | Sample Result | Result | Matrix Spike<br>J1801895-007MS |       | Duplicate Matrix Spike<br>J1801895-007DMS |              | % Rec Limits | RPD    | RPD Limit |       |
|-----------------|---------------|--------|--------------------------------|-------|---|--------------|--------------|--------|-----------|-------|
|                 |               |        | Spike Amount                   | % Rec | Result                                    | Spike Amount |              |        |           | % Rec |
| Antimony, Total | 1.1           | 49.6   | 50.0                           | 97    | 50.3                                      | 50.0         | 98           | 70-130 | 1         | 20    |
| Arsenic, Total  | 1.3           | 51.0   | 50.0                           | 99    | 52.3                                      | 50.0         | 102          | 70-130 | 3         | 20    |
| Lead, Total     | 0.03 U        | 23.2   | 25.0                           | 93    | 23.3                                      | 25.0         | 93           | 70-130 | <1        | 20    |
| Thallium, Total | 0.06 I        | 9.37   | 10.0                           | 93    | 9.35                                      | 10.0         | 93           | 70-130 | <1        | 20    |

Results flagged with an asterisk (\*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.



# *Kanapaha Laboratory*

3901 South West 63rd Blvd  
Gainesville, FL 32608  
(352) 393-6777

Florida Department of Health Certification E52099

March 29, 2018

Jeff Boudreau  
Deerhaven Laboratory  
Station D-38  
Gainesville, FL/USA 32614-7117

RE: Environmental

Enclosed are the results of analyses for samples received by the laboratory on 3/15/2018. If you have any questions concerning this report, please feel free to contact me.

Please note that all results were determined in accordance with NELAP requirements. All data is subject to a degree of uncertainty. Kanapaha Lab uncertainty is based upon LCS quality control statistics.

Sincerely,

Jaclyn M Dihos  
Laboratory Supervisor



Deerhaven Laboratory  
Station D-38  
Gainesville, FL/USA 32614-7117

Project: Environmental  
Project Number: D18A029  
Project Manager: Jeff Boudreau

**Reported:**  
03/29/2018 15:50

### ANALYTICAL REPORT FOR SAMPLES

| <b>Laboratory ID</b> | <b>Sample ID</b>             | <b>Matrix</b> | <b>Date Sampled</b> | <b>Date Received</b> |
|----------------------|------------------------------|---------------|---------------------|----------------------|
| K18C065-01           | D18A029-01 (SIS-1)           | Groundwater   | 03/07/2018 11:18    | 03/15/2018 12:30     |
| K18C065-02           | D18A029-02 (SIS-2)           | Groundwater   | 03/08/2018 09:36    | 03/15/2018 12:30     |
| K18C065-03           | D18A029-03 (SIS-3)           | Groundwater   | 03/07/2018 13:36    | 03/15/2018 12:30     |
| K18C065-04           | D18A029-04 (SIS-4)           | Groundwater   | 03/07/2018 15:31    | 03/15/2018 12:30     |
| K18C065-05           | D18A029-05 (LF-1)            | Groundwater   | 03/07/2018 09:29    | 03/15/2018 12:30     |
| K18C065-06           | D18A029-06 (LF-2)            | Groundwater   | 03/08/2018 11:13    | 03/15/2018 12:30     |
| K18C065-07           | D18A029-07 (LF-3)            | Groundwater   | 03/08/2018 12:56    | 03/15/2018 12:30     |
| K18C065-08           | D18A029-08 (LF-4)            | Groundwater   | 03/08/2018 14:50    | 03/15/2018 12:30     |
| K18C065-09           | D18A029-12 (MWI-4-5 (R4T5B)) | Groundwater   | 03/08/2018 08:18    | 03/15/2018 12:30     |
| K18C065-10           | D18A029-13 (MWI-6-4 (R6T4B)) | Groundwater   | 03/07/2018 10:31    | 03/15/2018 12:30     |
| K18C065-11           | D18A029-14 (EBLANK)          | Groundwater   | 03/07/2018 16:14    | 03/15/2018 12:30     |



Deerhaven Laboratory  
Station D-38  
Gainesville, FL/USA 32614-7117

Project: Environmental  
Project Number: D18A029  
Project Manager: Jeff Boudreau

**Reported:**  
03/29/2018 15:50

**D18A029-01 (SIS-1)**  
**K18C065-01 (Groundwater, Grab)**  
Collected: 03/07/2018 11:18 am

| Analyte | Result | Qual | MDL | PQL | Units | Dil | Prepared | Analyzed | Method |
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|

**Laboratory: Kanapaha Laboratory**

**Metals by EPA 200 Series Methods**

|         |       |   |       |       |      |   |            |            |           |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|
| Mercury | 0.100 | U | 0.100 | 0.400 | ug/L | 1 | 03/28/2018 | 03/28/2018 | EPA 245.1 |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|

**D18A029-02 (SIS-2)**  
**K18C065-02 (Groundwater, Grab)**  
Collected: 03/08/2018 9:36 am

| Analyte | Result | Qual | MDL | PQL | Units | Dil | Prepared | Analyzed | Method |
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|

**Laboratory: Kanapaha Laboratory**

**Metals by EPA 200 Series Methods**

|         |       |   |       |       |      |   |            |            |           |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|
| Mercury | 0.100 | U | 0.100 | 0.400 | ug/L | 1 | 03/28/2018 | 03/28/2018 | EPA 245.1 |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|

**D18A029-03 (SIS-3)**  
**K18C065-03 (Groundwater, Grab)**  
Collected: 03/07/2018 1:36 pm

| Analyte | Result | Qual | MDL | PQL | Units | Dil | Prepared | Analyzed | Method |
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|

**Laboratory: Kanapaha Laboratory**

**Metals by EPA 200 Series Methods**

|         |       |   |       |       |      |   |            |            |           |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|
| Mercury | 0.100 | U | 0.100 | 0.400 | ug/L | 1 | 03/28/2018 | 03/28/2018 | EPA 245.1 |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|

**D18A029-04 (SIS-4)**  
**K18C065-04 (Groundwater, Grab)**  
Collected: 03/07/2018 3:31 pm

| Analyte | Result | Qual | MDL | PQL | Units | Dil | Prepared | Analyzed | Method |
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|

**Laboratory: Kanapaha Laboratory**

**Metals by EPA 200 Series Methods**

|         |       |   |       |       |      |   |            |            |           |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|
| Mercury | 0.100 | U | 0.100 | 0.400 | ug/L | 1 | 03/28/2018 | 03/28/2018 | EPA 245.1 |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|



Deerhaven Laboratory  
Station D-38  
Gainesville, FL/USA 32614-7117

Project: Environmental  
Project Number: D18A029  
Project Manager: Jeff Boudreau

**Reported:**  
03/29/2018 15:50

**D18A029-05 (LF-1)**  
**K18C065-05 (Groundwater, Grab)**  
Collected: 03/07/2018 9:29 am

| Analyte | Result | Qual | MDL | PQL | Units | Dil | Prepared | Analyzed | Method |
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|

**Laboratory: Kanapaha Laboratory**

**Metals by EPA 200 Series Methods**

|         |       |   |       |       |      |   |            |            |           |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|
| Mercury | 0.100 | U | 0.100 | 0.400 | ug/L | 1 | 03/28/2018 | 03/28/2018 | EPA 245.1 |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|

**D18A029-06 (LF-2)**  
**K18C065-06 (Groundwater, Grab)**  
Collected: 03/08/2018 11:13 am

| Analyte | Result | Qual | MDL | PQL | Units | Dil | Prepared | Analyzed | Method |
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|

**Laboratory: Kanapaha Laboratory**

**Metals by EPA 200 Series Methods**

|         |       |   |       |       |      |   |            |            |           |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|
| Mercury | 0.100 | U | 0.100 | 0.400 | ug/L | 1 | 03/28/2018 | 03/28/2018 | EPA 245.1 |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|

**D18A029-07 (LF-3)**  
**K18C065-07 (Groundwater, Grab)**  
Collected: 03/08/2018 12:56 pm

| Analyte | Result | Qual | MDL | PQL | Units | Dil | Prepared | Analyzed | Method |
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|

**Laboratory: Kanapaha Laboratory**

**Metals by EPA 200 Series Methods**

|         |       |   |       |       |      |   |            |            |           |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|
| Mercury | 0.100 | U | 0.100 | 0.400 | ug/L | 1 | 03/28/2018 | 03/28/2018 | EPA 245.1 |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|

**D18A029-08 (LF-4)**  
**K18C065-08 (Groundwater, Grab)**  
Collected: 03/08/2018 2:50 pm

| Analyte | Result | Qual | MDL | PQL | Units | Dil | Prepared | Analyzed | Method |
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|

**Laboratory: Kanapaha Laboratory**

**Metals by EPA 200 Series Methods**

|         |       |   |       |       |      |   |            |            |           |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|
| Mercury | 0.100 | U | 0.100 | 0.400 | ug/L | 1 | 03/28/2018 | 03/28/2018 | EPA 245.1 |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|



Deerhaven Laboratory  
Station D-38  
Gainesville, FL/USA 32614-7117

Project: Environmental  
Project Number: D18A029  
Project Manager: Jeff Boudreau

**Reported:**  
03/29/2018 15:50

**D18A029-12 (MWI-4-5 (R4T5B))**  
**K18C065-09 (Groundwater, Grab)**  
Collected: 03/08/2018 8:18 am

| Analyte | Result | Qual | MDL | PQL | Units | Dil | Prepared | Analyzed | Method |
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|

**Laboratory: Kanapaha Laboratory**

**Metals by EPA 200 Series Methods**

|         |       |   |       |       |      |   |            |            |           |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|
| Mercury | 0.100 | U | 0.100 | 0.400 | ug/L | 1 | 03/28/2018 | 03/28/2018 | EPA 245.1 |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|

**D18A029-13 (MWI-6-4 (R6T4B))**  
**K18C065-10 (Groundwater, Grab)**  
Collected: 03/07/2018 10:31 am

| Analyte | Result | Qual | MDL | PQL | Units | Dil | Prepared | Analyzed | Method |
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|

**Laboratory: Kanapaha Laboratory**

**Metals by EPA 200 Series Methods**

|         |       |   |       |       |      |   |            |            |           |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|
| Mercury | 0.100 | U | 0.100 | 0.400 | ug/L | 1 | 03/28/2018 | 03/28/2018 | EPA 245.1 |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|

**D18A029-14 (EBLANK)**  
**K18C065-11 (Groundwater, Grab)**  
Collected: 03/07/2018 4:14 pm

| Analyte | Result | Qual | MDL | PQL | Units | Dil | Prepared | Analyzed | Method |
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|

**Laboratory: Kanapaha Laboratory**

**Metals by EPA 200 Series Methods**

|         |       |   |       |       |      |   |            |            |           |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|
| Mercury | 0.100 | U | 0.100 | 0.400 | ug/L | 1 | 03/28/2018 | 03/28/2018 | EPA 245.1 |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|





Deerhaven Laboratory  
Station D-38  
Gainesville, FL/USA 32614-7117

Project: Environmental  
Project Number: D18A029  
Project Manager: Jeff Boudreau

**Reported:**  
03/29/2018 15:50

**Metals by EPA 200 Series Methods - Quality Control**  
**Laboratory: Kanapaha Laboratory**

| Analyte                           | Result | Qual | MDL                       | PQL   | Units | Spike Level                    | Source Result | %REC | % REC Limits | RSD   | RSD Limit |
|-----------------------------------|--------|------|---------------------------|-------|-------|--------------------------------|---------------|------|--------------|-------|-----------|
| <b>Batch B18C184 - MERCURY</b>    |        |      |                           |       |       |                                |               |      |              |       |           |
| <b>Blank (B18C184-BLK1)</b>       |        |      |                           |       |       | Prepared & Analyzed: 3/28/2018 |               |      |              |       |           |
| Mercury                           | 0.100  | U    | 0.100                     | 0.400 | ug/L  |                                |               |      |              |       | NR        |
| <b>Blank (B18C184-BLK2)</b>       |        |      |                           |       |       | Prepared & Analyzed: 3/28/2018 |               |      |              |       |           |
| Mercury                           | 0.100  | U    | 0.100                     | 0.400 | ug/L  |                                |               |      |              |       | NR        |
| <b>Blank (B18C184-BLK3)</b>       |        |      |                           |       |       | Prepared & Analyzed: 3/28/2018 |               |      |              |       |           |
| Mercury                           | 0.100  | U    | 0.100                     | 0.400 | ug/L  |                                |               |      |              |       | NR        |
| <b>LCS (B18C184-BS1)</b>          |        |      |                           |       |       | Prepared & Analyzed: 3/28/2018 |               |      |              |       |           |
| Mercury                           | 18.5   |      |                           |       | ug/L  | 20.0                           |               | 92.7 | 90-110       | 0.703 |           |
| <b>LCS (B18C184-BS2)</b>          |        |      |                           |       |       | Prepared & Analyzed: 3/28/2018 |               |      |              |       |           |
| Mercury                           | 18.7   |      |                           |       | ug/L  | 20.0                           |               | 93.3 | 90-110       | 0.703 |           |
| <b>LCS (B18C184-BS3)</b>          |        |      |                           |       |       | Prepared & Analyzed: 3/28/2018 |               |      |              |       |           |
| Mercury                           | 18.4   |      |                           |       | ug/L  | 20.0                           |               | 92.0 | 90-110       | 0.703 |           |
| <b>Duplicate (B18C184-DUP1)</b>   |        |      | <b>Source: K18C055-03</b> |       |       | Prepared & Analyzed: 3/28/2018 |               |      |              |       |           |
| Mercury                           | 0.100  | U    | 0.100                     | 0.400 | ug/L  |                                | ND            |      |              |       | 23.6      |
| <b>Duplicate (B18C184-DUP2)</b>   |        |      | <b>Source: K18C065-08</b> |       |       | Prepared & Analyzed: 3/28/2018 |               |      |              |       |           |
| Mercury                           | 0.100  | U    | 0.100                     | 0.400 | ug/L  |                                | ND            |      |              |       | 25.3      |
| <b>Matrix Spike (B18C184-MS1)</b> |        |      | <b>Source: K18C055-03</b> |       |       | Prepared & Analyzed: 3/28/2018 |               |      |              |       |           |
| Mercury                           | 2.06   |      | 0.100                     | 0.400 | ug/L  | 2.00                           | ND            | 103  | 90-110       |       |           |
| <b>Matrix Spike (B18C184-MS2)</b> |        |      | <b>Source: K18C065-08</b> |       |       | Prepared & Analyzed: 3/28/2018 |               |      |              |       |           |
| Mercury                           | 2.03   |      | 0.100                     | 0.400 | ug/L  | 2.00                           | ND            | 102  | 90-110       |       |           |



Deerhaven Laboratory  
Station D-38  
Gainesville, FL/USA 32614-7117

Project: Environmental  
Project Number: D18A029  
Project Manager: Jeff Boudreau

**Reported:**  
03/29/2018 15:50

### Notes and Definitions

| <u>Qualifier</u> | <u>Description</u>  |
|------------------|---|
| NR               | Not Reported  |
| RSD              | Relative Standard Deviation   |
| U                | Compound was analyzed for but not detected                              |
| N                | Presumptive evidence of presence of material                            |
| L                | Off-scale high. Actual value is known to be greater than value given    |
| I                | The reported value is between the laboratory MDL and the laboratory PQL |
| V                | Analyte was detected in both the sample and the associated method blank |



**SUBCONTRACT ORDER**  
**Deerhaven Generating Station**  
**D18A029**

**SENDING LABORATORY:**

Gainesville Regional Utilities  
 Deerhaven Generating Station  
 10001 NW 13th Street  
 Gainesville, FL 32653  
 Phone: 352-334-3434  
 Fax: 352-334-3149  
 Project Manager: Jeff Boudreau

**RECEIVING LABORATORY:**

Kanapaha Laboratory  
 3901 SW 63rd BLVD  
 Gainesville, FL/USA 32608  
 Phone :352-393-6777  
 Fax: 352-334-2732

| Analysis   | Expires         | Laboratory ID | Comments     |
|--|-----------------|---------------|--------------|
| <b>Sample Name: SIS-1</b><br><b>Sample ID: D18A029-01</b> Water <b>Sampled:07-Mar-18 11:18</b> |                 | K18C065-01    |              |
| K_Mercury, cold vapor<br><i>Containers Supplied:</i><br>D_HDPE, HNO3 pH<2 - 500mL (A)          | 04-Apr-18 11:18 |               |              |
| <b>Sample Name: SIS-2</b><br><b>Sample ID: D18A029-02</b> Water <b>Sampled:08-Mar-18 09:36</b> |                 | K18C065-02    |              |
| K_Mercury, cold vapor<br><i>Containers Supplied:</i><br>D_HDPE, HNO3 pH<2 - 500mL (A)          | 05-Apr-18 09:36 |               |              |
| <b>Sample Name: SIS-3</b><br><b>Sample ID: D18A029-03</b> Water <b>Sampled:07-Mar-18 13:36</b> |                 | K18C065-03    | 608-967-9090 |
| K_Mercury, cold vapor<br><i>Containers Supplied:</i><br>D_HDPE, HNO3 pH<2 - 500mL (A)          | 04-Apr-18 13:36 |               |              |
| <b>Sample Name: SIS-4</b><br><b>Sample ID: D18A029-04</b> Water <b>Sampled:07-Mar-18 15:31</b> |                 | K18C065-04    |              |
| K_Mercury, cold vapor<br><i>Containers Supplied:</i><br>D_HDPE, HNO3 pH<2 - 500mL (A)          | 04-Apr-18 15:31 |               |              |
| <b>Sample Name: LF-1</b><br><b>Sample ID: D18A029-05</b> Water <b>Sampled:07-Mar-18 09:29</b>  |                 | K18C065-05    |              |
| K_Mercury, cold vapor<br><i>Containers Supplied:</i><br>D_HDPE, HNO3 pH<2 - 500mL (A)          | 04-Apr-18 09:29 |               |              |
| <b>Sample Name: LF-2</b><br><b>Sample ID: D18A029-06</b> Water <b>Sampled:08-Mar-18 11:13</b>  |                 | K18C065-06    |              |
| K_Mercury, cold vapor<br><i>Containers Supplied:</i><br>D_HDPE, HNO3 pH<2 - 500mL (A)          | 05-Apr-18 11:13 |               |              |

Released By: *Shelby Phillips*    Date: *3-14-18*    via I-D mail

Received By: *John M. Del...*    Date: *03/15/18 @ 1230*



SUBCONTRACT ORDER  
Deerhaven Generating Station  
D18A029

| Analysis  | Expires         | Laboratory ID | Comments |
|---|-----------------|---------------|----------|
| <b>Sample Name: LF-3</b><br><b>Sample ID: D18A029-07</b> <b>Water</b> <b>Sampled:08-Mar-18 12:56</b>            |                 | K18C065-07    |          |
| K_Mercury, cold vapor<br><i>Containers Supplied:</i><br>D_HDPE, HNO3 pH<2 - 500mL (A)                           | 05-Apr-18 12:56 |               |          |
| <b>Sample Name: LF-4</b><br><b>Sample ID: D18A029-08</b> <b>Water</b> <b>Sampled:08-Mar-18 14:50</b>            |                 | K18C065-08    |          |
| K_Mercury, cold vapor<br><i>Containers Supplied:</i><br>D_HDPE, HNO3 pH<2 - 500mL (A)                           | 05-Apr-18 14:50 |               |          |
| <b>Sample Name: MWI-4-5 (R4T5B)</b><br><b>Sample ID: D18A029-12</b> <b>Water</b> <b>Sampled:08-Mar-18 08:18</b> |                 | K18C065-09    |          |
| K_Mercury, cold vapor<br><i>Containers Supplied:</i><br>D_HDPE, HNO3 pH<2 - 500mL (A)                           | 05-Apr-18 08:18 |               |          |
| <b>Sample Name: MWI-6-4 (R6T4B)</b><br><b>Sample ID: D18A029-13</b> <b>Water</b> <b>Sampled:07-Mar-18 10:31</b> |                 | K18C065-10    |          |
| K_Mercury, cold vapor<br><i>Containers Supplied:</i><br>D_HDPE, HNO3 pH<2 - 500mL (A)                           | 04-Apr-18 10:31 |               |          |
| <b>Sample Name: EBLANK</b><br><b>Sample ID: D18A029-14</b> <b>Water</b> <b>Sampled:07-Mar-18 16:14</b>          |                 | K18C065-11    |          |
| K_Mercury, cold vapor<br><i>Containers Supplied:</i><br>D_HDPE, HNO3 pH<2 - 500mL (A)                           | 04-Apr-18 16:14 |               |          |

*via E-mail*

Released By: *Shelly Phillips*      Date: *3-14-18*      Received By: *Joel M. Dehn*      Date: *03/15/18 @ 1230*

---

Released By:      Date:      Received By:      Date:

March 28, 2018

Mr. Jeffery Boudreau  
Deerhaven Lab  
P.O. Box 147117, Station D38  
Gainesville, FL 32614

RE: Project: Project D18A029  
Pace Project No.: 35379762

Dear Mr. Boudreau:

Enclosed are the analytical results for sample(s) received by the laboratory on March 13, 2018. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,



Jeff Baylor  
jeff.baylor@pacelabs.com  
(386)672-5668  
Project Manager

Enclosures

cc: Kent Brakefield  
Shelley Phillips, Deerhaven Lab



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: Project D18A029  
Pace Project No.: 35379762

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### Pennsylvania Certification IDs

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601  
L-A-B DOD-ELAP Accreditation #: L2417  
Alabama Certification #: 41590  
Arizona Certification #: AZ0734  
Arkansas Certification  
California Certification #: 04222CA  
Colorado Certification  
Connecticut Certification #: PH-0694  
Delaware Certification  
Florida/TNI Certification #: E87683  
Georgia Certification #: C040  
Guam Certification  
Hawaii Certification  
Idaho Certification  
Illinois Certification  
Indiana Certification  
Iowa Certification #: 391  
Kansas/TNI Certification #: E-10358  
Kentucky Certification #: 90133  
Louisiana DHH/TNI Certification #: LA140008  
Louisiana DEQ/TNI Certification #: 4086  
Maine Certification #: PA00091  
Maryland Certification #: 308  
Massachusetts Certification #: M-PA1457  
Michigan/PADEP Certification  
Missouri Certification #: 235

Montana Certification #: Cert 0082  
Nebraska Certification #: NE-05-29-14  
Nevada Certification #: PA014572015-1  
New Hampshire/TNI Certification #: 2976  
New Jersey/TNI Certification #: PA 051  
New Mexico Certification #: PA01457  
New York/TNI Certification #: 10888  
North Carolina Certification #: 42706  
North Dakota Certification #: R-190  
Oregon/TNI Certification #: PA200002  
Pennsylvania/TNI Certification #: 65-00282  
Puerto Rico Certification #: PA01457  
Rhode Island Certification #: 65-00282  
South Dakota Certification  
Tennessee Certification #: TN2867  
Texas/TNI Certification #: T104704188-14-8  
Utah/TNI Certification #: PA014572015-5  
USDA Soil Permit #: P330-14-00213  
Vermont Dept. of Health: ID# VT-0282  
Virgin Island/PADEP Certification  
Virginia/VELAP Certification #: 460198  
Washington Certification #: C868  
West Virginia DEP Certification #: 143  
West Virginia DHHR Certification #: 9964C  
Wisconsin Certification  
Wyoming Certification #: 8TMS-L

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### Ormond Beach Certification IDs

8 East Tower Circle, Ormond Beach, FL 32174  
Alabama Certification #: 41320  
Connecticut Certification #: PH-0216  
Delaware Certification: FL NELAC Reciprocity  
Florida Certification #: E83079  
Georgia Certification #: 955  
Guam Certification: FL NELAC Reciprocity  
Hawaii Certification: FL NELAC Reciprocity  
Illinois Certification #: 200068  
Indiana Certification: FL NELAC Reciprocity  
Kansas Certification #: E-10383  
Kentucky Certification #: 90050  
Louisiana Certification #: FL NELAC Reciprocity  
Louisiana Environmental Certificate #: 05007  
Maryland Certification: #346  
Michigan Certification #: 9911  
Mississippi Certification: FL NELAC Reciprocity  
Missouri Certification #: 236  
Montana Certification #: Cert 0074

Nebraska Certification: NE-OS-28-14  
Nevada Certification: FL NELAC Reciprocity  
New Jersey Certification #: FL022  
New York Certification #: 11608  
North Carolina Environmental Certificate #: 667  
North Carolina Certification #: 12710  
Oklahoma Certification #: D9947  
Pennsylvania Certification #: 68-00547  
Puerto Rico Certification #: FL01264  
South Carolina Certification: #96042001  
Tennessee Certification #: TN02974  
Texas Certification: FL NELAC Reciprocity  
US Virgin Islands Certification: FL NELAC Reciprocity  
Virginia Environmental Certification #: 460165  
Wyoming Certification: FL NELAC Reciprocity  
West Virginia Certification #: 9962C  
Wisconsin Certification #: 399079670  
Wyoming (EPA Region 8): FL NELAC Reciprocity

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: Project D18A029

Pace Project No.: 35379762

| Lab ID      | Sample ID  | Matrix | Date Collected | Date Received  |
|-------------|------------|--------|----------------|----------------|
| 35379762001 | D18A029-01 | Water  | 03/07/18 11:18 | 03/13/18 11:00 |
| 35379762002 | D18A029-02 | Water  | 03/08/18 09:36 | 03/13/18 11:00 |
| 35379762003 | D18A029-03 | Water  | 03/07/18 13:36 | 03/13/18 11:00 |
| 35379762004 | D18A029-04 | Water  | 03/07/18 15:31 | 03/13/18 11:00 |
| 35379762005 | D18A029-05 | Water  | 03/07/18 09:29 | 03/13/18 11:00 |
| 35379762006 | D18A029-06 | Water  | 03/08/18 11:13 | 03/13/18 11:00 |
| 35379762007 | D18A029-07 | Water  | 03/08/18 12:56 | 03/13/18 11:00 |
| 35379762008 | D18A029-08 | Water  | 03/08/18 14:50 | 03/13/18 11:00 |
| 35379762009 | D18A029-12 | Water  | 03/08/18 08:18 | 03/13/18 11:00 |
| 35379762010 | D18A029-13 | Water  | 03/07/18 10:31 | 03/13/18 11:00 |
| 35379762011 | D18A029-14 | Water  | 03/07/18 16:14 | 03/13/18 11:00 |

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: Project D18A029

Pace Project No.: 35379762

| Lab ID      | Sample ID  | Method                   | Analysts | Analytes Reported | Laboratory |
|-------------|------------|--------------------------|----------|-------------------|------------|
| 35379762001 | D18A029-01 | EPA 903.1                | KAC      | 1                 | PASI-PA    |
|             |            | EPA 904.0                | JLW      | 1                 | PASI-PA    |
|             |            | Total Radium Calculation | JAL      | 1                 | PASI-PA    |
|             |            | EPA 300.0                | ALD      | 1                 | PASI-O     |
| 35379762002 | D18A029-02 | EPA 903.1                | KAC      | 1                 | PASI-PA    |
|             |            | EPA 904.0                | JLW      | 1                 | PASI-PA    |
|             |            | Total Radium Calculation | JAL      | 1                 | PASI-PA    |
|             |            | EPA 300.0                | ALD      | 1                 | PASI-O     |
| 35379762003 | D18A029-03 | EPA 903.1                | KAC      | 1                 | PASI-PA    |
|             |            | EPA 904.0                | JLW      | 1                 | PASI-PA    |
|             |            | Total Radium Calculation | JAL      | 1                 | PASI-PA    |
|             |            | EPA 300.0                | ALD      | 1                 | PASI-O     |
| 35379762004 | D18A029-04 | EPA 903.1                | KAC      | 1                 | PASI-PA    |
|             |            | EPA 904.0                | JLW      | 1                 | PASI-PA    |
|             |            | Total Radium Calculation | JAL      | 1                 | PASI-PA    |
|             |            | EPA 300.0                | ALD      | 1                 | PASI-O     |
| 35379762005 | D18A029-05 | EPA 903.1                | KAC      | 1                 | PASI-PA    |
|             |            | EPA 904.0                | JLW      | 1                 | PASI-PA    |
|             |            | Total Radium Calculation | JAL      | 1                 | PASI-PA    |
|             |            | EPA 300.0                | ALD      | 1                 | PASI-O     |
| 35379762006 | D18A029-06 | EPA 903.1                | KAC      | 1                 | PASI-PA    |
|             |            | EPA 904.0                | JLW      | 1                 | PASI-PA    |
|             |            | Total Radium Calculation | JAL      | 1                 | PASI-PA    |
|             |            | EPA 300.0                | ALD      | 1                 | PASI-O     |
| 35379762007 | D18A029-07 | EPA 903.1                | KAC      | 1                 | PASI-PA    |
|             |            | EPA 904.0                | JLW      | 1                 | PASI-PA    |
|             |            | Total Radium Calculation | JAL      | 1                 | PASI-PA    |
|             |            | EPA 300.0                | ALD      | 1                 | PASI-O     |
| 35379762008 | D18A029-08 | EPA 903.1                | KAC      | 1                 | PASI-PA    |
|             |            | EPA 904.0                | JLW      | 1                 | PASI-PA    |
|             |            | Total Radium Calculation | JAL      | 1                 | PASI-PA    |
|             |            | EPA 300.0                | ALD      | 1                 | PASI-O     |
| 35379762009 | D18A029-12 | EPA 903.1                | KAC      | 1                 | PASI-PA    |
|             |            | EPA 904.0                | JLW      | 1                 | PASI-PA    |
|             |            | Total Radium Calculation | JAL      | 1                 | PASI-PA    |
|             |            | EPA 300.0                | ALD      | 1                 | PASI-O     |
| 35379762010 | D18A029-13 | EPA 903.1                | KAC      | 1                 | PASI-PA    |

### REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: Project D18A029

Pace Project No.: 35379762

| Lab ID             | Sample ID         | Method                   | Analysts | Analytes Reported | Laboratory |
|--------------------|-------------------|--------------------------|----------|-------------------|------------|
|                    |                   | EPA 904.0                | JLW      | 1                 | PASI-PA    |
|                    |                   | Total Radium Calculation | JAL      | 1                 | PASI-PA    |
|                    |                   | EPA 300.0                | ALD      | 1                 | PASI-O     |
| <b>35379762011</b> | <b>D18A029-14</b> | EPA 903.1                | KAC      | 1                 | PASI-PA    |
|                    |                   | EPA 904.0                | JLW      | 1                 | PASI-PA    |
|                    |                   | Total Radium Calculation | JAL      | 1                 | PASI-PA    |
|                    |                   | EPA 300.0                | ALD      | 1                 | PASI-O     |

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: Project D18A029

Pace Project No.: 35379762

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**Sample: D18A029-01**      **Lab ID: 35379762001**      Collected: 03/07/18 11:18      Received: 03/13/18 11:00      Matrix: Water

| Parameters                     | Results     | Units | PQL   | MDL   | DF | Prepared | Analyzed       | CAS No.    | Qual |
|--------------------------------|-------------|-------|-------|-------|----|----------|----------------|------------|------|
| <b>300.0 IC Anions 28 Days</b> |             |       |       |       |    |          |                |            |      |
| Analytical Method: EPA 300.0   |             |       |       |       |    |          |                |            |      |
| Fluoride                       | <b>0.20</b> | mg/L  | 0.050 | 0.034 | 1  |          | 03/15/18 14:35 | 16984-48-8 |      |

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: Project D18A029

Pace Project No.: 35379762

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**Sample: D18A029-02**      **Lab ID: 35379762002**      Collected: 03/08/18 09:36      Received: 03/13/18 11:00      Matrix: Water

| Parameters                     | Results     | Units | PQL   | MDL   | DF | Prepared | Analyzed       | CAS No.    | Qual |
|--------------------------------|-------------|-------|-------|-------|----|----------|----------------|------------|------|
| <b>300.0 IC Anions 28 Days</b> |             |       |       |       |    |          |                |            |      |
| Analytical Method: EPA 300.0   |             |       |       |       |    |          |                |            |      |
| Fluoride                       | <b>0.42</b> | mg/L  | 0.050 | 0.034 | 1  |          | 03/15/18 15:41 | 16984-48-8 |      |

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### ANALYTICAL RESULTS

Project: Project D18A029

Pace Project No.: 35379762

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**Sample: D18A029-03**      **Lab ID: 35379762003**      Collected: 03/07/18 13:36      Received: 03/13/18 11:00      Matrix: Water

| Parameters                     | Results     | Units | PQL   | MDL   | DF | Prepared | Analyzed       | CAS No.    | Qual |
|--------------------------------|-------------|-------|-------|-------|----|----------|----------------|------------|------|
| <b>300.0 IC Anions 28 Days</b> |             |       |       |       |    |          |                |            |      |
| Analytical Method: EPA 300.0   |             |       |       |       |    |          |                |            |      |
| Fluoride                       | <b>0.16</b> | mg/L  | 0.050 | 0.034 | 1  |          | 03/15/18 16:03 | 16984-48-8 |      |

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## ANALYTICAL RESULTS

Project: Project D18A029

Pace Project No.: 35379762

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**Sample: D18A029-04**      **Lab ID: 35379762004**      Collected: 03/07/18 15:31      Received: 03/13/18 11:00      Matrix: Water

| Parameters                     | Results     | Units | PQL  | MDL   | DF | Prepared | Analyzed       | CAS No.    | Qual |
|--------------------------------|-------------|-------|------|-------|----|----------|----------------|------------|------|
| <b>300.0 IC Anions 28 Days</b> |             |       |      |       |    |          |                |            |      |
| Analytical Method: EPA 300.0   |             |       |      |       |    |          |                |            |      |
| Fluoride                       | <b>0.25</b> | mg/L  | 0.10 | 0.068 | 2  |          | 03/15/18 16:25 | 16984-48-8 |      |

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## ANALYTICAL RESULTS

Project: Project D18A029  
Pace Project No.: 35379762

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**Sample: D18A029-05**      **Lab ID: 35379762005**      Collected: 03/07/18 09:29      Received: 03/13/18 11:00      Matrix: Water

| Parameters                     | Results      | Units | PQL   | MDL   | DF | Prepared | Analyzed       | CAS No.    | Qual |
|--------------------------------|--------------|-------|-------|-------|----|----------|----------------|------------|------|
| <b>300.0 IC Anions 28 Days</b> |              |       |       |       |    |          |                |            |      |
| Analytical Method: EPA 300.0   |              |       |       |       |    |          |                |            |      |
| Fluoride                       | <b>0.069</b> | mg/L  | 0.050 | 0.034 | 1  |          | 03/15/18 16:48 | 16984-48-8 |      |

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## ANALYTICAL RESULTS

Project: Project D18A029

Pace Project No.: 35379762

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**Sample: D18A029-06**      **Lab ID: 35379762006**      Collected: 03/08/18 11:13      Received: 03/13/18 11:00      Matrix: Water

| Parameters                     | Results     | Units | PQL   | MDL   | DF | Prepared | Analyzed       | CAS No.    | Qual |
|--------------------------------|-------------|-------|-------|-------|----|----------|----------------|------------|------|
| <b>300.0 IC Anions 28 Days</b> |             |       |       |       |    |          |                |            |      |
| Analytical Method: EPA 300.0   |             |       |       |       |    |          |                |            |      |
| Fluoride                       | <b>0.28</b> | mg/L  | 0.050 | 0.034 | 1  |          | 03/15/18 17:10 | 16984-48-8 |      |

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### ANALYTICAL RESULTS

Project: Project D18A029  
Pace Project No.: 35379762

**Sample: D18A029-07**      **Lab ID: 35379762007**      Collected: 03/08/18 12:56      Received: 03/13/18 11:00      Matrix: Water

| Parameters                     | Results     | Units | PQL  | MDL   | DF | Prepared | Analyzed       | CAS No.    | Qual |
|--------------------------------|-------------|-------|------|-------|----|----------|----------------|------------|------|
| <b>300.0 IC Anions 28 Days</b> |             |       |      |       |    |          |                |            |      |
| Analytical Method: EPA 300.0   |             |       |      |       |    |          |                |            |      |
| Fluoride                       | <b>0.21</b> | mg/L  | 0.10 | 0.068 | 2  |          | 03/15/18 17:32 | 16984-48-8 |      |

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### ANALYTICAL RESULTS

Project: Project D18A029

Pace Project No.: 35379762

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**Sample: D18A029-08**      **Lab ID: 35379762008**      Collected: 03/08/18 14:50      Received: 03/13/18 11:00      Matrix: Water

| Parameters                     | Results     | Units | PQL   | MDL   | DF | Prepared | Analyzed       | CAS No.    | Qual |
|--------------------------------|-------------|-------|-------|-------|----|----------|----------------|------------|------|
| <b>300.0 IC Anions 28 Days</b> |             |       |       |       |    |          |                |            |      |
| Analytical Method: EPA 300.0   |             |       |       |       |    |          |                |            |      |
| Fluoride                       | <b>0.26</b> | mg/L  | 0.050 | 0.034 | 1  |          | 03/16/18 09:05 | 16984-48-8 |      |

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## ANALYTICAL RESULTS

Project: Project D18A029

Pace Project No.: 35379762

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**Sample: D18A029-12**      **Lab ID: 35379762009**      Collected: 03/08/18 08:18      Received: 03/13/18 11:00      Matrix: Water

| Parameters                     | Results     | Units | PQL   | MDL   | DF | Prepared | Analyzed       | CAS No.    | Qual |
|--------------------------------|-------------|-------|-------|-------|----|----------|----------------|------------|------|
| <b>300.0 IC Anions 28 Days</b> |             |       |       |       |    |          |                |            |      |
| Analytical Method: EPA 300.0   |             |       |       |       |    |          |                |            |      |
| Fluoride                       | <b>0.22</b> | mg/L  | 0.050 | 0.034 | 1  |          | 03/15/18 14:16 | 16984-48-8 |      |

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### ANALYTICAL RESULTS

Project: Project D18A029  
Pace Project No.: 35379762

**Sample: D18A029-13**      **Lab ID: 35379762010**      Collected: 03/07/18 10:31      Received: 03/13/18 11:00      Matrix: Water

| Parameters                     | Results      | Units | PQL   | MDL   | DF | Prepared | Analyzed       | CAS No.    | Qual |
|--------------------------------|--------------|-------|-------|-------|----|----------|----------------|------------|------|
| <b>300.0 IC Anions 28 Days</b> |              |       |       |       |    |          |                |            |      |
| Analytical Method: EPA 300.0   |              |       |       |       |    |          |                |            |      |
| Fluoride                       | <b>0.066</b> | mg/L  | 0.050 | 0.034 | 1  |          | 03/15/18 15:22 | 16984-48-8 |      |

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### ANALYTICAL RESULTS

Project: Project D18A029

Pace Project No.: 35379762

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**Sample: D18A029-14**      **Lab ID: 35379762011**      Collected: 03/07/18 16:14      Received: 03/13/18 11:00      Matrix: Water

| Parameters                     | Results                      | Units | PQL   | MDL   | DF | Prepared | Analyzed       | CAS No.    | Qual |
|--------------------------------|------------------------------|-------|-------|-------|----|----------|----------------|------------|------|
| <b>300.0 IC Anions 28 Days</b> | Analytical Method: EPA 300.0 |       |       |       |    |          |                |            |      |
| Fluoride                       | <b>0.034 U</b>               | mg/L  | 0.050 | 0.034 | 1  |          | 03/15/18 15:44 | 16984-48-8 |      |

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**QUALITY CONTROL DATA**

Project: Project D18A029

Pace Project No.: 35379762

QC Batch: 433127 Analysis Method: EPA 300.0  
 QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions  
 Associated Lab Samples: 35379762001, 35379762002, 35379762003, 35379762004, 35379762005, 35379762006, 35379762007, 35379762008

METHOD BLANK: 2354729 Matrix: Water  
 Associated Lab Samples: 35379762001, 35379762002, 35379762003, 35379762004, 35379762005, 35379762006, 35379762007, 35379762008

| Parameter | Units | Blank Result | Reporting Limit | MDL   | Analyzed       | Qualifiers |
|-----------|-------|--------------|-----------------|-------|----------------|------------|
| Fluoride  | mg/L  | 0.034 U      | 0.050           | 0.034 | 03/15/18 13:06 |            |

LABORATORY CONTROL SAMPLE: 2354730

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Fluoride  | mg/L  | 5           | 5.0        | 99        | 90-110       |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2357021 2357022

| Parameter | Units | 35379762001 Result | MS          | MSD         | MS     | MSD    | MS    | MSD   | % Rec  | Max | RPD | RPD | Qual |
|-----------|-------|--------------------|-------------|-------------|--------|--------|-------|-------|--------|-----|-----|-----|------|
|           |       |                    | Spike Conc. | Spike Conc. | Result | Result | % Rec | % Rec | Limits |     |     |     |      |
| Fluoride  | mg/L  | 0.20               | 5           | 5           | 5.1    | 5.1    | 98    | 98    | 90-110 | 0   | 20  |     |      |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

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### QUALITY CONTROL DATA

Project: Project D18A029  
Pace Project No.: 35379762

QC Batch: 433129 Analysis Method: EPA 300.0  
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions  
Associated Lab Samples: 35379762009, 35379762010, 35379762011

METHOD BLANK: 2354737 Matrix: Water  
Associated Lab Samples: 35379762009, 35379762010, 35379762011

| Parameter | Units | Blank Result | Reporting Limit | MDL   | Analyzed       | Qualifiers |
|-----------|-------|--------------|-----------------|-------|----------------|------------|
| Fluoride  | mg/L  | 0.034 U      | 0.050           | 0.034 | 03/15/18 13:32 |            |

LABORATORY CONTROL SAMPLE: 2354738

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Fluoride  | mg/L  | 5           | 5.0        | 99        | 90-110       |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2357075 2357076

| Parameter | Units | 2357075            |                | 2357076         |           | MS % Rec | MSD % Rec | % Rec Limits | RPD    | Max RPD | Qual |            |
|-----------|-------|--------------------|----------------|-----------------|-----------|----------|-----------|--------------|--------|---------|------|------------|
|           |       | 35379762009 Result | MS Spike Conc. | MSD Spike Conc. | MS Result |          |           |              |        |         |      | MSD Result |
| Fluoride  | mg/L  | 0.22               | 5              | 5               | 5.0       | 5.1      | 96        | 97           | 90-110 | 0       | 20   |            |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Project D18A029

Pace Project No.: 35379762

**Sample: D18A029-01**      **Lab ID: 35379762001**      Collected: 03/07/18 11:18      Received: 03/13/18 11:00      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters   | Method                      | Act ± Unc (MDC) Carr Trac                    | Units | Analyzed       | CAS No.    | Qual |
|--------------|-----------------------------|--|-------|----------------|------------|------|
| Radium-226   | EPA 903.1                   | <b>1.03U ± 0.656 (1.03)</b><br>C:NA T:82%    | pCi/L | 03/26/18 20:22 | 13982-63-3 |      |
| Radium-228   | EPA 904.0                   | <b>0.894U ± 0.441 (0.894)</b><br>C:77% T:83% | pCi/L | 03/26/18 15:43 | 15262-20-1 |      |
| Total Radium | Total Radium<br>Calculation | <b>1.92U ± 1.10 (1.92)</b>                   | pCi/L | 03/28/18 11:53 | 7440-14-4  |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Project D18A029

Pace Project No.: 35379762

**Sample: D18A029-02**      **Lab ID: 35379762002**      Collected: 03/08/18 09:36      Received: 03/13/18 11:00      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters   | Method                      | Act ± Unc (MDC) Carr Trac                           | Units | Analyzed       | CAS No.    | Qual |
|--------------|-----------------------------|---|-------|----------------|------------|------|
| Radium-226   | EPA 903.1                   | <b>1.19U ± 0.622 (1.19)</b><br><b>C:NA T:81%</b>    | pCi/L | 03/26/18 20:22 | 13982-63-3 |      |
| Radium-228   | EPA 904.0                   | <b>0.870U ± 0.436 (0.870)</b><br><b>C:78% T:81%</b> | pCi/L | 03/26/18 15:43 | 15262-20-1 |      |
| Total Radium | Total Radium<br>Calculation | <b>2.06U ± 1.06 (2.06)</b>                          | pCi/L | 03/28/18 11:53 | 7440-14-4  |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Project D18A029

Pace Project No.: 35379762

**Sample: D18A029-03**      **Lab ID: 35379762003**      Collected: 03/07/18 13:36      Received: 03/13/18 11:00      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters   | Method                   | Act ± Unc (MDC) Carr Trac                           | Units | Analyzed       | CAS No.    | Qual |
|--------------|--------------------------|---|-------|----------------|------------|------|
| Radium-226   | EPA 903.1                | <b>0.379 ± 0.434 (0.257)</b><br><b>C:NA T:80%</b>   | pCi/L | 03/26/18 20:22 | 13982-63-3 |      |
| Radium-228   | EPA 904.0                | <b>0.816U ± 0.437 (0.816)</b><br><b>C:77% T:83%</b> | pCi/L | 03/26/18 15:43 | 15262-20-1 |      |
| Total Radium | Total Radium Calculation | <b>1.10 ± 0.871 (1.07)</b>                          | pCi/L | 03/28/18 11:53 | 7440-14-4  |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Project D18A029

Pace Project No.: 35379762

**Sample: D18A029-04**      **Lab ID: 35379762004**      Collected: 03/07/18 15:31      Received: 03/13/18 11:00      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters   | Method                      | Act ± Unc (MDC) Carr Trac                   | Units | Analyzed       | CAS No.    | Qual |
|--------------|-----------------------------|---|-------|----------------|------------|------|
| Radium-226   | EPA 903.1                   | <b>1.43 ± 0.759 (0.656)</b><br>C:NA T:81%   | pCi/L | 03/26/18 20:22 | 13982-63-3 |      |
| Radium-228   | EPA 904.0                   | <b>0.981 ± 0.477 (0.816)</b><br>C:75% T:77% | pCi/L | 03/26/18 15:43 | 15262-20-1 |      |
| Total Radium | Total Radium<br>Calculation | <b>2.41 ± 1.24 (1.47)</b>                   | pCi/L | 03/28/18 11:53 | 7440-14-4  |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Project D18A029

Pace Project No.: 35379762

**Sample: D18A029-05**      **Lab ID: 35379762005**      Collected: 03/07/18 09:29      Received: 03/13/18 11:00      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters   | Method                      | Act ± Unc (MDC) Carr Trac                    | Units | Analyzed       | CAS No.    | Qual |
|--------------|-----------------------------|--|-------|----------------|------------|------|
| Radium-226   | EPA 903.1                   | <b>1.60 ± 0.905 (1.10)</b><br>C:NA T:84%     | pCi/L | 03/26/18 20:36 | 13982-63-3 |      |
| Radium-228   | EPA 904.0                   | <b>0.727U ± 0.310 (0.727)</b><br>C:77% T:82% | pCi/L | 03/26/18 15:43 | 15262-20-1 |      |
| Total Radium | Total Radium<br>Calculation | <b>1.83U ± 1.22 (1.83)</b>                   | pCi/L | 03/28/18 11:53 | 7440-14-4  |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Project D18A029

Pace Project No.: 35379762

**Sample: D18A029-06**      **Lab ID: 35379762006**      Collected: 03/08/18 11:13      Received: 03/13/18 11:00      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters   | Method                      | Act ± Unc (MDC) Carr Trac                  | Units | Analyzed       | CAS No.    | Qual |
|--------------|-----------------------------|--|-------|----------------|------------|------|
| Radium-226   | EPA 903.1                   | <b>1.59 ± 0.822 (0.690)</b><br>C:NA T:79%  | pCi/L | 03/26/18 20:36 | 13982-63-3 |      |
| Radium-228   | EPA 904.0                   | <b>1.55 ± 0.596 (0.935)</b><br>C:75% T:82% | pCi/L | 03/26/18 15:43 | 15262-20-1 |      |
| Total Radium | Total Radium<br>Calculation | <b>3.14 ± 1.42 (1.63)</b>                  | pCi/L | 03/28/18 11:53 | 7440-14-4  |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Project D18A029

Pace Project No.: 35379762

**Sample: D18A029-07**      **Lab ID: 35379762007**      Collected: 03/08/18 12:56      Received: 03/13/18 11:00      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters   | Method                      | Act ± Unc (MDC) Carr Trac                  | Units | Analyzed       | CAS No.    | Qual |
|--------------|-----------------------------|--|-------|----------------|------------|------|
| Radium-226   | EPA 903.1                   | <b>1.97 ± 0.932 (0.724)</b><br>C:NA T:70%  | pCi/L | 03/26/18 20:36 | 13982-63-3 |      |
| Radium-228   | EPA 904.0                   | <b>1.00 ± 0.457 (0.758)</b><br>C:78% T:83% | pCi/L | 03/26/18 15:43 | 15262-20-1 |      |
| Total Radium | Total Radium<br>Calculation | <b>2.97 ± 1.39 (1.48)</b>                  | pCi/L | 03/28/18 11:53 | 7440-14-4  |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Project D18A029

Pace Project No.: 35379762

**Sample: D18A029-08**      **Lab ID: 35379762008**      Collected: 03/08/18 14:50      Received: 03/13/18 11:00      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters   | Method                      | Act ± Unc (MDC) Carr Trac                          | Units | Analyzed       | CAS No.    | Qual |
|--------------|-----------------------------|--|-------|----------------|------------|------|
| Radium-226   | EPA 903.1                   | <b>1.44 ± 0.685 (0.217)</b><br><b>C:NA T:88%</b>   | pCi/L | 03/26/18 20:36 | 13982-63-3 |      |
| Radium-228   | EPA 904.0                   | <b>0.795 ± 0.438 (0.794)</b><br><b>C:78% T:85%</b> | pCi/L | 03/26/18 15:43 | 15262-20-1 |      |
| Total Radium | Total Radium<br>Calculation | <b>2.23 ± 1.12 (1.01)</b>                          | pCi/L | 03/28/18 11:53 | 7440-14-4  |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Project D18A029

Pace Project No.: 35379762

**Sample: D18A029-12**      **Lab ID: 35379762009**      Collected: 03/08/18 08:18      Received: 03/13/18 11:00      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters   | Method                   | Act ± Unc (MDC) Carr Trac                    | Units | Analyzed       | CAS No.    | Qual |
|--------------|--------------------------|--|-------|----------------|------------|------|
| Radium-226   | EPA 903.1                | <b>0.658 ± 0.515 (0.605)</b><br>C:NA T:84%   | pCi/L | 03/26/18 20:36 | 13982-63-3 |      |
| Radium-228   | EPA 904.0                | <b>0.793U ± 0.406 (0.793)</b><br>C:73% T:83% | pCi/L | 03/26/18 15:43 | 15262-20-1 |      |
| Total Radium | Total Radium Calculation | <b>1.40U ± 0.921 (1.40)</b>                  | pCi/L | 03/28/18 11:53 | 7440-14-4  |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Project D18A029

Pace Project No.: 35379762

**Sample: D18A029-13**      **Lab ID: 35379762010**      Collected: 03/07/18 10:31      Received: 03/13/18 11:00      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters   | Method                   | Act ± Unc (MDC) Carr Trac                           | Units | Analyzed       | CAS No.    | Qual |
|--------------|--------------------------|---|-------|----------------|------------|------|
| Radium-226   | EPA 903.1                | <b>0.716U ± 0.543 (0.716)</b><br><b>C:NA T:76%</b>  | pCi/L | 03/26/18 20:36 | 13982-63-3 |      |
| Radium-228   | EPA 904.0                | <b>0.787U ± 0.392 (0.787)</b><br><b>C:75% T:80%</b> | pCi/L | 03/26/18 15:44 | 15262-20-1 |      |
| Total Radium | Total Radium Calculation | <b>1.50U ± 0.935 (1.50)</b>                         | pCi/L | 03/28/18 11:53 | 7440-14-4  |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Project D18A029

Pace Project No.: 35379762

**Sample: D18A029-14**      **Lab ID: 35379762011**      Collected: 03/07/18 16:14      Received: 03/13/18 11:00      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters   | Method                   | Act ± Unc (MDC) Carr Trac                    | Units | Analyzed       | CAS No.    | Qual |
|--------------|--------------------------|--|-------|----------------|------------|------|
| Radium-226   | EPA 903.1                | <b>0.820U ± 0.403 (0.820)</b><br>C:NA T:83%  | pCi/L | 03/26/18 20:49 | 13982-63-3 |      |
| Radium-228   | EPA 904.0                | <b>0.750U ± 0.327 (0.750)</b><br>C:74% T:82% | pCi/L | 03/26/18 15:44 | 15262-20-1 |      |
| Total Radium | Total Radium Calculation | <b>1.57U ± 0.730 (1.57)</b>                  | pCi/L | 03/28/18 11:53 | 7440-14-4  |      |

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: Project D18A029

Pace Project No.: 35379762

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|                         |   |                       |                  |
|-------------------------|---|-----------------------|------------------|
| QC Batch:               | 291847  | Analysis Method:      | EPA 903.1        |
| QC Batch Method:        | EPA 903.1   | Analysis Description: | 903.1 Radium-226 |
| Associated Lab Samples: | 35379762001, 35379762002, 35379762003, 35379762004, 35379762005, 35379762006, 35379762007, 35379762008, 35379762009, 35379762010, 35379762011 |                       |                  |

---

|                         |   |         |       |
|-------------------------|---|---------|-------|
| METHOD BLANK:           | 1428366   | Matrix: | Water |
| Associated Lab Samples: | 35379762001, 35379762002, 35379762003, 35379762004, 35379762005, 35379762006, 35379762007, 35379762008, 35379762009, 35379762010, 35379762011 |         |       |

| Parameter  | Act ± Unc (MDC) Carr Trac        | Units | Analyzed       | Qualifiers |
|------------|----------------------------------|-------|----------------|------------|
| Radium-226 | 0.000 ± 0.358 (0.578) C:NA T:91% | pCi/L | 03/26/18 20:07 |            |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: Project D18A029

Pace Project No.: 35379762

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|                         |   |                       |                  |
|-------------------------|---|-----------------------|------------------|
| QC Batch:               | 291848  | Analysis Method:      | EPA 904.0        |
| QC Batch Method:        | EPA 904.0   | Analysis Description: | 904.0 Radium 228 |
| Associated Lab Samples: | 35379762001, 35379762002, 35379762003, 35379762004, 35379762005, 35379762006, 35379762007, 35379762008, 35379762009, 35379762010, 35379762011 |                       |                  |

---

|                         |   |         |       |
|-------------------------|---|---------|-------|
| METHOD BLANK:           | 1428367   | Matrix: | Water |
| Associated Lab Samples: | 35379762001, 35379762002, 35379762003, 35379762004, 35379762005, 35379762006, 35379762007, 35379762008, 35379762009, 35379762010, 35379762011 |         |       |

| Parameter  | Act ± Unc (MDC) Carr Trac         | Units | Analyzed       | Qualifiers |
|------------|-----------------------------------|-------|----------------|------------|
| Radium-228 | 0.648 ± 0.467 (0.914) C:73% T:80% | pCi/L | 03/26/18 15:42 |            |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: Project D18A029

Pace Project No.: 35379762

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval).

Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### LABORATORIES

PASI-O Pace Analytical Services - Ormond Beach

PASI-PA Pace Analytical Services - Greensburg

### ANALYTE QUALIFIERS

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

U Compound was analyzed for but not detected.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Project D18A029  
Pace Project No.: 35379762

| Lab ID      | Sample ID  | QC Batch Method          | QC Batch | Analytical Method | Analytical Batch |
|-------------|------------|--------------------------|----------|-------------------|------------------|
| 35379762001 | D18A029-01 | EPA 903.1                | 291847   |                   |                  |
| 35379762002 | D18A029-02 | EPA 903.1                | 291847   |                   |                  |
| 35379762003 | D18A029-03 | EPA 903.1                | 291847   |                   |                  |
| 35379762004 | D18A029-04 | EPA 903.1                | 291847   |                   |                  |
| 35379762005 | D18A029-05 | EPA 903.1                | 291847   |                   |                  |
| 35379762006 | D18A029-06 | EPA 903.1                | 291847   |                   |                  |
| 35379762007 | D18A029-07 | EPA 903.1                | 291847   |                   |                  |
| 35379762008 | D18A029-08 | EPA 903.1                | 291847   |                   |                  |
| 35379762009 | D18A029-12 | EPA 903.1                | 291847   |                   |                  |
| 35379762010 | D18A029-13 | EPA 903.1                | 291847   |                   |                  |
| 35379762011 | D18A029-14 | EPA 903.1                | 291847   |                   |                  |
| 35379762001 | D18A029-01 | EPA 904.0                | 291848   |                   |                  |
| 35379762002 | D18A029-02 | EPA 904.0                | 291848   |                   |                  |
| 35379762003 | D18A029-03 | EPA 904.0                | 291848   |                   |                  |
| 35379762004 | D18A029-04 | EPA 904.0                | 291848   |                   |                  |
| 35379762005 | D18A029-05 | EPA 904.0                | 291848   |                   |                  |
| 35379762006 | D18A029-06 | EPA 904.0                | 291848   |                   |                  |
| 35379762007 | D18A029-07 | EPA 904.0                | 291848   |                   |                  |
| 35379762008 | D18A029-08 | EPA 904.0                | 291848   |                   |                  |
| 35379762009 | D18A029-12 | EPA 904.0                | 291848   |                   |                  |
| 35379762010 | D18A029-13 | EPA 904.0                | 291848   |                   |                  |
| 35379762011 | D18A029-14 | EPA 904.0                | 291848   |                   |                  |
| 35379762001 | D18A029-01 | Total Radium Calculation | 292785   |                   |                  |
| 35379762002 | D18A029-02 | Total Radium Calculation | 292785   |                   |                  |
| 35379762003 | D18A029-03 | Total Radium Calculation | 292785   |                   |                  |
| 35379762004 | D18A029-04 | Total Radium Calculation | 292785   |                   |                  |
| 35379762005 | D18A029-05 | Total Radium Calculation | 292785   |                   |                  |
| 35379762006 | D18A029-06 | Total Radium Calculation | 292785   |                   |                  |
| 35379762007 | D18A029-07 | Total Radium Calculation | 292785   |                   |                  |
| 35379762008 | D18A029-08 | Total Radium Calculation | 292785   |                   |                  |
| 35379762009 | D18A029-12 | Total Radium Calculation | 292785   |                   |                  |
| 35379762010 | D18A029-13 | Total Radium Calculation | 292785   |                   |                  |
| 35379762011 | D18A029-14 | Total Radium Calculation | 292785   |                   |                  |
| 35379762001 | D18A029-01 | EPA 300.0                | 433127   |                   |                  |
| 35379762002 | D18A029-02 | EPA 300.0                | 433127   |                   |                  |
| 35379762003 | D18A029-03 | EPA 300.0                | 433127   |                   |                  |
| 35379762004 | D18A029-04 | EPA 300.0                | 433127   |                   |                  |
| 35379762005 | D18A029-05 | EPA 300.0                | 433127   |                   |                  |
| 35379762006 | D18A029-06 | EPA 300.0                | 433127   |                   |                  |
| 35379762007 | D18A029-07 | EPA 300.0                | 433127   |                   |                  |
| 35379762008 | D18A029-08 | EPA 300.0                | 433127   |                   |                  |
| 35379762009 | D18A029-12 | EPA 300.0                | 433129   |                   |                  |
| 35379762010 | D18A029-13 | EPA 300.0                | 433129   |                   |                  |
| 35379762011 | D18A029-14 | EPA 300.0                | 433129   |                   |                  |

### REPORT OF LABORATORY ANALYSIS

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SUBCONTRACT ORDER

WO#: 35379762

Deerhaven Generating Station

D18A029



SENDING LABORATORY:

Gainesville Regional Utilities  
Deerhaven Generating Station  
10001 NW 13th Street  
Gainesville, FL 32653  
Phone: 352-334-3434  
Fax: 352-334-3149  
Project Manager: Jeff Boudreau

RECEIVING LABORATORY:

Pace Analytical  
8 East Tower Circle  
Ormond Beach, FL 32174  
Phone : (386) 672-5668  
Fax: (386) 673-4001

| Analysis                        | Expires         | Laboratory ID                  | Comments |
|---------------------------------|-----------------|--------------------------------|----------|
| <b>Sample Name: SIS-1</b>       |                 |                                |          |
| <b>Sample ID: D18A029-01</b>    | <b>Water</b>    | <b>Sampled:07-Mar-18 11:18</b> |          |
| D_Radium226+228_Combined        | 30-Aug-18 11:18 |                                |          |
| D_Anions - Fluoride             | 04-Apr-18 11:18 |                                |          |
| <i>Containers Supplied:</i>     |                 |                                |          |
| D_HDPE, Chill @<6*C - 250mL (C) |                 |                                |          |
| D_HDPE, HNO3 pH<2 - 2000mL (D)  |                 |                                |          |
| <b>Sample Name: SIS-2</b>       |                 |                                |          |
| <b>Sample ID: D18A029-02</b>    | <b>Water</b>    | <b>Sampled:08-Mar-18 09:36</b> |          |
| D_Anions - Fluoride             | 05-Apr-18 09:36 |                                |          |
| D_Radium226+228_Combined        | 31-Aug-18 09:36 |                                |          |
| <i>Containers Supplied:</i>     |                 |                                |          |
| D_HDPE, Chill @<6*C - 250mL (C) |                 |                                |          |
| D_HDPE, HNO3 pH<2 - 2000mL (D)  |                 |                                |          |
| <b>Sample Name: SIS-3</b>       |                 |                                |          |
| <b>Sample ID: D18A029-03</b>    | <b>Water</b>    | <b>Sampled:07-Mar-18 13:36</b> |          |
| D_Anions - Fluoride             | 04-Apr-18 13:36 |                                |          |
| D_Radium226+228_Combined        | 30-Aug-18 13:36 |                                |          |
| <i>Containers Supplied:</i>     |                 |                                |          |
| D_HDPE, Chill @<6*C - 250mL (C) |                 |                                |          |
| D_HDPE, HNO3 pH<2 - 2000mL (D)  |                 |                                |          |
| <b>Sample Name: SIS-4</b>       |                 |                                |          |
| <b>Sample ID: D18A029-04</b>    | <b>Water</b>    | <b>Sampled:07-Mar-18 15:31</b> |          |
| D_Anions - Fluoride             | 04-Apr-18 15:31 |                                |          |
| D_Radium226+228_Combined        | 30-Aug-18 15:31 |                                |          |
| <i>Containers Supplied:</i>     |                 |                                |          |
| D_HDPE, Chill @<6*C - 250mL (C) |                 |                                |          |
| D_HDPE, HNO3 pH<2 - 2000mL (D)  |                 |                                |          |

*via Fedex*

*Shelly Phillips*

*3-12-18*

*J Pace*

*3/13/18 11:00*

Released By

Date

Received By

Date

Released By

Date

Received By

Date



**SUBCONTRACT ORDER**  
**Deerhaven Generating Station**  
**D18A029**

| Analysis                                  | Expires                        | Laboratory ID | Comments |
|---|--------------------------------|---------------|----------|
| <b>Sample Name: MWI-6-4 (R6T4B)</b>       |                                |               |          |
| <b>Sample ID: D18A029-13</b> <b>Water</b> | <b>Sampled:07-Mar-18 10:31</b> |               |          |
| D_Anions - Fluoride                       | 04-Apr-18 10:31                |               |          |
| D_Radium226+228_Combined                  | 30-Aug-18 10:31                |               |          |
| <i>Containers Supplied:</i>               |                                |               |          |
| D_HDPE, Chill @<6*C - 250mL (C)           |                                |               |          |
| D_HDPE, HNO3 pH<2 - 2000mL (D)            |                                |               |          |
| <b>Sample Name: EBLANK</b>                |                                |               |          |
| <b>Sample ID: D18A029-14</b> <b>Water</b> | <b>Sampled:07-Mar-18 16:14</b> |               |          |
| D_Radium226+228_Combined                  | 30-Aug-18 16:14                |               |          |
| D_Anions - Fluoride                       | 04-Apr-18 16:14                |               |          |
| <i>Containers Supplied:</i>               |                                |               |          |
| D_HDPE, Chill @<6*C - 250mL (C)           |                                |               |          |
| D_HDPE, HNO3 pH<2 - 2000mL (D)            |                                |               |          |

*via FedEx*

*Shelly Phillips*

*3-12-18*

*JOHN PACE*

*3/13/18 11:00*

Released By

Date

Received By

Date

Released By

Date

Received By

Date



Document Name:  
Sample Condition Upon Receipt Form  
Document No.:  
F-FL-C-007 rev. 12

Document Revised:  
August 2, 2017  
Issuing Authority:  
Pace Florida Quality Office

**Sample Condition Upon Receipt Form (SCUR)**

**Project #** **WO# : 35379762**  
**Project Manager:** PM: JSB **Due Date:** 03/20/18  
**Client:** CLIENT: DEELAB

**Date and Initials of person:**  
 Examining contents: \_\_\_\_\_  
 Label: \_\_\_\_\_  
 Deliver: \_\_\_\_\_  
 pH: \_\_\_\_\_  
 Initials: ARS

Thermometer Used: T301 Date: 3/13/18 Time: 11:00

State of Origin: \_\_\_\_\_

- |  |  |
|--|--|
| Cooler #1 Temp.°C <u>14.4</u> (Visual) <u>0</u> (Correction Factor) <u>14.4</u> (Actual) | <input type="checkbox"/> Samples on ice, cooling process has begun |
| Cooler #2 Temp.°C <u>14.4</u> (Visual) <u>0</u> (Correction Factor) <u>14.4</u> (Actual) | <input type="checkbox"/> Samples on ice, cooling process has begun |
| Cooler #3 Temp.°C <u>1.0</u> (Visual) <u>0</u> (Correction Factor) <u>1.0</u> (Actual)   | <input type="checkbox"/> Samples on ice, cooling process has begun |
| Cooler #4 Temp.°C _____ (Visual) _____ (Correction Factor) _____ (Actual)                | <input type="checkbox"/> Samples on ice, cooling process has begun |
| Cooler #5 Temp.°C _____ (Visual) _____ (Correction Factor) _____ (Actual)                | <input type="checkbox"/> Samples on ice, cooling process has begun |
| Cooler #6 Temp.°C _____ (Visual) _____ (Correction Factor) _____ (Actual)                | <input type="checkbox"/> Samples on ice, cooling process has begun |

- Courier:**  Fed Ex  UPS  USPS  Client  Commercial  Pace  Other \_\_\_\_\_
- Shipping Method:**  First Overnight  Priority Overnight  Standard Overnight  Ground  International Priority  Other \_\_\_\_\_

- Billing:**  Recipient  Sender  Third Party  Credit Card  Unknown
- Tracking #** 8127 8324 8126

- Custody Seal on Cooler/Box Present:**  Yes  No **Seals intact:**  Yes  No **Ice:**  Wet  Blue  Dry  None
- Packing Material:**  Bubble Wrap  Bubble Bags  None  Other \_\_\_\_\_
- Samples shorted to lab (If Yes, complete)** Shorted Date: \_\_\_\_\_ Shorted Time: \_\_\_\_\_ Qty: \_\_\_\_\_

**Comments:**

|   |  |  |
|---|--|--|
| Chain of Custody Present  | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Preservation Information:<br>Preservative: _____<br>Lot #/Trace #: _____<br>Date: _____ Time: _____<br>Initials: _____ |
| Chain of Custody Filled Out   | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |  |
| Relinquished Signature & Sampler Name COC   | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |  |
| Samples Arrived within Hold Time  | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |  |
| Rush TAT requested on COC   | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A |  |
| Sufficient Volume   | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |  |
| Correct Containers Used   | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |  |
| Containers Intact   | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |  |
| Sample Labels match COC (sample IDs & date/time of collection)  | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |  |
| All containers needing acid/base preservation have been checked.  | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |  |
| All Containers needing preservation are found to be in compliance with EPA recommendation:<br>Exceptions: VOA, Coliform, TOC, O&G, Carbamates | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |  |
| Headspace in VOA Vials? (>6mm):   | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A |  |
| Trip Blank Present:   | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A |  |

**Client Notification/ Resolution:**  
 Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

**Comments/ Resolution (use back for additional comments):**  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_



# Total Suspended Solids - Non-Filterable Residue - SM2540D

Date 3/9/18  
 Time 10:15  
 Analyst km  
 Batch 1812011

Quarter: #3 CCR

Duplicate Source: D18A029-12

| Sample ID  | ID     | Initial Filter Weight (g) | Sample Volume (mL) | Dry filter and Sample Final Wgt (g) | TSS, Final Result mg/L | Reporting Limit mg/L | Qual |
|------------|--------|---------------------------|--------------------|-------------------------------------|------------------------|----------------------|------|
| BLK        | BLK1   | 0.1155                    | 500                | 0.1153                              | -0.4                   | 1.0                  | U    |
| SRM        | SRM1   | 0.1201                    | 500                | 0.1597                              | 79.2                   | 1.0                  |      |
| D18A029-01 | SIS-1  | 0.1170                    | 500                | 0.1170                              | 0.0                    | 1.0                  | U    |
| DUP1       | SIS-1  | 0.1193                    | 500                | 0.1190                              | -0.6                   | 1.0                  | U    |
| D18A029-02 | SIS-2  | 0.1155                    | 500                | 0.1157                              | 0.4                    | 1.0                  | U    |
| D18A029-03 | SIS-3  | 0.1181                    | 500                | 0.1182                              | 0.2                    | 1.0                  | U    |
| D18A029-04 | SIS-4  | 0.1143                    | 500                | 0.1145                              | 0.4                    | 1.0                  | U    |
| D18A029-05 | LF-1   | 0.1173                    | 500                | 0.1172                              | -0.2                   | 1.0                  | U    |
| D18A029-06 | LF-2   | 0.1186                    | 500                | 0.1193                              | 1.4                    | 1.0                  | I    |
| D18A029-07 | LF-3   | 0.1163                    | 500                | 0.1163                              | 0.0                    | 1.0                  | U    |
| D18A029-08 | LF-4   | 0.1156                    | 500                | 0.1157                              | 0.2                    | 1.0                  | U    |
| D18A029-09 | R1T6   | 0.1208                    | 500                | 0.1222                              | 2.8                    | 1.0                  | I    |
| D18A029-10 | R2T1   | 0.1158                    | 500                | 0.1156                              | -0.4                   | 1.0                  | U    |
| D18A029-11 | R6T1   | 0.1176                    | 500                | 0.1175                              | -0.2                   | 1.0                  | U    |
| D18A029-12 | R4T5   | 0.1126                    | 500                | 0.1125                              | -0.2                   | 1.0                  | U    |
| D18A029-13 | R6T4   | 0.1159                    | 500                | 0.1159                              | 0.0                    | 1.0                  | U    |
| D18A029-14 | EBLANK | 0.1171                    | 500                | 0.1172                              | 0.2                    | 1.0                  | U    |
|            |        |                           |                    |                                     |                        |                      |      |
|            |        |                           |                    |                                     |                        |                      |      |
|            |        |                           |                    |                                     |                        |                      |      |
|            |        |                           |                    |                                     |                        |                      |      |
|            |        |                           |                    |                                     |                        |                      |      |
|            |        |                           |                    |                                     |                        |                      |      |
|            |        |                           |                    |                                     |                        |                      |      |
|            |        |                           |                    |                                     |                        |                      |      |
|            |        |                           |                    |                                     |                        |                      |      |

Balance S/N: U07797

Oven S/N: U08230

|                  |       |             |
|------------------|-------|-------------|
| SRM TV, mg/L     | 82.0  |             |
| SRM, mg/L        | 79.2  |             |
| % Recovery       | 96.59 | % Range     |
| Low Range, mg/L  | 67.0  | 81.70731707 |
| High Range, mg/L | 91.3  | 111.3414634 |

|           |   |
|-----------|---|
| Sample    | 0 |
| Duplicate | 0 |
| %RPD      | 0 |

Total Suspended Solids = (Dry Filter and Sample(g) - Initial Filter(g))\*1000000/Sample Volume(mL)

Reviewed By: JB



# *Kanapaha Laboratory*

3901 South West 63rd Blvd  
Gainesville, FL 32608  
(352) 393-6777

Florida Department of Health Certification E52099

April 12, 2018

Jeff Boudreau  
Deerhaven Laboratory  
Station D-38  
Gainesville, FL/USA 32614-7117

RE: Environmental

Enclosed are the results of analyses for samples received by the laboratory on 4/9/2018. If you have any questions concerning this report, please feel free to contact me.

Please note that all results were determined in accordance with NELAP requirements. All data is subject to a degree of uncertainty. Kanapaha Lab uncertainty is based upon LCS quality control statistics.

Sincerely,

Jaclyn M Dihos  
Laboratory Supervisor



Deerhaven Laboratory  
Station D-38  
Gainesville, FL/USA 32614-7117

Project: Environmental  
Project Number: D18A030  
Project Manager: Jeff Boudreau

**Reported:**  
04/12/2018 16:35

**ANALYTICAL REPORT FOR SAMPLES**

| <b>Laboratory ID</b> | <b>Sample ID</b>               | <b>Matrix</b> | <b>Date Sampled</b> | <b>Date Received</b> |
|----------------------|--------------------------------|---------------|---------------------|----------------------|
| K18D037-01           | D18A030-01 (MWD-1-6 (R1T6))    | Groundwater   | 04/02/2018 18:27    | 04/09/2018 11:55     |
| K18D037-02           | D18A030-02 (MWB-2-1 (R2T1))    | Groundwater   | 04/02/2018 15:45    | 04/09/2018 11:55     |
| K18D037-03           | D18A030-03 (MWI-3-7 (R3T7))    | Groundwater   | 04/05/2018 15:11    | 04/09/2018 11:55     |
| K18D037-04           | D18A030-04 (MWI-4-5 (R4T5B))   | Groundwater   | 04/03/2018 15:37    | 04/09/2018 11:55     |
| K18D037-05           | D18A030-05 (MWD-6-1 (R6T1B))   | Groundwater   | 04/03/2018 08:50    | 04/09/2018 11:55     |
| K18D037-06           | D18A030-06 (MWI-6-4 (R6T4B))   | Groundwater   | 04/03/2018 12:41    | 04/09/2018 11:55     |
| K18D037-07           | D18A030-07 (MWI-6-8 (R6T8B))   | Groundwater   | 04/05/2018 12:24    | 04/09/2018 11:55     |
| K18D037-08           | D18A030-08 (MWD-6-12 (R6T12))  | Groundwater   | 04/06/2018 11:26    | 04/09/2018 11:55     |
| K18D037-09           | D18A030-09 (MWC-8-10 (R8T10))  | Groundwater   | 04/06/2018 10:14    | 04/09/2018 11:55     |
| K18D037-10           | D18A030-10 (MWI-9-5 (R9T5B))   | Groundwater   | 04/05/2018 09:09    | 04/09/2018 11:55     |
| K18D037-11           | D18A030-11 (MWC-10-8 (R10T8))  | Groundwater   | 04/06/2018 08:24    | 04/09/2018 11:55     |
| K18D037-12           | D18A030-12 (MWC-11-4 (R11T4B)) | Groundwater   | 04/03/2018 10:10    | 04/09/2018 11:55     |
| K18D037-13           | D18A030-13 (MWC-DEEP (DEEP-1)) | Groundwater   | 04/05/2018 16:10    | 04/09/2018 11:55     |
| K18D037-14           | D18A030-14 (EBLANK)            | Groundwater   | 04/05/2018 12:47    | 04/09/2018 11:55     |
| K18D037-15           | D18A030-15 (DUPLICATE)         | Groundwater   | 04/03/2018 08:50    | 04/09/2018 11:55     |



Deerhaven Laboratory  
Station D-38  
Gainesville, FL/USA 32614-7117

Project: Environmental  
Project Number: D18A030  
Project Manager: Jeff Boudreau

**Reported:**  
04/12/2018 16:35

**D18A030-01 (MWD-1-6 (R1T6))**  
**K18D037-01 (Groundwater, Grab)**  
Collected: 04/02/2018 6:27 pm

| Analyte | Result | Qual | MDL | PQL | Units | Dil | Prepared | Analyzed | Method |
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|

**Laboratory: Kanapaha Laboratory**

**Metals by EPA 200 Series Methods**

|         |       |   |       |       |      |   |            |            |           |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|
| Mercury | 0.100 | U | 0.100 | 0.400 | ug/L | 1 | 04/11/2018 | 04/12/2018 | EPA 245.1 |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|

**D18A030-02 (MWB-2-1 (R2T1))**  
**K18D037-02 (Groundwater, Grab)**  
Collected: 04/02/2018 3:45 pm

| Analyte | Result | Qual | MDL | PQL | Units | Dil | Prepared | Analyzed | Method |
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|

**Laboratory: Kanapaha Laboratory**

**Metals by EPA 200 Series Methods**

|         |       |   |       |       |      |   |            |            |           |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|
| Mercury | 0.100 | U | 0.100 | 0.400 | ug/L | 1 | 04/11/2018 | 04/12/2018 | EPA 245.1 |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|

**D18A030-03 (MWI-3-7 (R3T7))**  
**K18D037-03 (Groundwater, Grab)**  
Collected: 04/05/2018 3:11 pm

| Analyte | Result | Qual | MDL | PQL | Units | Dil | Prepared | Analyzed | Method |
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|

**Laboratory: Kanapaha Laboratory**

**Metals by EPA 200 Series Methods**

|         |       |   |       |       |      |   |            |            |           |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|
| Mercury | 0.100 | U | 0.100 | 0.400 | ug/L | 1 | 04/11/2018 | 04/12/2018 | EPA 245.1 |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|

**D18A030-04 (MWI-4-5 (R4T5B))**  
**K18D037-04 (Groundwater, Grab)**  
Collected: 04/03/2018 3:37 pm

| Analyte | Result | Qual | MDL | PQL | Units | Dil | Prepared | Analyzed | Method |
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|

**Laboratory: Kanapaha Laboratory**

**Metals by EPA 200 Series Methods**

|         |       |   |       |       |      |   |            |            |           |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|
| Mercury | 0.100 | U | 0.100 | 0.400 | ug/L | 1 | 04/11/2018 | 04/12/2018 | EPA 245.1 |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|



Deerhaven Laboratory  
Station D-38  
Gainesville, FL/USA 32614-7117

Project: Environmental  
Project Number: D18A030  
Project Manager: Jeff Boudreau

**Reported:**  
04/12/2018 16:35

**D18A030-05 (MWD-6-1 (R6T1B))**  
**K18D037-05 (Groundwater, Grab)**  
Collected: 04/03/2018 8:50 am

| Analyte | Result | Qual | MDL | PQL | Units | Dil | Prepared | Analyzed | Method |
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|

**Laboratory: Kanapaha Laboratory**

**Metals by EPA 200 Series Methods**

|         |       |   |       |       |      |   |            |            |           |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|
| Mercury | 0.100 | U | 0.100 | 0.400 | ug/L | 1 | 04/11/2018 | 04/12/2018 | EPA 245.1 |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|

**D18A030-06 (MWI-6-4 (R6T4B))**  
**K18D037-06 (Groundwater, Grab)**  
Collected: 04/03/2018 12:41 pm

| Analyte | Result | Qual | MDL | PQL | Units | Dil | Prepared | Analyzed | Method |
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|

**Laboratory: Kanapaha Laboratory**

**Metals by EPA 200 Series Methods**

|         |       |   |       |       |      |   |            |            |           |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|
| Mercury | 0.100 | U | 0.100 | 0.400 | ug/L | 1 | 04/11/2018 | 04/12/2018 | EPA 245.1 |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|

**D18A030-07 (MWI-6-8 (R6T8B))**  
**K18D037-07 (Groundwater, Grab)**  
Collected: 04/05/2018 12:24 pm

| Analyte | Result | Qual | MDL | PQL | Units | Dil | Prepared | Analyzed | Method |
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|

**Laboratory: Kanapaha Laboratory**

**Metals by EPA 200 Series Methods**

|         |       |   |       |       |      |   |            |            |           |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|
| Mercury | 0.100 | U | 0.100 | 0.400 | ug/L | 1 | 04/11/2018 | 04/12/2018 | EPA 245.1 |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|

**D18A030-08 (MWD-6-12 (R6T12))**  
**K18D037-08 (Groundwater, Grab)**  
Collected: 04/06/2018 11:26 am

| Analyte | Result | Qual | MDL | PQL | Units | Dil | Prepared | Analyzed | Method |
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|

**Laboratory: Kanapaha Laboratory**

**Metals by EPA 200 Series Methods**

|         |       |   |       |       |      |   |            |            |           |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|
| Mercury | 0.100 | U | 0.100 | 0.400 | ug/L | 1 | 04/11/2018 | 04/12/2018 | EPA 245.1 |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|



Deerhaven Laboratory  
Station D-38  
Gainesville, FL/USA 32614-7117

Project: Environmental  
Project Number: D18A030  
Project Manager: Jeff Boudreau

**Reported:**  
04/12/2018 16:35

**D18A030-09 (MWC-8-10 (R8T10))**  
**K18D037-09 (Groundwater, Grab)**  
Collected: 04/06/2018 10:14 am

| Analyte | Result | Qual | MDL | PQL | Units | Dil | Prepared | Analyzed | Method |
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|

**Laboratory: Kanapaha Laboratory**

**Metals by EPA 200 Series Methods**

|         |       |   |       |       |      |   |            |            |           |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|
| Mercury | 0.100 | U | 0.100 | 0.400 | ug/L | 1 | 04/11/2018 | 04/12/2018 | EPA 245.1 |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|

**D18A030-10 (MWI-9-5 (R9T5B))**  
**K18D037-10 (Groundwater, Grab)**  
Collected: 04/05/2018 9:09 am

| Analyte | Result | Qual | MDL | PQL | Units | Dil | Prepared | Analyzed | Method |
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|

**Laboratory: Kanapaha Laboratory**

**Metals by EPA 200 Series Methods**

|         |       |   |       |       |      |   |            |            |           |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|
| Mercury | 0.100 | U | 0.100 | 0.400 | ug/L | 1 | 04/11/2018 | 04/12/2018 | EPA 245.1 |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|

**D18A030-11 (MWC-10-8 (R10T8))**  
**K18D037-11 (Groundwater, Grab)**  
Collected: 04/06/2018 8:24 am

| Analyte | Result | Qual | MDL | PQL | Units | Dil | Prepared | Analyzed | Method |
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|

**Laboratory: Kanapaha Laboratory**

**Metals by EPA 200 Series Methods**

|         |       |   |       |       |      |   |            |            |           |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|
| Mercury | 0.100 | U | 0.100 | 0.400 | ug/L | 1 | 04/11/2018 | 04/12/2018 | EPA 245.1 |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|

**D18A030-12 (MWC-11-4 (R11T4B))**  
**K18D037-12 (Groundwater, Grab)**  
Collected: 04/03/2018 10:10 am

| Analyte | Result | Qual | MDL | PQL | Units | Dil | Prepared | Analyzed | Method |
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|

**Laboratory: Kanapaha Laboratory**

**Metals by EPA 200 Series Methods**

|         |       |   |       |       |      |   |            |            |           |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|
| Mercury | 0.100 | U | 0.100 | 0.400 | ug/L | 1 | 04/11/2018 | 04/12/2018 | EPA 245.1 |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|



Deerhaven Laboratory  
Station D-38  
Gainesville, FL/USA 32614-7117

Project: Environmental  
Project Number: D18A030  
Project Manager: Jeff Boudreau

**Reported:**  
04/12/2018 16:35

**D18A030-13 (MWC-DEEP (DEEP-1))**  
**K18D037-13 (Groundwater, Grab)**  
Collected: 04/05/2018 4:10 pm

| Analyte | Result | Qual | MDL | PQL | Units | Dil | Prepared | Analyzed | Method |
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|

**Laboratory: Kanapaha Laboratory**

**Metals by EPA 200 Series Methods**

|         |       |   |       |       |      |   |            |            |           |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|
| Mercury | 0.100 | U | 0.100 | 0.400 | ug/L | 1 | 04/11/2018 | 04/12/2018 | EPA 245.1 |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|

**D18A030-14 (EBLANK)**  
**K18D037-14 (Groundwater, Grab)**  
Collected: 04/05/2018 12:47 pm

| Analyte | Result | Qual | MDL | PQL | Units | Dil | Prepared | Analyzed | Method |
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|

**Laboratory: Kanapaha Laboratory**

**Metals by EPA 200 Series Methods**

|         |       |   |       |       |      |   |            |            |           |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|
| Mercury | 0.100 | U | 0.100 | 0.400 | ug/L | 1 | 04/11/2018 | 04/12/2018 | EPA 245.1 |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|

**D18A030-15 (DUPLICATE)**  
**K18D037-15 (Groundwater, Grab)**  
Collected: 04/03/2018 8:50 am

| Analyte | Result | Qual | MDL | PQL | Units | Dil | Prepared | Analyzed | Method |
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|

**Laboratory: Kanapaha Laboratory**

**Metals by EPA 200 Series Methods**

|         |       |   |       |       |      |   |            |            |           |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|
| Mercury | 0.100 | U | 0.100 | 0.400 | ug/L | 1 | 04/11/2018 | 04/12/2018 | EPA 245.1 |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|



Deerhaven Laboratory  
Station D-38  
Gainesville, FL/USA 32614-7117

Project: Environmental  
Project Number: D18A030  
Project Manager: Jeff Boudreau

**Reported:**  
04/12/2018 16:35

### Metals by EPA 200 Series Methods - Quality Control Laboratory: Kanapaha Laboratory

| Analyte                           | Result | Qual | MDL   | PQL   | Units | Spike Level  | Source Result | %REC | % REC Limits | RSD   | RSD Limit |
|-----------------------------------|--------|------|-------|-------|-------|--|---------------|------|--------------|-------|-----------|
| <b>Batch B18D080 - MERCURY</b>    |        |      |       |       |       |  |               |      |              |       |           |
| <b>Blank (B18D080-BLK1)</b>       |        |      |       |       |       | Prepared: 4/11/2018 Analyzed: 4/12/2018                    |               |      |              |       |           |
| Mercury                           | 0.100  | U    | 0.100 | 0.400 | ug/L  |  |               |      |              | 47.7  |           |
| <b>Blank (B18D080-BLK2)</b>       |        |      |       |       |       | Prepared: 4/11/2018 Analyzed: 4/12/2018                    |               |      |              |       |           |
| Mercury                           | 0.100  | U    | 0.100 | 0.400 | ug/L  |  |               |      |              | 47.7  |           |
| <b>Blank (B18D080-BLK3)</b>       |        |      |       |       |       | Prepared: 4/11/2018 Analyzed: 4/12/2018                    |               |      |              |       |           |
| Mercury                           | 0.100  | U    | 0.100 | 0.400 | ug/L  |  |               |      |              | 47.7  |           |
| <b>LCS (B18D080-BS1)</b>          |        |      |       |       |       | Prepared: 4/11/2018 Analyzed: 4/12/2018                    |               |      |              |       |           |
| Mercury                           | 20.2   |      |       |       | ug/L  | 20.0   |               | 101  | 90-110       | 2.14  |           |
| <b>LCS (B18D080-BS2)</b>          |        |      |       |       |       | Prepared: 4/11/2018 Analyzed: 4/12/2018                    |               |      |              |       |           |
| Mercury                           | 19.6   |      |       |       | ug/L  | 20.0   |               | 98.2 | 90-110       | 2.14  |           |
| <b>LCS (B18D080-BS3)</b>          |        |      |       |       |       | Prepared: 4/11/2018 Analyzed: 4/12/2018                    |               |      |              |       |           |
| Mercury                           | 19.3   |      |       |       | ug/L  | 20.0   |               | 96.6 | 90-110       | 2.14  |           |
| <b>Duplicate (B18D080-DUP1)</b>   |        |      |       |       |       | Source: K18D037-08 Prepared: 4/11/2018 Analyzed: 4/12/2018 |               |      |              |       |           |
| Mercury                           | 0.100  | U    | 0.100 | 0.400 | ug/L  |  | ND            |      |              | 0.473 |           |
| <b>Duplicate (B18D080-DUP2)</b>   |        |      |       |       |       | Source: K18D037-14 Prepared: 4/11/2018 Analyzed: 4/12/2018 |               |      |              |       |           |
| Mercury                           | 0.100  | U    | 0.100 | 0.400 | ug/L  |  | ND            |      |              | 54.4  |           |
| <b>Matrix Spike (B18D080-MS1)</b> |        |      |       |       |       | Source: K18D037-08 Prepared: 4/11/2018 Analyzed: 4/12/2018 |               |      |              |       |           |
| Mercury                           | 1.98   |      | 0.100 | 0.400 | ug/L  | 2.00   | ND            | 98.8 | 90-110       |       |           |
| <b>Matrix Spike (B18D080-MS2)</b> |        |      |       |       |       | Source: K18D037-14 Prepared: 4/11/2018 Analyzed: 4/12/2018 |               |      |              |       |           |
| Mercury                           | 1.93   |      | 0.100 | 0.400 | ug/L  | 2.00   | ND            | 96.4 | 90-110       |       |           |





Deerhaven Laboratory  
Station D-38  
Gainesville, FL/USA 32614-7117

Project: Environmental  
Project Number: D18A030  
Project Manager: Jeff Boudreau

**Reported:**  
04/12/2018 16:35

### Notes and Definitions

| <u>Qualifier</u> | <u>Description</u>  |
|------------------|---|
| NR               | Not Reported  |
| RSD              | Relative Standard Deviation   |
| U                | Compound was analyzed for but not detected                              |
| N                | Presumptive evidence of presence of material                            |
| L                | Off-scale high. Actual value is known to be greater than value given    |
| I                | The reported value is between the laboratory MDL and the laboratory PQL |
| V                | Analyte was detected in both the sample and the associated method blank |



**SUBCONTRACT ORDER**  
**Deerhaven Generating Station**  
**D18A030**

**SENDING LABORATORY:**

Gainesville Regional Utilities  
 Deerhaven Generating Station  
 10001 NW 13th Street  
 Gainesville, FL 32653  
 Phone: 352-334-3434  
 Fax: 352-334-3149  
 Project Manager: Jeff Boudreau

**RECEIVING LABORATORY:**

Kanapaha Laboratory  
 3901 SW 63rd BLVD  
 Gainesville, FL/USA 32608  
 Phone :352-393-6777  
 Fax: 352-334-2732

| Analysis                            | Expires                        | Laboratory ID     | Comments |
|-------------------------------------|--------------------------------|-------------------|----------|
| <b>Sample Name: MWD-1-6 (R1T6)</b>  |                                |                   |          |
| <b>Sample ID: D18A030-01</b> Water  | <b>Sampled:02-Apr-18 18:27</b> | <b>K18D037-01</b> |          |
| K_Mercury, cold vapor               | 30-Apr-18 18:27                |                   |          |
| <i>Containers Supplied:</i>         |                                |                   |          |
| D_HDPE, HNO3 pH<2 - 500mL (E)       |                                |                   |          |
| <b>Sample Name: MWB-2-1 (R2T1)</b>  |                                |                   |          |
| <b>Sample ID: D18A030-02</b> Water  | <b>Sampled:02-Apr-18 15:45</b> | <b>K18D037-02</b> |          |
| K_Mercury, cold vapor               | 30-Apr-18 15:45                |                   |          |
| <i>Containers Supplied:</i>         |                                |                   |          |
| D_HDPE, HNO3 pH<2 - 500mL (E)       |                                |                   |          |
| <b>Sample Name: MWI-3-7 (R3T7)</b>  |                                |                   |          |
| <b>Sample ID: D18A030-03</b> Water  | <b>Sampled:05-Apr-18 15:11</b> | <b>K18D037-03</b> |          |
| K_Mercury, cold vapor               | 03-May-18 15:11                |                   |          |
| <i>Containers Supplied:</i>         |                                |                   |          |
| D_HDPE, HNO3 pH<2 - 500mL (E)       |                                |                   |          |
| <b>Sample Name: MWI-4-5 (R4T5B)</b> |                                |                   |          |
| <b>Sample ID: D18A030-04</b> Water  | <b>Sampled:03-Apr-18 15:37</b> | <b>K18D037-04</b> |          |
| K_Mercury, cold vapor               | 01-May-18 15:37                |                   |          |
| <i>Containers Supplied:</i>         |                                |                   |          |
| D_HDPE, HNO3 pH<2 - 500mL (E)       |                                |                   |          |
| <b>Sample Name: MWD-6-1 (R6T1B)</b> |                                |                   |          |
| <b>Sample ID: D18A030-05</b> Water  | <b>Sampled:03-Apr-18 08:50</b> | <b>K18D037-05</b> |          |
| K_Mercury, cold vapor               | 01-May-18 08:50                |                   |          |
| <i>Containers Supplied:</i>         |                                |                   |          |
| D_HDPE, HNO3 pH<2 - 500mL (E)       |                                |                   |          |
| <b>Sample Name: MWI-6-4 (R6T4B)</b> |                                |                   |          |
| <b>Sample ID: D18A030-06</b> Water  | <b>Sampled:03-Apr-18 12:41</b> | <b>K18D037-06</b> |          |
| K_Mercury, cold vapor               | 01-May-18 12:41                |                   |          |
| <i>Containers Supplied:</i>         |                                |                   |          |
| D_HDPE, HNO3 pH<2 - 500mL (E)       |                                |                   |          |

Released By: *Shelley Phillips*      Date: *4-9-18*      Received By: *S. [Signature]*      Date: *4-9-18 1155*

*v/a Inter-office (I-O) mail*

Released By \_\_\_\_\_ Date \_\_\_\_\_ Received By \_\_\_\_\_ Date \_\_\_\_\_



**SUBCONTRACT ORDER**  
**Deerhaven Generating Station**  
**D18A030**

| Analysis   | Expires | Laboratory ID | Comments |
|--|---------|---------------|----------|
| <b>Sample Name: MWI-6-8 (R6T8B)</b><br><b>Sample ID: D18A030-07</b> Water <b>Sampled:05-Apr-18 12:24</b>   |         | K18D037-07    |          |
| K_Mercury, cold vapor     03-May-18 12:24<br><i>Containers Supplied:</i><br>D_HDPE, HNO3 pH<2 - 500mL (E)  |         |               |          |
| <b>Sample Name: MWD-6-12 (R6T12)</b><br><b>Sample ID: D18A030-08</b> Water <b>Sampled:06-Apr-18 11:26</b>  |         | K18D037-08    |          |
| K_Mercury, cold vapor     04-May-18 11:26<br><i>Containers Supplied:</i><br>D_HDPE, HNO3 pH<2 - 500mL (E)  |         |               |          |
| <b>Sample Name: MWC-8-10 (R8T10)</b><br><b>Sample ID: D18A030-09</b> Water <b>Sampled:06-Apr-18 10:14</b>  |         | K18D037-09    |          |
| K_Mercury, cold vapor     04-May-18 10:14<br><i>Containers Supplied:</i><br>D_HDPE, HNO3 pH<2 - 500mL (E)  |         |               |          |
| <b>Sample Name: MWI-9-5 (R9T5B)</b><br><b>Sample ID: D18A030-10</b> Water <b>Sampled:05-Apr-18 09:09</b>   |         | K18D037-10    |          |
| K_Mercury, cold vapor     03-May-18 09:09<br><i>Containers Supplied:</i><br>D_HDPE, HNO3 pH<2 - 500mL (E)  |         |               |          |
| <b>Sample Name: MWC-10-8 (R10T8)</b><br><b>Sample ID: D18A030-11</b> Water <b>Sampled:06-Apr-18 08:24</b>  |         | K18D037-11    |          |
| K_Mercury, cold vapor     04-May-18 08:24<br><i>Containers Supplied:</i><br>D_HDPE, HNO3 pH<2 - 500mL (E)  |         |               |          |
| <b>Sample Name: MWC-11-4 (R11T4B)</b><br><b>Sample ID: D18A030-12</b> Water <b>Sampled:03-Apr-18 10:10</b> |         | K18D037-12    |          |
| K_Mercury, cold vapor     01-May-18 10:10<br><i>Containers Supplied:</i><br>D_HDPE, HNO3 pH<2 - 500mL (E)  |         |               |          |
| <b>Sample Name: MWC-DEEP (DEEP-1)</b><br><b>Sample ID: D18A030-13</b> Water <b>Sampled:05-Apr-18 16:10</b> |         | K18D037-13    |          |
| K_Mercury, cold vapor     03-May-18 16:10<br><i>Containers Supplied:</i><br>D_HDPE, HNO3 pH<2 - 500mL (E)  |         |               |          |
| <b>Sample Name: EBLANK</b><br><b>Sample ID: D18A030-14</b> Water <b>Sampled:05-Apr-18 12:47</b>            |         | K18D037-14    |          |
| K_Mercury, cold vapor     03-May-18 12:47<br><i>Containers Supplied:</i><br>D_HDPE, HNO3 pH<2 - 500mL (E)  |         |               |          |

Released By *Shelley Phillips*     Date *4-9-18*     via I-O mail  
 Received By *S. [Signature]*     Date *4-09-18 @ 1155*

Released By \_\_\_\_\_ Date \_\_\_\_\_ Received By \_\_\_\_\_ Date \_\_\_\_\_



**SUBCONTRACT ORDER**  
**Deerhaven Generating Station**  
**D18A030**

| Analysis                       | Expires                  | Laboratory ID | Comments |
|--------------------------------|--------------------------|---------------|----------|
| Sample Name: DUPLICATE         |                          |               |          |
| Sample ID: D18A030-15    Water | Sampled: 03-Apr-18 08:50 | K18D037-15    |          |
| K_Mercury, cold vapor          | 01-May-18 08:50          |               |          |
| Containers Supplied:           |                          |               |          |
| D_HDPE, HNO3 pH<2 - 500mL (E)  |                          |               |          |

|                         |                               |             |               |
|-------------------------|-------------------------------|-------------|---------------|
| <i>Shelley Phillips</i> | <i>via I-O mail</i><br>4-9-18 | <i>S</i>    | 4-9-18 e 1155 |
| Released By             | Date                          | Received By | Date          |

|             |      |             |      |
|-------------|------|-------------|------|
| Released By | Date | Received By | Date |
|-------------|------|-------------|------|



April 27, 2018

Jeffery Boudreau  
Gainesville Regional Utilities  
10001 NW 13th St  
Gainesville, FL 32653

*R176 } for Lithium  
R271 }  
R671 }  
  
R475 } CCR  
R674 } wells  
Eq blank }*

Service Request No: J1802778

**Laboratory Results for: D18A030**

Dear Jeffery,

Enclosed are the results of the sample(s) submitted to our laboratory April 17, 2018  
For your reference, these analyses have been assigned our service request number **J1802778**.

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and ALS Environmental is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report. In accordance to the NELAC 2003 Standard, a statement on the estimated uncertainty of measurement of any quantitative analysis will be supplied upon request.

Respectfully submitted,

**ALS Group USA, Corp. dba ALS Environmental**

Gina Bondani  
Project Manager

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## Table of Contents

|                            |    |
|----------------------------|----|
| CoverLetter                | 1  |
| Table of Contents          | 2  |
| Narrative Documents        | 4  |
| Narrative Documents        | 5  |
| Hit Summary List           | 6  |
| Sample Receipt Information | 13 |
| Sample Cross-Reference     | 14 |
| Chain Of Custody           | 15 |
| Miscellaneous Forms        | 31 |
| Qualifiers                 | 32 |
| Acronyms                   | 34 |
| Analyst Summary            | 35 |
| Sample Results             | 39 |
| Metals                     | 40 |
| D18A030-01 - Metals        | 41 |
| D18A030-02 - Metals        | 42 |
| D18A030-03 - Metals        | 43 |
| D18A030-04 - Metals        | 44 |
| D18A030-05 - Metals        | 45 |
| D18A030-06 - Metals        | 46 |
| D18A030-07 - Metals        | 47 |
| D18A030-08 - Metals        | 48 |

## Table of Contents (continued)

|   |    |
|---|----|
| D18A030-09 - Metals                     | 49 |
| D18A030-10 - Metals                     | 50 |
| D18A030-11 - Metals                     | 51 |
| D18A030-12 - Metals                     | 52 |
| D18A030-13 - Metals                     | 53 |
| D18A030-14 - Metals                     | 54 |
| D18A030-15 - Metals                     | 55 |
| QC Summary Forms                        | 56 |
| Metals                                  | 57 |
| 200.7 - Inorganic Parameters            |    |
| Method Blank - Metals                   | 58 |
| J1802778-002DMS D18A030-02 - DMS Metals | 59 |
| J1802778-LCS - LCS Metals               | 60 |
| 200.8 - Inorganic Parameters            |    |
| J1802778-003DMS D18A030-03 - DMS Metals | 62 |
| J1802778-013DMS D18A030-13 - DMS Metals | 63 |



## Narrative Documents

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[www.alsglobal.com](http://www.alsglobal.com)

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**Client:** Gainesville Regional Utilities  
**Project:** D18A030  
**Sample Matrix:** Water

**Service Request:** J1802778  
**Date Received:** 4/17/18

### CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier II data deliverables, including results of QC samples analyzed from this delivery group. When appropriate to the procedure, method blank results have been reported with each analytical test. Analytical procedures performed by the lab are validated in accordance with NELAC standards. Parameters that are included in the NELAC Fields of Testing but are not included in the lab's NELAC accreditation are identified in the discussion of each analytical procedure.

#### Sample Receipt

15 water samples were received for analysis at ALS Environmental on 4/17/18. The samples were received in good condition and consistent with the accompanying chain of custody form. Samples are refrigerated at  $\leq 6^{\circ}\text{C}$  upon receipt at the lab except for aqueous samples designated for metals analyses, which are stored at room temperature.

#### Metals Analyses:

No significant data anomalies were noted with this analysis.

#### Revision Notes:

This revised report replaces the original report generated on 4/26/18 at 1:49pm. The revised report includes an updated Metals report list.

Approved by

A handwritten signature in cursive script, appearing to read 'Shiva Bouda', written over a horizontal line.

Date 4/27/2018



**SAMPLE DETECTION SUMMARY**

**CLIENT ID: D18A030-01** **Lab ID: J1802778-001**

| Analyte           | Results | Flag | MDL    | PQL   | Units | Method |
|-------------------|---------|------|--------|-------|-------|--------|
| Aluminum, Total   | 0.03    | IV   | 0.010  | 0.10  | mg/L  | 200.7  |
| Arsenic, Total    | 11.3    |      | 0.10   | 1.0   | ug/L  | 200.8  |
| Barium, Total     | 0.014   |      | 0.001  | 0.010 | mg/L  | 200.7  |
| Calcium, Total    | 52.2    |      | 0.04   | 0.10  | mg/L  | 200.7  |
| Chromium, Total   | 0.001   | I    | 0.0004 | 0.010 | mg/L  | 200.7  |
| Cobalt, Total     | 0.003   | I    | 0.003  | 0.010 | mg/L  | 200.7  |
| Iron, Total       | 4.77    |      | 0.010  | 0.10  | mg/L  | 200.7  |
| Magnesium, Total  | 29.5    |      | 0.009  | 0.10  | mg/L  | 200.7  |
| Manganese, Total  | 0.143   |      | 0.0007 | 0.010 | mg/L  | 200.7  |
| Molybdenum, Total | 0.005   | I    | 0.0003 | 0.010 | mg/L  | 200.7  |
| Nickel, Total     | 0.002   | I    | 0.0007 | 0.010 | mg/L  | 200.7  |
| Potassium, Total  | 0.5     | I    | 0.05   | 2.0   | mg/L  | 200.7  |
| Selenium, Total   | 0.005   | I    | 0.002  | 0.010 | mg/L  | 200.7  |
| Sodium, Total     | 11.8    |      | 0.02   | 0.50  | mg/L  | 200.7  |
| Strontium, Total  | 0.045   |      | 0.0001 | 0.010 | mg/L  | 200.7  |

**CLIENT ID: D18A030-02** **Lab ID: J1802778-002**

| Analyte           | Results | Flag | MDL    | PQL   | Units | Method |
|-------------------|---------|------|--------|-------|-------|--------|
| Aluminum, Total   | 0.17    |      | 0.010  | 0.10  | mg/L  | 200.7  |
| Arsenic, Total    | 0.2     | I    | 0.10   | 1.0   | ug/L  | 200.8  |
| Barium, Total     | 0.002   | I    | 0.001  | 0.010 | mg/L  | 200.7  |
| Calcium, Total    | 4.35    |      | 0.04   | 0.10  | mg/L  | 200.7  |
| Chromium, Total   | 0.003   | I    | 0.0004 | 0.010 | mg/L  | 200.7  |
| Copper, Total     | 0.001   | IV   | 0.0010 | 0.010 | mg/L  | 200.7  |
| Iron, Total       | 0.15    |      | 0.010  | 0.10  | mg/L  | 200.7  |
| Magnesium, Total  | 0.53    |      | 0.009  | 0.10  | mg/L  | 200.7  |
| Manganese, Total  | 0.006   | I    | 0.0007 | 0.010 | mg/L  | 200.7  |
| Molybdenum, Total | 0.001   | I    | 0.0003 | 0.010 | mg/L  | 200.7  |
| Nickel, Total     | 0.003   | I    | 0.0007 | 0.010 | mg/L  | 200.7  |
| Potassium, Total  | 0.07    | I    | 0.05   | 2.0   | mg/L  | 200.7  |
| Selenium, Total   | 0.004   | I    | 0.002  | 0.010 | mg/L  | 200.7  |
| Sodium, Total     | 3.58    |      | 0.02   | 0.50  | mg/L  | 200.7  |
| Strontium, Total  | 0.019   |      | 0.0001 | 0.010 | mg/L  | 200.7  |
| Vanadium, Total   | 0.002   | I    | 0.0008 | 0.020 | mg/L  | 200.7  |
| Zinc, Total       | 0.006   | I    | 0.006  | 0.020 | mg/L  | 200.7  |

**CLIENT ID: D18A030-03** **Lab ID: J1802778-003**

| Analyte        | Results | Flag | MDL    | PQL    | Units | Method |
|----------------|---------|------|--------|--------|-------|--------|
| Arsenic, Total | 1.3     |      | 0.10   | 1.0    | ug/L  | 200.8  |
| Barium, Total  | 0.004   | I    | 0.001  | 0.010  | mg/L  | 200.7  |
| Cadmium, Total | 0.0010  | I    | 0.0002 | 0.0050 | mg/L  | 200.7  |
| Calcium, Total | 69.4    |      | 0.04   | 0.10   | mg/L  | 200.7  |



**SAMPLE DETECTION SUMMARY**

**CLIENT ID: D18A030-03** **Lab ID: J1802778-003**

| Analyte           | Results | Flag | MDL    | PQL   | Units | Method |
|-------------------|---------|------|--------|-------|-------|--------|
| Chromium, Total   | 0.002   | I    | 0.0004 | 0.010 | mg/L  | 200.7  |
| Copper, Total     | 0.001   | IV   | 0.0010 | 0.010 | mg/L  | 200.7  |
| Iron, Total       | 0.72    |      | 0.010  | 0.10  | mg/L  | 200.7  |
| Lead, Total       | 0.03    | I    | 0.03   | 0.50  | ug/L  | 200.8  |
| Magnesium, Total  | 24.7    |      | 0.009  | 0.10  | mg/L  | 200.7  |
| Manganese, Total  | 0.021   |      | 0.0007 | 0.010 | mg/L  | 200.7  |
| Molybdenum, Total | 0.043   |      | 0.0003 | 0.010 | mg/L  | 200.7  |
| Nickel, Total     | 0.011   |      | 0.0007 | 0.010 | mg/L  | 200.7  |
| Potassium, Total  | 9.9     |      | 0.05   | 2.0   | mg/L  | 200.7  |
| Selenium, Total   | 0.005   | I    | 0.002  | 0.010 | mg/L  | 200.7  |
| Sodium, Total     | 179     |      | 0.02   | 0.50  | mg/L  | 200.7  |
| Strontium, Total  | 0.711   |      | 0.0001 | 0.010 | mg/L  | 200.7  |
| Vanadium, Total   | 0.011   | I    | 0.0008 | 0.020 | mg/L  | 200.7  |

**CLIENT ID: D18A030-04** **Lab ID: J1802778-004**

| Analyte           | Results | Flag | MDL    | PQL   | Units | Method |
|-------------------|---------|------|--------|-------|-------|--------|
| Aluminum, Total   | 0.12    |      | 0.010  | 0.10  | mg/L  | 200.7  |
| Antimony, Total   | 0.09    | I    | 0.04   | 1.0   | ug/L  | 200.8  |
| Arsenic, Total    | 4.5     |      | 0.10   | 1.0   | ug/L  | 200.8  |
| Barium, Total     | 0.014   |      | 0.001  | 0.010 | mg/L  | 200.7  |
| Calcium, Total    | 87.8    |      | 0.04   | 0.10  | mg/L  | 200.7  |
| Chromium, Total   | 0.003   | I    | 0.0004 | 0.010 | mg/L  | 200.7  |
| Iron, Total       | 32.6    |      | 0.010  | 0.10  | mg/L  | 200.7  |
| Magnesium, Total  | 31.0    |      | 0.009  | 0.10  | mg/L  | 200.7  |
| Manganese, Total  | 0.154   |      | 0.0007 | 0.010 | mg/L  | 200.7  |
| Molybdenum, Total | 0.006   | I    | 0.0003 | 0.010 | mg/L  | 200.7  |
| Potassium, Total  | 0.5     | I    | 0.05   | 2.0   | mg/L  | 200.7  |
| Selenium, Total   | 0.007   | I    | 0.002  | 0.010 | mg/L  | 200.7  |
| Sodium, Total     | 11.7    |      | 0.02   | 0.50  | mg/L  | 200.7  |
| Strontium, Total  | 0.080   |      | 0.0001 | 0.010 | mg/L  | 200.7  |

**CLIENT ID: D18A030-05** **Lab ID: J1802778-005**

| Analyte           | Results | Flag | MDL    | PQL   | Units | Method |
|-------------------|---------|------|--------|-------|-------|--------|
| Aluminum, Total   | 0.17    |      | 0.010  | 0.10  | mg/L  | 200.7  |
| Arsenic, Total    | 0.3     | I    | 0.10   | 1.0   | ug/L  | 200.8  |
| Barium, Total     | 0.021   |      | 0.001  | 0.010 | mg/L  | 200.7  |
| Calcium, Total    | 8.74    |      | 0.04   | 0.10  | mg/L  | 200.7  |
| Copper, Total     | 0.001   | IV   | 0.0010 | 0.010 | mg/L  | 200.7  |
| Iron, Total       | 0.46    |      | 0.010  | 0.10  | mg/L  | 200.7  |
| Magnesium, Total  | 4.84    |      | 0.009  | 0.10  | mg/L  | 200.7  |
| Manganese, Total  | 0.003   | I    | 0.0007 | 0.010 | mg/L  | 200.7  |
| Molybdenum, Total | 0.002   | I    | 0.0003 | 0.010 | mg/L  | 200.7  |



**SAMPLE DETECTION SUMMARY**

**CLIENT ID: D18A030-05** **Lab ID: J1802778-005**

| Analyte          | Results | Flag | MDL    | PQL   | Units | Method |
|------------------|---------|------|--------|-------|-------|--------|
| Nickel, Total    | 0.001   | I    | 0.0007 | 0.010 | mg/L  | 200.7  |
| Potassium, Total | 4.3     |      | 0.05   | 2.0   | mg/L  | 200.7  |
| Selenium, Total  | 0.002   | I    | 0.002  | 0.010 | mg/L  | 200.7  |
| Sodium, Total    | 32.1    |      | 0.02   | 0.50  | mg/L  | 200.7  |
| Strontium, Total | 0.069   |      | 0.0001 | 0.010 | mg/L  | 200.7  |
| Thallium, Total  | 0.02    | I    | 0.02   | 0.20  | ug/L  | 200.8  |
| Vanadium, Total  | 0.004   | I    | 0.0008 | 0.020 | mg/L  | 200.7  |

**CLIENT ID: D18A030-06** **Lab ID: J1802778-006**

| Analyte           | Results | Flag | MDL    | PQL   | Units | Method |
|-------------------|---------|------|--------|-------|-------|--------|
| Aluminum, Total   | 0.04    | IV   | 0.010  | 0.10  | mg/L  | 200.7  |
| Antimony, Total   | 0.07    | I    | 0.04   | 1.0   | ug/L  | 200.8  |
| Arsenic, Total    | 1.2     |      | 0.10   | 1.0   | ug/L  | 200.8  |
| Barium, Total     | 0.013   |      | 0.001  | 0.010 | mg/L  | 200.7  |
| Calcium, Total    | 51.7    |      | 0.04   | 0.10  | mg/L  | 200.7  |
| Copper, Total     | 0.001   | IV   | 0.0010 | 0.010 | mg/L  | 200.7  |
| Iron, Total       | 0.35    |      | 0.010  | 0.10  | mg/L  | 200.7  |
| Magnesium, Total  | 3.75    |      | 0.009  | 0.10  | mg/L  | 200.7  |
| Manganese, Total  | 0.025   |      | 0.0007 | 0.010 | mg/L  | 200.7  |
| Molybdenum, Total | 0.006   | I    | 0.0003 | 0.010 | mg/L  | 200.7  |
| Nickel, Total     | 0.001   | I    | 0.0007 | 0.010 | mg/L  | 200.7  |
| Potassium, Total  | 1.5     | I    | 0.05   | 2.0   | mg/L  | 200.7  |
| Selenium, Total   | 0.008   | I    | 0.002  | 0.010 | mg/L  | 200.7  |
| Sodium, Total     | 8.05    |      | 0.02   | 0.50  | mg/L  | 200.7  |
| Strontium, Total  | 0.098   |      | 0.0001 | 0.010 | mg/L  | 200.7  |
| Vanadium, Total   | 0.002   | I    | 0.0008 | 0.020 | mg/L  | 200.7  |

**CLIENT ID: D18A030-07** **Lab ID: J1802778-007**

| Analyte           | Results | Flag | MDL    | PQL   | Units | Method |
|-------------------|---------|------|--------|-------|-------|--------|
| Aluminum, Total   | 0.18    |      | 0.010  | 0.10  | mg/L  | 200.7  |
| Arsenic, Total    | 0.7     | I    | 0.10   | 1.0   | ug/L  | 200.8  |
| Barium, Total     | 0.011   |      | 0.001  | 0.010 | mg/L  | 200.7  |
| Calcium, Total    | 33.2    |      | 0.04   | 0.10  | mg/L  | 200.7  |
| Chromium, Total   | 0.002   | I    | 0.0004 | 0.010 | mg/L  | 200.7  |
| Copper, Total     | 0.001   | IV   | 0.0010 | 0.010 | mg/L  | 200.7  |
| Iron, Total       | 0.26    |      | 0.010  | 0.10  | mg/L  | 200.7  |
| Magnesium, Total  | 14.8    |      | 0.009  | 0.10  | mg/L  | 200.7  |
| Manganese, Total  | 0.038   |      | 0.0007 | 0.010 | mg/L  | 200.7  |
| Molybdenum, Total | 0.004   | I    | 0.0003 | 0.010 | mg/L  | 200.7  |
| Nickel, Total     | 0.001   | I    | 0.0007 | 0.010 | mg/L  | 200.7  |
| Potassium, Total  | 0.8     | I    | 0.05   | 2.0   | mg/L  | 200.7  |
| Selenium, Total   | 0.006   | I    | 0.002  | 0.010 | mg/L  | 200.7  |



**SAMPLE DETECTION SUMMARY**

**CLIENT ID: D18A030-07** **Lab ID: J1802778-007**

| Analyte          | Results | Flag | MDL    | PQL   | Units | Method |
|------------------|---------|------|--------|-------|-------|--------|
| Sodium, Total    | 6.20    |      | 0.02   | 0.50  | mg/L  | 200.7  |
| Strontium, Total | 0.053   |      | 0.0001 | 0.010 | mg/L  | 200.7  |

**CLIENT ID: D18A030-08** **Lab ID: J1802778-008**

| Analyte           | Results | Flag | MDL    | PQL    | Units | Method |
|-------------------|---------|------|--------|--------|-------|--------|
| Aluminum, Total   | 0.30    |      | 0.010  | 0.10   | mg/L  | 200.7  |
| Arsenic, Total    | 1.3     |      | 0.10   | 1.0    | ug/L  | 200.8  |
| Barium, Total     | 0.006   | I    | 0.001  | 0.010  | mg/L  | 200.7  |
| Cadmium, Total    | 0.0010  | I    | 0.0002 | 0.0050 | mg/L  | 200.7  |
| Calcium, Total    | 13.8    |      | 0.04   | 0.10   | mg/L  | 200.7  |
| Chromium, Total   | 0.001   | I    | 0.0004 | 0.010  | mg/L  | 200.7  |
| Copper, Total     | 0.038   |      | 0.0010 | 0.010  | mg/L  | 200.7  |
| Iron, Total       | 0.42    |      | 0.010  | 0.10   | mg/L  | 200.7  |
| Lead, Total       | 0.64    |      | 0.03   | 0.50   | ug/L  | 200.8  |
| Magnesium, Total  | 1.49    |      | 0.009  | 0.10   | mg/L  | 200.7  |
| Manganese, Total  | 0.008   | I    | 0.0007 | 0.010  | mg/L  | 200.7  |
| Molybdenum, Total | 0.002   | I    | 0.0003 | 0.010  | mg/L  | 200.7  |
| Nickel, Total     | 0.002   | I    | 0.0007 | 0.010  | mg/L  | 200.7  |
| Potassium, Total  | 0.1     | I    | 0.05   | 2.0    | mg/L  | 200.7  |
| Selenium, Total   | 0.002   | I    | 0.002  | 0.010  | mg/L  | 200.7  |
| Sodium, Total     | 9.93    |      | 0.02   | 0.50   | mg/L  | 200.7  |
| Strontium, Total  | 0.027   |      | 0.0001 | 0.010  | mg/L  | 200.7  |
| Vanadium, Total   | 0.013   | I    | 0.0008 | 0.020  | mg/L  | 200.7  |
| Zinc, Total       | 0.008   | I    | 0.006  | 0.020  | mg/L  | 200.7  |

**CLIENT ID: D18A030-09** **Lab ID: J1802778-009**

| Analyte           | Results | Flag | MDL    | PQL   | Units | Method |
|-------------------|---------|------|--------|-------|-------|--------|
| Aluminum, Total   | 0.62    |      | 0.010  | 0.10  | mg/L  | 200.7  |
| Arsenic, Total    | 2.1     |      | 0.10   | 1.0   | ug/L  | 200.8  |
| Barium, Total     | 0.008   | I    | 0.001  | 0.010 | mg/L  | 200.7  |
| Calcium, Total    | 25.7    |      | 0.04   | 0.10  | mg/L  | 200.7  |
| Chromium, Total   | 0.005   | I    | 0.0004 | 0.010 | mg/L  | 200.7  |
| Cobalt, Total     | 0.003   | I    | 0.003  | 0.010 | mg/L  | 200.7  |
| Copper, Total     | 0.001   | IV   | 0.0010 | 0.010 | mg/L  | 200.7  |
| Iron, Total       | 5.87    |      | 0.010  | 0.10  | mg/L  | 200.7  |
| Magnesium, Total  | 8.66    |      | 0.009  | 0.10  | mg/L  | 200.7  |
| Manganese, Total  | 0.009   | I    | 0.0007 | 0.010 | mg/L  | 200.7  |
| Molybdenum, Total | 0.003   | I    | 0.0003 | 0.010 | mg/L  | 200.7  |
| Nickel, Total     | 0.002   | I    | 0.0007 | 0.010 | mg/L  | 200.7  |
| Potassium, Total  | 0.1     | I    | 0.05   | 2.0   | mg/L  | 200.7  |
| Selenium, Total   | 0.004   | I    | 0.002  | 0.010 | mg/L  | 200.7  |
| Sodium, Total     | 72.2    |      | 0.02   | 0.50  | mg/L  | 200.7  |



**SAMPLE DETECTION SUMMARY**

**CLIENT ID: D18A030-09** **Lab ID: J1802778-009**

| Analyte          | Results | Flag | MDL    | PQL   | Units | Method |
|------------------|---------|------|--------|-------|-------|--------|
| Strontium, Total | 0.020   |      | 0.0001 | 0.010 | mg/L  | 200.7  |
| Vanadium, Total  | 0.017   | I    | 0.0008 | 0.020 | mg/L  | 200.7  |

**CLIENT ID: D18A030-10** **Lab ID: J1802778-010**

| Analyte           | Results | Flag | MDL    | PQL   | Units | Method |
|-------------------|---------|------|--------|-------|-------|--------|
| Aluminum, Total   | 0.06    | IV   | 0.010  | 0.10  | mg/L  | 200.7  |
| Arsenic, Total    | 0.3     | I    | 0.10   | 1.0   | ug/L  | 200.8  |
| Barium, Total     | 0.025   |      | 0.001  | 0.010 | mg/L  | 200.7  |
| Calcium, Total    | 26.1    |      | 0.04   | 0.10  | mg/L  | 200.7  |
| Chromium, Total   | 0.002   | I    | 0.0004 | 0.010 | mg/L  | 200.7  |
| Copper, Total     | 0.001   | IV   | 0.0010 | 0.010 | mg/L  | 200.7  |
| Iron, Total       | 1.56    |      | 0.010  | 0.10  | mg/L  | 200.7  |
| Magnesium, Total  | 12.8    |      | 0.009  | 0.10  | mg/L  | 200.7  |
| Manganese, Total  | 0.136   |      | 0.0007 | 0.010 | mg/L  | 200.7  |
| Molybdenum, Total | 0.003   | I    | 0.0003 | 0.010 | mg/L  | 200.7  |
| Nickel, Total     | 0.001   | I    | 0.0007 | 0.010 | mg/L  | 200.7  |
| Potassium, Total  | 3.5     |      | 0.05   | 2.0   | mg/L  | 200.7  |
| Selenium, Total   | 0.005   | I    | 0.002  | 0.010 | mg/L  | 200.7  |
| Sodium, Total     | 21.7    |      | 0.02   | 0.50  | mg/L  | 200.7  |
| Strontium, Total  | 0.203   |      | 0.0001 | 0.010 | mg/L  | 200.7  |

**CLIENT ID: D18A030-11** **Lab ID: J1802778-011**

| Analyte           | Results | Flag | MDL    | PQL   | Units | Method |
|-------------------|---------|------|--------|-------|-------|--------|
| Aluminum, Total   | 0.04    | IV   | 0.010  | 0.10  | mg/L  | 200.7  |
| Arsenic, Total    | 0.2     | I    | 0.10   | 1.0   | ug/L  | 200.8  |
| Barium, Total     | 0.003   | I    | 0.001  | 0.010 | mg/L  | 200.7  |
| Calcium, Total    | 14.1    |      | 0.04   | 0.10  | mg/L  | 200.7  |
| Iron, Total       | 0.47    |      | 0.010  | 0.10  | mg/L  | 200.7  |
| Magnesium, Total  | 2.88    |      | 0.009  | 0.10  | mg/L  | 200.7  |
| Manganese, Total  | 0.011   |      | 0.0007 | 0.010 | mg/L  | 200.7  |
| Molybdenum, Total | 0.002   | I    | 0.0003 | 0.010 | mg/L  | 200.7  |
| Potassium, Total  | 0.2     | I    | 0.05   | 2.0   | mg/L  | 200.7  |
| Selenium, Total   | 0.004   | I    | 0.002  | 0.010 | mg/L  | 200.7  |
| Sodium, Total     | 4.70    |      | 0.02   | 0.50  | mg/L  | 200.7  |
| Strontium, Total  | 0.016   |      | 0.0001 | 0.010 | mg/L  | 200.7  |

**CLIENT ID: D18A030-12** **Lab ID: J1802778-012**

| Analyte         | Results | Flag | MDL    | PQL   | Units | Method |
|-----------------|---------|------|--------|-------|-------|--------|
| Aluminum, Total | 0.09    | IV   | 0.010  | 0.10  | mg/L  | 200.7  |
| Arsenic, Total  | 0.2     | I    | 0.10   | 1.0   | ug/L  | 200.8  |
| Barium, Total   | 0.004   | I    | 0.001  | 0.010 | mg/L  | 200.7  |
| Calcium, Total  | 5.75    |      | 0.04   | 0.10  | mg/L  | 200.7  |
| Chromium, Total | 0.003   | I    | 0.0004 | 0.010 | mg/L  | 200.7  |



**SAMPLE DETECTION SUMMARY**

**CLIENT ID: D18A030-12** **Lab ID: J1802778-012**

| Analyte           | Results | Flag | MDL    | PQL   | Units | Method |
|-------------------|---------|------|--------|-------|-------|--------|
| Copper, Total     | 0.001   | IV   | 0.0010 | 0.010 | mg/L  | 200.7  |
| Iron, Total       | 0.72    |      | 0.010  | 0.10  | mg/L  | 200.7  |
| Magnesium, Total  | 3.76    |      | 0.009  | 0.10  | mg/L  | 200.7  |
| Manganese, Total  | 0.012   |      | 0.0007 | 0.010 | mg/L  | 200.7  |
| Molybdenum, Total | 0.001   | I    | 0.0003 | 0.010 | mg/L  | 200.7  |
| Nickel, Total     | 0.001   | I    | 0.0007 | 0.010 | mg/L  | 200.7  |
| Potassium, Total  | 0.8     | I    | 0.05   | 2.0   | mg/L  | 200.7  |
| Sodium, Total     | 32.9    |      | 0.02   | 0.50  | mg/L  | 200.7  |
| Strontium, Total  | 0.004   | I    | 0.0001 | 0.010 | mg/L  | 200.7  |
| Vanadium, Total   | 0.002   | I    | 0.0008 | 0.020 | mg/L  | 200.7  |

**CLIENT ID: D18A030-13** **Lab ID: J1802778-013**

| Analyte           | Results | Flag | MDL    | PQL   | Units | Method |
|-------------------|---------|------|--------|-------|-------|--------|
| Arsenic, Total    | 1.3     |      | 0.10   | 1.0   | ug/L  | 200.8  |
| Barium, Total     | 0.012   |      | 0.001  | 0.010 | mg/L  | 200.7  |
| Calcium, Total    | 58.7    |      | 0.04   | 0.10  | mg/L  | 200.7  |
| Chromium, Total   | 0.001   | I    | 0.0004 | 0.010 | mg/L  | 200.7  |
| Lead, Total       | 0.03    | I    | 0.03   | 0.50  | ug/L  | 200.8  |
| Magnesium, Total  | 20.2    |      | 0.009  | 0.10  | mg/L  | 200.7  |
| Manganese, Total  | 0.008   | I    | 0.0007 | 0.010 | mg/L  | 200.7  |
| Molybdenum, Total | 0.005   | I    | 0.0003 | 0.010 | mg/L  | 200.7  |
| Potassium, Total  | 0.9     | I    | 0.05   | 2.0   | mg/L  | 200.7  |
| Selenium, Total   | 0.007   | I    | 0.002  | 0.010 | mg/L  | 200.7  |
| Sodium, Total     | 8.68    |      | 0.02   | 0.50  | mg/L  | 200.7  |
| Strontium, Total  | 1.10    |      | 0.0001 | 0.010 | mg/L  | 200.7  |

**CLIENT ID: D18A030-14** **Lab ID: J1802778-014**

| Analyte         | Results | Flag | MDL    | PQL   | Units | Method |
|-----------------|---------|------|--------|-------|-------|--------|
| Aluminum, Total | 0.01    | IV   | 0.010  | 0.10  | mg/L  | 200.7  |
| Copper, Total   | 0.001   | IV   | 0.0010 | 0.010 | mg/L  | 200.7  |

**CLIENT ID: D18A030-15** **Lab ID: J1802778-015**

| Analyte           | Results | Flag | MDL    | PQL   | Units | Method |
|-------------------|---------|------|--------|-------|-------|--------|
| Aluminum, Total   | 0.19    |      | 0.010  | 0.10  | mg/L  | 200.7  |
| Arsenic, Total    | 0.1     | I    | 0.10   | 1.0   | ug/L  | 200.8  |
| Barium, Total     | 0.020   |      | 0.001  | 0.010 | mg/L  | 200.7  |
| Calcium, Total    | 9.22    |      | 0.04   | 0.10  | mg/L  | 200.7  |
| Chromium, Total   | 0.001   | I    | 0.0004 | 0.010 | mg/L  | 200.7  |
| Copper, Total     | 0.001   | IV   | 0.0010 | 0.010 | mg/L  | 200.7  |
| Iron, Total       | 0.49    |      | 0.010  | 0.10  | mg/L  | 200.7  |
| Magnesium, Total  | 5.07    |      | 0.009  | 0.10  | mg/L  | 200.7  |
| Manganese, Total  | 0.004   | I    | 0.0007 | 0.010 | mg/L  | 200.7  |
| Molybdenum, Total | 0.001   | I    | 0.0003 | 0.010 | mg/L  | 200.7  |



**SAMPLE DETECTION SUMMARY**

| <b>CLIENT ID: D18A030-15</b> |                | <b>Lab ID: J1802778-015</b> |            |            |              |               |
|------------------------------|----------------|-----------------------------|------------|------------|--------------|---------------|
| <b>Analyte</b>               | <b>Results</b> | <b>Flag</b>                 | <b>MDL</b> | <b>PQL</b> | <b>Units</b> | <b>Method</b> |
| Nickel, Total                | 0.002          |                             | 0.0007     | 0.010      | mg/L         | 200.7         |
| Potassium, Total             | 4.3            |                             | 0.05       | 2.0        | mg/L         | 200.7         |
| Selenium, Total              | 0.003          |                             | 0.002      | 0.010      | mg/L         | 200.7         |
| Sodium, Total                | 33.3           |                             | 0.02       | 0.50       | mg/L         | 200.7         |
| Strontium, Total             | 0.068          |                             | 0.0001     | 0.010      | mg/L         | 200.7         |
| Vanadium, Total              | 0.004          |                             | 0.0008     | 0.020      | mg/L         | 200.7         |





## Sample Receipt Information

**ALS Environmental—Jacksonville Laboratory**  
9143 Philips Highway, Suite 200, Jacksonville, FL 32256  
Phone (904) 739-2277 Fax (904) 739-2011  
[www.alsglobal.com](http://www.alsglobal.com)

RIGHT SOLUTIONS. RIGHT PARTNER.

**Client:** Gainesville Regional Utilities  
**Project:** D18A030

**Service Request:**J1802778

**SAMPLE CROSS-REFERENCE**

| <u>SAMPLE #</u> | <u>CLIENT SAMPLE ID</u> | <u>DATE</u> | <u>TIME</u> |
|-----------------|-------------------------|-------------|-------------|
| J1802778-001    | D18A030-01              | 4/2/2018    | 1827        |
| J1802778-002    | D18A030-02              | 4/2/2018    | 1545        |
| J1802778-003    | D18A030-03              | 4/5/2018    | 1511        |
| J1802778-004    | D18A030-04              | 4/3/2018    | 1537        |
| J1802778-005    | D18A030-05              | 4/3/2018    | 0850        |
| J1802778-006    | D18A030-06              | 4/3/2018    | 1241        |
| J1802778-007    | D18A030-07              | 4/5/2018    | 1224        |
| J1802778-008    | D18A030-08              | 4/6/2018    | 1126        |
| J1802778-009    | D18A030-09              | 4/6/2018    | 1014        |
| J1802778-010    | D18A030-10              | 4/5/2018    | 0909        |
| J1802778-011    | D18A030-11              | 4/6/2018    | 0824        |
| J1802778-012    | D18A030-12              | 4/3/2018    | 1010        |
| J1802778-013    | D18A030-13              | 4/5/2018    | 1610        |
| J1802778-014    | D18A030-14              | 4/5/2018    | 1247        |
| J1802778-015    | D18A030-15              | 4/3/2018    | 0850        |

**Cooler Receipt Form**

Client: GRU Service Request #: 11802778  
 Project: D18A030 Shipping paid by ALS?  
 Cooler received on 4/17/18 and opened on 4/17/18 by SR Yes  No  N/A  
 COURIER: ALS UPS  FEDEX  DHL Client Other \_\_\_\_\_ Airbill # 8127 8324 8505

- 1 Were custody seals on outside of cooler? Yes  No   
 If yes, how many and where? #: \_\_\_ on lid other \_\_\_\_\_
- 2 Were seals intact and signature and date correct? Yes  No  N/A
- 3 Were custody papers properly filled out?  Yes  No  N/A
- 4 Temperature of cooler(s) upon receipt (Should be 0°C and ≤ 6°C) N/A
- 5 Thermometer ID \_\_\_\_\_
- 6 Temperature Blank Present? Yes  No
- 7 Were Ice or Ice Packs present Ice  Ice Packs  No
- 8 Did all bottles arrive in good condition (unbroken, etc....)?  Yes  No  N/A
- 9 Type of packing material present  
 Netting  Vial Holder  Bubble Wrap   
 Paper  Styrofoam  Other  N/A
- 10 Were all bottle labels complete (sample ID, preservation, etc....)?  Yes  No  N/A
- 11 Did all bottle labels and tags agree with custody papers?  Yes  No  N/A
- 12 Were the correct bottles used for the tests indicated?  Yes  No  N/A
- 13 Were all of the preserved bottles received with the appropriate preservative?  
 HNO3 pH<2    H2SO4 pH<2    ZnAc2/NaOH pH>9    NaOH pH>12    HCl pH<2  
Preservative additions noted below  Yes  No  N/A *OK 4/17/18*
- 14 Were all samples received within analysis holding times?  Yes  No  N/A
- 15 Were VOA vials free of air bubbles greater than 6mm? If present, note below Yes  No  N/A
- 16 Where did the bottles originate?  ALS  Client

| Sample ID | Reagent | Lot # | ml added | Initials | Date/Time |
|-----------|---------|-------|----------|----------|-----------|
|           |         |       |          |          |           |
|           |         |       |          |          |           |
|           |         |       |          |          |           |
|           |         |       |          |          |           |
|           |         |       |          |          |           |
|           |         |       |          |          |           |
|           |         |       |          |          |           |
|           |         |       |          |          |           |
|           |         |       |          |          |           |

Additional comments and/or explanation of all discrepancies noted above:  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Client approval to run samples if discrepancies noted: \_\_\_\_\_ Date: \_\_\_\_\_



SUBCONTRACT ORDER

Deerhaven Generating Station  
D18A030

J1802778

J1802778

5

Gainesville Regional Utilities  
Boiler Byproduct Testing



SENDING LABORATORY:

Gainesville Regional Utilities  
Deerhaven Generating Station  
10001 NW 13th Street  
Gainesville, FL 32653  
Phone: 352-334-3434  
Fax: 352-334-3149  
Project Manager: Jeff Boudreau

RECEIVING LABORATORY:

ALS Global  
9143 Philips Highway, Suite 200  
Jacksonville, FL 32256  
Phone : (904) 394-4426  
Fax: (904) 739-2011

| Analysis                             | Expires         | Laboratory ID           | Comments |
|--------------------------------------|-----------------|-------------------------|----------|
| Sample Name: MWD-1-6 (R1T6)          |                 |                         |          |
| Sample ID: D18A030-01                | Water           | Sampled:02-Apr-18 18:27 |          |
| K_Potassium                          | 29-Sep-18 18:27 |                         |          |
| D_Arsenic by 200.8                   | 29-Sep-18 18:27 |                         |          |
| K_Zinc                               | 29-Sep-18 18:27 |                         |          |
| K_Vanadium                           | 29-Sep-18 18:27 |                         |          |
| K_Strontium                          | 29-Sep-18 18:27 |                         |          |
| K_Sodium                             | 29-Sep-18 18:27 |                         |          |
| K_Selenium                           | 29-Sep-18 18:27 |                         |          |
| K_Nickel                             | 29-Sep-18 18:27 |                         |          |
| K_Molybdenum                         | 29-Sep-18 18:27 |                         |          |
| K_Manganese                          | 29-Sep-18 18:27 |                         |          |
| K_Magnesium                          | 29-Sep-18 18:27 |                         |          |
| K_Aluminum                           | 29-Sep-18 18:27 |                         |          |
| K_Silver                             | 29-Sep-18 18:27 |                         |          |
| D_Lithium by 200.7                   | 29-Sep-18 18:27 |                         |          |
| K_Iron                               | 29-Sep-18 18:27 |                         |          |
| K_Barium                             | 29-Sep-18 18:27 |                         |          |
| K_Beryllium                          | 29-Sep-18 18:27 |                         |          |
| K_Calcium                            | 29-Sep-18 18:27 |                         |          |
| K_Chromium                           | 29-Sep-18 18:27 |                         |          |
| K_Cobalt                             | 29-Sep-18 18:27 |                         |          |
| K_Copper                             | 29-Sep-18 18:27 |                         |          |
| K_Cadmium                            | 29-Sep-18 18:27 |                         |          |
| D_Lead by 200.8                      | 29-Sep-18 18:27 |                         |          |
| Containers Supplied:                 |                 |                         |          |
| D_HDPE, HNO3 pH<2 - 250mL extra2 (F) |                 |                         | 23       |

20.7      20.8

Released By: Shelly Phillips      Date: 4-13-18      via Fedex

Received By: Sh      Date: 4/17/18      1030

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Released By: \_\_\_\_\_      Date: \_\_\_\_\_      Received By: \_\_\_\_\_      Date: \_\_\_\_\_



**SUBCONTRACT ORDER**  
**Deerhaven Generating Station**  
**D18A030**

J1802778

| Analysis                             | Expires         | Laboratory ID                  | Comments |
|--------------------------------------|-----------------|--------------------------------|----------|
| <b>Sample Name: MWB-2-1 (R2T1)</b>   |                 |                                |          |
| <b>Sample ID: D18A030-02</b>         | <b>Water</b>    | <b>Sampled:02-Apr-18 15:45</b> |          |
| K_Vanadium                           | 29-Sep-18 15:45 |                                |          |
| K_Manganese                          | 29-Sep-18 15:45 |                                |          |
| K_Molybdenum                         | 29-Sep-18 15:45 |                                |          |
| K_Nickel                             | 29-Sep-18 15:45 |                                |          |
| K_Potassium                          | 29-Sep-18 15:45 |                                |          |
| K_Selenium                           | 29-Sep-18 15:45 |                                |          |
| K_Silver                             | 29-Sep-18 15:45 |                                |          |
| K_Strontium                          | 29-Sep-18 15:45 |                                |          |
| K_Barium                             | 29-Sep-18 15:45 |                                |          |
| K_Magnesium                          | 29-Sep-18 15:45 |                                |          |
| K_Sodium                             | 29-Sep-18 15:45 |                                |          |
| D_Lead by 200.8                      | 29-Sep-18 15:45 |                                |          |
| K_Cadmium                            | 29-Sep-18 15:45 |                                |          |
| D_Arsenic by 200.8                   | 29-Sep-18 15:45 |                                |          |
| K_Iron                               | 29-Sep-18 15:45 |                                |          |
| D_Lithium by 200.7                   | 29-Sep-18 15:45 |                                |          |
| K_Aluminum                           | 29-Sep-18 15:45 |                                |          |
| K_Zinc                               | 29-Sep-18 15:45 |                                |          |
| K_Calcium                            | 29-Sep-18 15:45 |                                |          |
| K_Chromium                           | 29-Sep-18 15:45 |                                |          |
| K_Cobalt                             | 29-Sep-18 15:45 |                                |          |
| K_Copper                             | 29-Sep-18 15:45 |                                |          |
| K_Beryllium                          | 29-Sep-18 15:45 |                                |          |
| <i>Containers Supplied:</i>          |                 |                                |          |
| D_HDPE, HNO3 pH<2 - 250mL extra2 (F) |                 |                                |          |

*Shelly Phillips*      *via Fedex*  
*4-13-18*      *Sh*      *4/17/18*      *1030*  
 Released By      Date      Received By      Date  
 \_\_\_\_\_  
 Released By      Date      Received By      Date



**SUBCONTRACT ORDER**  
**Deerhaven Generating Station**  
**D18A030**

J1802778

| Analysis                             | Expires         | Laboratory ID                  | Comments |
|--------------------------------------|-----------------|--------------------------------|----------|
| <b>Sample Name: MWI-4-5 (R4TSB)</b>  |                 |                                |          |
| <b>Sample ID: D18A030-04</b>         | <b>Water</b>    | <b>Sampled:03-Apr-18 15:37</b> |          |
| D_Antimony by 200.8                  | 30-Sep-18 15:37 |                                |          |
| K_Sodium                             | 30-Sep-18 15:37 |                                |          |
| D_Arsenic by 200.8                   | 30-Sep-18 15:37 |                                |          |
| K_Selenium                           | 30-Sep-18 15:37 |                                |          |
| K_Beryllium                          | 30-Sep-18 15:37 |                                |          |
| K_Cadmium                            | 30-Sep-18 15:37 |                                |          |
| K_Calcium                            | 30-Sep-18 15:37 |                                |          |
| K_Chromium                           | 30-Sep-18 15:37 |                                |          |
| K_Cobalt                             | 30-Sep-18 15:37 |                                |          |
| K_Nickel                             | 30-Sep-18 15:37 |                                |          |
| K_Potassium                          | 30-Sep-18 15:37 |                                |          |
| D_Lead by 200.8                      | 30-Sep-18 15:37 |                                |          |
| K_Silver                             | 30-Sep-18 15:37 |                                |          |
| K_Zinc                               | 30-Sep-18 15:37 |                                |          |
| K_Aluminum                           | 30-Sep-18 15:37 |                                |          |
| K_Barium                             | 30-Sep-18 15:37 |                                |          |
| K_Copper                             | 30-Sep-18 15:37 |                                |          |
| K_Iron                               | 30-Sep-18 15:37 |                                |          |
| K_Magnesium                          | 30-Sep-18 15:37 |                                |          |
| K_Manganese                          | 30-Sep-18 15:37 |                                |          |
| K_Molybdenum                         | 30-Sep-18 15:37 |                                |          |
| K_Strontium                          | 30-Sep-18 15:37 |                                |          |
| K_Vanadium                           | 30-Sep-18 15:37 |                                |          |
| D_Lithium by 200.7                   | 30-Sep-18 15:37 |                                |          |
| D_Thallium by 200.8                  | 30-Sep-18 15:37 |                                |          |
| <i>Containers Supplied:</i>          |                 |                                |          |
| D_HDPE, HNO3 pH<2 - 250mL extra2 (F) |                 |                                |          |

|                        |                             |             |         |      |
|------------------------|-----------------------------|-------------|---------|------|
| <i>Shelby Phillips</i> | <i>via fedex</i><br>4-13-18 | <i>Sh S</i> | 4/17/18 | 1030 |
| Released By            | Date                        | Received By | Date    |      |
| Released By            | Date                        | Received By | Date    |      |



**SUBCONTRACT ORDER**  
**Deerhaven Generating Station**  
**D18A030**

J1802778

| Analysis                             | Expires         | Laboratory ID                   | Comments |
|--------------------------------------|-----------------|---------------------------------|----------|
| <b>Sample Name: MWD-6-1 (R6T1B)</b>  |                 |                                 |          |
| <b>Sample ID: D18A030-05</b>         | <b>Water</b>    | <b>Sampled: 03-Apr-18 08:50</b> |          |
| K_Potassium                          | 30-Sep-18 08:50 |                                 |          |
| D_Lithium by 200.7                   | 30-Sep-18 08:50 |                                 |          |
| K_Nickel                             | 30-Sep-18 08:50 |                                 |          |
| K_Molybdenum                         | 30-Sep-18 08:50 |                                 |          |
| K_Manganese                          | 30-Sep-18 08:50 |                                 |          |
| K_Cadmium                            | 30-Sep-18 08:50 |                                 |          |
| K_Barium                             | 30-Sep-18 08:50 |                                 |          |
| K_Aluminum                           | 30-Sep-18 08:50 |                                 |          |
| K_Beryllium                          | 30-Sep-18 08:50 |                                 |          |
| K_Zinc                               | 30-Sep-18 08:50 |                                 |          |
| K_Calcium                            | 30-Sep-18 08:50 |                                 |          |
| K_Magnesium                          | 30-Sep-18 08:50 |                                 |          |
| D_Arsenic by 200.8                   | 30-Sep-18 08:50 |                                 |          |
| D_Lead by 200.8                      | 30-Sep-18 08:50 |                                 |          |
| K_Chromium                           | 30-Sep-18 08:50 |                                 |          |
| K_Cobalt                             | 30-Sep-18 08:50 |                                 |          |
| K_Copper                             | 30-Sep-18 08:50 |                                 |          |
| K_Selenium                           | 30-Sep-18 08:50 |                                 |          |
| K_Silver                             | 30-Sep-18 08:50 |                                 |          |
| K_Sodium                             | 30-Sep-18 08:50 |                                 |          |
| K_Strontium                          | 30-Sep-18 08:50 |                                 |          |
| K_Iron                               | 30-Sep-18 08:50 |                                 |          |
| K_Vanadium                           | 30-Sep-18 08:50 |                                 |          |
| <i>Containers Supplied:</i>          |                 |                                 |          |
| D_HDPE, HNO3 pH<2 - 250mL extra2 (F) |                 |                                 |          |

Released By: *Shelley Phillip* Date: *4-13-18* via Fedex

Received By: *Sh S* Date: *4/17/18 1030*

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Released By: \_\_\_\_\_ Date: \_\_\_\_\_ Received By: \_\_\_\_\_ Date: \_\_\_\_\_



**SUBCONTRACT ORDER**  
**Deerhaven Generating Station**  
**D18A030**

J1802778

| Analysis                             | Expires         | Laboratory ID                  | Comments |
|--------------------------------------|-----------------|--------------------------------|----------|
| <b>Sample Name: MWI-6-4 (R6T4B)</b>  |                 |                                |          |
| <b>Sample ID: D18A030-06</b>         | <b>Water</b>    | <b>Sampled:03-Apr-18 12:41</b> |          |
| K_Cobalt                             | 30-Sep-18 12:41 |                                |          |
| K_Potassium                          | 30-Sep-18 12:41 |                                |          |
| K_Zinc                               | 30-Sep-18 12:41 |                                |          |
| K_Selenium                           | 30-Sep-18 12:41 |                                |          |
| K_Strontium                          | 30-Sep-18 12:41 |                                |          |
| K_Sodium                             | 30-Sep-18 12:41 |                                |          |
| K_Iron                               | 30-Sep-18 12:41 |                                |          |
| K_Chromium                           | 30-Sep-18 12:41 |                                |          |
| K_Copper                             | 30-Sep-18 12:41 |                                |          |
| K_Nickel                             | 30-Sep-18 12:41 |                                |          |
| K_Magnesium                          | 30-Sep-18 12:41 |                                |          |
| K_Calcium                            | 30-Sep-18 12:41 |                                |          |
| K_Beryllium                          | 30-Sep-18 12:41 |                                |          |
| K_Manganese                          | 30-Sep-18 12:41 |                                |          |
| K_Vanadium                           | 30-Sep-18 12:41 |                                |          |
| D_Antimony by 200.8                  | 30-Sep-18 12:41 |                                |          |
| D_Arsenic by 200.8                   | 30-Sep-18 12:41 |                                |          |
| K_Cadmium                            | 30-Sep-18 12:41 |                                |          |
| D_Lead by 200.8                      | 30-Sep-18 12:41 |                                |          |
| D_Lithium by 200.7                   | 30-Sep-18 12:41 |                                |          |
| D_Thallium by 200.8                  | 30-Sep-18 12:41 |                                |          |
| K_Aluminum                           | 30-Sep-18 12:41 |                                |          |
| K_Silver                             | 30-Sep-18 12:41 |                                |          |
| K_Barium                             | 30-Sep-18 12:41 |                                |          |
| K_Molybdenum                         | 30-Sep-18 12:41 |                                |          |
| <i>Containers Supplied:</i>          |                 |                                |          |
| D_HDPE, HNO3 pH<2 - 250mL extra2 (F) |                 |                                |          |

|                        |                |             |                |
|------------------------|----------------|-------------|----------------|
| Released By            | Date           | Received By | Date           |
| <i>Shelby Phillips</i> | <i>4-13-18</i> | <i>JMS</i>  | <i>4/17/18</i> |
|                        |                |             | <i>1030</i>    |
| Released By            | Date           | Received By | Date           |





**SUBCONTRACT ORDER**  
**Deerhaven Generating Station**  
**D18A030**

J1802778

| Analysis                             | Expires         | Laboratory ID                  | Comments |
|--------------------------------------|-----------------|--------------------------------|----------|
| <b>Sample Name: EBLANK</b>           |                 |                                |          |
| <b>Sample ID: D18A030-14</b>         | <b>Water</b>    | <b>Sampled:05-Apr-18 12:47</b> |          |
| K_Barium                             | 02-Oct-18 12:47 |                                |          |
| K_Cadmium                            | 02-Oct-18 12:47 |                                |          |
| D_Antimony by 200.8                  | 02-Oct-18 12:47 |                                |          |
| K_Beryllium                          | 02-Oct-18 12:47 |                                |          |
| K_Cobalt                             | 02-Oct-18 12:47 |                                |          |
| D_Lead by 200.8                      | 02-Oct-18 12:47 |                                |          |
| D_Lithium by 200.7                   | 02-Oct-18 12:47 |                                |          |
| K_Calcium                            | 02-Oct-18 12:47 |                                |          |
| K_Aluminum                           | 02-Oct-18 12:47 |                                |          |
| D_Arsenic by 200.8                   | 02-Oct-18 12:47 |                                |          |
| K_Iron                               | 02-Oct-18 12:47 |                                |          |
| K_Magnesium                          | 02-Oct-18 12:47 |                                |          |
| K_Manganese                          | 02-Oct-18 12:47 |                                |          |
| K_Molybdenum                         | 02-Oct-18 12:47 |                                |          |
| K_Nickel                             | 02-Oct-18 12:47 |                                |          |
| K_Potassium                          | 02-Oct-18 12:47 |                                |          |
| D_Thallium by 200.8                  | 02-Oct-18 12:47 |                                |          |
| K_Sodium                             | 02-Oct-18 12:47 |                                |          |
| K_Copper                             | 02-Oct-18 12:47 |                                |          |
| K_Silver                             | 02-Oct-18 12:47 |                                |          |
| K_Chromium                           | 02-Oct-18 12:47 |                                |          |
| K_Strontium                          | 02-Oct-18 12:47 |                                |          |
| K_Vanadium                           | 02-Oct-18 12:47 |                                |          |
| K_Zinc                               | 02-Oct-18 12:47 |                                |          |
| K_Selenium                           | 02-Oct-18 12:47 |                                |          |
| <i>Containers Supplied:</i>          |                 |                                |          |
| D_HDPE, HNO3 pH<2 - 250mL extra2 (F) |                 |                                |          |

|                    |                  |             |                |             |
|--------------------|------------------|-------------|----------------|-------------|
| <i>A. Phillips</i> | <i>via Fedex</i> | <i>Shz</i>  | <i>4/17/18</i> | <i>1035</i> |
| Released By        | Date             | Received By | Date           |             |
| Released By        | Date             | Received By | Date           |             |



## Miscellaneous Forms

**ALS Environmental—Jacksonville Laboratory**  
9143 Philips Highway, Suite 200, Jacksonville, FL 32256  
Phone (904) 739-2277 Fax (904) 739-2011  
[www.alsglobal.com](http://www.alsglobal.com)

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## FLORIDA DEP DATA QUALIFIERS

- B Results based upon colony counts outside the acceptable range.
- D Measurement was made in the field.
- H Value based on field kit determination; results may not be accurate.
- I The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
- J Estimated value (one of the following reasons is discussed in the project case narrative).
1. The result may be inaccurate because the surrogate recovery limits have been exceeded.
  2. No known quality control criteria exists for the component.
  3. The reported value failed to meet the established quality control criteria for either precision or accuracy.
  4. The sample matrix interfered with the ability to make any accurate determination (e.g., primary and confirmation results show greater than 40% RPD).
  5. The data is questionable because of improper laboratory or field protocols (e.g., GC/MS Tune did not meet method criteria).
- K Off scale low. The value is less than the lowest calibration standard but greater than the method reporting limit (MRL).
- L Off scale high. The analyte is above the upper limit of the linear calibration range.
- M The MDL/MRL has been elevated because the analyte could not be accurately quantified due to matrix interference.
- N Presumptive evidence of the analyte. Confirmation was not performed.
- Q Sample held beyond the accepted holding time.
- T Value reported is less than the laboratory method detection limit. The value is reported for informational purposes only.
- U Indicates that the compound was analyzed for but not detected.
- V Indicates that the analyte was detected in both the sample and the associated method blank.
- Y The laboratory analysis was from an improperly preserved sample.
- Z Too many colonies were present (TNTC). The numeric value represents the filtration volume.



**Jacksonville Lab ID # for State Certifications<sup>1</sup>**

| <b>Agency</b>  | <b>Number</b>   | <b>Expiration Date</b> |
|--|-----------------|------------------------|
| Department of Defense  | 66206           | 7/31/2018              |
| Florida Department of Health                                   | E82502          | 6/30/2018              |
| Georgia Department of Natural Resources                        | 958             | 6/30/2018              |
| Kentucky Division of Waste Management                          | 123042          | 6/30/2018              |
| Louisiana Department of Environmental Quality                  | 02086           | 6/30/2018              |
| Maine Department of Health and Human Services                  | 2015002         | 2/3/2019               |
| North Carolina Department of Environment and Natural Resources | 527             | 12/31/2018             |
| Pennsylvania Department of Environmental Protection            | 68-04835        | 8/31/2018              |
| South Carolina Department of Health and Environmental Control  | 96021001        | 6/30/2018              |
| Texas Commission on Environmental Quality                      | T104704197-16-8 | 5/31/2018              |
| Virginia Environmental Accreditation Program                   | 460191          | 12/14/2018             |

<sup>1</sup> Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state or agency requirements. The test results meet requirements of the current NELAP/TNI standards or state or agency requirements, where applicable, except as noted in the laboratory case narrative provided. For a specific list of accredited analytes, refer to <http://www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads/North-America-Downloads>



## ACRONYMS

|            |  |
|------------|--|
| ASTM       | American Society for Testing and Materials   |
| A2LA       | American Association for Laboratory Accreditation  |
| CARB       | California Air Resources Board   |
| CAS Number | Chemical Abstract Service registry Number  |
| CFC        | Chlorofluorocarbon   |
| CFU        | Colony-Forming Unit  |
| DEC        | Department of Environmental Conservation   |
| DEQ        | Department of Environmental Quality  |
| DHS        | Department of Health Services  |
| DOE        | Department of Ecology  |
| DOH        | Department of Health   |
| EPA        | U. S. Environmental Protection Agency  |
| ELAP       | Environmental Laboratory Accreditation Program   |
| GC         | Gas Chromatography   |
| GC/MS      | Gas Chromatography/Mass Spectrometry   |
| LUFT       | Leaking Underground Fuel Tank  |
| M          | Modified   |
| MCL        | Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA. |
| MDL        | Method Detection Limit   |
| MPN        | Most Probable Number   |
| MRL        | Method Reporting Limit   |
| NA         | Not Applicable   |
| NC         | Not Calculated   |
| NCASI      | National Council of the Paper Industry for Air and Stream Improvement  |
| ND         | Not Detected   |
| NIOSH      | National Institute for Occupational Safety and Health  |
| PQL        | Practical Quantitation Limit   |
| RCRA       | Resource Conservation and Recovery Act   |
| SIM        | Selected Ion Monitoring  |
| TPH        | Total Petroleum Hydrocarbons   |
| tr         | Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.                           |



ALS Group USA, Corp.  
dba ALS Environmental  
Analyst Summary report

**Client:** Gainesville Regional Utilities  
**Project:** D18A030

**Service Request:** J1802778

**Sample Name:** D18A030-01  
**Lab Code:** J1802778-001  
**Sample Matrix:** Water

**Date Collected:** 04/2/18  
**Date Received:** 04/17/18

**Analysis Method**  
200.7  
200.8

**Extracted/Digested By**  
EGARDNER  
CSULLIVAN

**Analyzed By**  
EGARDNER  
CSULLIVAN

**Sample Name:** D18A030-02  
**Lab Code:** J1802778-002  
**Sample Matrix:** Water

**Date Collected:** 04/2/18  
**Date Received:** 04/17/18

**Analysis Method**  
200.7  
200.8

**Extracted/Digested By**  
EGARDNER  
CSULLIVAN

**Analyzed By**  
EGARDNER  
CSULLIVAN

**Sample Name:** D18A030-03  
**Lab Code:** J1802778-003  
**Sample Matrix:** Water

**Date Collected:** 04/5/18  
**Date Received:** 04/17/18

**Analysis Method**  
200.7  
200.8

**Extracted/Digested By**  
EGARDNER  
CSULLIVAN

**Analyzed By**  
EGARDNER  
CSULLIVAN

**Sample Name:** D18A030-04  
**Lab Code:** J1802778-004  
**Sample Matrix:** Water

**Date Collected:** 04/3/18  
**Date Received:** 04/17/18

**Analysis Method**  
200.7  
200.8

**Extracted/Digested By**  
EGARDNER  
CSULLIVAN

**Analyzed By**  
EGARDNER  
CSULLIVAN

ALS Group USA, Corp.  
dba ALS Environmental  
Analyst Summary report

**Client:** Gainesville Regional Utilities  
**Project:** D18A030

**Service Request:** J1802778

**Sample Name:** D18A030-05  
**Lab Code:** J1802778-005  
**Sample Matrix:** Water

**Date Collected:** 04/3/18  
**Date Received:** 04/17/18

**Analysis Method**  
200.7  
200.8

**Extracted/Digested By**  
EGARDNER  
CSULLIVAN

**Analyzed By**  
EGARDNER  
CSULLIVAN

**Sample Name:** D18A030-06  
**Lab Code:** J1802778-006  
**Sample Matrix:** Water

**Date Collected:** 04/3/18  
**Date Received:** 04/17/18

**Analysis Method**  
200.7  
200.8

**Extracted/Digested By**  
EGARDNER  
CSULLIVAN

**Analyzed By**  
EGARDNER  
CSULLIVAN

**Sample Name:** D18A030-07  
**Lab Code:** J1802778-007  
**Sample Matrix:** Water

**Date Collected:** 04/5/18  
**Date Received:** 04/17/18

**Analysis Method**  
200.7  
200.8

**Extracted/Digested By**  
EGARDNER  
CSULLIVAN

**Analyzed By**  
EGARDNER  
CSULLIVAN

**Sample Name:** D18A030-08  
**Lab Code:** J1802778-008  
**Sample Matrix:** Water

**Date Collected:** 04/6/18  
**Date Received:** 04/17/18

**Analysis Method**  
200.7  
200.8

**Extracted/Digested By**  
EGARDNER  
CSULLIVAN

**Analyzed By**  
EGARDNER  
CSULLIVAN



ALS Group USA, Corp.  
dba ALS Environmental  
Analyst Summary report

**Client:** Gainesville Regional Utilities  
**Project:** D18A030

**Service Request:** J1802778

**Sample Name:** D18A030-09  
**Lab Code:** J1802778-009  
**Sample Matrix:** Water

**Date Collected:** 04/6/18  
**Date Received:** 04/17/18

**Analysis Method**  
200.7  
200.8

**Extracted/Digested By**  
EGARDNER  
CSULLIVAN

**Analyzed By**  
EGARDNER  
CSULLIVAN

**Sample Name:** D18A030-10  
**Lab Code:** J1802778-010  
**Sample Matrix:** Water

**Date Collected:** 04/5/18  
**Date Received:** 04/17/18

**Analysis Method**  
200.7  
200.8

**Extracted/Digested By**  
EGARDNER  
CSULLIVAN

**Analyzed By**  
EGARDNER  
CSULLIVAN

**Sample Name:** D18A030-11  
**Lab Code:** J1802778-011  
**Sample Matrix:** Water

**Date Collected:** 04/6/18  
**Date Received:** 04/17/18

**Analysis Method**  
200.7  
200.8

**Extracted/Digested By**  
EGARDNER  
CSULLIVAN

**Analyzed By**  
EGARDNER  
CSULLIVAN

**Sample Name:** D18A030-12  
**Lab Code:** J1802778-012  
**Sample Matrix:** Water

**Date Collected:** 04/3/18  
**Date Received:** 04/17/18

**Analysis Method**  
200.7  
200.8

**Extracted/Digested By**  
EGARDNER  
CSULLIVAN

**Analyzed By**  
EGARDNER  
CSULLIVAN

ALS Group USA, Corp.  
dba ALS Environmental

Analyst Summary report

**Client:** Gainesville Regional Utilities  
**Project:** D18A030

**Service Request:** J1802778

**Sample Name:** D18A030-13  
**Lab Code:** J1802778-013  
**Sample Matrix:** Water

**Date Collected:** 04/5/18  
**Date Received:** 04/17/18

**Analysis Method**  
200.7  
200.8

**Extracted/Digested By**  
EGARDNER  
CSULLIVAN

**Analyzed By**  
EGARDNER  
CSULLIVAN

**Sample Name:** D18A030-14  
**Lab Code:** J1802778-014  
**Sample Matrix:** Water

**Date Collected:** 04/5/18  
**Date Received:** 04/17/18

**Analysis Method**  
200.7  
200.8

**Extracted/Digested By**  
EGARDNER  
CSULLIVAN

**Analyzed By**  
EGARDNER  
CSULLIVAN

**Sample Name:** D18A030-15  
**Lab Code:** J1802778-015  
**Sample Matrix:** Water

**Date Collected:** 04/3/18  
**Date Received:** 04/17/18

**Analysis Method**  
200.7  
200.8

**Extracted/Digested By**  
EGARDNER  
CSULLIVAN

**Analyzed By**  
EGARDNER  
CSULLIVAN

ALS Group USA, Corp.  
dba ALS Environmental

Analytical Report

Client: Gainesville Regional Utilities  
Project: D18A030  
Sample Matrix: Water  
Sample Name: D18A030-01  
Lab Code: J1802778-001

Service Request: J1802778  
Date Collected: 04/02/18 18:27  
Date Received: 04/17/18 10:30

Basis: NA

Inorganic Parameters

| Analyte Name      | Analysis Method | Result    | Units | PQL    | MDL     | Dil. | Date Analyzed  | Date Extracted | Q |
|-------------------|-----------------|-----------|-------|--------|---------|------|----------------|----------------|---|
| Aluminum, Total   | 200.7           | 0.03 IV   | mg/L  | 0.10   | 0.010   | 1    | 04/20/18 01:47 | 04/19/18       |   |
| Antimony, Total   | 200.8           | 0.04 U    | ug/L  | 1.0    | 0.04    | 1    | 04/20/18 11:51 | 04/18/18       |   |
| Arsenic, Total    | 200.8           | 11.3      | ug/L  | 1.0    | 0.10    | 1    | 04/20/18 11:51 | 04/18/18       |   |
| Barium, Total     | 200.7           | 0.014     | mg/L  | 0.010  | 0.001   | 1    | 04/20/18 01:48 | 04/19/18       |   |
| Beryllium, Total  | 200.7           | 0.00006 U | mg/L  | 0.0040 | 0.00006 | 1    | 04/20/18 01:48 | 04/19/18       |   |
| Cadmium, Total    | 200.7           | 0.0002 U  | mg/L  | 0.0050 | 0.0002  | 1    | 04/20/18 01:48 | 04/19/18       |   |
| Calcium, Total    | 200.7           | 52.2      | mg/L  | 0.10   | 0.04    | 1    | 04/20/18 01:47 | 04/19/18       |   |
| Chromium, Total   | 200.7           | 0.001 I   | mg/L  | 0.010  | 0.0004  | 1    | 04/20/18 01:48 | 04/19/18       |   |
| Cobalt, Total     | 200.7           | 0.003 I   | mg/L  | 0.010  | 0.003   | 1    | 04/20/18 01:48 | 04/19/18       |   |
| Copper, Total     | 200.7           | 0.0010 U  | mg/L  | 0.010  | 0.0010  | 1    | 04/20/18 01:48 | 04/19/18       |   |
| Iron, Total       | 200.7           | 4.77      | mg/L  | 0.10   | 0.010   | 1    | 04/20/18 01:47 | 04/19/18       |   |
| Lead, Total       | 200.8           | 0.03 U    | ug/L  | 0.50   | 0.03    | 1    | 04/20/18 11:51 | 04/18/18       |   |
| Lithium, Total    | 200.7           | 0.002 U   | mg/L  | 0.10   | 0.002   | 1    | 04/20/18 01:47 | 04/19/18       |   |
| Magnesium, Total  | 200.7           | 29.5      | mg/L  | 0.10   | 0.009   | 1    | 04/20/18 01:47 | 04/19/18       |   |
| Manganese, Total  | 200.7           | 0.143     | mg/L  | 0.010  | 0.0007  | 1    | 04/20/18 01:48 | 04/19/18       |   |
| Molybdenum, Total | 200.7           | 0.005 I   | mg/L  | 0.010  | 0.0003  | 1    | 04/20/18 01:48 | 04/19/18       |   |
| Nickel, Total     | 200.7           | 0.002 I   | mg/L  | 0.010  | 0.0007  | 1    | 04/20/18 01:48 | 04/19/18       |   |
| Potassium, Total  | 200.7           | 0.5 I     | mg/L  | 2.0    | 0.05    | 1    | 04/20/18 01:47 | 04/19/18       |   |
| Selenium, Total   | 200.7           | 0.005 I   | mg/L  | 0.010  | 0.002   | 1    | 04/20/18 01:48 | 04/19/18       |   |
| Silver, Total     | 200.7           | 0.0004 U  | mg/L  | 0.010  | 0.0004  | 1    | 04/20/18 01:48 | 04/19/18       |   |
| Sodium, Total     | 200.7           | 11.8      | mg/L  | 0.50   | 0.02    | 1    | 04/20/18 01:47 | 04/19/18       |   |
| Strontium, Total  | 200.7           | 0.045     | mg/L  | 0.010  | 0.0001  | 1    | 04/20/18 01:47 | 04/19/18       |   |
| Thallium, Total   | 200.8           | 0.02 U    | ug/L  | 0.20   | 0.02    | 1    | 04/20/18 11:51 | 04/18/18       |   |
| Vanadium, Total   | 200.7           | 0.0008 U  | mg/L  | 0.020  | 0.0008  | 1    | 04/20/18 01:48 | 04/19/18       |   |
| Zinc, Total       | 200.7           | 0.006 U   | mg/L  | 0.020  | 0.006   | 1    | 04/20/18 01:48 | 04/19/18       |   |

ALS Group USA, Corp.  
dba ALS Environmental

Analytical Report

Client: Gainesville Regional Utilities  
Project: D18A030  
Sample Matrix: Water  
Sample Name: D18A030-02  
Lab Code: J1802778-002

Service Request: J1802778  
Date Collected: 04/02/18 15:45  
Date Received: 04/17/18 10:30

Basis: NA

*R2T1*

Inorganic Parameters

| Analyte Name      | Analysis Method | Result    | Units | PQL    | MDL     | Dil. | Date Analyzed  | Date Extracted | Q |
|-------------------|-----------------|-----------|-------|--------|---------|------|----------------|----------------|---|
| Aluminum, Total   | 200.7           | 0.17      | mg/L  | 0.10   | 0.010   | 1    | 04/20/18 01:52 | 04/19/18       |   |
| Antimony, Total   | 200.8           | 0.04 U    | ug/L  | 1.0    | 0.04    | 1    | 04/20/18 11:53 | 04/18/18       |   |
| Arsenic, Total    | 200.8           | 0.2 I     | ug/L  | 1.0    | 0.10    | 1    | 04/20/18 11:53 | 04/18/18       |   |
| Barium, Total     | 200.7           | 0.002 I   | mg/L  | 0.010  | 0.001   | 1    | 04/20/18 01:53 | 04/19/18       |   |
| Beryllium, Total  | 200.7           | 0.00006 U | mg/L  | 0.0040 | 0.00006 | 1    | 04/20/18 01:53 | 04/19/18       |   |
| Cadmium, Total    | 200.7           | 0.0002 U  | mg/L  | 0.0050 | 0.0002  | 1    | 04/20/18 01:53 | 04/19/18       |   |
| Calcium, Total    | 200.7           | 4.35      | mg/L  | 0.10   | 0.04    | 1    | 04/20/18 01:52 | 04/19/18       |   |
| Chromium, Total   | 200.7           | 0.003 I   | mg/L  | 0.010  | 0.0004  | 1    | 04/20/18 01:53 | 04/19/18       |   |
| Cobalt, Total     | 200.7           | 0.003 U   | mg/L  | 0.010  | 0.003   | 1    | 04/20/18 01:53 | 04/19/18       |   |
| Copper, Total     | 200.7           | 0.001 IV  | mg/L  | 0.010  | 0.0010  | 1    | 04/20/18 01:53 | 04/19/18       |   |
| Iron, Total       | 200.7           | 0.15      | mg/L  | 0.10   | 0.010   | 1    | 04/20/18 01:52 | 04/19/18       |   |
| Lead, Total       | 200.8           | 0.03 U    | ug/L  | 0.50   | 0.03    | 1    | 04/20/18 11:53 | 04/18/18       |   |
| Lithium, Total    | 200.7           | 0.002 U   | mg/L  | 0.10   | 0.002   | 1    | 04/20/18 01:52 | 04/19/18       |   |
| Magnesium, Total  | 200.7           | 0.53      | mg/L  | 0.10   | 0.009   | 1    | 04/20/18 01:52 | 04/19/18       |   |
| Manganese, Total  | 200.7           | 0.006 I   | mg/L  | 0.010  | 0.0007  | 1    | 04/20/18 01:53 | 04/19/18       |   |
| Molybdenum, Total | 200.7           | 0.001 I   | mg/L  | 0.010  | 0.0003  | 1    | 04/20/18 01:53 | 04/19/18       |   |
| Nickel, Total     | 200.7           | 0.003 I   | mg/L  | 0.010  | 0.0007  | 1    | 04/20/18 01:53 | 04/19/18       |   |
| Potassium, Total  | 200.7           | 0.07 I    | mg/L  | 2.0    | 0.05    | 1    | 04/20/18 01:52 | 04/19/18       |   |
| Selenium, Total   | 200.7           | 0.004 I   | mg/L  | 0.010  | 0.002   | 1    | 04/20/18 01:53 | 04/19/18       |   |
| Silver, Total     | 200.7           | 0.0004 U  | mg/L  | 0.010  | 0.0004  | 1    | 04/20/18 01:53 | 04/19/18       |   |
| Sodium, Total     | 200.7           | 3.58      | mg/L  | 0.50   | 0.02    | 1    | 04/20/18 01:52 | 04/19/18       |   |
| Strontium, Total  | 200.7           | 0.019     | mg/L  | 0.010  | 0.0001  | 1    | 04/20/18 01:52 | 04/19/18       |   |
| Thallium, Total   | 200.8           | 0.02 U    | ug/L  | 0.20   | 0.02    | 1    | 04/20/18 11:53 | 04/18/18       |   |
| Vanadium, Total   | 200.7           | 0.002 I   | mg/L  | 0.020  | 0.0008  | 1    | 04/20/18 01:53 | 04/19/18       |   |
| Zinc, Total       | 200.7           | 0.006 I   | mg/L  | 0.020  | 0.006   | 1    | 04/20/18 01:53 | 04/19/18       |   |

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Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A030  
**Sample Matrix:** Water  
**Sample Name:** D18A030-04  
**Lab Code:** J1802778-004

*R4TS*

**Service Request:** J1802778  
**Date Collected:** 04/03/18 15:37  
**Date Received:** 04/17/18 10:30

**Basis:** NA

**Inorganic Parameters**

| Analyte Name      | Analysis Method | Result         | Units | PQL    | MDL     | Dil. | Date Analyzed  | Date Extracted | Q |
|-------------------|-----------------|----------------|-------|--------|---------|------|----------------|----------------|---|
| Aluminum, Total   | 200.7           | <b>0.12</b>    | mg/L  | 0.10   | 0.010   | 1    | 04/20/18 02:22 | 04/19/18       |   |
| Antimony, Total   | 200.8           | <b>0.09 I</b>  | ug/L  | 1.0    | 0.04    | 1    | 04/20/18 12:05 | 04/18/18       |   |
| Arsenic, Total    | 200.8           | <b>4.5</b>     | ug/L  | 1.0    | 0.10    | 1    | 04/20/18 12:05 | 04/18/18       |   |
| Barium, Total     | 200.7           | <b>0.014</b>   | mg/L  | 0.010  | 0.001   | 1    | 04/20/18 02:23 | 04/19/18       |   |
| Beryllium, Total  | 200.7           | 0.00006 U      | mg/L  | 0.0040 | 0.00006 | 1    | 04/20/18 02:23 | 04/19/18       |   |
| Cadmium, Total    | 200.7           | 0.0002 U       | mg/L  | 0.0050 | 0.0002  | 1    | 04/20/18 02:23 | 04/19/18       |   |
| Calcium, Total    | 200.7           | <b>87.8</b>    | mg/L  | 0.10   | 0.04    | 1    | 04/20/18 02:22 | 04/19/18       |   |
| Chromium, Total   | 200.7           | <b>0.003 I</b> | mg/L  | 0.010  | 0.0004  | 1    | 04/20/18 02:23 | 04/19/18       |   |
| Cobalt, Total     | 200.7           | 0.003 U        | mg/L  | 0.010  | 0.003   | 1    | 04/20/18 02:23 | 04/19/18       |   |
| Copper, Total     | 200.7           | 0.0010 U       | mg/L  | 0.010  | 0.0010  | 1    | 04/20/18 02:23 | 04/19/18       |   |
| Iron, Total       | 200.7           | <b>32.6</b>    | mg/L  | 0.10   | 0.010   | 1    | 04/20/18 02:22 | 04/19/18       |   |
| Lead, Total       | 200.8           | 0.03 U         | ug/L  | 0.50   | 0.03    | 1    | 04/20/18 12:05 | 04/18/18       |   |
| Lithium, Total    | 200.7           | 0.002 U        | mg/L  | 0.10   | 0.002   | 1    | 04/20/18 02:22 | 04/19/18       |   |
| Magnesium, Total  | 200.7           | <b>31.0</b>    | mg/L  | 0.10   | 0.009   | 1    | 04/20/18 02:22 | 04/19/18       |   |
| Manganese, Total  | 200.7           | <b>0.154</b>   | mg/L  | 0.010  | 0.0007  | 1    | 04/20/18 02:23 | 04/19/18       |   |
| Molybdenum, Total | 200.7           | <b>0.006 I</b> | mg/L  | 0.010  | 0.0003  | 1    | 04/20/18 02:23 | 04/19/18       |   |
| Nickel, Total     | 200.7           | 0.0007 U       | mg/L  | 0.010  | 0.0007  | 1    | 04/20/18 02:23 | 04/19/18       |   |
| Potassium, Total  | 200.7           | <b>0.5 I</b>   | mg/L  | 2.0    | 0.05    | 1    | 04/20/18 02:22 | 04/19/18       |   |
| Selenium, Total   | 200.7           | <b>0.007 I</b> | mg/L  | 0.010  | 0.002   | 1    | 04/20/18 02:23 | 04/19/18       |   |
| Silver, Total     | 200.7           | 0.0004 U       | mg/L  | 0.010  | 0.0004  | 1    | 04/20/18 02:23 | 04/19/18       |   |
| Sodium, Total     | 200.7           | <b>11.7</b>    | mg/L  | 0.50   | 0.02    | 1    | 04/20/18 02:22 | 04/19/18       |   |
| Strontium, Total  | 200.7           | <b>0.080</b>   | mg/L  | 0.010  | 0.0001  | 1    | 04/20/18 02:22 | 04/19/18       |   |
| Thallium, Total   | 200.8           | 0.02 U         | ug/L  | 0.20   | 0.02    | 1    | 04/20/18 12:05 | 04/18/18       |   |
| Vanadium, Total   | 200.7           | 0.0008 U       | mg/L  | 0.020  | 0.0008  | 1    | 04/20/18 02:23 | 04/19/18       |   |
| Zinc, Total       | 200.7           | 0.006 U        | mg/L  | 0.020  | 0.006   | 1    | 04/20/18 02:23 | 04/19/18       |   |

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Analytical Report

Client: Gainesville Regional Utilities  
Project: D18A030  
Sample Matrix: Water  
Sample Name: D18A030-05  
Lab Code: J1802778-005

Service Request: J1802778  
Date Collected: 04/03/18 08:50  
Date Received: 04/17/18 10:30

Basis: NA

*RGTT*

Inorganic Parameters

| Analyte Name      | Analysis Method | Result    | Units | PQL    | MDL     | Dil. | Date Analyzed  | Date Extracted | Q |
|-------------------|-----------------|-----------|-------|--------|---------|------|----------------|----------------|---|
| Aluminum, Total   | 200.7           | 0.17      | mg/L  | 0.10   | 0.010   | 1    | 04/20/18 02:27 | 04/19/18       |   |
| Antimony, Total   | 200.8           | 0.04 U    | ug/L  | 1.0    | 0.04    | 1    | 04/20/18 12:07 | 04/18/18       |   |
| Arsenic, Total    | 200.8           | 0.3 I     | ug/L  | 1.0    | 0.10    | 1    | 04/20/18 12:07 | 04/18/18       |   |
| Barium, Total     | 200.7           | 0.021     | mg/L  | 0.010  | 0.001   | 1    | 04/20/18 02:28 | 04/19/18       |   |
| Beryllium, Total  | 200.7           | 0.00006 U | mg/L  | 0.0040 | 0.00006 | 1    | 04/20/18 02:28 | 04/19/18       |   |
| Cadmium, Total    | 200.7           | 0.0002 U  | mg/L  | 0.0050 | 0.0002  | 1    | 04/20/18 02:28 | 04/19/18       |   |
| Calcium, Total    | 200.7           | 8.74      | mg/L  | 0.10   | 0.04    | 1    | 04/20/18 02:27 | 04/19/18       |   |
| Chromium, Total   | 200.7           | 0.0004 U  | mg/L  | 0.010  | 0.0004  | 1    | 04/20/18 02:28 | 04/19/18       |   |
| Cobalt, Total     | 200.7           | 0.003 U   | mg/L  | 0.010  | 0.003   | 1    | 04/20/18 02:28 | 04/19/18       |   |
| Copper, Total     | 200.7           | 0.001 IV  | mg/L  | 0.010  | 0.0010  | 1    | 04/20/18 02:28 | 04/19/18       |   |
| Iron, Total       | 200.7           | 0.46      | mg/L  | 0.10   | 0.010   | 1    | 04/20/18 02:27 | 04/19/18       |   |
| Lead, Total       | 200.8           | 0.03 U    | ug/L  | 0.50   | 0.03    | 1    | 04/20/18 12:07 | 04/18/18       |   |
| Lithium, Total    | 200.7           | 0.002 U   | mg/L  | 0.10   | 0.002   | 1    | 04/20/18 02:27 | 04/19/18       |   |
| Magnesium, Total  | 200.7           | 4.84      | mg/L  | 0.10   | 0.009   | 1    | 04/20/18 02:27 | 04/19/18       |   |
| Manganese, Total  | 200.7           | 0.003 I   | mg/L  | 0.010  | 0.0007  | 1    | 04/20/18 02:28 | 04/19/18       |   |
| Molybdenum, Total | 200.7           | 0.002 I   | mg/L  | 0.010  | 0.0003  | 1    | 04/20/18 02:28 | 04/19/18       |   |
| Nickel, Total     | 200.7           | 0.001 I   | mg/L  | 0.010  | 0.0007  | 1    | 04/20/18 02:28 | 04/19/18       |   |
| Potassium, Total  | 200.7           | 4.3       | mg/L  | 2.0    | 0.05    | 1    | 04/20/18 02:27 | 04/19/18       |   |
| Selenium, Total   | 200.7           | 0.002 I   | mg/L  | 0.010  | 0.002   | 1    | 04/20/18 02:28 | 04/19/18       |   |
| Silver, Total     | 200.7           | 0.0004 U  | mg/L  | 0.010  | 0.0004  | 1    | 04/20/18 02:28 | 04/19/18       |   |
| Sodium, Total     | 200.7           | 32.1      | mg/L  | 0.50   | 0.02    | 1    | 04/20/18 02:27 | 04/19/18       |   |
| Strontium, Total  | 200.7           | 0.069     | mg/L  | 0.010  | 0.0001  | 1    | 04/20/18 02:27 | 04/19/18       |   |
| Thallium, Total   | 200.8           | 0.02 I    | ug/L  | 0.20   | 0.02    | 1    | 04/20/18 12:07 | 04/18/18       |   |
| Vanadium, Total   | 200.7           | 0.004 I   | mg/L  | 0.020  | 0.0008  | 1    | 04/20/18 02:28 | 04/19/18       |   |
| Zinc, Total       | 200.7           | 0.006 U   | mg/L  | 0.020  | 0.006   | 1    | 04/20/18 02:28 | 04/19/18       |   |

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Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A030  
**Sample Matrix:** Water  
**Sample Name:** D18A030-06  
**Lab Code:** J1802778-006

*RLUTY*

**Service Request:** J1802778  
**Date Collected:** 04/03/18 12:41  
**Date Received:** 04/17/18 10:30

**Basis:** NA

Inorganic Parameters

| Analyte Name      | Analysis Method | Result          | Units | PQL    | MDL     | Dil. | Date Analyzed  | Date Extracted | Q |
|-------------------|-----------------|-----------------|-------|--------|---------|------|----------------|----------------|---|
| Aluminum, Total   | 200.7           | <b>0.04</b> IV  | mg/L  | 0.10   | 0.010   | 1    | 04/20/18 02:31 | 04/19/18       |   |
| Antimony, Total   | 200.8           | <b>0.07</b> I   | ug/L  | 1.0    | 0.04    | 1    | 04/20/18 12:08 | 04/18/18       |   |
| Arsenic, Total    | 200.8           | <b>1.2</b>      | ug/L  | 1.0    | 0.10    | 1    | 04/20/18 12:08 | 04/18/18       |   |
| Barium, Total     | 200.7           | <b>0.013</b>    | mg/L  | 0.010  | 0.001   | 1    | 04/20/18 02:33 | 04/19/18       |   |
| Beryllium, Total  | 200.7           | 0.00006 U       | mg/L  | 0.0040 | 0.00006 | 1    | 04/20/18 02:32 | 04/19/18       |   |
| Cadmium, Total    | 200.7           | 0.0002 U        | mg/L  | 0.0050 | 0.0002  | 1    | 04/20/18 02:33 | 04/19/18       |   |
| Calcium, Total    | 200.7           | <b>51.7</b>     | mg/L  | 0.10   | 0.04    | 1    | 04/20/18 02:31 | 04/19/18       |   |
| Chromium, Total   | 200.7           | 0.0004 U        | mg/L  | 0.010  | 0.0004  | 1    | 04/20/18 02:33 | 04/19/18       |   |
| Cobalt, Total     | 200.7           | 0.003 U         | mg/L  | 0.010  | 0.003   | 1    | 04/20/18 02:33 | 04/19/18       |   |
| Copper, Total     | 200.7           | <b>0.001</b> IV | mg/L  | 0.010  | 0.0010  | 1    | 04/20/18 02:33 | 04/19/18       |   |
| Iron, Total       | 200.7           | <b>0.35</b>     | mg/L  | 0.10   | 0.010   | 1    | 04/20/18 02:31 | 04/19/18       |   |
| Lead, Total       | 200.8           | 0.03 U          | ug/L  | 0.50   | 0.03    | 1    | 04/20/18 12:08 | 04/18/18       |   |
| Lithium, Total    | 200.7           | 0.002 U         | mg/L  | 0.10   | 0.002   | 1    | 04/20/18 02:31 | 04/19/18       |   |
| Magnesium, Total  | 200.7           | <b>3.75</b>     | mg/L  | 0.10   | 0.009   | 1    | 04/20/18 02:31 | 04/19/18       |   |
| Manganese, Total  | 200.7           | <b>0.025</b>    | mg/L  | 0.010  | 0.0007  | 1    | 04/20/18 02:32 | 04/19/18       |   |
| Molybdenum, Total | 200.7           | <b>0.006</b> I  | mg/L  | 0.010  | 0.0003  | 1    | 04/20/18 02:33 | 04/19/18       |   |
| Nickel, Total     | 200.7           | <b>0.001</b> I  | mg/L  | 0.010  | 0.0007  | 1    | 04/20/18 02:33 | 04/19/18       |   |
| Potassium, Total  | 200.7           | <b>1.5</b> I    | mg/L  | 2.0    | 0.05    | 1    | 04/20/18 02:31 | 04/19/18       |   |
| Selenium, Total   | 200.7           | <b>0.008</b> I  | mg/L  | 0.010  | 0.002   | 1    | 04/20/18 02:33 | 04/19/18       |   |
| Silver, Total     | 200.7           | 0.0004 U        | mg/L  | 0.010  | 0.0004  | 1    | 04/20/18 02:32 | 04/19/18       |   |
| Sodium, Total     | 200.7           | <b>8.05</b>     | mg/L  | 0.50   | 0.02    | 1    | 04/20/18 02:31 | 04/19/18       |   |
| Strontium, Total  | 200.7           | <b>0.098</b>    | mg/L  | 0.010  | 0.0001  | 1    | 04/20/18 02:31 | 04/19/18       |   |
| Thallium, Total   | 200.8           | 0.02 U          | ug/L  | 0.20   | 0.02    | 1    | 04/20/18 12:08 | 04/18/18       |   |
| Vanadium, Total   | 200.7           | <b>0.002</b> I  | mg/L  | 0.020  | 0.0008  | 1    | 04/20/18 02:33 | 04/19/18       |   |
| Zinc, Total       | 200.7           | 0.006 U         | mg/L  | 0.020  | 0.006   | 1    | 04/20/18 02:33 | 04/19/18       |   |

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Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A030  
**Sample Matrix:** Water  
**Sample Name:** D18A030-14  
**Lab Code:** J1802778-014

**Service Request:** J1802778  
**Date Collected:** 04/05/18 12:47  
**Date Received:** 04/17/18 10:30

**Basis:** NA

*Eg. Blank*

**Inorganic Parameters**

| Analyte Name      | Analysis Method | Result    | Units | PQL    | MDL     | Dil. | Date Analyzed  | Date Extracted | Q |
|-------------------|-----------------|-----------|-------|--------|---------|------|----------------|----------------|---|
| Aluminum, Total   | 200.7           | 0.01 IV   | mg/L  | 0.10   | 0.010   | 1    | 04/20/18 03:28 | 04/19/18       |   |
| Antimony, Total   | 200.8           | 0.04 U    | ug/L  | 1.0    | 0.04    | 1    | 04/20/18 12:27 | 04/18/18       |   |
| Arsenic, Total    | 200.8           | 0.10 U    | ug/L  | 1.0    | 0.10    | 1    | 04/20/18 12:27 | 04/18/18       |   |
| Barium, Total     | 200.7           | 0.001 U   | mg/L  | 0.010  | 0.001   | 1    | 04/20/18 03:29 | 04/19/18       |   |
| Beryllium, Total  | 200.7           | 0.00006 U | mg/L  | 0.0040 | 0.00006 | 1    | 04/20/18 03:29 | 04/19/18       |   |
| Cadmium, Total    | 200.7           | 0.0002 U  | mg/L  | 0.0050 | 0.0002  | 1    | 04/20/18 03:29 | 04/19/18       |   |
| Calcium, Total    | 200.7           | 0.04 U    | mg/L  | 0.10   | 0.04    | 1    | 04/20/18 03:28 | 04/19/18       |   |
| Chromium, Total   | 200.7           | 0.0004 U  | mg/L  | 0.010  | 0.0004  | 1    | 04/20/18 03:29 | 04/19/18       |   |
| Cobalt, Total     | 200.7           | 0.003 U   | mg/L  | 0.010  | 0.003   | 1    | 04/20/18 03:29 | 04/19/18       |   |
| Copper, Total     | 200.7           | 0.001 IV  | mg/L  | 0.010  | 0.0010  | 1    | 04/20/18 03:29 | 04/19/18       |   |
| Iron, Total       | 200.7           | 0.010 U   | mg/L  | 0.10   | 0.010   | 1    | 04/20/18 03:28 | 04/19/18       |   |
| Lead, Total       | 200.8           | 0.03 U    | ug/L  | 0.50   | 0.03    | 1    | 04/20/18 12:27 | 04/18/18       |   |
| Lithium, Total    | 200.7           | 0.002 U   | mg/L  | 0.10   | 0.002   | 1    | 04/20/18 03:28 | 04/19/18       |   |
| Magnesium, Total  | 200.7           | 0.009 U   | mg/L  | 0.10   | 0.009   | 1    | 04/20/18 03:28 | 04/19/18       |   |
| Manganese, Total  | 200.7           | 0.0007 U  | mg/L  | 0.010  | 0.0007  | 1    | 04/20/18 03:29 | 04/19/18       |   |
| Molybdenum, Total | 200.7           | 0.0003 U  | mg/L  | 0.010  | 0.0003  | 1    | 04/20/18 03:29 | 04/19/18       |   |
| Nickel, Total     | 200.7           | 0.0007 U  | mg/L  | 0.010  | 0.0007  | 1    | 04/20/18 03:29 | 04/19/18       |   |
| Potassium, Total  | 200.7           | 0.05 U    | mg/L  | 2.0    | 0.05    | 1    | 04/20/18 03:28 | 04/19/18       |   |
| Selenium, Total   | 200.7           | 0.002 U   | mg/L  | 0.010  | 0.002   | 1    | 04/20/18 03:29 | 04/19/18       |   |
| Silver, Total     | 200.7           | 0.0004 U  | mg/L  | 0.010  | 0.0004  | 1    | 04/20/18 03:29 | 04/19/18       |   |
| Sodium, Total     | 200.7           | 0.02 U    | mg/L  | 0.50   | 0.02    | 1    | 04/20/18 03:28 | 04/19/18       |   |
| Strontium, Total  | 200.7           | 0.0001 U  | mg/L  | 0.010  | 0.0001  | 1    | 04/20/18 03:28 | 04/19/18       |   |
| Thallium, Total   | 200.8           | 0.02 U    | ug/L  | 0.20   | 0.02    | 1    | 04/20/18 12:27 | 04/18/18       |   |
| Vanadium, Total   | 200.7           | 0.0008 U  | mg/L  | 0.020  | 0.0008  | 1    | 04/20/18 03:29 | 04/19/18       |   |
| Zinc, Total       | 200.7           | 0.006 U   | mg/L  | 0.020  | 0.006   | 1    | 04/20/18 03:29 | 04/19/18       |   |





## QC Summary Forms

**ALS Environmental - Jacksonville Laboratory**  
9143 Philips Highway, Suite 200, Jacksonville, FL 32256  
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## Metals

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[www.alsglobal.com](http://www.alsglobal.com)

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Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A030  
**Sample Matrix:** Water  
  
**Sample Name:** Method Blank  
**Lab Code:** J1802778-MB

**Service Request:** J1802778  
**Date Collected:** NA  
**Date Received:** NA  
  
**Basis:** NA

Inorganic Parameters

| Analyte Name      | Analysis Method | Result    | Units | PQL    | MDL     | Dil. | Date Analyzed  | Date Extracted | Q |
|-------------------|-----------------|-----------|-------|--------|---------|------|----------------|----------------|---|
| Aluminum, Total   | 200.7           | 0.01 I    | mg/L  | 0.10   | 0.010   | 1    | 04/20/18 00:12 | 04/19/18       |   |
| Antimony, Total   | 200.8           | 0.04 U    | ug/L  | 1.0    | 0.04    | 1    | 04/20/18 11:48 | 04/18/18       |   |
| Arsenic, Total    | 200.8           | 0.10 U    | ug/L  | 1.0    | 0.10    | 1    | 04/20/18 11:48 | 04/18/18       |   |
| Barium, Total     | 200.7           | 0.001 U   | mg/L  | 0.010  | 0.001   | 1    | 04/20/18 00:13 | 04/19/18       |   |
| Beryllium, Total  | 200.7           | 0.00006 U | mg/L  | 0.0040 | 0.00006 | 1    | 04/20/18 00:13 | 04/19/18       |   |
| Cadmium, Total    | 200.7           | 0.0002 U  | mg/L  | 0.0050 | 0.0002  | 1    | 04/20/18 00:13 | 04/19/18       |   |
| Calcium, Total    | 200.7           | 0.04 U    | mg/L  | 0.10   | 0.04    | 1    | 04/20/18 00:12 | 04/19/18       |   |
| Chromium, Total   | 200.7           | 0.0004 U  | mg/L  | 0.010  | 0.0004  | 1    | 04/20/18 00:13 | 04/19/18       |   |
| Cobalt, Total     | 200.7           | 0.003 U   | mg/L  | 0.010  | 0.003   | 1    | 04/20/18 00:13 | 04/19/18       |   |
| Copper, Total     | 200.7           | 0.001 I   | mg/L  | 0.010  | 0.0010  | 1    | 04/20/18 00:13 | 04/19/18       |   |
| Iron, Total       | 200.7           | 0.010 U   | mg/L  | 0.10   | 0.010   | 1    | 04/20/18 00:12 | 04/19/18       |   |
| Lead, Total       | 200.8           | 0.03 U    | ug/L  | 0.50   | 0.03    | 1    | 04/20/18 11:48 | 04/18/18       |   |
| Lithium, Total    | 200.7           | 0.002 U   | mg/L  | 0.10   | 0.002   | 1    | 04/20/18 00:12 | 04/19/18       |   |
| Magnesium, Total  | 200.7           | 0.009 U   | mg/L  | 0.10   | 0.009   | 1    | 04/20/18 00:12 | 04/19/18       |   |
| Manganese, Total  | 200.7           | 0.0007 U  | mg/L  | 0.010  | 0.0007  | 1    | 04/20/18 00:13 | 04/19/18       |   |
| Molybdenum, Total | 200.7           | 0.0003 U  | mg/L  | 0.010  | 0.0003  | 1    | 04/20/18 00:13 | 04/19/18       |   |
| Nickel, Total     | 200.7           | 0.0007 U  | mg/L  | 0.010  | 0.0007  | 1    | 04/20/18 00:13 | 04/19/18       |   |
| Potassium, Total  | 200.7           | 0.05 U    | mg/L  | 2.0    | 0.05    | 1    | 04/20/18 00:12 | 04/19/18       |   |
| Selenium, Total   | 200.7           | 0.002 U   | mg/L  | 0.010  | 0.002   | 1    | 04/20/18 00:13 | 04/19/18       |   |
| Silver, Total     | 200.7           | 0.0004 U  | mg/L  | 0.010  | 0.0004  | 1    | 04/20/18 00:13 | 04/19/18       |   |
| Sodium, Total     | 200.7           | 0.02 U    | mg/L  | 0.50   | 0.02    | 1    | 04/20/18 00:12 | 04/19/18       |   |
| Strontium, Total  | 200.7           | 0.0001 U  | mg/L  | 0.010  | 0.0001  | 1    | 04/20/18 00:12 | 04/19/18       |   |
| Thallium, Total   | 200.8           | 0.02 U    | ug/L  | 0.20   | 0.02    | 1    | 04/20/18 11:48 | 04/18/18       |   |
| Vanadium, Total   | 200.7           | 0.0008 U  | mg/L  | 0.020  | 0.0008  | 1    | 04/20/18 00:13 | 04/19/18       |   |
| Zinc, Total       | 200.7           | 0.006 U   | mg/L  | 0.020  | 0.006   | 1    | 04/20/18 00:13 | 04/19/18       |   |

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QA/QC Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A030  
**Sample Matrix:** Water

**Service Request:** J1802778  
**Date Collected:** 04/02/18  
**Date Received:** 04/17/18  
**Date Analyzed:** 04/20/18  
**Date Extracted:** 04/19/18

**Duplicate Matrix Spike Summary**  
**Inorganic Parameters**

**Sample Name:** D18A030-02  
**Lab Code:** J1802778-002  
**Analysis Method:** 200.7  
**Prep Method:** EPA 3005A

**Units:** mg/L  
**Basis:** NA

| Analyte Name      | Matrix Spike<br>J1802778-002MS |        |                 |       | Duplicate Matrix Spike<br>J1802778-002DMS |                 |       |                 | RPD | RPD<br>Limit |
|-------------------|--------------------------------|--------|-----------------|-------|---|-----------------|-------|-----------------|-----|--------------|
|                   | Sample<br>Result               | Result | Spike<br>Amount | % Rec | Result                                    | Spike<br>Amount | % Rec | % Rec<br>Limits |     |              |
| Aluminum, Total   | 0.17                           | 5.26   | 5.00            | 102   | 5.10                                      | 5.00            | 98    | 70-130          | 3   | 20           |
| Barium, Total     | 0.002 I                        | 0.510  | 0.500           | 102   | 0.493                                     | 0.500           | 98    | 70-130          | 3   | 20           |
| Beryllium, Total  | 0.00006 U                      | 0.205  | 0.200           | 103   | 0.198                                     | 0.200           | 99    | 70-130          | 3   | 20           |
| Cadmium, Total    | 0.0002 U                       | 0.254  | 0.250           | 102   | 0.244                                     | 0.250           | 98    | 70-130          | 4   | 20           |
| Calcium, Total    | 4.35                           | 9.44   | 5.00            | 102   | 9.18                                      | 5.00            | 97    | 70-130          | 3   | 20           |
| Chromium, Total   | 0.003 I                        | 0.524  | 0.500           | 104   | 0.501                                     | 0.500           | 100   | 70-130          | 4   | 20           |
| Cobalt, Total     | 0.003 U                        | 0.515  | 0.500           | 103   | 0.495                                     | 0.500           | 99    | 70-130          | 4   | 20           |
| Copper, Total     | 0.001 IV                       | 0.505  | 0.500           | 101   | 0.488                                     | 0.500           | 97    | 70-130          | 3   | 20           |
| Iron, Total       | 0.15                           | 5.26   | 5.00            | 102   | 5.12                                      | 5.00            | 99    | 70-130          | 3   | 20           |
| Magnesium, Total  | 0.53                           | 5.67   | 5.00            | 103   | 5.53                                      | 5.00            | 100   | 70-130          | 3   | 20           |
| Manganese, Total  | 0.006 I                        | 0.517  | 0.500           | 102   | 0.500                                     | 0.500           | 99    | 70-130          | 3   | 20           |
| Molybdenum, Total | 0.001 I                        | 0.510  | 0.500           | 102   | 0.489                                     | 0.500           | 98    | 70-130          | 4   | 20           |
| Nickel, Total     | 0.003 I                        | 0.537  | 0.500           | 107   | 0.516                                     | 0.500           | 103   | 70-130          | 4   | 20           |
| Potassium, Total  | 0.07 I                         | 101    | 100             | 101   | 96.9                                      | 100             | 97    | 70-130          | 4   | 20           |
| Selenium, Total   | 0.004 I                        | 0.526  | 0.500           | 104   | 0.500                                     | 0.500           | 99    | 70-130          | 5   | 20           |
| Silver, Total     | 0.0004 U                       | 0.519  | 0.500           | 104   | 0.502                                     | 0.500           | 100   | 70-130          | 3   | 20           |
| Sodium, Total     | 3.58                           | 28.9   | 25.0            | 101   | 27.7                                      | 25.0            | 96    | 70-130          | 4   | 20           |
| Strontium, Total  | 0.019                          | 0.527  | 0.500           | 102   | 0.504                                     | 0.500           | 97    | 70-130          | 4   | 20           |
| Vanadium, Total   | 0.002 I                        | 0.993  | 1.00            | 99    | 0.959                                     | 1.00            | 96    | 70-130          | 3   | 20           |
| Zinc, Total       | 0.006 I                        | 1.02   | 1.00            | 102   | 0.988                                     | 1.00            | 98    | 70-130          | 3   | 20           |
| Lithium, Total    | 0.002 U                        | 5.06   | 5.00            | 101   | 4.84                                      | 5.00            | 97    | 70-130          | 4   | 20           |

Results flagged with an asterisk (\*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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QA/QC Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A030  
**Sample Matrix:** Water

**Service Request:** J1802778  
**Date Analyzed:** 04/20/18

**Lab Control Sample Summary**  
**Inorganic Parameters**

**Units:**mg/L  
**Basis:**NA

**Lab Control Sample**  
J1802778-LCS

| Analyte Name      | Analytical Method | Result | Spike Amount | % Rec | % Rec Limits |
|-------------------|-------------------|--------|--------------|-------|--------------|
| Aluminum, Total   | 200.7             | 5.05   | 5.00         | 101   | 85-115       |
| Barium, Total     | 200.7             | 0.513  | 0.500        | 103   | 85-115       |
| Beryllium, Total  | 200.7             | 0.206  | 0.200        | 103   | 85-115       |
| Cadmium, Total    | 200.7             | 0.253  | 0.250        | 101   | 85-115       |
| Calcium, Total    | 200.7             | 5.06   | 5.00         | 101   | 85-115       |
| Chromium, Total   | 200.7             | 0.517  | 0.500        | 103   | 85-115       |
| Cobalt, Total     | 200.7             | 0.515  | 0.500        | 103   | 85-115       |
| Copper, Total     | 200.7             | 0.511  | 0.500        | 102   | 85-115       |
| Iron, Total       | 200.7             | 5.09   | 5.00         | 102   | 85-115       |
| Lithium, Total    | 200.7             | 5.02   | 5.00         | 100   | 85-115       |
| Magnesium, Total  | 200.7             | 5.13   | 5.00         | 103   | 85-115       |
| Manganese, Total  | 200.7             | 0.514  | 0.500        | 103   | 85-115       |
| Molybdenum, Total | 200.7             | 0.507  | 0.500        | 101   | 85-115       |
| Nickel, Total     | 200.7             | 0.531  | 0.500        | 106   | 85-115       |
| Potassium, Total  | 200.7             | 100    | 100          | 100   | 85-115       |
| Selenium, Total   | 200.7             | 0.518  | 0.500        | 104   | 85-115       |
| Silver, Total     | 200.7             | 0.522  | 0.500        | 104   | 85-115       |
| Sodium, Total     | 200.7             | 25.2   | 25.0         | 101   | 85-115       |
| Strontium, Total  | 200.7             | 0.504  | 0.500        | 101   | 85-115       |
| Vanadium, Total   | 200.7             | 0.996  | 1.00         | 100   | 85-115       |
| Zinc, Total       | 200.7             | 1.03   | 1.00         | 103   | 85-115       |

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QA/QC Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A030  
**Sample Matrix:** Water

**Service Request:** J1802778  
**Date Analyzed:** 04/20/18

**Lab Control Sample Summary**  
**Inorganic Parameters**

**Units:**ug/L  
**Basis:**NA

**Lab Control Sample**  
J1802778-LCS

| <b>Analyte Name</b> | <b>Analytical Method</b> | <b>Result</b> | <b>Spike Amount</b> | <b>% Rec</b> | <b>% Rec Limits</b> |
|---------------------|--------------------------|---------------|---------------------|--------------|---------------------|
| Antimony, Total     | 200.8                    | 48.9          | 50.0                | 98           | 85-115              |
| Arsenic, Total      | 200.8                    | 48.6          | 50.0                | 97           | 85-115              |
| Lead, Total         | 200.8                    | 24.0          | 25.0                | 96           | 85-115              |
| Thallium, Total     | 200.8                    | 9.61          | 10.0                | 96           | 85-115              |

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QA/QC Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A030  
**Sample Matrix:** Water

**Service Request:** J1802778  
**Date Collected:** 04/05/18  
**Date Received:** 04/17/18  
**Date Analyzed:** 04/20/18  
**Date Extracted:** 04/18/18

**Duplicate Matrix Spike Summary  
Inorganic Parameters**

**Sample Name:** D18A030-03  
**Lab Code:** J1802778-003  
**Analysis Method:** 200.8  
**Prep Method:** EPA 3005A

**Units:** ug/L  
**Basis:** NA

| Analyte Name   | Sample Result | Result | Matrix Spike<br>J1802778-003MS |       | Duplicate Matrix Spike<br>J1802778-003DMS |              | % Rec Limits | RPD    | RPD Limit |       |
|----------------|---------------|--------|--------------------------------|-------|---|--------------|--------------|--------|-----------|-------|
|                |               |        | Spike Amount                   | % Rec | Result                                    | Spike Amount |              |        |           | % Rec |
| Arsenic, Total | 1.3           | 53.8   | 50.0                           | 105   | 52.1                                      | 50.0         | 102          | 70-130 | 3         | 20    |
| Lead, Total    | 0.03 I        | 23.4   | 25.0                           | 94    | 23.2                                      | 25.0         | 93           | 70-130 | <1        | 20    |

Results flagged with an asterisk (\*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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QA/QC Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A030  
**Sample Matrix:** Water

**Service Request:** J1802778  
**Date Collected:** 04/05/18  
**Date Received:** 04/17/18  
**Date Analyzed:** 04/20/18  
**Date Extracted:** 04/18/18

**Duplicate Matrix Spike Summary  
Inorganic Parameters**

**Sample Name:** D18A030-13  
**Lab Code:** J1802778-013  
**Analysis Method:** 200.8  
**Prep Method:** EPA 3005A

**Units:** ug/L  
**Basis:** NA

| Analyte Name   | Matrix Spike<br>J1802778-013MS |        |                 |       | Duplicate Matrix Spike<br>J1802778-013DMS |                 |       |                 | RPD | RPD<br>Limit |
|----------------|--------------------------------|--------|-----------------|-------|---|-----------------|-------|-----------------|-----|--------------|
|                | Sample<br>Result               | Result | Spike<br>Amount | % Rec | Result                                    | Spike<br>Amount | % Rec | % Rec<br>Limits |     |              |
| Arsenic, Total | 1.3                            | 51.7   | 50.0            | 101   | 52.2                                      | 50.0            | 102   | 70-130          | 1   | 20           |
| Lead, Total    | 0.03 I                         | 23.8   | 25.0            | 95    | 23.7                                      | 25.0            | 95    | 70-130          | <1  | 20           |

Results flagged with an asterisk (\*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.





April 25, 2018

Service Request No:J1802779

Jeffery Boudreau  
Gainesville Regional Utilities  
10001 NW 13th St  
Gainesville, FL 32653

**Laboratory Results for: D18A031**

Dear Jeffery,

Enclosed are the results of the sample(s) submitted to our laboratory April 17, 2018  
For your reference, these analyses have been assigned our service request number **J1802779**.

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and ALS Environmental is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report. In accordance to the NELAC 2003 Standard, a statement on the estimated uncertainty of measurement of any quantitative analysis will be supplied upon request.

Respectfully submitted,

**ALS Group USA, Corp. dba ALS Environmental**

Gina Bondani  
Project Manager

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PHONE +1 904 739 2277 | FAX +1 904 739 2011  
ALS Group USA, Corp.  
dba ALS Environmental



# Narrative Documents

**ALS Environmental—Jacksonville Laboratory**  
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Phone (904) 739-2277 Fax (904) 739-2011  
[www.alsglobal.com](http://www.alsglobal.com)



**Client:** Gainesville Regional Utilities  
**Project:** D18A031  
**Sample Matrix:** Water

**Service Request:** J1802779  
**Date Received:** 4/17/18

### CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier II data deliverables, including results of QC samples analyzed from this delivery group. When appropriate to the procedure, method blank results have been reported with each analytical test. Analytical procedures performed by the lab are validated in accordance with NELAC standards. Parameters that are included in the NELAC Fields of Testing but are not included in the lab's NELAC accreditation are identified in the discussion of each analytical procedure.

#### Sample Receipt

Samples were received for analysis at ALS Environmental and were received in good condition and consistent with the accompanying chain of custody form. Samples are refrigerated at  $\leq 6^{\circ}\text{C}$  upon receipt at the lab except for aqueous samples designated for metals analyses, which are stored at room temperature.

#### Analyses Notes:

No significant data anomalies were noted with this analysis.

Approved by  Date 4/25/2018



**SAMPLE DETECTION SUMMARY**

**CLIENT ID: D18A031-01 Lab ID: J1802779-001**

| Analyte           | Results | Flag | MDL    | PQL   | Units | Method |
|-------------------|---------|------|--------|-------|-------|--------|
| Antimony, Total   | 0.2     | I    | 0.04   | 1.0   | ug/L  | 200.8  |
| Arsenic, Total    | 1.4     |      | 0.10   | 1.0   | ug/L  | 200.8  |
| Barium, Total     | 0.020   |      | 0.001  | 0.010 | mg/L  | 200.7  |
| Chromium, Total   | 0.001   | I    | 0.0004 | 0.010 | mg/L  | 200.7  |
| Lead, Total       | 0.04    | IV   | 0.03   | 0.50  | ug/L  | 200.8  |
| Molybdenum, Total | 0.006   | I    | 0.0003 | 0.010 | mg/L  | 200.7  |
| Selenium, Total   | 0.006   | I    | 0.002  | 0.010 | mg/L  | 200.7  |

**CLIENT ID: D18A031-02 Lab ID: J1802779-002**

| Analyte           | Results | Flag | MDL    | PQL   | Units | Method |
|-------------------|---------|------|--------|-------|-------|--------|
| Antimony, Total   | 0.2     | I    | 0.04   | 1.0   | ug/L  | 200.8  |
| Arsenic, Total    | 1.0     | I    | 0.10   | 1.0   | ug/L  | 200.8  |
| Barium, Total     | 0.009   | I    | 0.001  | 0.010 | mg/L  | 200.7  |
| Chromium, Total   | 0.001   | I    | 0.0004 | 0.010 | mg/L  | 200.7  |
| Lead, Total       | 0.04    | IV   | 0.03   | 0.50  | ug/L  | 200.8  |
| Molybdenum, Total | 0.008   | I    | 0.0003 | 0.010 | mg/L  | 200.7  |
| Selenium, Total   | 0.007   | I    | 0.002  | 0.010 | mg/L  | 200.7  |

**CLIENT ID: D18A031-03 Lab ID: J1802779-003**

| Analyte           | Results | Flag | MDL    | PQL   | Units | Method |
|-------------------|---------|------|--------|-------|-------|--------|
| Antimony, Total   | 0.1     | I    | 0.04   | 1.0   | ug/L  | 200.8  |
| Arsenic, Total    | 1.4     |      | 0.10   | 1.0   | ug/L  | 200.8  |
| Barium, Total     | 0.013   |      | 0.001  | 0.010 | mg/L  | 200.7  |
| Chromium, Total   | 0.002   | I    | 0.0004 | 0.010 | mg/L  | 200.7  |
| Molybdenum, Total | 0.006   | I    | 0.0003 | 0.010 | mg/L  | 200.7  |
| Selenium, Total   | 0.006   | I    | 0.002  | 0.010 | mg/L  | 200.7  |

**CLIENT ID: D18A031-04 Lab ID: J1802779-004**

| Analyte           | Results | Flag | MDL    | PQL   | Units | Method |
|-------------------|---------|------|--------|-------|-------|--------|
| Antimony, Total   | 0.2     | I    | 0.04   | 1.0   | ug/L  | 200.8  |
| Arsenic, Total    | 0.9     | I    | 0.10   | 1.0   | ug/L  | 200.8  |
| Barium, Total     | 0.039   |      | 0.001  | 0.010 | mg/L  | 200.7  |
| Chromium, Total   | 0.002   | I    | 0.0004 | 0.010 | mg/L  | 200.7  |
| Lead, Total       | 0.03    | IV   | 0.03   | 0.50  | ug/L  | 200.8  |
| Molybdenum, Total | 0.006   | I    | 0.0003 | 0.010 | mg/L  | 200.7  |
| Selenium, Total   | 0.006   | I    | 0.002  | 0.010 | mg/L  | 200.7  |

**CLIENT ID: D18A031-05 Lab ID: J1802779-005**

| Analyte         | Results | Flag | MDL    | PQL   | Units | Method |
|-----------------|---------|------|--------|-------|-------|--------|
| Antimony, Total | 0.4     | I    | 0.04   | 1.0   | ug/L  | 200.8  |
| Arsenic, Total  | 0.3     | I    | 0.10   | 1.0   | ug/L  | 200.8  |
| Barium, Total   | 0.082   |      | 0.001  | 0.010 | mg/L  | 200.7  |
| Chromium, Total | 0.001   | I    | 0.0004 | 0.010 | mg/L  | 200.7  |



**SAMPLE DETECTION SUMMARY**

**CLIENT ID: D18A031-05 Lab ID: J1802779-005**

| Analyte           | Results | Flag | MDL    | PQL   | Units | Method |
|-------------------|---------|------|--------|-------|-------|--------|
| Molybdenum, Total | 0.007   | I    | 0.0003 | 0.010 | mg/L  | 200.7  |
| Selenium, Total   | 0.004   | I    | 0.002  | 0.010 | mg/L  | 200.7  |
| Thallium, Total   | 0.07    | I    | 0.02   | 0.20  | ug/L  | 200.8  |

**CLIENT ID: D18A031-06 Lab ID: J1802779-006**

| Analyte           | Results | Flag | MDL     | PQL    | Units | Method |
|-------------------|---------|------|---------|--------|-------|--------|
| Antimony, Total   | 0.2     | I    | 0.04    | 1.0    | ug/L  | 200.8  |
| Arsenic, Total    | 2.3     |      | 0.10    | 1.0    | ug/L  | 200.8  |
| Barium, Total     | 0.141   |      | 0.001   | 0.010  | mg/L  | 200.7  |
| Beryllium, Total  | 0.0010  | I    | 0.00006 | 0.0040 | mg/L  | 200.7  |
| Chromium, Total   | 0.005   | I    | 0.0004  | 0.010  | mg/L  | 200.7  |
| Lead, Total       | 0.19    | IV   | 0.03    | 0.50   | ug/L  | 200.8  |
| Molybdenum, Total | 0.008   | I    | 0.0003  | 0.010  | mg/L  | 200.7  |
| Selenium, Total   | 0.007   | I    | 0.002   | 0.010  | mg/L  | 200.7  |
| Thallium, Total   | 0.07    | I    | 0.02    | 0.20   | ug/L  | 200.8  |

**CLIENT ID: D18A031-07 Lab ID: J1802779-007**

| Analyte           | Results | Flag | MDL    | PQL   | Units | Method |
|-------------------|---------|------|--------|-------|-------|--------|
| Antimony, Total   | 0.5     | I    | 0.04   | 1.0   | ug/L  | 200.8  |
| Arsenic, Total    | 2.2     |      | 0.10   | 1.0   | ug/L  | 200.8  |
| Barium, Total     | 0.084   |      | 0.001  | 0.010 | mg/L  | 200.7  |
| Chromium, Total   | 0.005   | I    | 0.0004 | 0.010 | mg/L  | 200.7  |
| Lead, Total       | 0.06    | IV   | 0.03   | 0.50  | ug/L  | 200.8  |
| Molybdenum, Total | 0.098   |      | 0.0003 | 0.010 | mg/L  | 200.7  |
| Selenium, Total   | 0.004   | I    | 0.002  | 0.010 | mg/L  | 200.7  |
| Thallium, Total   | 0.03    | I    | 0.02   | 0.20  | ug/L  | 200.8  |

**CLIENT ID: D18A031-08 Lab ID: J1802779-008**

| Analyte           | Results | Flag | MDL    | PQL   | Units | Method |
|-------------------|---------|------|--------|-------|-------|--------|
| Antimony, Total   | 5.9     |      | 0.04   | 1.0   | ug/L  | 200.8  |
| Arsenic, Total    | 1.5     |      | 0.10   | 1.0   | ug/L  | 200.8  |
| Barium, Total     | 0.059   |      | 0.001  | 0.010 | mg/L  | 200.7  |
| Chromium, Total   | 0.003   | I    | 0.0004 | 0.010 | mg/L  | 200.7  |
| Lithium, Total    | 0.30    |      | 0.002  | 0.10  | mg/L  | 200.7  |
| Molybdenum, Total | 0.105   |      | 0.0003 | 0.010 | mg/L  | 200.7  |
| Selenium, Total   | 0.008   | I    | 0.002  | 0.010 | mg/L  | 200.7  |
| Thallium, Total   | 0.46    |      | 0.02   | 0.20  | ug/L  | 200.8  |



## Sample Receipt Information

**ALS Environmental—Jacksonville Laboratory**  
9143 Philips Highway, Suite 200, Jacksonville, FL 32256  
Phone (904) 739-2277 Fax (904) 739-2011  
[www.alsglobal.com](http://www.alsglobal.com)

**Client:** Gainesville Regional Utilities  
**Project:** D18A031

**Service Request:**J1802779

**SAMPLE CROSS-REFERENCE**

| <u>SAMPLE #</u> | <u>CLIENT SAMPLE ID</u> | <u>DATE</u> | <u>TIME</u> |
|-----------------|-------------------------|-------------|-------------|
| J1802779-001    | D18A031-01              | 4/3/2018    | 1337        |
| J1802779-002    | D18A031-02              | 4/3/2018    | 1445        |
| J1802779-003    | D18A031-03              | 4/4/2018    | 1540        |
| J1802779-004    | D18A031-04              | 4/4/2018    | 1410        |
| J1802779-005    | D18A031-05              | 4/3/2018    | 1152        |
| J1802779-006    | D18A031-06              | 4/4/2018    | 1213        |
| J1802779-007    | D18A031-07              | 4/4/2018    | 1032        |
| J1802779-008    | D18A031-08              | 4/4/2018    | 0840        |

### Cooler Receipt Form

Client: GRU Service Request #: 51802779  
 Project: D18A031 Shipping paid by ALS? Yes  No  N/A  
 Cooler received on 4/17/18 and opened on 4/17/18 by SR  
 COURIER: ALS  UPS  FEDEX  DHL Client Other \_\_\_\_\_ Airbill # 8127 8324 8505

- |    |   |                                      |                                  |  |
|----|---|--------------------------------------|----------------------------------|--|
| 1  | Were custody seals on outside of cooler?  | Yes                                  | <input checked="" type="radio"/> | No   |
|    | If yes, how many and where?   | #: _____                             | on lid                           | other                                      |
| 2  | Were seals intact and signature and date correct?   | Yes                                  | No                               | <input checked="" type="radio"/> N/A       |
| 3  | Were custody papers properly filled out?  | <input checked="" type="radio"/> Yes | No                               | N/A  |
| 4  | Temperature of cooler(s) upon receipt (Should be 0°C and ≤ 6°C)   | <u>N/A</u>                           |                                  |  |
| 5  | Thermometer ID  | <u>N/A</u>                           |                                  |  |
| 6  | Temperature Blank Present?  | Yes                                  | <input checked="" type="radio"/> | No   |
| 7  | Were Ice or Ice Packs present   | Ice                                  | Ice Packs                        | <input checked="" type="radio"/> No        |
| 8  | Did all bottles arrive in good condition (unbroken, etc....)?   | <input checked="" type="radio"/> Yes | No                               | N/A  |
| 9  | Type of packing material present  | Netting                              | Vial Holder                      | Bubble Wrap                                |
|    |   | Paper                                | Styrofoam                        | Other <input checked="" type="radio"/> N/A |
| 10 | Were all bottle labels complete (sample ID, preservation, etc....)?   | <input checked="" type="radio"/> Yes | No                               | N/A  |
| 11 | Did all bottle labels and tags agree with custody papers?   | <input checked="" type="radio"/> Yes | No                               | N/A  |
| 12 | Were the correct bottles used for the tests indicated?  | <input checked="" type="radio"/> Yes | No                               | N/A  |
| 13 | Were all of the preserved bottles received with the appropriate preservative?   | <input checked="" type="radio"/> Yes | No                               | <input checked="" type="radio"/> N/A       |
|    | <u>HNO3 pH&lt;2</u> <u>H2SO4 pH&lt;2</u> <u>ZnAc2/NaOH pH&gt;9</u> <u>NaOH pH&gt;12</u> <u>HCl pH&lt;2</u><br><small>Preservative additions noted below</small> | <u>SR 4/17/18</u>                    |                                  |  |
| 14 | Were all samples received within analysis holding times?  | <input checked="" type="radio"/> Yes | No                               | N/A  |
| 15 | Were VOA vials free of air bubbles greater than 6mm? If present, note below   | Yes                                  | No                               | <input checked="" type="radio"/> N/A       |
| 16 | Where did the bottles originate?  | <input checked="" type="radio"/> ALS | Client                           |  |

| Sample ID | Reagent | Lot # | ml added | Initials Date/Time |
|-----------|---------|-------|----------|--------------------|
|           |         |       |          |                    |
|           |         |       |          |                    |
|           |         |       |          |                    |
|           |         |       |          |                    |
|           |         |       |          |                    |
|           |         |       |          |                    |
|           |         |       |          |                    |
|           |         |       |          |                    |
|           |         |       |          |                    |
|           |         |       |          |                    |

Additional comments and/or explanation of all discrepancies noted above:

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Client approval to run samples if discrepancies noted: \_\_\_\_\_ Date: \_\_\_\_\_





**SUBCONTRACT ORDER**  
**Deerhaven Generating Station**  
**D18A031**

51802779

**SENDING LABORATORY:**

Gainesville Regional Utilities  
 Deerhaven Generating Station  
 10001 NW 13th Street  
 Gainesville, FL 32653  
 Phone: 352-334-3434  
 Fax: 352-334-3149  
 Project Manager: Jeff Boudreau

**RECEIVING LABORATORY:**

ALS Global  
 9143 Philips Highway, Suite 200  
 Jacksonville, FL 32256  
 Phone : (904) 394-4426  
 Fax: (904) 739-2011

**J1802779**  
 Gainesville Regional Utilities  
 D18A031

**5**



| Analysis                     | Expires         | Laboratory ID                  | Comments |
|------------------------------|-----------------|--------------------------------|----------|
| <b>Sample Name: SIS-1</b>    |                 |                                |          |
| <b>Sample ID: D18A031-01</b> | <b>Water</b>    | <b>Sampled:03-Apr-18 13:37</b> |          |
| K_Chromium                   | 30-Sep-18 13:37 |                                |          |
| D_Antimony by 200.8          | 30-Sep-18 13:37 |                                |          |
| K_Selenium                   | 30-Sep-18 13:37 |                                |          |
| K_Cobalt                     | 30-Sep-18 13:37 |                                |          |
| K_Cadmium                    | 30-Sep-18 13:37 |                                |          |
| K_Beryllium                  | 30-Sep-18 13:37 |                                |          |
| K_Barium                     | 30-Sep-18 13:37 |                                |          |
| D_Thallium by 200.8          | 30-Sep-18 13:37 |                                |          |
| D_Lithium by 200.7           | 30-Sep-18 13:37 |                                |          |
| D_Lead by 200.8              | 30-Sep-18 13:37 |                                |          |
| D_Arsenic by 200.8           | 30-Sep-18 13:37 |                                |          |
| K_Molybdenum                 | 30-Sep-18 13:37 |                                |          |

*Containers Supplied:*

D\_HDPE, HNO3 pH<2 - 250mL extra2 (B)

|                              |                 |                                |  |
|------------------------------|-----------------|--------------------------------|--|
| <b>Sample Name: SIS-2</b>    |                 |                                |  |
| <b>Sample ID: D18A031-02</b> | <b>Water</b>    | <b>Sampled:03-Apr-18 14:45</b> |  |
| D_Lead by 200.8              | 30-Sep-18 14:45 |                                |  |
| K_Beryllium                  | 30-Sep-18 14:45 |                                |  |
| K_Molybdenum                 | 30-Sep-18 14:45 |                                |  |
| K_Cobalt                     | 30-Sep-18 14:45 |                                |  |
| K_Chromium                   | 30-Sep-18 14:45 |                                |  |
| K_Cadmium                    | 30-Sep-18 14:45 |                                |  |
| K_Barium                     | 30-Sep-18 14:45 |                                |  |
| D_Lithium by 200.7           | 30-Sep-18 14:45 |                                |  |
| K_Selenium                   | 30-Sep-18 14:45 |                                |  |
| D_Arsenic by 200.8           | 30-Sep-18 14:45 |                                |  |
| D_Antimony by 200.8          | 30-Sep-18 14:45 |                                |  |
| D_Thallium by 200.8          | 30-Sep-18 14:45 |                                |  |

*Containers Supplied:*

D\_HDPE, HNO3 pH<2 - 250mL extra2 (B)

|                         |                  |                    |                     |
|-------------------------|------------------|--------------------|---------------------|
| <i>Shelley Phillips</i> | <i>via FedEx</i> | <i>Tenue Futch</i> | <i>4/17/18 1030</i> |
| Released By             | Date             | Received By        | Date                |

|             |      |             |      |
|-------------|------|-------------|------|
| Released By | Date | Received By | Date |
|-------------|------|-------------|------|



**SUBCONTRACT ORDER**  
**Deerhaven Generating Station**  
**D18A031**

51802779

| Analysis | Expires | Laboratory ID | Comments |
|----------|---------|---------------|----------|
|----------|---------|---------------|----------|

**Sample Name: SIS-3**

**Sample ID: D18A031-03      Water      Sampled:04-Apr-18 15:40**

|                     |                 |
|---------------------|-----------------|
| K_Beryllium         | 01-Oct-18 15:40 |
| K_Selenium          | 01-Oct-18 15:40 |
| K_Molybdenum        | 01-Oct-18 15:40 |
| K_Cobalt            | 01-Oct-18 15:40 |
| K_Chromium          | 01-Oct-18 15:40 |
| K_Cadmium           | 01-Oct-18 15:40 |
| D_Thallium by 200.8 | 01-Oct-18 15:40 |
| D_Lithium by 200.7  | 01-Oct-18 15:40 |
| D_Lead by 200.8     | 01-Oct-18 15:40 |
| D_Antimony by 200.8 | 01-Oct-18 15:40 |
| K_Barium            | 01-Oct-18 15:40 |
| D_Arsenic by 200.8  | 01-Oct-18 15:40 |

*Containers Supplied:*

D\_HDPE, HNO3 pH<2 - 250mL extra2 (B)

**Sample Name: SIS-4**

**Sample ID: D18A031-04      Water      Sampled:04-Apr-18 14:10**

|                     |                 |
|---------------------|-----------------|
| D_Lead by 200.8     | 01-Oct-18 14:10 |
| K_Selenium          | 01-Oct-18 14:10 |
| K_Cobalt            | 01-Oct-18 14:10 |
| K_Chromium          | 01-Oct-18 14:10 |
| K_Cadmium           | 01-Oct-18 14:10 |
| K_Beryllium         | 01-Oct-18 14:10 |
| K_Barium            | 01-Oct-18 14:10 |
| D_Lithium by 200.7  | 01-Oct-18 14:10 |
| D_Arsenic by 200.8  | 01-Oct-18 14:10 |
| D_Antimony by 200.8 | 01-Oct-18 14:10 |
| K_Molybdenum        | 01-Oct-18 14:10 |
| D_Thallium by 200.8 | 01-Oct-18 14:10 |

*Containers Supplied:*

D\_HDPE, HNO3 pH<2 - 250mL extra2 (B)

|                         |                |                   |                     |
|-------------------------|----------------|-------------------|---------------------|
| Released By             | Date           | Received By       | Date                |
| <i>Shelley Phillips</i> | <i>4-13-18</i> | <i>Rene Futch</i> | <i>4/17/18 1030</i> |

|             |      |             |      |
|-------------|------|-------------|------|
| Released By | Date | Received By | Date |
|-------------|------|-------------|------|



**SUBCONTRACT ORDER**  
**Deerhaven Generating Station**  
**D18A031**

51802779

| Analysis | Expires | Laboratory ID | Comments |
|----------|---------|---------------|----------|
|----------|---------|---------------|----------|

**Sample Name: LF-1**

**Sample ID: D18A031-05**      **Water**      **Sampled:03-Apr-18 11:52**

|                     |                 |
|---------------------|-----------------|
| K_Beryllium         | 30-Sep-18 11:52 |
| K_Selenium          | 30-Sep-18 11:52 |
| K_Molybdenum        | 30-Sep-18 11:52 |
| K_Cobalt            | 30-Sep-18 11:52 |
| K_Chromium          | 30-Sep-18 11:52 |
| D_Antimony by 200.8 | 30-Sep-18 11:52 |
| K_Cadmium           | 30-Sep-18 11:52 |
| D_Thallium by 200.8 | 30-Sep-18 11:52 |
| D_Arsenic by 200.8  | 30-Sep-18 11:52 |
| D_Lithium by 200.7  | 30-Sep-18 11:52 |
| K_Barium            | 30-Sep-18 11:52 |
| D_Lead by 200.8     | 30-Sep-18 11:52 |

*Containers Supplied:*

D\_HDPE, HNO3 pH<2 - 250mL extra2 (B)

**Sample Name: LF-2**

**Sample ID: D18A031-06**      **Water**      **Sampled:04-Apr-18 12:13**

|                     |                 |
|---------------------|-----------------|
| D_Lead by 200.8     | 01-Oct-18 12:13 |
| K_Selenium          | 01-Oct-18 12:13 |
| K_Molybdenum        | 01-Oct-18 12:13 |
| K_Cobalt            | 01-Oct-18 12:13 |
| K_Chromium          | 01-Oct-18 12:13 |
| K_Cadmium           | 01-Oct-18 12:13 |
| K_Beryllium         | 01-Oct-18 12:13 |
| K_Barium            | 01-Oct-18 12:13 |
| D_Lithium by 200.7  | 01-Oct-18 12:13 |
| D_Arsenic by 200.8  | 01-Oct-18 12:13 |
| D_Thallium by 200.8 | 01-Oct-18 12:13 |
| D_Antimony by 200.8 | 01-Oct-18 12:13 |

*Containers Supplied:*

D\_HDPE, HNO3 pH<2 - 250mL extra2 (B)

*Handwritten signature: a. Sedix*

|                                       |                |   |                     |
|---------------------------------------|----------------|---|---------------------|
| <i>Handwritten signature: Phillip</i> | <i>4-13-18</i> | <i>Handwritten signature: Renee Futch</i> | <i>4/17/18 1030</i> |
| Released By                           | Date           | Received By                               | Date                |

|             |      |             |      |
|-------------|------|-------------|------|
| Released By | Date | Received By | Date |
|-------------|------|-------------|------|



**SUBCONTRACT ORDER**  
**Deerhaven Generating Station**  
**D18A031**

51802779

|          |         |               |          |
|----------|---------|---------------|----------|
| Analysis | Expires | Laboratory ID | Comments |
|----------|---------|---------------|----------|

**Sample Name: LF-3**

**Sample ID: D18A031-07      Water      Sampled:04-Apr-18 10:32**

|                     |                 |
|---------------------|-----------------|
| D_Antimony by 200.8 | 01-Oct-18 10:32 |
| K_Selenium          | 01-Oct-18 10:32 |
| K_Molybdenum        | 01-Oct-18 10:32 |
| K_Cobalt            | 01-Oct-18 10:32 |
| K_Chromium          | 01-Oct-18 10:32 |
| K_Beryllium         | 01-Oct-18 10:32 |
| D_Arsenic by 200.8  | 01-Oct-18 10:32 |
| D_Lead by 200.8     | 01-Oct-18 10:32 |
| D_Thallium by 200.8 | 01-Oct-18 10:32 |
| K_Barium            | 01-Oct-18 10:32 |
| D_Lithium by 200.7  | 01-Oct-18 10:32 |
| K_Cadmium           | 01-Oct-18 10:32 |

*Containers Supplied:*

**D\_HDPE, HNO3 pH<2 - 250mL extra2 (B)**

**Sample Name: LF-4**

**Sample ID: D18A031-08      Water      Sampled:04-Apr-18 08:40**

|                     |                 |
|---------------------|-----------------|
| D_Lead by 200.8     | 01-Oct-18 08:40 |
| K_Molybdenum        | 01-Oct-18 08:40 |
| K_Cobalt            | 01-Oct-18 08:40 |
| K_Chromium          | 01-Oct-18 08:40 |
| K_Cadmium           | 01-Oct-18 08:40 |
| K_Beryllium         | 01-Oct-18 08:40 |
| D_Lithium by 200.7  | 01-Oct-18 08:40 |
| D_Arsenic by 200.8  | 01-Oct-18 08:40 |
| K_Barium            | 01-Oct-18 08:40 |
| D_Antimony by 200.8 | 01-Oct-18 08:40 |
| K_Selenium          | 01-Oct-18 08:40 |
| D_Thallium by 200.8 | 01-Oct-18 08:40 |

*Containers Supplied:*

**D\_HDPE, HNO3 pH<2 - 250mL extra2 (B)**

*via FedEx*

*Shelley Phillips*

*4-13-18*

*Renee Futch*

*4/12/18 1030*

Released By

Date

Received By

Date

Released By

Date

Received By

Date



## Miscellaneous Forms

**ALS Environmental—Jacksonville Laboratory**  
9143 Philips Highway, Suite 200, Jacksonville, FL 32256  
Phone (904) 739-2277 Fax (904) 739-2011  
[www.alsglobal.com](http://www.alsglobal.com)



## **FLORIDA DEP DATA QUALIFIERS**

- B Results based upon colony counts outside the acceptable range.
- D Measurement was made in the field.
- H Value based on field kit determination; results may not be accurate.
- I The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
- J Estimated value (one of the following reasons is discussed in the project case narrative).
1. The result may be inaccurate because the surrogate recovery limits have been exceeded.
  2. No known quality control criteria exists for the component.
  3. The reported value failed to meet the established quality control criteria for either precision or accuracy.
  4. The sample matrix interfered with the ability to make any accurate determination (e.g., primary and confirmation results show greater than 40% RPD).
  5. The data is questionable because of improper laboratory or field protocols (e.g., GC/MS Tune did not meet method criteria).
- K Off scale low. The value is less than the lowest calibration standard but greater than the method reporting limit (MRL).
- L Off scale high. The analyte is above the upper limit of the linear calibration range.
- M The MDL/MRL has been elevated because the analyte could not be accurately quantified due to matrix interference.
- N Presumptive evidence of the analyte. Confirmation was not performed.
- Q Sample held beyond the accepted holding time.
- T Value reported is less than the laboratory method detection limit. The value is reported for informational purposes only.
- U Indicates that the compound was analyzed for but not detected.
- V Indicates that the analyte was detected in both the sample and the associated method blank.
- Y The laboratory analysis was from an improperly preserved sample.
- Z Too many colonies were present (TNTC). The numeric value represents the filtration volume.



**Jacksonville Lab ID # for State Certifications<sup>1</sup>**

| <b>Agency</b>  | <b>Number</b>   | <b>Expiration Date</b> |
|--|-----------------|------------------------|
| Department of Defense  | 66206           | 7/31/2018              |
| Florida Department of Health                                   | E82502          | 6/30/2018              |
| Georgia Department of Natural Resources                        | 958             | 6/30/2018              |
| Kentucky Division of Waste Management                          | 123042          | 6/30/2018              |
| Louisiana Department of Environmental Quality                  | 02086           | 6/30/2018              |
| Maine Department of Health and Human Services                  | 2015002         | 2/3/2019               |
| North Carolina Department of Environment and Natural Resources | 527             | 12/31/2018             |
| Pennsylvania Department of Environmental Protection            | 68-04835        | 8/31/2018              |
| South Carolina Department of Health and Environmental Control  | 96021001        | 6/30/2018              |
| Texas Commission on Environmental Quality                      | T104704197-16-8 | 5/31/2018              |
| Virginia Environmental Accreditation Program                   | 460191          | 12/14/2018             |

<sup>1</sup> Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state or agency requirements. The test results meet requirements of the current NELAP/TNI standards or state or agency requirements, where applicable, except as noted in the laboratory case narrative provided. For a specific list of accredited analytes, refer to <http://www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads/North-America-Downloads>



## ACRONYMS

|            |  |
|------------|--|
| ASTM       | American Society for Testing and Materials   |
| A2LA       | American Association for Laboratory Accreditation  |
| CARB       | California Air Resources Board   |
| CAS Number | Chemical Abstract Service registry Number  |
| CFC        | Chlorofluorocarbon   |
| CFU        | Colony-Forming Unit  |
| DEC        | Department of Environmental Conservation   |
| DEQ        | Department of Environmental Quality  |
| DHS        | Department of Health Services  |
| DOE        | Department of Ecology  |
| DOH        | Department of Health   |
| EPA        | U. S. Environmental Protection Agency  |
| ELAP       | Environmental Laboratory Accreditation Program   |
| GC         | Gas Chromatography   |
| GC/MS      | Gas Chromatography/Mass Spectrometry   |
| LUFT       | Leaking Underground Fuel Tank  |
| M          | Modified   |
| MCL        | Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA. |
| MDL        | Method Detection Limit   |
| MPN        | Most Probable Number   |
| MRL        | Method Reporting Limit   |
| NA         | Not Applicable   |
| NC         | Not Calculated   |
| NCASI      | National Council of the Paper Industry for Air and Stream Improvement  |
| ND         | Not Detected   |
| NIOSH      | National Institute for Occupational Safety and Health  |
| PQL        | Practical Quantitation Limit   |
| RCRA       | Resource Conservation and Recovery Act   |
| SIM        | Selected Ion Monitoring  |
| TPH        | Total Petroleum Hydrocarbons   |
| tr         | Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.                           |



ALS Group USA, Corp.  
dba ALS Environmental

Analyst Summary report

**Client:** Gainesville Regional Utilities  
**Project:** D18A031

**Service Request:** J1802779

**Sample Name:** D18A031-01  
**Lab Code:** J1802779-001  
**Sample Matrix:** Water

**Date Collected:** 04/3/18  
**Date Received:** 04/17/18

**Analysis Method**  
200.7  
200.8

**Extracted/Digested By**  
EGARDNER  
CSULLIVAN

**Analyzed By**  
EGARDNER  
CSULLIVAN

**Sample Name:** D18A031-02  
**Lab Code:** J1802779-002  
**Sample Matrix:** Water

**Date Collected:** 04/3/18  
**Date Received:** 04/17/18

**Analysis Method**  
200.7  
200.8

**Extracted/Digested By**  
EGARDNER  
CSULLIVAN

**Analyzed By**  
EGARDNER  
CSULLIVAN

**Sample Name:** D18A031-03  
**Lab Code:** J1802779-003  
**Sample Matrix:** Water

**Date Collected:** 04/4/18  
**Date Received:** 04/17/18

**Analysis Method**  
200.7  
200.8

**Extracted/Digested By**  
EGARDNER  
CSULLIVAN

**Analyzed By**  
EGARDNER  
CSULLIVAN

**Sample Name:** D18A031-04  
**Lab Code:** J1802779-004  
**Sample Matrix:** Water

**Date Collected:** 04/4/18  
**Date Received:** 04/17/18

**Analysis Method**  
200.7  
200.8

**Extracted/Digested By**  
EGARDNER  
CSULLIVAN

**Analyzed By**  
EGARDNER  
CSULLIVAN

ALS Group USA, Corp.  
dba ALS Environmental

Analyst Summary report

**Client:** Gainesville Regional Utilities  
**Project:** D18A031

**Service Request:** J1802779

**Sample Name:** D18A031-05  
**Lab Code:** J1802779-005  
**Sample Matrix:** Water

**Date Collected:** 04/3/18  
**Date Received:** 04/17/18

**Analysis Method**  
200.7  
200.8

**Extracted/Digested By**  
EGARDNER  
CSULLIVAN

**Analyzed By**  
EGARDNER  
CSULLIVAN

**Sample Name:** D18A031-06  
**Lab Code:** J1802779-006  
**Sample Matrix:** Water

**Date Collected:** 04/4/18  
**Date Received:** 04/17/18

**Analysis Method**  
200.7  
200.8

**Extracted/Digested By**  
EGARDNER  
CSULLIVAN

**Analyzed By**  
EGARDNER  
CSULLIVAN

**Sample Name:** D18A031-07  
**Lab Code:** J1802779-007  
**Sample Matrix:** Water

**Date Collected:** 04/4/18  
**Date Received:** 04/17/18

**Analysis Method**  
200.7  
200.8

**Extracted/Digested By**  
EGARDNER  
CSULLIVAN

**Analyzed By**  
EGARDNER  
CSULLIVAN

**Sample Name:** D18A031-08  
**Lab Code:** J1802779-008  
**Sample Matrix:** Water

**Date Collected:** 04/4/18  
**Date Received:** 04/17/18

**Analysis Method**  
200.7  
200.8

**Extracted/Digested By**  
EGARDNER  
CSULLIVAN

**Analyzed By**  
EGARDNER  
CSULLIVAN



# Sample Results

**ALS Environmental—Jacksonville Laboratory**  
9143 Philips Highway, Suite 200, Jacksonville, FL 32256  
Phone (904) 739-2277 Fax (904) 739-2011  
[www.alsglobal.com](http://www.alsglobal.com)



# Metals

**ALS Environmental—Jacksonville Laboratory**  
9143 Philips Highway, Suite 200, Jacksonville, FL 32256  
Phone (904)739-2277 Fax (904)739-2011  
[www.alsglobal.com](http://www.alsglobal.com)

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Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A031  
**Sample Matrix:** Water  
**Sample Name:** D18A031-01  
**Lab Code:** J1802779-001

**Service Request:** J1802779  
**Date Collected:** 04/03/18 13:37  
**Date Received:** 04/17/18 10:30  
**Basis:** NA

Inorganic Parameters

| Analyte Name      | Analysis Method | Result         | Units | PQL    | MDL     | Dil. | Date Analyzed  | Date Extracted | Q |
|-------------------|-----------------|----------------|-------|--------|---------|------|----------------|----------------|---|
| Antimony, Total   | 200.8           | <b>0.2 I</b>   | ug/L  | 1.0    | 0.04    | 1    | 04/19/18 18:25 | 04/18/18       |   |
| Arsenic, Total    | 200.8           | <b>1.4</b>     | ug/L  | 1.0    | 0.10    | 1    | 04/19/18 18:25 | 04/18/18       |   |
| Barium, Total     | 200.7           | <b>0.020</b>   | mg/L  | 0.010  | 0.001   | 1    | 04/19/18 22:46 | 04/19/18       |   |
| Beryllium, Total  | 200.7           | 0.00006 U      | mg/L  | 0.0040 | 0.00006 | 1    | 04/19/18 22:46 | 04/19/18       |   |
| Cadmium, Total    | 200.7           | 0.0002 U       | mg/L  | 0.0050 | 0.0002  | 1    | 04/19/18 22:46 | 04/19/18       |   |
| Chromium, Total   | 200.7           | <b>0.001 I</b> | mg/L  | 0.010  | 0.0004  | 1    | 04/19/18 22:46 | 04/19/18       |   |
| Cobalt, Total     | 200.7           | 0.003 U        | mg/L  | 0.010  | 0.003   | 1    | 04/19/18 22:46 | 04/19/18       |   |
| Lead, Total       | 200.8           | <b>0.04 IV</b> | ug/L  | 0.50   | 0.03    | 1    | 04/19/18 18:25 | 04/18/18       |   |
| Lithium, Total    | 200.7           | 0.002 U        | mg/L  | 0.10   | 0.002   | 1    | 04/19/18 22:45 | 04/19/18       |   |
| Molybdenum, Total | 200.7           | <b>0.006 I</b> | mg/L  | 0.010  | 0.0003  | 1    | 04/19/18 22:46 | 04/19/18       |   |
| Selenium, Total   | 200.7           | <b>0.006 I</b> | mg/L  | 0.010  | 0.002   | 1    | 04/19/18 22:46 | 04/19/18       |   |
| Thallium, Total   | 200.8           | 0.02 U         | ug/L  | 0.20   | 0.02    | 1    | 04/19/18 18:25 | 04/18/18       |   |

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Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A031  
**Sample Matrix:** Water  
**Sample Name:** D18A031-02  
**Lab Code:** J1802779-002

**Service Request:** J1802779  
**Date Collected:** 04/03/18 14:45  
**Date Received:** 04/17/18 10:30  
**Basis:** NA

Inorganic Parameters

| Analyte Name      | Analysis Method | Result         | Units | PQL    | MDL     | Dil. | Date Analyzed  | Date Extracted | Q |
|-------------------|-----------------|----------------|-------|--------|---------|------|----------------|----------------|---|
| Antimony, Total   | 200.8           | <b>0.2 I</b>   | ug/L  | 1.0    | 0.04    | 1    | 04/19/18 18:26 | 04/18/18       |   |
| Arsenic, Total    | 200.8           | <b>1.0 I</b>   | ug/L  | 1.0    | 0.10    | 1    | 04/19/18 18:26 | 04/18/18       |   |
| Barium, Total     | 200.7           | <b>0.009 I</b> | mg/L  | 0.010  | 0.001   | 1    | 04/19/18 22:51 | 04/19/18       |   |
| Beryllium, Total  | 200.7           | 0.00006 U      | mg/L  | 0.0040 | 0.00006 | 1    | 04/19/18 22:51 | 04/19/18       |   |
| Cadmium, Total    | 200.7           | 0.0002 U       | mg/L  | 0.0050 | 0.0002  | 1    | 04/19/18 22:51 | 04/19/18       |   |
| Chromium, Total   | 200.7           | <b>0.001 I</b> | mg/L  | 0.010  | 0.0004  | 1    | 04/19/18 22:51 | 04/19/18       |   |
| Cobalt, Total     | 200.7           | 0.003 U        | mg/L  | 0.010  | 0.003   | 1    | 04/19/18 22:51 | 04/19/18       |   |
| Lead, Total       | 200.8           | <b>0.04 IV</b> | ug/L  | 0.50   | 0.03    | 1    | 04/19/18 18:26 | 04/18/18       |   |
| Lithium, Total    | 200.7           | 0.002 U        | mg/L  | 0.10   | 0.002   | 1    | 04/19/18 22:50 | 04/19/18       |   |
| Molybdenum, Total | 200.7           | <b>0.008 I</b> | mg/L  | 0.010  | 0.0003  | 1    | 04/19/18 22:51 | 04/19/18       |   |
| Selenium, Total   | 200.7           | <b>0.007 I</b> | mg/L  | 0.010  | 0.002   | 1    | 04/19/18 22:51 | 04/19/18       |   |
| Thallium, Total   | 200.8           | 0.02 U         | ug/L  | 0.20   | 0.02    | 1    | 04/19/18 18:26 | 04/18/18       |   |

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Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A031  
**Sample Matrix:** Water  
**Sample Name:** D18A031-03  
**Lab Code:** J1802779-003

**Service Request:** J1802779  
**Date Collected:** 04/04/18 15:40  
**Date Received:** 04/17/18 10:30  
**Basis:** NA

Inorganic Parameters

| Analyte Name      | Analysis Method | Result         | Units | PQL    | MDL     | Dil. | Date Analyzed  | Date Extracted | Q |
|-------------------|-----------------|----------------|-------|--------|---------|------|----------------|----------------|---|
| Antimony, Total   | 200.8           | <b>0.1 I</b>   | ug/L  | 1.0    | 0.04    | 1    | 04/19/18 18:28 | 04/18/18       |   |
| Arsenic, Total    | 200.8           | <b>1.4</b>     | ug/L  | 1.0    | 0.10    | 1    | 04/19/18 18:28 | 04/18/18       |   |
| Barium, Total     | 200.7           | <b>0.013</b>   | mg/L  | 0.010  | 0.001   | 1    | 04/19/18 22:56 | 04/19/18       |   |
| Beryllium, Total  | 200.7           | 0.00006 U      | mg/L  | 0.0040 | 0.00006 | 1    | 04/19/18 22:56 | 04/19/18       |   |
| Cadmium, Total    | 200.7           | 0.0002 U       | mg/L  | 0.0050 | 0.0002  | 1    | 04/19/18 22:56 | 04/19/18       |   |
| Chromium, Total   | 200.7           | <b>0.002 I</b> | mg/L  | 0.010  | 0.0004  | 1    | 04/19/18 22:56 | 04/19/18       |   |
| Cobalt, Total     | 200.7           | 0.003 U        | mg/L  | 0.010  | 0.003   | 1    | 04/19/18 22:56 | 04/19/18       |   |
| Lead, Total       | 200.8           | 0.03 U         | ug/L  | 0.50   | 0.03    | 1    | 04/19/18 18:28 | 04/18/18       |   |
| Lithium, Total    | 200.7           | 0.002 U        | mg/L  | 0.10   | 0.002   | 1    | 04/19/18 22:55 | 04/19/18       |   |
| Molybdenum, Total | 200.7           | <b>0.006 I</b> | mg/L  | 0.010  | 0.0003  | 1    | 04/19/18 22:56 | 04/19/18       |   |
| Selenium, Total   | 200.7           | <b>0.006 I</b> | mg/L  | 0.010  | 0.002   | 1    | 04/19/18 22:56 | 04/19/18       |   |
| Thallium, Total   | 200.8           | 0.02 U         | ug/L  | 0.20   | 0.02    | 1    | 04/19/18 18:28 | 04/18/18       |   |

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Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A031  
**Sample Matrix:** Water  
**Sample Name:** D18A031-04  
**Lab Code:** J1802779-004

**Service Request:** J1802779  
**Date Collected:** 04/04/18 14:10  
**Date Received:** 04/17/18 10:30  
**Basis:** NA

Inorganic Parameters

| Analyte Name      | Analysis Method | Result         | Units | PQL    | MDL     | Dil. | Date Analyzed  | Date Extracted | Q |
|-------------------|-----------------|----------------|-------|--------|---------|------|----------------|----------------|---|
| Antimony, Total   | 200.8           | <b>0.2 I</b>   | ug/L  | 1.0    | 0.04    | 1    | 04/19/18 18:29 | 04/18/18       |   |
| Arsenic, Total    | 200.8           | <b>0.9 I</b>   | ug/L  | 1.0    | 0.10    | 1    | 04/19/18 18:29 | 04/18/18       |   |
| Barium, Total     | 200.7           | <b>0.039</b>   | mg/L  | 0.010  | 0.001   | 1    | 04/19/18 23:01 | 04/19/18       |   |
| Beryllium, Total  | 200.7           | 0.00006 U      | mg/L  | 0.0040 | 0.00006 | 1    | 04/19/18 23:00 | 04/19/18       |   |
| Cadmium, Total    | 200.7           | 0.0002 U       | mg/L  | 0.0050 | 0.0002  | 1    | 04/19/18 23:01 | 04/19/18       |   |
| Chromium, Total   | 200.7           | <b>0.002 I</b> | mg/L  | 0.010  | 0.0004  | 1    | 04/19/18 23:01 | 04/19/18       |   |
| Cobalt, Total     | 200.7           | 0.003 U        | mg/L  | 0.010  | 0.003   | 1    | 04/19/18 23:01 | 04/19/18       |   |
| Lead, Total       | 200.8           | <b>0.03 IV</b> | ug/L  | 0.50   | 0.03    | 1    | 04/19/18 18:29 | 04/18/18       |   |
| Lithium, Total    | 200.7           | 0.002 U        | mg/L  | 0.10   | 0.002   | 1    | 04/19/18 22:59 | 04/19/18       |   |
| Molybdenum, Total | 200.7           | <b>0.006 I</b> | mg/L  | 0.010  | 0.0003  | 1    | 04/19/18 23:01 | 04/19/18       |   |
| Selenium, Total   | 200.7           | <b>0.006 I</b> | mg/L  | 0.010  | 0.002   | 1    | 04/19/18 23:01 | 04/19/18       |   |
| Thallium, Total   | 200.8           | 0.02 U         | ug/L  | 0.20   | 0.02    | 1    | 04/19/18 18:29 | 04/18/18       |   |



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Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A031  
**Sample Matrix:** Water  
**Sample Name:** D18A031-05  
**Lab Code:** J1802779-005

**Service Request:** J1802779  
**Date Collected:** 04/03/18 11:52  
**Date Received:** 04/17/18 10:30  
**Basis:** NA

Inorganic Parameters

| Analyte Name      | Analysis Method | Result         | Units | PQL    | MDL     | Dil. | Date Analyzed  | Date Extracted | Q |
|-------------------|-----------------|----------------|-------|--------|---------|------|----------------|----------------|---|
| Antimony, Total   | 200.8           | <b>0.4 I</b>   | ug/L  | 1.0    | 0.04    | 1    | 04/19/18 18:34 | 04/18/18       |   |
| Arsenic, Total    | 200.8           | <b>0.3 I</b>   | ug/L  | 1.0    | 0.10    | 1    | 04/19/18 18:34 | 04/18/18       |   |
| Barium, Total     | 200.7           | <b>0.082</b>   | mg/L  | 0.010  | 0.001   | 1    | 04/19/18 23:25 | 04/19/18       |   |
| Beryllium, Total  | 200.7           | 0.00006 U      | mg/L  | 0.0040 | 0.00006 | 1    | 04/19/18 23:25 | 04/19/18       |   |
| Cadmium, Total    | 200.7           | 0.0002 U       | mg/L  | 0.0050 | 0.0002  | 1    | 04/19/18 23:25 | 04/19/18       |   |
| Chromium, Total   | 200.7           | <b>0.001 I</b> | mg/L  | 0.010  | 0.0004  | 1    | 04/19/18 23:25 | 04/19/18       |   |
| Cobalt, Total     | 200.7           | 0.003 U        | mg/L  | 0.010  | 0.003   | 1    | 04/19/18 23:25 | 04/19/18       |   |
| Lead, Total       | 200.8           | 0.03 U         | ug/L  | 0.50   | 0.03    | 1    | 04/19/18 18:34 | 04/18/18       |   |
| Lithium, Total    | 200.7           | 0.002 U        | mg/L  | 0.10   | 0.002   | 1    | 04/19/18 23:24 | 04/19/18       |   |
| Molybdenum, Total | 200.7           | <b>0.007 I</b> | mg/L  | 0.010  | 0.0003  | 1    | 04/19/18 23:25 | 04/19/18       |   |
| Selenium, Total   | 200.7           | <b>0.004 I</b> | mg/L  | 0.010  | 0.002   | 1    | 04/19/18 23:25 | 04/19/18       |   |
| Thallium, Total   | 200.8           | <b>0.07 I</b>  | ug/L  | 0.20   | 0.02    | 1    | 04/19/18 18:34 | 04/18/18       |   |

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Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A031  
**Sample Matrix:** Water  
**Sample Name:** D18A031-06  
**Lab Code:** J1802779-006

**Service Request:** J1802779  
**Date Collected:** 04/04/18 12:13  
**Date Received:** 04/17/18 10:30  
**Basis:** NA

Inorganic Parameters

| Analyte Name      | Analysis Method | Result          | Units | PQL    | MDL     | Dil. | Date Analyzed  | Date Extracted | Q |
|-------------------|-----------------|-----------------|-------|--------|---------|------|----------------|----------------|---|
| Antimony, Total   | 200.8           | <b>0.2 I</b>    | ug/L  | 1.0    | 0.04    | 1    | 04/19/18 18:36 | 04/18/18       |   |
| Arsenic, Total    | 200.8           | <b>2.3</b>      | ug/L  | 1.0    | 0.10    | 1    | 04/19/18 18:36 | 04/18/18       |   |
| Barium, Total     | 200.7           | <b>0.141</b>    | mg/L  | 0.010  | 0.001   | 1    | 04/19/18 23:30 | 04/19/18       |   |
| Beryllium, Total  | 200.7           | <b>0.0010 I</b> | mg/L  | 0.0040 | 0.00006 | 1    | 04/19/18 23:30 | 04/19/18       |   |
| Cadmium, Total    | 200.7           | 0.0002 U        | mg/L  | 0.0050 | 0.0002  | 1    | 04/19/18 23:30 | 04/19/18       |   |
| Chromium, Total   | 200.7           | <b>0.005 I</b>  | mg/L  | 0.010  | 0.0004  | 1    | 04/19/18 23:30 | 04/19/18       |   |
| Cobalt, Total     | 200.7           | 0.003 U         | mg/L  | 0.010  | 0.003   | 1    | 04/19/18 23:30 | 04/19/18       |   |
| Lead, Total       | 200.8           | <b>0.19 IV</b>  | ug/L  | 0.50   | 0.03    | 1    | 04/19/18 18:36 | 04/18/18       |   |
| Lithium, Total    | 200.7           | 0.002 U         | mg/L  | 0.10   | 0.002   | 1    | 04/19/18 23:29 | 04/19/18       |   |
| Molybdenum, Total | 200.7           | <b>0.008 I</b>  | mg/L  | 0.010  | 0.0003  | 1    | 04/19/18 23:30 | 04/19/18       |   |
| Selenium, Total   | 200.7           | <b>0.007 I</b>  | mg/L  | 0.010  | 0.002   | 1    | 04/19/18 23:30 | 04/19/18       |   |
| Thallium, Total   | 200.8           | <b>0.07 I</b>   | ug/L  | 0.20   | 0.02    | 1    | 04/19/18 18:36 | 04/18/18       |   |

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Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A031  
**Sample Matrix:** Water  
**Sample Name:** D18A031-07  
**Lab Code:** J1802779-007

**Service Request:** J1802779  
**Date Collected:** 04/04/18 10:32  
**Date Received:** 04/17/18 10:30  
**Basis:** NA

Inorganic Parameters

| Analyte Name      | Analysis Method | Result         | Units | PQL    | MDL     | Dil. | Date Analyzed  | Date Extracted | Q |
|-------------------|-----------------|----------------|-------|--------|---------|------|----------------|----------------|---|
| Antimony, Total   | 200.8           | <b>0.5 I</b>   | ug/L  | 1.0    | 0.04    | 1    | 04/19/18 18:37 | 04/18/18       |   |
| Arsenic, Total    | 200.8           | <b>2.2</b>     | ug/L  | 1.0    | 0.10    | 1    | 04/19/18 18:37 | 04/18/18       |   |
| Barium, Total     | 200.7           | <b>0.084</b>   | mg/L  | 0.010  | 0.001   | 1    | 04/19/18 23:35 | 04/19/18       |   |
| Beryllium, Total  | 200.7           | 0.00006 U      | mg/L  | 0.0040 | 0.00006 | 1    | 04/19/18 23:35 | 04/19/18       |   |
| Cadmium, Total    | 200.7           | 0.0002 U       | mg/L  | 0.0050 | 0.0002  | 1    | 04/19/18 23:35 | 04/19/18       |   |
| Chromium, Total   | 200.7           | <b>0.005 I</b> | mg/L  | 0.010  | 0.0004  | 1    | 04/19/18 23:35 | 04/19/18       |   |
| Cobalt, Total     | 200.7           | 0.003 U        | mg/L  | 0.010  | 0.003   | 1    | 04/19/18 23:35 | 04/19/18       |   |
| Lead, Total       | 200.8           | <b>0.06 IV</b> | ug/L  | 0.50   | 0.03    | 1    | 04/19/18 18:37 | 04/18/18       |   |
| Lithium, Total    | 200.7           | 0.002 U        | mg/L  | 0.10   | 0.002   | 1    | 04/19/18 23:34 | 04/19/18       |   |
| Molybdenum, Total | 200.7           | <b>0.098</b>   | mg/L  | 0.010  | 0.0003  | 1    | 04/19/18 23:35 | 04/19/18       |   |
| Selenium, Total   | 200.7           | <b>0.004 I</b> | mg/L  | 0.010  | 0.002   | 1    | 04/19/18 23:35 | 04/19/18       |   |
| Thallium, Total   | 200.8           | <b>0.03 I</b>  | ug/L  | 0.20   | 0.02    | 1    | 04/19/18 18:37 | 04/18/18       |   |

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Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A031  
**Sample Matrix:** Water  
**Sample Name:** D18A031-08  
**Lab Code:** J1802779-008

**Service Request:** J1802779  
**Date Collected:** 04/04/18 08:40  
**Date Received:** 04/17/18 10:30  
**Basis:** NA

Inorganic Parameters

| Analyte Name      | Analysis Method | Result         | Units | PQL    | MDL     | Dil. | Date Analyzed  | Date Extracted | Q |
|-------------------|-----------------|----------------|-------|--------|---------|------|----------------|----------------|---|
| Antimony, Total   | 200.8           | <b>5.9</b>     | ug/L  | 1.0    | 0.04    | 1    | 04/19/18 18:39 | 04/18/18       |   |
| Arsenic, Total    | 200.8           | <b>1.5</b>     | ug/L  | 1.0    | 0.10    | 1    | 04/19/18 18:39 | 04/18/18       |   |
| Barium, Total     | 200.7           | <b>0.059</b>   | mg/L  | 0.010  | 0.001   | 1    | 04/19/18 23:46 | 04/19/18       |   |
| Beryllium, Total  | 200.7           | 0.00006 U      | mg/L  | 0.0040 | 0.00006 | 1    | 04/19/18 23:46 | 04/19/18       |   |
| Cadmium, Total    | 200.7           | 0.0002 U       | mg/L  | 0.0050 | 0.0002  | 1    | 04/19/18 23:46 | 04/19/18       |   |
| Chromium, Total   | 200.7           | <b>0.003 I</b> | mg/L  | 0.010  | 0.0004  | 1    | 04/19/18 23:46 | 04/19/18       |   |
| Cobalt, Total     | 200.7           | 0.003 U        | mg/L  | 0.010  | 0.003   | 1    | 04/19/18 23:46 | 04/19/18       |   |
| Lead, Total       | 200.8           | 0.03 U         | ug/L  | 0.50   | 0.03    | 1    | 04/19/18 18:39 | 04/18/18       |   |
| Lithium, Total    | 200.7           | <b>0.30</b>    | mg/L  | 0.10   | 0.002   | 1    | 04/19/18 23:45 | 04/19/18       |   |
| Molybdenum, Total | 200.7           | <b>0.105</b>   | mg/L  | 0.010  | 0.0003  | 1    | 04/19/18 23:46 | 04/19/18       |   |
| Selenium, Total   | 200.7           | <b>0.008 I</b> | mg/L  | 0.010  | 0.002   | 1    | 04/19/18 23:46 | 04/19/18       |   |
| Thallium, Total   | 200.8           | <b>0.46</b>    | ug/L  | 0.20   | 0.02    | 1    | 04/19/18 18:39 | 04/18/18       |   |



## QC Summary Forms

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Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A031  
**Sample Matrix:** Water  
**Sample Name:** Method Blank  
**Lab Code:** J1802779-MB

**Service Request:** J1802779  
**Date Collected:** NA  
**Date Received:** NA  
**Basis:** NA

Inorganic Parameters

| Analyte Name      | Analysis Method | Result        | Units | PQL    | MDL     | Dil. | Date Analyzed  | Date Extracted | Q |
|-------------------|-----------------|---------------|-------|--------|---------|------|----------------|----------------|---|
| Antimony, Total   | 200.8           | 0.04 U        | ug/L  | 1.0    | 0.04    | 1    | 04/19/18 17:57 | 04/18/18       |   |
| Arsenic, Total    | 200.8           | 0.1 U         | ug/L  | 1.0    | 0.1     | 1    | 04/19/18 17:57 | 04/18/18       |   |
| Barium, Total     | 200.7           | 0.001 U       | mg/L  | 0.010  | 0.001   | 1    | 04/19/18 20:31 | 04/19/18       |   |
| Beryllium, Total  | 200.7           | 0.00006 U     | mg/L  | 0.0040 | 0.00006 | 1    | 04/19/18 20:31 | 04/19/18       |   |
| Cadmium, Total    | 200.7           | 0.0002 U      | mg/L  | 0.0050 | 0.0002  | 1    | 04/19/18 20:31 | 04/19/18       |   |
| Chromium, Total   | 200.7           | 0.0004 U      | mg/L  | 0.010  | 0.0004  | 1    | 04/19/18 20:31 | 04/19/18       |   |
| Cobalt, Total     | 200.7           | 0.003 U       | mg/L  | 0.010  | 0.003   | 1    | 04/19/18 20:31 | 04/19/18       |   |
| Lead, Total       | 200.8           | <b>0.04 I</b> | ug/L  | 0.50   | 0.03    | 1    | 04/19/18 17:57 | 04/18/18       |   |
| Lithium, Total    | 200.7           | 0.002 U       | mg/L  | 0.10   | 0.002   | 1    | 04/19/18 20:30 | 04/19/18       |   |
| Molybdenum, Total | 200.7           | 0.0003 U      | mg/L  | 0.010  | 0.0003  | 1    | 04/19/18 20:31 | 04/19/18       |   |
| Selenium, Total   | 200.7           | 0.002 U       | mg/L  | 0.010  | 0.002   | 1    | 04/19/18 20:31 | 04/19/18       |   |
| Thallium, Total   | 200.8           | 0.02 U        | ug/L  | 0.20   | 0.02    | 1    | 04/19/18 17:57 | 04/18/18       |   |

ALS Group USA, Corp.  
dba ALS Environmental

QA/QC Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A031  
**Sample Matrix:** Water

**Service Request:** J1802779  
**Date Collected:** 04/04/18  
**Date Received:** 04/17/18  
**Date Analyzed:** 04/19/18  
**Date Extracted:** 04/19/18

**Duplicate Matrix Spike Summary  
Inorganic Parameters**

**Sample Name:** D18A031-04  
**Lab Code:** J1802779-004  
**Analysis Method:** 200.7  
**Prep Method:** EPA 3005A

**Units:** mg/L  
**Basis:** NA

| Analyte Name      | Sample Result | Result | Matrix Spike<br>J1802779-004MS |       | Duplicate Matrix Spike<br>J1802779-004DMS |              | % Rec Limits | RPD    | RPD Limit |       |
|-------------------|---------------|--------|--------------------------------|-------|---|--------------|--------------|--------|-----------|-------|
|                   |               |        | Spike Amount                   | % Rec | Result                                    | Spike Amount |              |        |           | % Rec |
| Barium, Total     | 0.039         | 0.541  | 0.500                          | 100   | 0.542                                     | 0.500        | 101          | 70-130 | <1        | 20    |
| Beryllium, Total  | 0.00006 U     | 0.205  | 0.200                          | 103   | 0.206                                     | 0.200        | 103          | 70-130 | <1        | 20    |
| Cadmium, Total    | 0.0002 U      | 0.253  | 0.250                          | 101   | 0.254                                     | 0.250        | 102          | 70-130 | <1        | 20    |
| Chromium, Total   | 0.002 I       | 0.515  | 0.500                          | 103   | 0.517                                     | 0.500        | 103          | 70-130 | <1        | 20    |
| Cobalt, Total     | 0.003 U       | 0.514  | 0.500                          | 103   | 0.516                                     | 0.500        | 103          | 70-130 | <1        | 20    |
| Molybdenum, Total | 0.006 I       | 0.518  | 0.500                          | 102   | 0.521                                     | 0.500        | 103          | 70-130 | <1        | 20    |
| Selenium, Total   | 0.006 I       | 0.530  | 0.500                          | 105   | 0.540                                     | 0.500        | 107          | 70-130 | 2         | 20    |
| Lithium, Total    | 0.002 U       | 5.01   | 5.00                           | 100   | 5.03                                      | 5.00         | 101          | 70-130 | <1        | 20    |

Results flagged with an asterisk (\*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.



ALS Group USA, Corp.  
dba ALS Environmental

QA/QC Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A031  
**Sample Matrix:** Water

**Service Request:** J1802779  
**Date Analyzed:** 04/19/18

**Lab Control Sample Summary**  
**Inorganic Parameters**

**Units:**ug/L  
**Basis:**NA

**Lab Control Sample**  
J1802779-LCS

| <b>Analyte Name</b> | <b>Analytical Method</b> | <b>Result</b> | <b>Spike Amount</b> | <b>% Rec</b> | <b>% Rec Limits</b> |
|---------------------|--------------------------|---------------|---------------------|--------------|---------------------|
| Antimony, Total     | 200.8                    | 49.8          | 50.0                | 100          | 85-115              |
| Arsenic, Total      | 200.8                    | 49.8          | 50.0                | 100          | 85-115              |
| Lead, Total         | 200.8                    | 25.7          | 25.0                | 103          | 85-115              |
| Thallium, Total     | 200.8                    | 10.0          | 10.0                | 100          | 85-115              |

ALS Group USA, Corp.  
dba ALS Environmental

QA/QC Report

**Client:** Gainesville Regional Utilities  
**Project:** D18A031  
**Sample Matrix:** Water

**Service Request:** J1802779  
**Date Analyzed:** 04/19/18

**Lab Control Sample Summary**  
**Inorganic Parameters**

**Units:**mg/L  
**Basis:**NA

**Lab Control Sample**  
J1802779-LCS

| <b>Analyte Name</b> | <b>Analytical Method</b> | <b>Result</b> | <b>Spike Amount</b> | <b>% Rec</b> | <b>% Rec Limits</b> |
|---------------------|--------------------------|---------------|---------------------|--------------|---------------------|
| Barium, Total       | 200.7                    | 0.500         | 0.500               | 100          | 85-115              |
| Beryllium, Total    | 200.7                    | 0.201         | 0.200               | 101          | 85-115              |
| Cadmium, Total      | 200.7                    | 0.251         | 0.250               | 100          | 85-115              |
| Chromium, Total     | 200.7                    | 0.508         | 0.500               | 102          | 85-115              |
| Cobalt, Total       | 200.7                    | 0.512         | 0.500               | 102          | 85-115              |
| Lithium, Total      | 200.7                    | 4.98          | 5.00                | 100          | 85-115              |
| Molybdenum, Total   | 200.7                    | 0.501         | 0.500               | 100          | 85-115              |
| Selenium, Total     | 200.7                    | 0.522         | 0.500               | 104          | 85-115              |



*Kanapaha Laboratory*

3901 South West 63rd Blvd  
Gainesville, FL 32608  
(352) 393-6777

Florida Department of Health Certification E52099

April 12, 2018

Jeff Boudreau  
Deerhaven Laboratory  
Station D-38  
Gainesville, FL/USA 32614-7117

RE: Environmental

Enclosed are the results of analyses for samples received by the laboratory on 4/9/2018. If you have any questions concerning this report, please feel free to contact me.

Please note that all results were determined in accordance with NELAP requirements. All data is subject to a degree of uncertainty. Kanapaha Lab uncertainty is based upon LCS quality control statistics.

Sincerely,

Jaclyn M Dihos  
Laboratory Supervisor



Deerhaven Laboratory  
Station D-38  
Gainesville, FL/USA 32614-7117

Project: Environmental  
Project Number: D18A031  
Project Manager: Jeff Boudreau

**Reported:**  
04/12/2018 16:25

### ANALYTICAL REPORT FOR SAMPLES

| <b>Laboratory ID</b> | <b>Sample ID</b>   | <b>Matrix</b> | <b>Date Sampled</b> | <b>Date Received</b> |
|----------------------|--------------------|---------------|---------------------|----------------------|
| K18D038-01           | D18A031-01 (SIS-1) | Groundwater   | 04/03/2018 13:37    | 04/09/2018 11:55     |
| K18D038-02           | D18A031-02 (SIS-2) | Groundwater   | 04/03/2018 14:45    | 04/09/2018 11:55     |
| K18D038-03           | D18A031-03 (SIS-3) | Groundwater   | 04/04/2018 15:40    | 04/09/2018 11:55     |
| K18D038-04           | D18A031-04 (SIS-4) | Groundwater   | 04/04/2018 14:10    | 04/09/2018 11:55     |
| K18D038-05           | D18A031-05 (LF-1)  | Groundwater   | 04/03/2018 11:52    | 04/09/2018 11:55     |
| K18D038-06           | D18A031-06 (LF-2)  | Groundwater   | 04/04/2018 12:13    | 04/09/2018 11:55     |
| K18D038-07           | D18A031-07 (LF-3)  | Groundwater   | 04/04/2018 10:32    | 04/09/2018 11:55     |
| K18D038-08           | D18A031-08 (LF-4)  | Groundwater   | 04/04/2018 08:40    | 04/09/2018 11:55     |



Deerhaven Laboratory  
Station D-38  
Gainesville, FL/USA 32614-7117

Project: Environmental  
Project Number: D18A031  
Project Manager: Jeff Boudreau

**Reported:**  
04/12/2018 16:25

**D18A031-01 (SIS-1)**  
**K18D038-01 (Groundwater, Grab)**  
Collected: 04/03/2018 1:37 pm

| Analyte | Result | Qual | MDL | PQL | Units | Dil | Prepared | Analyzed | Method |
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|

**Laboratory: Kanapaha Laboratory**

**Metals by EPA 200 Series Methods**

|         |       |   |       |       |      |   |            |            |           |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|
| Mercury | 0.100 | U | 0.100 | 0.400 | ug/L | 1 | 04/10/2018 | 04/10/2018 | EPA 245.1 |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|

**D18A031-02 (SIS-2)**  
**K18D038-02 (Groundwater, Grab)**  
Collected: 04/03/2018 2:45 pm

| Analyte | Result | Qual | MDL | PQL | Units | Dil | Prepared | Analyzed | Method |
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|

**Laboratory: Kanapaha Laboratory**

**Metals by EPA 200 Series Methods**

|         |       |   |       |       |      |   |            |            |           |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|
| Mercury | 0.100 | U | 0.100 | 0.400 | ug/L | 1 | 04/10/2018 | 04/10/2018 | EPA 245.1 |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|

**D18A031-03 (SIS-3)**  
**K18D038-03 (Groundwater, Grab)**  
Collected: 04/04/2018 3:40 pm

| Analyte | Result | Qual | MDL | PQL | Units | Dil | Prepared | Analyzed | Method |
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|

**Laboratory: Kanapaha Laboratory**

**Metals by EPA 200 Series Methods**

|         |       |   |       |       |      |   |            |            |           |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|
| Mercury | 0.100 | U | 0.100 | 0.400 | ug/L | 1 | 04/10/2018 | 04/10/2018 | EPA 245.1 |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|

**D18A031-04 (SIS-4)**  
**K18D038-04 (Groundwater, Grab)**  
Collected: 04/04/2018 2:10 pm

| Analyte | Result | Qual | MDL | PQL | Units | Dil | Prepared | Analyzed | Method |
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|

**Laboratory: Kanapaha Laboratory**

**Metals by EPA 200 Series Methods**

|         |       |   |       |       |      |   |            |            |           |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|
| Mercury | 0.100 | U | 0.100 | 0.400 | ug/L | 1 | 04/10/2018 | 04/10/2018 | EPA 245.1 |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|



Deerhaven Laboratory  
Station D-38  
Gainesville, FL/USA 32614-7117

Project: Environmental  
Project Number: D18A031  
Project Manager: Jeff Boudreau

**Reported:**  
04/12/2018 16:25

**D18A031-05 (LF-1)**  
**K18D038-05 (Groundwater, Grab)**  
Collected: 04/03/2018 11:52 am

| Analyte | Result | Qual | MDL | PQL | Units | Dil | Prepared | Analyzed | Method |
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|

**Laboratory: Kanapaha Laboratory**

**Metals by EPA 200 Series Methods**

|         |       |   |       |       |      |   |            |            |           |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|
| Mercury | 0.100 | U | 0.100 | 0.400 | ug/L | 1 | 04/10/2018 | 04/10/2018 | EPA 245.1 |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|

**D18A031-06 (LF-2)**  
**K18D038-06 (Groundwater, Grab)**  
Collected: 04/04/2018 12:13 pm

| Analyte | Result | Qual | MDL | PQL | Units | Dil | Prepared | Analyzed | Method |
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|

**Laboratory: Kanapaha Laboratory**

**Metals by EPA 200 Series Methods**

|         |       |   |       |       |      |   |            |            |           |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|
| Mercury | 0.100 | U | 0.100 | 0.400 | ug/L | 1 | 04/10/2018 | 04/10/2018 | EPA 245.1 |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|

**D18A031-07 (LF-3)**  
**K18D038-07 (Groundwater, Grab)**  
Collected: 04/04/2018 10:32 am

| Analyte | Result | Qual | MDL | PQL | Units | Dil | Prepared | Analyzed | Method |
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|

**Laboratory: Kanapaha Laboratory**

**Metals by EPA 200 Series Methods**

|         |       |   |       |       |      |   |            |            |           |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|
| Mercury | 0.100 | U | 0.100 | 0.400 | ug/L | 1 | 04/10/2018 | 04/10/2018 | EPA 245.1 |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|

**D18A031-08 (LF-4)**  
**K18D038-08 (Groundwater, Grab)**  
Collected: 04/04/2018 8:40 am

| Analyte | Result | Qual | MDL | PQL | Units | Dil | Prepared | Analyzed | Method |
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|

**Laboratory: Kanapaha Laboratory**

**Metals by EPA 200 Series Methods**

|         |       |   |       |       |      |   |            |            |           |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|
| Mercury | 0.100 | U | 0.100 | 0.400 | ug/L | 1 | 04/10/2018 | 04/10/2018 | EPA 245.1 |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|



Deerhaven Laboratory  
Station D-38  
Gainesville, FL/USA 32614-7117

Project: Environmental  
Project Number: D18A031  
Project Manager: Jeff Boudreau

**Reported:**  
04/12/2018 16:25

**Metals by EPA 200 Series Methods - Quality Control**

**Laboratory: Kanapaha Laboratory**

| Analyte | Result | Qual | MDL | PQL | Units | Spike Level | Source Result | %REC | % REC Limits | RSD | RSD Limit |
|---------|--------|------|-----|-----|-------|-------------|---------------|------|--------------|-----|-----------|
|---------|--------|------|-----|-----|-------|-------------|---------------|------|--------------|-----|-----------|

**Batch B18D076 - MERCURY**

**Blank (B18D076-BLK1)**

Prepared & Analyzed: 4/10/2018

|         |       |   |       |       |      |  |  |  |  |  |    |
|---------|-------|---|-------|-------|------|--|--|--|--|--|----|
| Mercury | 0.100 | U | 0.100 | 0.400 | ug/L |  |  |  |  |  | NR |
|---------|-------|---|-------|-------|------|--|--|--|--|--|----|

**Blank (B18D076-BLK2)**

Prepared & Analyzed: 4/10/2018

|         |       |   |       |       |      |  |  |  |  |  |    |
|---------|-------|---|-------|-------|------|--|--|--|--|--|----|
| Mercury | 0.100 | U | 0.100 | 0.400 | ug/L |  |  |  |  |  | NR |
|---------|-------|---|-------|-------|------|--|--|--|--|--|----|

**LCS (B18D076-BS1)**

Prepared & Analyzed: 4/10/2018

|         |      |  |  |  |      |      |  |     |        |  |       |
|---------|------|--|--|--|------|------|--|-----|--------|--|-------|
| Mercury | 20.0 |  |  |  | ug/L | 20.0 |  | 100 | 90-110 |  | 0.659 |
|---------|------|--|--|--|------|------|--|-----|--------|--|-------|

**LCS (B18D076-BS2)**

Prepared & Analyzed: 4/10/2018

|         |      |  |  |  |      |      |  |      |        |  |       |
|---------|------|--|--|--|------|------|--|------|--------|--|-------|
| Mercury | 19.9 |  |  |  | ug/L | 20.0 |  | 99.3 | 90-110 |  | 0.659 |
|---------|------|--|--|--|------|------|--|------|--------|--|-------|

**Matrix Spike (B18D076-MS1)**

**Source: K18D038-08**

Prepared & Analyzed: 4/10/2018

|         |      |  |       |       |      |      |    |      |        |  |  |
|---------|------|--|-------|-------|------|------|----|------|--------|--|--|
| Mercury | 1.98 |  | 0.100 | 0.400 | ug/L | 2.00 | ND | 99.0 | 90-110 |  |  |
|---------|------|--|-------|-------|------|------|----|------|--------|--|--|



Deerhaven Laboratory  
Station D-38  
Gainesville, FL/USA 32614-7117

Project: Environmental  
Project Number: D18A031  
Project Manager: Jeff Boudreau

**Reported:**  
04/12/2018 16:25

### Notes and Definitions

| <u>Qualifier</u> | <u>Description</u>  |
|------------------|---|
| NR               | Not Reported  |
| RSD              | Relative Standard Deviation   |
| U                | Compound was analyzed for but not detected                              |
| N                | Presumptive evidence of presence of material                            |
| L                | Off-scale high. Actual value is known to be greater than value given    |
| I                | The reported value is between the laboratory MDL and the laboratory PQL |
| V                | Analyte was detected in both the sample and the associated method blank |





**SUBCONTRACT ORDER**  
**Deerhaven Generating Station**  
**D18A031**

**SENDING LABORATORY:**

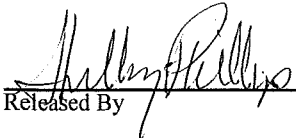

Gainesville Regional Utilities  
 Deerhaven Generating Station  
 10001 NW 13th Street  
 Gainesville, FL 32653  
 Phone: 352-334-3434  
 Fax: 352-334-3149  
 Project Manager: Jeff Boudreau

**RECEIVING LABORATORY:**

Kanapaha Laboratory  
 3901 SW 63rd BLVD  
 Gainesville, FL/USA 32608  
 Phone :352-393-6777  
 Fax: 352-334-2732

| Analysis                                  | Expires                        | Laboratory ID | Comments |
|---|--------------------------------|---------------|----------|
| <b>Sample Name: SIS-1</b>                 |                                |               |          |
| <b>Sample ID: D18A031-01</b> <b>Water</b> | <b>Sampled:03-Apr-18 13:37</b> | K18D038-01    |          |
| K_Mercury, cold vapor                     | 01-May-18 13:37                |               |          |
| <i>Containers Supplied:</i>               |                                |               |          |
| D_HDPE, HNO3 pH<2 - 500mL (A)             |                                |               |          |
| <b>Sample Name: SIS-2</b>                 |                                |               |          |
| <b>Sample ID: D18A031-02</b> <b>Water</b> | <b>Sampled:03-Apr-18 14:45</b> | K18D038-02    |          |
| K_Mercury, cold vapor                     | 01-May-18 14:45                |               |          |
| <i>Containers Supplied:</i>               |                                |               |          |
| D_HDPE, HNO3 pH<2 - 500mL (A)             |                                |               |          |
| <b>Sample Name: SIS-3</b>                 |                                |               |          |
| <b>Sample ID: D18A031-03</b> <b>Water</b> | <b>Sampled:04-Apr-18 15:40</b> | K18D038-03    |          |
| K_Mercury, cold vapor                     | 02-May-18 15:40                |               |          |
| <i>Containers Supplied:</i>               |                                |               |          |
| D_HDPE, HNO3 pH<2 - 500mL (A)             |                                |               |          |
| <b>Sample Name: SIS-4</b>                 |                                |               |          |
| <b>Sample ID: D18A031-04</b> <b>Water</b> | <b>Sampled:04-Apr-18 14:10</b> | K18D038-04    |          |
| K_Mercury, cold vapor                     | 02-May-18 14:10                |               |          |
| <i>Containers Supplied:</i>               |                                |               |          |
| D_HDPE, HNO3 pH<2 - 500mL (A)             |                                |               |          |
| <b>Sample Name: LF-1</b>                  |                                |               |          |
| <b>Sample ID: D18A031-05</b> <b>Water</b> | <b>Sampled:03-Apr-18 11:52</b> | K18D038-05    |          |
| K_Mercury, cold vapor                     | 01-May-18 11:52                |               |          |
| <i>Containers Supplied:</i>               |                                |               |          |
| D_HDPE, HNO3 pH<2 - 500mL (A)             |                                |               |          |
| <b>Sample Name: LF-2</b>                  |                                |               |          |
| <b>Sample ID: D18A031-06</b> <b>Water</b> | <b>Sampled:04-Apr-18 12:13</b> | K18D038-06    |          |
| K_Mercury, cold vapor                     | 02-May-18 12:13                |               |          |
| <i>Containers Supplied:</i>               |                                |               |          |
| D_HDPE, HNO3 pH<2 - 500mL (A)             |                                |               |          |

*via Inter-office mail*

Released By:  Date: 4-9-18  
 Received By:  Date: 4-9-18 e1155

Released By \_\_\_\_\_ Date \_\_\_\_\_ Received By \_\_\_\_\_ Date \_\_\_\_\_



**SUBCONTRACT ORDER**  
**Deerhaven Generating Station**  
**D18A031**

| Analysis   | Expires         | Laboratory ID | Comments |
|--|-----------------|---------------|----------|
| Sample Name: LF-3<br>Sample ID: D18A031-07    Water    Sampled:04-Apr-18 10:32 |                 | K18D038-07    |          |
| K_Mercury, cold vapor  | 02-May-18 10:32 |               |          |
| <i>Containers Supplied:</i><br>D_HDPE, HNO3 pH<2 - 500mL (A)                   |                 |               |          |
| Sample Name: LF-4<br>Sample ID: D18A031-08    Water    Sampled:04-Apr-18 08:40 |                 | K18D038-08    |          |
| K_Mercury, cold vapor  | 02-May-18 08:40 |               |          |
| <i>Containers Supplied:</i><br>D_HDPE, HNO3 pH<2 - 500mL (A)                   |                 |               |          |

|                         |                     |             |                      |
|-------------------------|---------------------|-------------|----------------------|
| <i>Shelley Phillips</i> | <i>via I-O mail</i> | <i>Se</i>   | <i>4-9-18 @ 1155</i> |
| Released By             | Date                | Received By | Date                 |
|                         |                     |             |                      |
| Released By             | Date                | Received By | Date                 |

April 26, 2018

Mr. Jeffery Boudreau  
Deerhaven Lab  
P.O. Box 147117, Station D38  
Gainesville, FL 32614

RE: Project: D18A031  
Pace Project No.: 35385117

Dear Mr. Boudreau:

Enclosed are the analytical results for sample(s) received by the laboratory on April 10, 2018. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

The report for 35385117 was revised to correct a formatting issue with the COC.

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

Sincerely,



Jeff Baylor  
jeff.baylor@pacelabs.com  
(386)672-5668  
Project Manager

Enclosures

cc: Kent Brakefield  
Shelley Phillips, Deerhaven Lab



## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.

## CERTIFICATIONS

Project: D18A031

Pace Project No.: 35385117

---

### Pennsylvania Certification IDs

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601  
ANAB DOD-ELAP Rad Accreditation #: L2417  
Alabama Certification #: 41590  
Arizona Certification #: AZ0734  
Arkansas Certification  
California Certification #: 04222CA  
Colorado Certification #: PA01547  
Connecticut Certification #: PH-0694  
Delaware Certification  
EPA Region 4 DW Rad  
Florida/TNI Certification #: E87683  
Georgia Certification #: C040  
Guam Certification  
Hawaii Certification  
Idaho Certification  
Illinois Certification  
Indiana Certification  
Iowa Certification #: 391  
Kansas/TNI Certification #: E-10358  
Kentucky Certification #: KY90133  
KY WW Permit #: KY0098221  
KY WW Permit #: KY0000221  
Louisiana DHH/TNI Certification #: LA180012  
Louisiana DEQ/TNI Certification #: 4086  
Maine Certification #: 2017020  
Maryland Certification #: 308  
Massachusetts Certification #: M-PA1457  
Michigan/PADEP Certification #: 9991

Missouri Certification #: 235  
Montana Certification #: Cert0082  
Nebraska Certification #: NE-OS-29-14  
Nevada Certification #: PA014572018-1  
New Hampshire/TNI Certification #: 297617  
New Jersey/TNI Certification #: PA051  
New Mexico Certification #: PA01457  
New York/TNI Certification #: 10888  
North Carolina Certification #: 42706  
North Dakota Certification #: R-190  
Ohio EPA Rad Approval: #41249  
Oregon/TNI Certification #: PA200002-010  
Pennsylvania/TNI Certification #: 65-00282  
Puerto Rico Certification #: PA01457  
Rhode Island Certification #: 65-00282  
South Dakota Certification  
Tennessee Certification #: 02867  
Texas/TNI Certification #: T104704188-17-3  
Utah/TNI Certification #: PA014572017-9  
USDA Soil Permit #: P330-17-00091  
Vermont Dept. of Health: ID# VT-0282  
Virgin Island/PADEP Certification  
Virginia/VELAP Certification #: 9526  
Washington Certification #: C868  
West Virginia DEP Certification #: 143  
West Virginia DHHR Certification #: 9964C  
Wisconsin Approve List for Rad  
Wyoming Certification #: 8TMS-L

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### Ormond Beach Certification IDs

8 East Tower Circle, Ormond Beach, FL 32174  
Alabama Certification #: 41320  
Connecticut Certification #: PH-0216  
Delaware Certification: FL NELAC Reciprocity  
Florida Certification #: E83079  
Georgia Certification #: 955  
Guam Certification: FL NELAC Reciprocity  
Hawaii Certification: FL NELAC Reciprocity  
Illinois Certification #: 200068  
Indiana Certification: FL NELAC Reciprocity  
Kansas Certification #: E-10383  
Kentucky Certification #: 90050  
Louisiana Certification #: FL NELAC Reciprocity  
Louisiana Environmental Certificate #: 05007  
Maryland Certification: #346  
Michigan Certification #: 9911  
Mississippi Certification: FL NELAC Reciprocity  
Missouri Certification #: 236  
Montana Certification #: Cert 0074

Nebraska Certification: NE-OS-28-14  
Nevada Certification: FL NELAC Reciprocity  
New Hampshire Certification #: 2958  
New Jersey Certification #: FL022  
New York Certification #: 11608  
North Carolina Environmental Certificate #: 667  
North Carolina Certification #: 12710  
Oklahoma Certification #: D9947  
Pennsylvania Certification #: 68-00547  
Puerto Rico Certification #: FL01264  
South Carolina Certification: #96042001  
Tennessee Certification #: TN02974  
Texas Certification: FL NELAC Reciprocity  
US Virgin Islands Certification: FL NELAC Reciprocity  
Virginia Environmental Certification #: 460165  
Wyoming Certification: FL NELAC Reciprocity  
West Virginia Certification #: 9962C  
Wisconsin Certification #: 399079670  
Wyoming (EPA Region 8): FL NELAC Reciprocity

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## REPORT OF LABORATORY ANALYSIS

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### SAMPLE SUMMARY

Project: D18A031

Pace Project No.: 35385117

| Lab ID      | Sample ID  | Matrix | Date Collected | Date Received  |
|-------------|------------|--------|----------------|----------------|
| 35385117001 | D18A031-01 | Water  | 04/03/18 13:37 | 04/10/18 11:15 |
| 35385117002 | D18A031-02 | Water  | 04/03/18 14:45 | 04/10/18 11:15 |
| 35385117003 | D18A031-03 | Water  | 04/04/18 15:40 | 04/10/18 11:15 |
| 35385117004 | D18A031-04 | Water  | 04/04/18 14:10 | 04/10/18 11:15 |
| 35385117005 | D18A031-05 | Water  | 04/03/18 11:52 | 04/10/18 11:15 |
| 35385117006 | D18A031-06 | Water  | 04/04/18 12:13 | 04/10/18 11:15 |
| 35385117007 | D18A031-07 | Water  | 04/04/18 10:32 | 04/10/18 11:15 |
| 35385117008 | D18A031-08 | Water  | 04/04/18 08:40 | 04/10/18 11:15 |
| 35385117009 | D18A031-09 | Water  | 04/03/18 15:37 | 04/10/18 11:15 |
| 35385117010 | D18A031-10 | Water  | 04/03/18 12:41 | 04/10/18 11:15 |
| 35385117011 | D18A031-11 | Water  | 04/05/18 12:47 | 04/10/18 11:15 |

### REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: D18A031  
Pace Project No.: 35385117

| Lab ID      | Sample ID  | Method                   | Analysts | Analytes Reported | Laboratory |
|-------------|------------|--------------------------|----------|-------------------|------------|
| 35385117001 | D18A031-01 | EPA 903.1                | KAC      | 1                 | PASI-PA    |
|             |            | EPA 904.0                | JLW      | 1                 | PASI-PA    |
|             |            | Total Radium Calculation | CMC      | 1                 | PASI-PA    |
|             |            | EPA 300.0                | CMD      | 1                 | PASI-O     |
| 35385117002 | D18A031-02 | EPA 903.1                | KAC      | 1                 | PASI-PA    |
|             |            | EPA 904.0                | JLW      | 1                 | PASI-PA    |
|             |            | Total Radium Calculation | CMC      | 1                 | PASI-PA    |
|             |            | EPA 300.0                | CMD      | 1                 | PASI-O     |
| 35385117003 | D18A031-03 | EPA 903.1                | KAC      | 1                 | PASI-PA    |
|             |            | EPA 904.0                | JLW      | 1                 | PASI-PA    |
|             |            | Total Radium Calculation | CMC      | 1                 | PASI-PA    |
|             |            | EPA 300.0                | CMD      | 1                 | PASI-O     |
| 35385117004 | D18A031-04 | EPA 903.1                | KAC      | 1                 | PASI-PA    |
|             |            | EPA 904.0                | JLW      | 1                 | PASI-PA    |
|             |            | Total Radium Calculation | CMC      | 1                 | PASI-PA    |
|             |            | EPA 300.0                | CMD      | 1                 | PASI-O     |
| 35385117005 | D18A031-05 | EPA 903.1                | KAC      | 1                 | PASI-PA    |
|             |            | EPA 904.0                | JLW      | 1                 | PASI-PA    |
|             |            | Total Radium Calculation | CMC      | 1                 | PASI-PA    |
|             |            | EPA 300.0                | CMD      | 1                 | PASI-O     |
| 35385117006 | D18A031-06 | EPA 903.1                | KAC      | 1                 | PASI-PA    |
|             |            | EPA 904.0                | JLW      | 1                 | PASI-PA    |
|             |            | Total Radium Calculation | CMC      | 1                 | PASI-PA    |
|             |            | EPA 300.0                | CMD      | 1                 | PASI-O     |
| 35385117007 | D18A031-07 | EPA 903.1                | KAC      | 1                 | PASI-PA    |
|             |            | EPA 904.0                | JLW      | 1                 | PASI-PA    |
|             |            | Total Radium Calculation | CMC      | 1                 | PASI-PA    |
|             |            | EPA 300.0                | CMD      | 1                 | PASI-O     |
| 35385117008 | D18A031-08 | EPA 903.1                | KAC      | 1                 | PASI-PA    |
|             |            | EPA 904.0                | JLW      | 1                 | PASI-PA    |
|             |            | Total Radium Calculation | CMC      | 1                 | PASI-PA    |
|             |            | EPA 300.0                | CMD      | 1                 | PASI-O     |
| 35385117009 | D18A031-09 | EPA 903.1                | KAC      | 1                 | PASI-PA    |
|             |            | EPA 904.0                | JLW      | 1                 | PASI-PA    |
|             |            | Total Radium Calculation | CMC      | 1                 | PASI-PA    |
|             |            | EPA 300.0                | CMD      | 1                 | PASI-O     |
| 35385117010 | D18A031-10 | EPA 903.1                | KAC      | 1                 | PASI-PA    |
|             |            | EPA 904.0                | JLW      | 1                 | PASI-PA    |

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### SAMPLE ANALYTE COUNT

Project: D18A031

Pace Project No.: 35385117

| Lab ID      | Sample ID  | Method                   | Analysts | Analytes Reported | Laboratory |
|-------------|------------|--------------------------|----------|-------------------|------------|
| 35385117011 | D18A031-11 | Total Radium Calculation | CMC      | 1                 | PASI-PA    |
|             |            | EPA 903.1                | KAC      | 1                 | PASI-PA    |
|             |            | EPA 904.0                | JLW      | 1                 | PASI-PA    |
|             |            | Total Radium Calculation | CMC      | 1                 | PASI-PA    |

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### ANALYTICAL RESULTS

Project: D18A031

Pace Project No.: 35385117

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**Sample: D18A031-01**      **Lab ID: 35385117001**      Collected: 04/03/18 13:37      Received: 04/10/18 11:15      Matrix: Water

| Parameters                     | Results     | Units | PQL   | MDL   | DF | Prepared | Analyzed       | CAS No.    | Qual |
|--------------------------------|-------------|-------|-------|-------|----|----------|----------------|------------|------|
| <b>300.0 IC Anions 28 Days</b> |             |       |       |       |    |          |                |            |      |
| Analytical Method: EPA 300.0   |             |       |       |       |    |          |                |            |      |
| Fluoride                       | <b>0.19</b> | mg/L  | 0.050 | 0.034 | 1  |          | 04/11/18 13:17 | 16984-48-8 |      |

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## ANALYTICAL RESULTS

Project: D18A031

Pace Project No.: 35385117

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**Sample: D18A031-02**      **Lab ID: 35385117002**      Collected: 04/03/18 14:45      Received: 04/10/18 11:15      Matrix: Water

| Parameters                     | Results     | Units | PQL   | MDL   | DF | Prepared | Analyzed       | CAS No.    | Qual |
|--------------------------------|-------------|-------|-------|-------|----|----------|----------------|------------|------|
| <b>300.0 IC Anions 28 Days</b> |             |       |       |       |    |          |                |            |      |
| Analytical Method: EPA 300.0   |             |       |       |       |    |          |                |            |      |
| Fluoride                       | <b>0.42</b> | mg/L  | 0.050 | 0.034 | 1  |          | 04/11/18 13:39 | 16984-48-8 |      |

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### ANALYTICAL RESULTS

Project: D18A031

Pace Project No.: 35385117

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**Sample: D18A031-03**      **Lab ID: 35385117003**      Collected: 04/04/18 15:40      Received: 04/10/18 11:15      Matrix: Water

| Parameters                     | Results     | Units | PQL   | MDL   | DF | Prepared | Analyzed       | CAS No.    | Qual |
|--------------------------------|-------------|-------|-------|-------|----|----------|----------------|------------|------|
| <b>300.0 IC Anions 28 Days</b> |             |       |       |       |    |          |                |            |      |
| Analytical Method: EPA 300.0   |             |       |       |       |    |          |                |            |      |
| Fluoride                       | <b>0.15</b> | mg/L  | 0.050 | 0.034 | 1  |          | 04/11/18 14:01 | 16984-48-8 |      |

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## ANALYTICAL RESULTS

Project: D18A031

Pace Project No.: 35385117

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**Sample: D18A031-04**      **Lab ID: 35385117004**      Collected: 04/04/18 14:10      Received: 04/10/18 11:15      Matrix: Water

| Parameters                     | Results     | Units | PQL   | MDL   | DF | Prepared | Analyzed       | CAS No.    | Qual |
|--------------------------------|-------------|-------|-------|-------|----|----------|----------------|------------|------|
| <b>300.0 IC Anions 28 Days</b> |             |       |       |       |    |          |                |            |      |
| Analytical Method: EPA 300.0   |             |       |       |       |    |          |                |            |      |
| Fluoride                       | <b>0.21</b> | mg/L  | 0.050 | 0.034 | 1  |          | 04/11/18 14:23 | 16984-48-8 |      |

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### ANALYTICAL RESULTS

Project: D18A031

Pace Project No.: 35385117

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**Sample: D18A031-05**      **Lab ID: 35385117005**      Collected: 04/03/18 11:52      Received: 04/10/18 11:15      Matrix: Water

| Parameters                     | Results      | Units | PQL   | MDL   | DF | Prepared | Analyzed       | CAS No.    | Qual |
|--------------------------------|--------------|-------|-------|-------|----|----------|----------------|------------|------|
| <b>300.0 IC Anions 28 Days</b> |              |       |       |       |    |          |                |            |      |
| Analytical Method: EPA 300.0   |              |       |       |       |    |          |                |            |      |
| Fluoride                       | <b>0.075</b> | mg/L  | 0.050 | 0.034 | 1  |          | 04/11/18 14:45 | 16984-48-8 |      |

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## ANALYTICAL RESULTS

Project: D18A031

Pace Project No.: 35385117

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**Sample: D18A031-06**      **Lab ID: 35385117006**      Collected: 04/04/18 12:13      Received: 04/10/18 11:15      Matrix: Water

| Parameters                     | Results     | Units | PQL   | MDL   | DF | Prepared | Analyzed       | CAS No.    | Qual |
|--------------------------------|-------------|-------|-------|-------|----|----------|----------------|------------|------|
| <b>300.0 IC Anions 28 Days</b> |             |       |       |       |    |          |                |            |      |
| Analytical Method: EPA 300.0   |             |       |       |       |    |          |                |            |      |
| Fluoride                       | <b>0.24</b> | mg/L  | 0.050 | 0.034 | 1  |          | 04/12/18 03:51 | 16984-48-8 |      |

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## ANALYTICAL RESULTS

Project: D18A031

Pace Project No.: 35385117

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**Sample: D18A031-07**      **Lab ID: 35385117007**      Collected: 04/04/18 10:32      Received: 04/10/18 11:15      Matrix: Water

| Parameters                     | Results     | Units | PQL  | MDL   | DF | Prepared | Analyzed       | CAS No.    | Qual |
|--------------------------------|-------------|-------|------|-------|----|----------|----------------|------------|------|
| <b>300.0 IC Anions 28 Days</b> |             |       |      |       |    |          |                |            |      |
| Analytical Method: EPA 300.0   |             |       |      |       |    |          |                |            |      |
| Fluoride                       | <b>0.18</b> | mg/L  | 0.10 | 0.068 | 2  |          | 04/12/18 04:13 | 16984-48-8 |      |

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### ANALYTICAL RESULTS

Project: D18A031

Pace Project No.: 35385117

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**Sample: D18A031-08**      **Lab ID: 35385117008**      Collected: 04/04/18 08:40      Received: 04/10/18 11:15      Matrix: Water

| Parameters                     | Results     | Units | PQL   | MDL   | DF | Prepared | Analyzed       | CAS No.    | Qual |
|--------------------------------|-------------|-------|-------|-------|----|----------|----------------|------------|------|
| <b>300.0 IC Anions 28 Days</b> |             |       |       |       |    |          |                |            |      |
| Analytical Method: EPA 300.0   |             |       |       |       |    |          |                |            |      |
| Fluoride                       | <b>0.24</b> | mg/L  | 0.050 | 0.034 | 1  |          | 04/11/18 15:07 | 16984-48-8 |      |

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: D18A031

Pace Project No.: 35385117

QC Batch: 439296

Analysis Method: EPA 300.0

QC Batch Method: EPA 300.0

Analysis Description: 300.0 IC Anions

Associated Lab Samples: 35385117001, 35385117002, 35385117003, 35385117004, 35385117005, 35385117008

METHOD BLANK: 2384671

Matrix: Water

Associated Lab Samples: 35385117001, 35385117002, 35385117003, 35385117004, 35385117005, 35385117008

| Parameter | Units | Blank Result | Reporting Limit | MDL   | Analyzed       | Qualifiers |
|-----------|-------|--------------|-----------------|-------|----------------|------------|
| Fluoride  | mg/L  | 0.034 U      | 0.050           | 0.034 | 04/11/18 10:41 |            |

LABORATORY CONTROL SAMPLE: 2384672

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Fluoride  | mg/L  | 5           | 5.0        | 99        | 90-110       |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2384673 2384674

| Parameter | Units | 2384673            |                | 2384674         |           | MS % Rec | MSD % Rec | % Rec Limits | RPD    | Max RPD | Qual |
|-----------|-------|--------------------|----------------|-----------------|-----------|----------|-----------|--------------|--------|---------|------|
|           |       | 35385116012 Result | MS Spike Conc. | MSD Spike Conc. | MS Result |          |           |              |        |         |      |
| Fluoride  | mg/L  | 0.14               | 5              | 5               | 4.9       | 4.9      | 96        | 96           | 90-110 | 0       | 20   |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

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### QUALITY CONTROL DATA

Project: D18A031  
Pace Project No.: 35385117

QC Batch: 439386 Analysis Method: EPA 300.0  
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions  
Associated Lab Samples: 35385117006, 35385117007

METHOD BLANK: 2384962 Matrix: Water  
Associated Lab Samples: 35385117006, 35385117007

| Parameter | Units | Blank Result | Reporting Limit | MDL   | Analyzed       | Qualifiers |
|-----------|-------|--------------|-----------------|-------|----------------|------------|
| Fluoride  | mg/L  | 0.034 U      | 0.050           | 0.034 | 04/12/18 00:33 |            |

LABORATORY CONTROL SAMPLE: 2384963

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Fluoride  | mg/L  | 5           | 5.2        | 103       | 90-110       |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2387005 2387006

| Parameter | Units | 2387005   |                 | 2387006   |                 | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|-----------|-----------------|-----------|-----------------|----------|-----------|--------------|-----|---------|------|
|           |       | MS Result | MSD Spike Conc. | MS Result | MSD Spike Conc. |          |           |              |     |         |      |
| Fluoride  | mg/L  | 0.19      | 5               | 5.3       | 5               | 102      | 103       | 90-110       | 0   | 20      |      |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: D18A031

Pace Project No.: 35385117

**Sample: D18A031-01**      **Lab ID: 35385117001**      Collected: 04/03/18 13:37      Received: 04/10/18 11:15      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters   | Method                   | Act ± Unc (MDC) Carr Trac                    | Units | Analyzed       | CAS No.    | Qual |
|--------------|--------------------------|--|-------|----------------|------------|------|
| Radium-226   | EPA 903.1                | <b>0.727 ± 0.532 (0.595)</b><br>C:NA T:81%   | pCi/L | 04/23/18 13:34 | 13982-63-3 |      |
| Radium-228   | EPA 904.0                | <b>0.681U ± 0.345 (0.681)</b><br>C:73% T:83% | pCi/L | 04/23/18 14:06 | 15262-20-1 |      |
| Total Radium | Total Radium Calculation | <b>1.28U ± 0.877 (1.28)</b>                  | pCi/L | 04/25/18 11:20 | 7440-14-4  |      |

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: D18A031

Pace Project No.: 35385117

**Sample: D18A031-02**      **Lab ID: 35385117002**      Collected: 04/03/18 14:45      Received: 04/10/18 11:15      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters   | Method                      | Act ± Unc (MDC) Carr Trac                    | Units | Analyzed       | CAS No.    | Qual |
|--------------|-----------------------------|--|-------|----------------|------------|------|
| Radium-226   | EPA 903.1                   | <b>1.04U ± 0.579 (1.04)</b><br>C:NA T:90%    | pCi/L | 04/23/18 13:35 | 13982-63-3 |      |
| Radium-228   | EPA 904.0                   | <b>0.756U ± 0.373 (0.756)</b><br>C:75% T:87% | pCi/L | 04/23/18 11:59 | 15262-20-1 |      |
| Total Radium | Total Radium<br>Calculation | <b>1.80U ± 0.952 (1.80)</b>                  | pCi/L | 04/25/18 11:20 | 7440-14-4  |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: D18A031

Pace Project No.: 35385117

**Sample: D18A031-03**      **Lab ID: 35385117003**      Collected: 04/04/18 15:40      Received: 04/10/18 11:15      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters   | Method                   | Act ± Unc (MDC) Carr Trac                         | Units | Analyzed       | CAS No.    | Qual |
|--------------|--------------------------|---|-------|----------------|------------|------|
| Radium-226   | EPA 903.1                | <b>1.01 ± 0.638 (0.721)</b><br><b>C:NA T:86%</b>  | pCi/L | 04/23/18 13:34 | 13982-63-3 |      |
| Radium-228   | EPA 904.0                | <b>1.46 ± 0.525 (0.764)</b><br><b>C:74% T:79%</b> | pCi/L | 04/23/18 11:59 | 15262-20-1 |      |
| Total Radium | Total Radium Calculation | <b>2.47 ± 1.16 (1.49)</b>                         | pCi/L | 04/25/18 11:20 | 7440-14-4  |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: D18A031

Pace Project No.: 35385117

**Sample: D18A031-04**      **Lab ID: 35385117004**      Collected: 04/04/18 14:10      Received: 04/10/18 11:15      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters   | Method                      | Act ± Unc (MDC) Carr Trac                   | Units | Analyzed       | CAS No.    | Qual |
|--------------|-----------------------------|---|-------|----------------|------------|------|
| Radium-226   | EPA 903.1                   | <b>1.20 ± 0.619 (0.519)</b><br>C:NA T:92%   | pCi/L | 04/23/18 13:34 | 13982-63-3 |      |
| Radium-228   | EPA 904.0                   | <b>0.968 ± 0.466 (0.797)</b><br>C:73% T:78% | pCi/L | 04/23/18 11:59 | 15262-20-1 |      |
| Total Radium | Total Radium<br>Calculation | <b>2.17 ± 1.09 (1.32)</b>                   | pCi/L | 04/25/18 11:20 | 7440-14-4  |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: D18A031

Pace Project No.: 35385117

**Sample: D18A031-05**      **Lab ID: 35385117005**      Collected: 04/03/18 11:52      Received: 04/10/18 11:15      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters   | Method                   | Act ± Unc (MDC) Carr Trac                    | Units | Analyzed       | CAS No.    | Qual |
|--------------|--------------------------|--|-------|----------------|------------|------|
| Radium-226   | EPA 903.1                | <b>1.09 ± 0.666 (0.784)</b><br>C:NA T:91%    | pCi/L | 04/23/18 13:47 | 13982-63-3 |      |
| Radium-228   | EPA 904.0                | <b>0.715U ± 0.390 (0.715)</b><br>C:78% T:83% | pCi/L | 04/23/18 11:59 | 15262-20-1 |      |
| Total Radium | Total Radium Calculation | <b>1.78 ± 1.06 (1.50)</b>                    | pCi/L | 04/25/18 11:20 | 7440-14-4  |      |

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: D18A031

Pace Project No.: 35385117

**Sample: D18A031-06**      **Lab ID: 35385117006**      Collected: 04/04/18 12:13      Received: 04/10/18 11:15      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters   | Method                   | Act ± Unc (MDC) Carr Trac                         | Units | Analyzed       | CAS No.    | Qual |
|--------------|--------------------------|---|-------|----------------|------------|------|
| Radium-226   | EPA 903.1                | <b>1.85 ± 0.798 (0.566)</b><br><b>C:NA T:90%</b>  | pCi/L | 04/23/18 13:34 | 13982-63-3 |      |
| Radium-228   | EPA 904.0                | <b>1.39 ± 0.566 (0.912)</b><br><b>C:78% T:76%</b> | pCi/L | 04/23/18 15:13 | 15262-20-1 |      |
| Total Radium | Total Radium Calculation | <b>3.23 ± 1.36 (1.48)</b>                         | pCi/L | 04/25/18 11:20 | 7440-14-4  |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: D18A031

Pace Project No.: 35385117

**Sample: D18A031-07**      **Lab ID: 35385117007**      Collected: 04/04/18 10:32      Received: 04/10/18 11:15      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters   | Method                      | Act ± Unc (MDC) Carr Trac                  | Units | Analyzed       | CAS No.    | Qual |
|--------------|-----------------------------|--|-------|----------------|------------|------|
| Radium-226   | EPA 903.1                   | <b>3.55 ± 1.11 (0.674)</b><br>C:NA T:87%   | pCi/L | 04/23/18 13:47 | 13982-63-3 |      |
| Radium-228   | EPA 904.0                   | <b>2.58 ± 0.751 (0.890)</b><br>C:72% T:77% | pCi/L | 04/23/18 15:13 | 15262-20-1 |      |
| Total Radium | Total Radium<br>Calculation | <b>6.13 ± 1.86 (1.56)</b>                  | pCi/L | 04/25/18 11:20 | 7440-14-4  |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: D18A031

Pace Project No.: 35385117

**Sample: D18A031-08**      **Lab ID: 35385117008**      Collected: 04/04/18 08:40      Received: 04/10/18 11:15      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters   | Method                   | Act ± Unc (MDC) Carr Trac                         | Units | Analyzed       | CAS No.    | Qual |
|--------------|--------------------------|---|-------|----------------|------------|------|
| Radium-226   | EPA 903.1                | <b>1.18 ± 0.665 (0.745)</b><br><b>C:NA T:90%</b>  | pCi/L | 04/23/18 13:47 | 13982-63-3 |      |
| Radium-228   | EPA 904.0                | <b>1.97 ± 0.693 (0.987)</b><br><b>C:65% T:75%</b> | pCi/L | 04/23/18 15:13 | 15262-20-1 |      |
| Total Radium | Total Radium Calculation | <b>3.15 ± 1.36 (1.73)</b>                         | pCi/L | 04/25/18 11:20 | 7440-14-4  |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: D18A031

Pace Project No.: 35385117

**Sample: D18A031-09**      **Lab ID: 35385117009**      Collected: 04/03/18 15:37      Received: 04/10/18 11:15      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters   | Method                   | Act ± Unc (MDC) Carr Trac                           | Units | Analyzed       | CAS No.    | Qual |
|--------------|--------------------------|---|-------|----------------|------------|------|
| Radium-226   | EPA 903.1                | <b>0.878U ± 0.561 (0.878)</b><br><b>C:NA T:95%</b>  | pCi/L | 04/23/18 13:47 | 13982-63-3 |      |
| Radium-228   | EPA 904.0                | <b>0.886U ± 0.382 (0.886)</b><br><b>C:74% T:87%</b> | pCi/L | 04/23/18 15:13 | 15262-20-1 |      |
| Total Radium | Total Radium Calculation | <b>1.76U ± 0.943 (1.76)</b>                         | pCi/L | 04/25/18 11:20 | 7440-14-4  |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: D18A031

Pace Project No.: 35385117

**Sample: D18A031-10**      **Lab ID: 35385117010**      Collected: 04/03/18 12:41      Received: 04/10/18 11:15      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters   | Method                      | Act ± Unc (MDC) Carr Trac                           | Units | Analyzed       | CAS No.    | Qual |
|--------------|-----------------------------|---|-------|----------------|------------|------|
| Radium-226   | EPA 903.1                   | <b>0.889 ± 0.622 (0.750)</b><br><b>C:NA T:82%</b>   | pCi/L | 04/23/18 13:47 | 13982-63-3 |      |
| Radium-228   | EPA 904.0                   | <b>0.816U ± 0.407 (0.816)</b><br><b>C:75% T:84%</b> | pCi/L | 04/23/18 15:13 | 15262-20-1 |      |
| Total Radium | Total Radium<br>Calculation | <b>1.57U ± 1.03 (1.57)</b>                          | pCi/L | 04/25/18 11:39 | 7440-14-4  |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: D18A031

Pace Project No.: 35385117

**Sample: D18A031-11**      **Lab ID: 35385117011**      Collected: 04/05/18 12:47      Received: 04/10/18 11:15      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters   | Method                      | Act ± Unc (MDC) Carr Trac                           | Units | Analyzed       | CAS No.    | Qual |
|--------------|-----------------------------|---|-------|----------------|------------|------|
| Radium-226   | EPA 903.1                   | <b>0.696U ± 0.389 (0.696)</b><br><b>C:NA T:89%</b>  | pCi/L | 04/23/18 13:47 | 13982-63-3 |      |
| Radium-228   | EPA 904.0                   | <b>0.844U ± 0.331 (0.844)</b><br><b>C:73% T:81%</b> | pCi/L | 04/23/18 15:14 | 15262-20-1 |      |
| Total Radium | Total Radium<br>Calculation | <b>1.54U ± 0.720 (1.54)</b>                         | pCi/L | 04/25/18 11:39 | 7440-14-4  |      |

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: D18A031

Pace Project No.: 35385117

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|                         |   |                       |                  |
|-------------------------|---|-----------------------|------------------|
| QC Batch:               | 294999  | Analysis Method:      | EPA 904.0        |
| QC Batch Method:        | EPA 904.0   | Analysis Description: | 904.0 Radium 228 |
| Associated Lab Samples: | 35385117001, 35385117002, 35385117003, 35385117004, 35385117005, 35385117006, 35385117007, 35385117008, 35385117009, 35385117010, 35385117011 |                       |                  |

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|                         |   |         |       |
|-------------------------|---|---------|-------|
| METHOD BLANK:           | 1444377   | Matrix: | Water |
| Associated Lab Samples: | 35385117001, 35385117002, 35385117003, 35385117004, 35385117005, 35385117006, 35385117007, 35385117008, 35385117009, 35385117010, 35385117011 |         |       |

| Parameter  | Act ± Unc (MDC) Carr Trac         | Units | Analyzed       | Qualifiers |
|------------|-----------------------------------|-------|----------------|------------|
| Radium-228 | 0.121 ± 0.304 (0.678) C:83% T:82% | pCi/L | 04/23/18 10:58 |            |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: D18A031  
Pace Project No.: 35385117

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|                         |   |                       |                  |
|-------------------------|---|-----------------------|------------------|
| QC Batch:               | 294946  | Analysis Method:      | EPA 903.1        |
| QC Batch Method:        | EPA 903.1   | Analysis Description: | 903.1 Radium-226 |
| Associated Lab Samples: | 35385117001, 35385117002, 35385117003, 35385117004, 35385117005, 35385117006, 35385117007, 35385117008, 35385117009, 35385117010, 35385117011 |                       |                  |

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|                         |   |         |       |
|-------------------------|---|---------|-------|
| METHOD BLANK:           | 1444225   | Matrix: | Water |
| Associated Lab Samples: | 35385117001, 35385117002, 35385117003, 35385117004, 35385117005, 35385117006, 35385117007, 35385117008, 35385117009, 35385117010, 35385117011 |         |       |

| Parameter  | Act ± Unc (MDC) Carr Trac        | Units | Analyzed       | Qualifiers |
|------------|----------------------------------|-------|----------------|------------|
| Radium-226 | 0.431 ± 0.490 (0.773) C:NA T:84% | pCi/L | 04/23/18 12:57 |            |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: D18A031

Pace Project No.: 35385117

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval).

Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### LABORATORIES

PASI-O Pace Analytical Services - Ormond Beach

PASI-PA Pace Analytical Services - Greensburg

### ANALYTE QUALIFIERS

U Compound was analyzed for but not detected.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: D18A031  
Pace Project No.: 35385117

| Lab ID      | Sample ID  | QC Batch Method          | QC Batch | Analytical Method | Analytical Batch |
|-------------|------------|--------------------------|----------|-------------------|------------------|
| 35385117001 | D18A031-01 | EPA 903.1                | 294946   |                   |                  |
| 35385117002 | D18A031-02 | EPA 903.1                | 294946   |                   |                  |
| 35385117003 | D18A031-03 | EPA 903.1                | 294946   |                   |                  |
| 35385117004 | D18A031-04 | EPA 903.1                | 294946   |                   |                  |
| 35385117005 | D18A031-05 | EPA 903.1                | 294946   |                   |                  |
| 35385117006 | D18A031-06 | EPA 903.1                | 294946   |                   |                  |
| 35385117007 | D18A031-07 | EPA 903.1                | 294946   |                   |                  |
| 35385117008 | D18A031-08 | EPA 903.1                | 294946   |                   |                  |
| 35385117009 | D18A031-09 | EPA 903.1                | 294946   |                   |                  |
| 35385117010 | D18A031-10 | EPA 903.1                | 294946   |                   |                  |
| 35385117011 | D18A031-11 | EPA 903.1                | 294946   |                   |                  |
| 35385117001 | D18A031-01 | EPA 904.0                | 294999   |                   |                  |
| 35385117002 | D18A031-02 | EPA 904.0                | 294999   |                   |                  |
| 35385117003 | D18A031-03 | EPA 904.0                | 294999   |                   |                  |
| 35385117004 | D18A031-04 | EPA 904.0                | 294999   |                   |                  |
| 35385117005 | D18A031-05 | EPA 904.0                | 294999   |                   |                  |
| 35385117006 | D18A031-06 | EPA 904.0                | 294999   |                   |                  |
| 35385117007 | D18A031-07 | EPA 904.0                | 294999   |                   |                  |
| 35385117008 | D18A031-08 | EPA 904.0                | 294999   |                   |                  |
| 35385117009 | D18A031-09 | EPA 904.0                | 294999   |                   |                  |
| 35385117010 | D18A031-10 | EPA 904.0                | 294999   |                   |                  |
| 35385117011 | D18A031-11 | EPA 904.0                | 294999   |                   |                  |
| 35385117001 | D18A031-01 | Total Radium Calculation | 295904   |                   |                  |
| 35385117002 | D18A031-02 | Total Radium Calculation | 295904   |                   |                  |
| 35385117003 | D18A031-03 | Total Radium Calculation | 295904   |                   |                  |
| 35385117004 | D18A031-04 | Total Radium Calculation | 295904   |                   |                  |
| 35385117005 | D18A031-05 | Total Radium Calculation | 295904   |                   |                  |
| 35385117006 | D18A031-06 | Total Radium Calculation | 295904   |                   |                  |
| 35385117007 | D18A031-07 | Total Radium Calculation | 295904   |                   |                  |
| 35385117008 | D18A031-08 | Total Radium Calculation | 295904   |                   |                  |
| 35385117009 | D18A031-09 | Total Radium Calculation | 295904   |                   |                  |
| 35385117010 | D18A031-10 | Total Radium Calculation | 295909   |                   |                  |
| 35385117011 | D18A031-11 | Total Radium Calculation | 295909   |                   |                  |
| 35385117001 | D18A031-01 | EPA 300.0                | 439296   |                   |                  |
| 35385117002 | D18A031-02 | EPA 300.0                | 439296   |                   |                  |
| 35385117003 | D18A031-03 | EPA 300.0                | 439296   |                   |                  |
| 35385117004 | D18A031-04 | EPA 300.0                | 439296   |                   |                  |
| 35385117005 | D18A031-05 | EPA 300.0                | 439296   |                   |                  |
| 35385117006 | D18A031-06 | EPA 300.0                | 439386   |                   |                  |
| 35385117007 | D18A031-07 | EPA 300.0                | 439386   |                   |                  |
| 35385117008 | D18A031-08 | EPA 300.0                | 439296   |                   |                  |

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**SUBCONTRACT ORDER**  
**Deerhaven Generating Station**  
**D18A031**

**WO# : 35385117**



**SENDING LABORATORY:**

Gainesville Regional Utilities  
 Deerhaven Generating Station  
 10001 NW 13th Street  
 Gainesville, FL 32653  
 Phone: 352-334-3434  
 Fax: 352-334-3149  
 Project Manager: Jeff Boudreau

**RECEIVING LABORATORY:**

Pace Analytical  
 8 East Tower Circle  
 Ormond Beach, FL 32174  
 Phone : (386) 672-5668  
 Fax: (386) 673-4001

| Analysis                        | Expires         | Laboratory ID                  | Comments |
|---------------------------------|-----------------|--------------------------------|----------|
| <b>Sample Name: SIS-1</b>       |                 |                                |          |
| <b>Sample ID: D18A031-01</b>    | <b>Water</b>    | <b>Sampled:03-Apr-18 13:37</b> |          |
| D_Radium226+228_Combined        | 26-Sep-18 13:37 |                                |          |
| D_Anions - Fluoride             | 01-May-18 13:37 |                                |          |
| <i>Containers Supplied:</i>     |                 |                                |          |
| D_HDPE, Chill @<6*C - 250mL (C) |                 |                                |          |
| D_HDPE, HNO3 pH<2 - 2000mL (D)  |                 |                                |          |
| <b>Sample Name: SIS-2</b>       |                 |                                |          |
| <b>Sample ID: D18A031-02</b>    | <b>Water</b>    | <b>Sampled:03-Apr-18 14:45</b> |          |
| D_Anions - Fluoride             | 01-May-18 14:45 |                                |          |
| D_Radium226+228_Combined        | 26-Sep-18 14:45 |                                |          |
| <i>Containers Supplied:</i>     |                 |                                |          |
| D_HDPE, Chill @<6*C - 250mL (C) |                 |                                |          |
| D_HDPE, HNO3 pH<2 - 2000mL (D)  |                 |                                |          |
| <b>Sample Name: SIS-3</b>       |                 |                                |          |
| <b>Sample ID: D18A031-03</b>    | <b>Water</b>    | <b>Sampled:04-Apr-18 15:40</b> |          |
| D_Anions - Fluoride             | 02-May-18 15:40 |                                |          |
| D_Radium226+228_Combined        | 27-Sep-18 15:40 |                                |          |
| <i>Containers Supplied:</i>     |                 |                                |          |
| D_HDPE, Chill @<6*C - 250mL (C) |                 |                                |          |
| D_HDPE, HNO3 pH<2 - 2000mL (D)  |                 |                                |          |
| <b>Sample Name: SIS-4</b>       |                 |                                |          |
| <b>Sample ID: D18A031-04</b>    | <b>Water</b>    | <b>Sampled:04-Apr-18 14:10</b> |          |
| D_Anions - Fluoride             | 02-May-18 14:10 |                                |          |
| D_Radium226+228_Combined        | 27-Sep-18 14:10 |                                |          |
| <i>Containers Supplied:</i>     |                 |                                |          |
| D_HDPE, Chill @<6*C - 250mL (C) |                 |                                |          |
| D_HDPE, HNO3 pH<2 - 2000mL (D)  |                 |                                |          |

Released By: *Shelby Phillip* via FedEx Date: *4-9-18* Received By: *[Signature]* Date: *4/11/18 11:15*

Released By: \_\_\_\_\_ Date: \_\_\_\_\_ Received By: \_\_\_\_\_ Date: \_\_\_\_\_



**SUBCONTRACT ORDER**  
**Deerhaven Generating Station**  
**D18A031**

| Analysis                            | Expires         | Laboratory ID                  | Comments |
|-------------------------------------|-----------------|--------------------------------|----------|
| <b>Sample Name: LF-1</b>            |                 |                                |          |
| <b>Sample ID: D18A031-05</b>        | <b>Water</b>    | <b>Sampled:03-Apr-18 11:52</b> |          |
| D_Radium226+228_Combined            | 26-Sep-18 11:52 |                                |          |
| D_Anions - Fluoride                 | 01-May-18 11:52 |                                |          |
| <i>Containers Supplied:</i>         |                 |                                |          |
| D_HDPE, Chill @<6°C - 250mL (C)     |                 |                                |          |
| D_HDPE, HNO3 pH<2 - 2000mL (D)      |                 |                                |          |
| <b>Sample Name: LF-2</b>            |                 |                                |          |
| <b>Sample ID: D18A031-06</b>        | <b>Water</b>    | <b>Sampled:04-Apr-18 12:13</b> |          |
| D_Radium226+228_Combined            | 27-Sep-18 12:13 |                                |          |
| D_Anions - Fluoride                 | 02-May-18 12:13 |                                |          |
| <i>Containers Supplied:</i>         |                 |                                |          |
| D_HDPE, Chill @<6°C - 250mL (C)     |                 |                                |          |
| D_HDPE, HNO3 pH<2 - 2000mL (D)      |                 |                                |          |
| <b>Sample Name: LF-3</b>            |                 |                                |          |
| <b>Sample ID: D18A031-07</b>        | <b>Water</b>    | <b>Sampled:04-Apr-18 10:32</b> |          |
| D_Anions - Fluoride                 | 02-May-18 10:32 |                                |          |
| D_Radium226+228_Combined            | 27-Sep-18 10:32 |                                |          |
| <i>Containers Supplied:</i>         |                 |                                |          |
| D_HDPE, Chill @<6°C - 250mL (C)     |                 |                                |          |
| D_HDPE, HNO3 pH<2 - 2000mL (D)      |                 |                                |          |
| <b>Sample Name: LF-4</b>            |                 |                                |          |
| <b>Sample ID: D18A031-08</b>        | <b>Water</b>    | <b>Sampled:04-Apr-18 08:40</b> |          |
| D_Anions - Fluoride                 | 02-May-18 08:40 |                                |          |
| D_Radium226+228_Combined            | 27-Sep-18 08:40 |                                |          |
| <i>Containers Supplied:</i>         |                 |                                |          |
| D_HDPE, Chill @<6°C - 250mL (C)     |                 |                                |          |
| D_HDPE, HNO3 pH<2 - 2000mL (D)      |                 |                                |          |
| <b>Sample Name: MWI-4-5 (R4T5B)</b> |                 |                                |          |
| <b>Sample ID: D18A031-09</b>        | <b>Water</b>    | <b>Sampled:03-Apr-18 15:37</b> |          |
| D_Radium226+228_Combined            | 26-Sep-18 15:37 |                                |          |
| <i>Containers Supplied:</i>         |                 |                                |          |
| D_HDPE, HNO3 pH<2 - 2000mL (D)      |                 |                                |          |
| <b>Sample Name: MWI-6-4 (R6T4B)</b> |                 |                                |          |
| <b>Sample ID: D18A031-10</b>        | <b>Water</b>    | <b>Sampled:03-Apr-18 12:41</b> |          |
| D_Radium226+228_Combined            | 26-Sep-18 12:41 |                                |          |
| <i>Containers Supplied:</i>         |                 |                                |          |
| D_HDPE, HNO3 pH<2 - 2000mL (D)      |                 |                                |          |

Released By: *Shelly Phillips*      Date: *4-9-18*      Received By: *AS/Trace*      Date: *4/10/18 1115*  
*1.6 T-338*

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Released By: \_\_\_\_\_      Date: \_\_\_\_\_      Received By: \_\_\_\_\_      Date: \_\_\_\_\_



**SUBCONTRACT ORDER**  
**Deerhaven Generating Station**  
**D18A031**

| Analysis                         | Expires                 | Laboratory ID | Comments |
|----------------------------------|-------------------------|---------------|----------|
| Sample Name: EBLANK              |                         |               |          |
| Sample ID: D18A031-11      Water | Sampled:05-Apr-18 12:47 |               |          |
| D_Radium226+228_Combined         | 28-Sep-18 12:47         |               |          |
| <i>Containers Supplied:</i>      |                         |               |          |
| D_HDPE, HNO3 pH<2 - 2000mL (D)   |                         |               |          |

|                         |                  |                  |                |            |
|-------------------------|------------------|------------------|----------------|------------|
| <i>Shelley Phillips</i> | <i>via Fedex</i> | <i>AS / Paul</i> | <i>2/10/18</i> | <i>115</i> |
| Released By             | Date             | Received By      | Date           |            |
|                         | <i>4-9-18</i>    |                  | <i>1-6-18</i>  | <i>308</i> |
| Released By             | Date             | Received By      | Date           |            |



Document Name:  
Sample Condition Upon Receipt Form  
Document No.:  
F-FL-C-007 rev. 12

Document Revised:  
August 2, 2017  
Issuing Authority:  
Pace Florida Quality Office

**Form (SCUR)**

**WO#: 35385117**

**Project  
Project Manager  
Client**

PM: JSB      Due Date: 04/26/18  
CLIENT: DEELAB

*AS*

Date and Initials of person:  
Examining contents: \_\_\_\_\_  
Label: \_\_\_\_\_  
Deliver: \_\_\_\_\_  
pH: \_\_\_\_\_

Thermometer Used: T338      Date: 4/10/18      Time: 11:15      Initials: SS

State of Origin: \_\_\_\_\_

- |   |  |
|---|--|
| Cooler #1 Temp: °C <u>1.0</u> (Visual) <u>0</u> (Correction Factor) <u>1.0</u> (Actual)   | <input type="checkbox"/> Samples on ice, cooling process has begun |
| Cooler #2 Temp: °C <u>21.0</u> (Visual) <u>0</u> (Correction Factor) <u>21.0</u> (Actual) | <input type="checkbox"/> Samples on ice, cooling process has begun |
| Cooler #3 Temp: °C <u>21.2</u> (Visual) <u>0</u> (Correction Factor) <u>21.2</u> (Actual) | <input type="checkbox"/> Samples on ice, cooling process has begun |
| Cooler #4 Temp: °C <u>21.1</u> (Visual) <u>0</u> (Correction Factor) <u>21.1</u> (Actual) | <input type="checkbox"/> Samples on ice, cooling process has begun |
| Cooler #5 Temp: °C <u>20.1</u> (Visual) <u>0</u> (Correction Factor) <u>20.1</u> (Actual) | <input type="checkbox"/> Samples on ice, cooling process has begun |
| Cooler #6 Temp: °C _____ (Visual) _____ (Correction Factor) _____ (Actual)                | <input type="checkbox"/> Samples on ice, cooling process has begun |

Courier:  Fed Ex     UPS     USPS     Client     Commercial     Pace     Other \_\_\_\_\_

Shipping Method:  First Overnight     Priority Overnight     Standard Overnight     Ground     International Priority  
 Other 2 day

Billing:  Recipient     Sender     Third Party     Credit Card     Unknown

Tracking # 8127 8324 8516

Custody Seal on Cooler/Box Present:  Yes     No      Seals intact:  Yes     No      Ice: Wet Blue Dry None

Packing Material:  Bubble Wrap     Bubble Bags     None     Other \_\_\_\_\_

Samples shorted to lab (If Yes, complete)      Shorted Date: \_\_\_\_\_      Shorted Time: \_\_\_\_\_      Qty: \_\_\_\_\_

**Comments:**

|  |  |  |
|--|--|--|
| Chain of Custody Present   | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A            |  |
| Chain of Custody Filled Out  | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |  |
| Relinquished Signature & Sampler Name COC  | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A            |  |
| Samples Arrived within Hold Time   | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |  |
| Rush TAT requested on COC  | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A |  |
| Sufficient Volume  | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A            |  |
| Correct Containers Used  | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |  |
| Containers Intact  | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |  |
| Sample Labels match COC (sample IDs & date/time of collection)                             | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |  |
| All containers needing acid/base preservation have been checked.                           | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A            | Preservation Information:<br>Preservative: _____<br>Lot #/Trace #: _____<br>Date: _____ Time: _____<br>Initials: _____ |
| All Containers needing preservation are found to be in compliance with EPA recommendation: | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |  |
| Exceptions: VOA, Coliform, TOC, O&G, Carbamates  |  |  |
| Headspace in VOA Vials? (>6mm):  | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A            |  |
| Trip Blank Present:  | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A            |  |

Client Notification/ Resolution:  
Person Contacted: \_\_\_\_\_      Date/Time: \_\_\_\_\_

Comments/ Resolution (use back for additional comments): \_\_\_\_\_



Pace Analytical Services, LLC  
8 East Tower Circle  
Ormond Beach, FL 32174  
(386)672-5668

*Fluoride Data*  
*R4T5*  
*R6T4*  
*Eg Blank*  
*CCR 2018*  
*Wk #4*  
*Assessment*

April 25, 2018

Mr. Jeffery Boudreau  
Deerhaven Lab  
P.O. Box 147117, Station D38  
Gainesville, FL 32614

RE: Project: D18A030  
Pace Project No.: 35385116

Dear Mr. Boudreau:  
Enclosed are the analytical results for sample(s) received by the laboratory on April 10, 2018. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,  
*Jeff Baylor*

Jeff Baylor  
jeff.baylor@pacelabs.com  
(386)672-5668  
Project Manager

Enclosures

cc: Kent Brakefield  
Shelley Phillips, Deerhaven Lab



**REPORT OF LABORATORY ANALYSIS**

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## CERTIFICATIONS

Project: D18A030  
Pace Project No.: 35385116

### Pennsylvania Certification IDs

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601  
ANAB DOD-ELAP Rad Accreditation #: L2417  
Alabama Certification #: 41590  
Arizona Certification #: AZ0734  
Arkansas Certification  
California Certification #: 04222CA  
Colorado Certification #: PA01547  
Connecticut Certification #: PH-0694  
Delaware Certification  
EPA Region 4 DW Rad  
Florida/TNI Certification #: E87683  
Georgia Certification #: C040  
Guam Certification  
Hawaii Certification  
Idaho Certification  
Illinois Certification  
Indiana Certification  
Iowa Certification #: 391  
Kansas/TNI Certification #: E-10358  
Kentucky Certification #: KY90133  
KY WW Permit #: KY0098221  
KY WW Permit #: KY0000221  
Louisiana DHH/TNI Certification #: LA180012  
Louisiana DEQ/TNI Certification #: 4086  
Maine Certification #: 2017020  
Maryland Certification #: 308  
Massachusetts Certification #: M-PA1457  
Michigan/PADEP Certification #: 9991

Missouri Certification #: 235  
Montana Certification #: Cert0082  
Nebraska Certification #: NE-OS-29-14  
Nevada Certification #: PA014572018-1  
New Hampshire/TNI Certification #: 297617  
New Jersey/TNI Certification #: PA051  
New Mexico Certification #: PA01457  
New York/TNI Certification #: 10888  
North Carolina Certification #: 42706  
North Dakota Certification #: R-190  
Ohio EPA Rad Approval: #41249  
Oregon/TNI Certification #: PA200002-010  
Pennsylvania/TNI Certification #: 65-00282  
Puerto Rico Certification #: PA01457  
Rhode Island Certification #: 65-00282  
South Dakota Certification  
Tennessee Certification #: 02867  
Texas/TNI Certification #: T104704188-17-3  
Utah/TNI Certification #: PA014572017-9  
USDA Soil Permit #: P330-17-00091  
Vermont Dept. of Health: ID# VT-0282  
Virgin Island/PADEP Certification  
Virginia/VELAP Certification #: 9526  
Washington Certification #: C868  
West Virginia DEP Certification #: 143  
West Virginia DHHR Certification #: 9964C  
Wisconsin Approve List for Rad  
Wyoming Certification #: 8TMS-L

### Ormond Beach Certification IDs

8 East Tower Circle, Ormond Beach, FL 32174  
Alabama Certification #: 41320  
Connecticut Certification #: PH-0216  
Delaware Certification: FL NELAC Reciprocity  
Florida Certification #: E83079  
Georgia Certification #: 955  
Guam Certification: FL NELAC Reciprocity  
Hawaii Certification: FL NELAC Reciprocity  
Illinois Certification #: 200068  
Indiana Certification: FL NELAC Reciprocity  
Kansas Certification #: E-10383  
Kentucky Certification #: 90050  
Louisiana Certification #: FL NELAC Reciprocity  
Louisiana Environmental Certificate #: 05007  
Maryland Certification: #346  
Michigan Certification #: 9911  
Mississippi Certification: FL NELAC Reciprocity  
Missouri Certification #: 236  
Montana Certification #: Cert 0074

Nebraska Certification: NE-OS-28-14  
Nevada Certification: FL NELAC Reciprocity  
New Hampshire Certification #: 2958  
New Jersey Certification #: FL022  
New York Certification #: 11608  
North Carolina Environmental Certificate #: 667  
North Carolina Certification #: 12710  
Oklahoma Certification #: D9947  
Pennsylvania Certification #: 68-00547  
Puerto Rico Certification #: FL01264  
South Carolina Certification: #96042001  
Tennessee Certification #: TN02974  
Texas Certification: FL NELAC Reciprocity  
US Virgin Islands Certification: FL NELAC Reciprocity  
Virginia Environmental Certification #: 460165  
Wyoming Certification: FL NELAC Reciprocity  
West Virginia Certification #: 9962C  
Wisconsin Certification #: 399079670  
Wyoming (EPA Region 8): FL NELAC Reciprocity

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE SUMMARY

Project: D18A030  
Pace Project No.: 35385116

| Lab ID      | Sample ID  | Matrix | Date Collected | Date Received  |
|-------------|------------|--------|----------------|----------------|
| 35385116001 | D18A030-01 | Water  | 04/02/18 18:27 | 04/10/18 11:15 |
| 35385116002 | D18A030-02 | Water  | 04/02/18 15:45 | 04/10/18 11:15 |
| 35385116003 | D18A030-03 | Water  | 04/05/18 15:11 | 04/10/18 11:15 |
| 35385116004 | D18A030-04 | Water  | 04/03/18 15:37 | 04/10/18 11:15 |
| 35385116005 | D18A030-05 | Water  | 04/03/18 08:50 | 04/10/18 11:15 |
| 35385116006 | D18A030-06 | Water  | 04/03/18 12:41 | 04/10/18 11:15 |
| 35385116007 | D18A030-07 | Water  | 04/05/18 12:24 | 04/10/18 11:15 |
| 35385116008 | D18A030-08 | Water  | 04/06/18 11:26 | 04/10/18 11:15 |
| 35385116009 | D18A030-09 | Water  | 04/06/18 10:14 | 04/10/18 11:15 |
| 35385116010 | D18A030-10 | Water  | 04/05/18 09:09 | 04/10/18 11:15 |
| 35385116011 | D18A030-11 | Water  | 04/06/18 08:24 | 04/10/18 11:15 |
| 35385116012 | D18A030-12 | Water  | 04/03/18 10:10 | 04/10/18 11:15 |
| 35385116013 | D18A030-13 | Water  | 04/05/18 16:10 | 04/10/18 11:15 |
| 35385116014 | D18A030-14 | Water  | 04/05/18 12:47 | 04/10/18 11:15 |
| 35385116015 | D18A030-15 | Water  | 04/03/18 08:50 | 04/10/18 11:15 |

### REPORT OF LABORATORY ANALYSIS

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**SAMPLE ANALYTE COUNT**

Project: D18A030  
 Pace Project No.: 35385116

| Lab ID      | Sample ID  | Method     | Analysts | Analytes Reported | Laboratory |
|-------------|------------|------------|----------|-------------------|------------|
| 35385116001 | D18A030-01 | EPA 900.0  | NEG      | 1                 | PASI-PA    |
|             |            | EPA 300.0  | CMD      | 2                 | PASI-O     |
|             |            | EPA 353.2  | JMD      | 1                 | PASI-O     |
|             |            | SM 5310B   | JMD      | 1                 | PASI-O     |
| 35385116002 | D18A030-02 | EPA 900.0  | NEG      | 1                 | PASI-PA    |
|             |            | EPA 300.0  | CMD      | 2                 | PASI-O     |
|             |            | EPA 353.2  | JMD      | 1                 | PASI-O     |
|             |            | SM 5310B   | JMD      | 1                 | PASI-O     |
| 35385116003 | D18A030-03 | SM7110C-11 | NEG      | 1                 | PASI-PA    |
|             |            | EPA 300.0  | CMD      | 2                 | PASI-O     |
|             |            | EPA 353.2  | JMD      | 1                 | PASI-O     |
|             |            | SM 5310B   | JMD      | 1                 | PASI-O     |
| 35385116004 | D18A030-04 | EPA 900.0  | NEG      | 1                 | PASI-PA    |
|             |            | EPA 300.0  | CMD      | 3                 | PASI-O     |
|             |            | EPA 353.2  | JMD      | 1                 | PASI-O     |
|             |            | SM 5310B   | JMD      | 1                 | PASI-O     |
| 35385116005 | D18A030-05 | EPA 900.0  | NEG      | 1                 | PASI-PA    |
|             |            | EPA 300.0  | CMD      | 2                 | PASI-O     |
|             |            | EPA 353.2  | JMD      | 1                 | PASI-O     |
|             |            | SM 5310B   | JMD      | 1                 | PASI-O     |
| 35385116006 | D18A030-06 | EPA 900.0  | NEG      | 1                 | PASI-PA    |
|             |            | EPA 300.0  | CMD      | 3                 | PASI-O     |
|             |            | EPA 353.2  | JMD      | 1                 | PASI-O     |
|             |            | SM 5310B   | JMD      | 1                 | PASI-O     |
| 35385116007 | D18A030-07 | EPA 900.0  | NEG      | 1                 | PASI-PA    |
|             |            | EPA 300.0  | CMD      | 2                 | PASI-O     |
|             |            | EPA 353.2  | JMD      | 1                 | PASI-O     |
|             |            | SM 5310B   | JMD      | 1                 | PASI-O     |
| 35385116008 | D18A030-08 | EPA 900.0  | NEG      | 1                 | PASI-PA    |
|             |            | EPA 300.0  | CMD      | 2                 | PASI-O     |
|             |            | EPA 353.2  | JMD      | 1                 | PASI-O     |
|             |            | SM 5310B   | JMD      | 1                 | PASI-O     |
| 35385116009 | D18A030-09 | EPA 900.0  | NEG      | 1                 | PASI-PA    |
|             |            | EPA 300.0  | CMD      | 2                 | PASI-O     |
|             |            | EPA 353.2  | JMD      | 1                 | PASI-O     |
|             |            | SM 5310B   | JMD      | 1                 | PASI-O     |
| 35385116010 | D18A030-10 | EPA 900.0  | NEG      | 1                 | PASI-PA    |

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**SAMPLE ANALYTE COUNT**

Project: D18A030  
Pace Project No.: 35385116

| Lab ID             | Sample ID         | Method    | Analysts | Analytes Reported | Laboratory |
|--------------------|-------------------|-----------|----------|-------------------|------------|
|                    |                   | EPA 300.0 | CMD      | 2                 | PASI-O     |
|                    |                   | EPA 353.2 | JMD      | 1                 | PASI-O     |
|                    |                   | SM 5310B  | JMD      | 1                 | PASI-O     |
| <b>35385116011</b> | <b>D18A030-11</b> | EPA 900.0 | NEG      | 1                 | PASI-PA    |
|                    |                   | EPA 300.0 | CMD      | 2                 | PASI-O     |
|                    |                   | EPA 353.2 | JMD      | 1                 | PASI-O     |
|                    |                   | SM 5310B  | JMD      | 1                 | PASI-O     |
| <b>35385116012</b> | <b>D18A030-12</b> | EPA 900.0 | NEG      | 1                 | PASI-PA    |
|                    |                   | EPA 300.0 | CMD      | 2                 | PASI-O     |
|                    |                   | EPA 353.2 | JMD      | 1                 | PASI-O     |
|                    |                   | SM 5310B  | JMD      | 1                 | PASI-O     |
| <b>35385116013</b> | <b>D18A030-13</b> | EPA 900.0 | NEG      | 1                 | PASI-PA    |
|                    |                   | EPA 300.0 | CMD      | 2                 | PASI-O     |
|                    |                   | EPA 353.2 | JMD      | 1                 | PASI-O     |
|                    |                   | SM 5310B  | JMD      | 1                 | PASI-O     |
| <b>35385116014</b> | <b>D18A030-14</b> | EPA 900.0 | NEG      | 1                 | PASI-PA    |
|                    |                   | EPA 300.0 | CMD      | 3                 | PASI-O     |
|                    |                   | EPA 353.2 | JMD      | 1                 | PASI-O     |
|                    |                   | SM 5310B  | JMD      | 1                 | PASI-O     |
| <b>35385116015</b> | <b>D18A030-15</b> | EPA 900.0 | NEG      | 1                 | PASI-PA    |
|                    |                   | EPA 300.0 | CMD      | 2                 | PASI-O     |
|                    |                   | EPA 353.2 | JMD      | 1                 | PASI-O     |
|                    |                   | SM 5310B  | JMD      | 1                 | PASI-O     |

**REPORT OF LABORATORY ANALYSIS**

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**ANALYTICAL RESULTS**

Project: D18A030  
Pace Project No.: 35385116

*R475*

**Sample: D18A030-04**      **Lab ID: 35385116004**      Collected: 04/03/18 15:37      Received: 04/10/18 11:15      Matrix: Water

| Parameters                           | Results        | Units                        | PQL   | MDL   | DF | Prepared | Analyzed       | CAS No.    | Qual  |
|--------------------------------------|----------------|------------------------------|-------|-------|----|----------|----------------|------------|-------|
| <b>300.0 IC Anions 28 Days</b>       |                | Analytical Method: EPA 300.0 |       |       |    |          |                |            |       |
| Chloride                             | <b>3.8 I</b>   | mg/L                         | 5.0   | 2.5   | 1  |          | 04/24/18 04:52 | 16887-00-6 |       |
| Fluoride                             | <b>0.21</b>    | mg/L                         | 0.050 | 0.034 | 1  |          | 04/24/18 04:52 | 16984-48-8 |       |
| Sulfate                              | <b>2.5 U</b>   | mg/L                         | 5.0   | 2.5   | 1  |          | 04/24/18 04:52 | 14808-79-8 |       |
| <b>353.2 Nitrogen, NO2/NO3 pres.</b> |                | Analytical Method: EPA 353.2 |       |       |    |          |                |            |       |
| Nitrogen, NO2 plus NO3               | <b>0.034 I</b> | mg/L                         | 0.050 | 0.025 | 1  |          | 04/16/18 15:07 |            | J(M1) |
| <b>5310B TOC</b>                     |                | Analytical Method: SM 5310B  |       |       |    |          |                |            |       |
| Total Organic Carbon                 | <b>33.6</b>    | mg/L                         | 1.0   | 0.50  | 1  |          | 04/23/18 01:17 | 7440-44-0  |       |

**REPORT OF LABORATORY ANALYSIS**

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**ANALYTICAL RESULTS**

Project: D18A030  
Pace Project No.: 35385116

*RGTY*

**Sample: D18A030-06**      **Lab ID: 35385116006**      Collected: 04/03/18 12:41      Received: 04/10/18 11:15      Matrix: Water

| Parameters                           | Results        | Units                        | PQL   | MDL   | DF | Prepared | Analyzed       | CAS No.    | Qual |
|--------------------------------------|----------------|------------------------------|-------|-------|----|----------|----------------|------------|------|
| <b>300.0 IC Anions 28 Days</b>       |                | Analytical Method: EPA 300.0 |       |       |    |          |                |            |      |
| Chloride                             | <b>4.9 I</b>   | mg/L                         | 5.0   | 2.5   | 1  |          | 04/11/18 15:30 | 16887-00-6 |      |
| Fluoride                             | <b>0.086</b>   | mg/L                         | 0.050 | 0.034 | 1  |          | 04/11/18 15:30 | 16984-48-8 |      |
| Sulfate                              | <b>18.1</b>    | mg/L                         | 5.0   | 2.5   | 1  |          | 04/11/18 15:30 | 14808-79-8 |      |
| <b>353.2 Nitrogen, NO2/NO3 pres.</b> |                | Analytical Method: EPA 353.2 |       |       |    |          |                |            |      |
| Nitrogen, NO2 plus NO3               | <b>0.025 U</b> | mg/L                         | 0.050 | 0.025 | 1  |          | 04/16/18 15:12 |            |      |
| <b>5310B TOC</b>                     |                | Analytical Method: SM 5310B  |       |       |    |          |                |            |      |
| Total Organic Carbon                 | <b>8.4</b>     | mg/L                         | 1.0   | 0.50  | 1  |          | 04/23/18 01:49 | 7440-44-0  |      |

**REPORT OF LABORATORY ANALYSIS**

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**ANALYTICAL RESULTS**

Project: D18A030  
Pace Project No.: 35385116

**Sample: D18A030-14**      **Lab ID: 35385116014**      Collected: 04/05/18 12:47      Received: 04/10/18 11:15      Matrix: Water

| Parameters                           | Results        | Units                        | PQL   | MDL   | DF | Prepared | Analyzed       | CAS No.    | Qual |
|--------------------------------------|----------------|------------------------------|-------|-------|----|----------|----------------|------------|------|
| <b>300.0 IC Anions 28 Days</b>       |                | Analytical Method: EPA 300.0 |       |       |    |          |                |            |      |
| Chloride                             | <b>2.5 U</b>   | mg/L                         | 5.0   | 2.5   | 1  |          | 04/11/18 12:32 | 16887-00-6 |      |
| Fluoride                             | <b>0.034 U</b> | mg/L                         | 0.050 | 0.034 | 1  |          | 04/11/18 12:32 | 16984-48-8 |      |
| Sulfate                              | <b>2.5 U</b>   | mg/L                         | 5.0   | 2.5   | 1  |          | 04/11/18 12:32 | 14808-79-8 |      |
| <b>353.2 Nitrogen, NO2/NO3 pres.</b> |                | Analytical Method: EPA 353.2 |       |       |    |          |                |            |      |
| Nitrogen, NO2 plus NO3               | <b>0.025 U</b> | mg/L                         | 0.050 | 0.025 | 1  |          | 04/16/18 15:27 |            |      |
| <b>5310B TOC</b>                     |                | Analytical Method: SM 5310B  |       |       |    |          |                |            |      |
| Total Organic Carbon                 | <b>0.50 U</b>  | mg/L                         | 1.0   | 0.50  | 1  |          | 04/23/18 04:48 | 7440-44-0  |      |

**REPORT OF LABORATORY ANALYSIS**

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### QUALITY CONTROL DATA

Project: D18A030  
Pace Project No.: 35385116

QC Batch: 439296 Analysis Method: EPA 300.0  
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions  
Associated Lab Samples: 35385116006, 35385116012, 35385116014, 35385116015

METHOD BLANK: 2384671 Matrix: Water  
Associated Lab Samples: 35385116006, 35385116012, 35385116014, 35385116015

| Parameter | Units | Blank Result | Reporting Limit | MDL   | Analyzed       | Qualifiers |
|-----------|-------|--------------|-----------------|-------|----------------|------------|
| Chloride  | mg/L  | 2.5 U        | 5.0             | 2.5   | 04/11/18 10:41 |            |
| Fluoride  | mg/L  | 0.034 U      | 0.050           | 0.034 | 04/11/18 10:41 |            |
| Sulfate   | mg/L  | 2.5 U        | 5.0             | 2.5   | 04/11/18 10:41 |            |

LABORATORY CONTROL SAMPLE: 2384672

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Chloride  | mg/L  | 50          | 49.0       | 98        | 90-110       |            |
| Fluoride  | mg/L  | 5           | 5.0        | 99        | 90-110       |            |
| Sulfate   | mg/L  | 50          | 48.1       | 96        | 90-110       |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2384673 2384674

| Parameter | Units | MS                 |             | MSD         |           | MS % Rec | MSD % Rec | % Rec Limits | RPD    | Max RPD | Qual |
|-----------|-------|--------------------|-------------|-------------|-----------|----------|-----------|--------------|--------|---------|------|
|           |       | 35385116012 Result | Spike Conc. | Spike Conc. | MS Result |          |           |              |        |         |      |
| Chloride  | mg/L  | 19.9               | 50          | 50          | 71.0      | 70.7     | 102       | 102          | 90-110 | 0       | 20   |
| Fluoride  | mg/L  | 0.14               | 5           | 5           | 4.9       | 4.9      | 96        | 96           | 90-110 | 0       | 20   |
| Sulfate   | mg/L  | 43.5               | 50          | 50          | 96.1      | 96.0     | 105       | 105          | 90-110 | 0       | 20   |

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### REPORT OF LABORATORY ANALYSIS

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**QUALITY CONTROL DATA**

Project: D18A030  
 Pace Project No.: 35385116

QC Batch: 439620 Analysis Method: EPA 300.0  
 QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions  
 Associated Lab Samples: 35385116001, 35385116002, 35385116003, 35385116005, 35385116007, 35385116008, 35385116009, 35385116010, 35385116011, 35385116013

METHOD BLANK: 2386634 Matrix: Water  
 Associated Lab Samples: 35385116001, 35385116002, 35385116003, 35385116005, 35385116007, 35385116008, 35385116009, 35385116010, 35385116011, 35385116013

| Parameter | Units | Blank Result | Reporting Limit | MDL | Analyzed       | Qualifiers |
|-----------|-------|--------------|-----------------|-----|----------------|------------|
| Chloride  | mg/L  | 2.5 U        | 5.0             | 2.5 | 04/12/18 12:38 |            |
| Sulfate   | mg/L  | 2.5 U        | 5.0             | 2.5 | 04/12/18 12:38 |            |

LABORATORY CONTROL SAMPLE: 2386635

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Chloride  | mg/L  | 50          | 49.9       | 100       | 90-110       |            |
| Sulfate   | mg/L  | 50          | 51.3       | 103       | 90-110       |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2386638 2386639

| Parameter | Units | 35385116001 Result | MS          |                | MSD       |            | MS % Rec | MSD % Rec | % Rec Limits | Max |     | Qual |
|-----------|-------|--------------------|-------------|----------------|-----------|------------|----------|-----------|--------------|-----|-----|------|
|           |       |                    | Spike Conc. | MS Spike Conc. | MS Result | MSD Result |          |           |              | RPD | RPD |      |
| Chloride  | mg/L  | 15.4               | 50          | 50             | 62.4      | 62.3       | 94       | 94        | 90-110       | 0   | 20  |      |
| Sulfate   | mg/L  | 2.5 U              | 50          | 50             | 48.5      | 48.9       | 95       | 95        | 90-110       | 1   | 20  |      |

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**REPORT OF LABORATORY ANALYSIS**

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### QUALITY CONTROL DATA

Project: D18A030  
Pace Project No.: 35385116

QC Batch: 442036 Analysis Method: EPA 300.0  
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions  
Associated Lab Samples: 35385116004

METHOD BLANK: 2399160 Matrix: Water  
Associated Lab Samples: 35385116004

| Parameter | Units | Blank Result | Reporting Limit | MDL   | Analyzed       | Qualifiers |
|-----------|-------|--------------|-----------------|-------|----------------|------------|
| Chloride  | mg/L  | 2.5 U        | 5.0             | 2.5   | 04/23/18 09:49 |            |
| Fluoride  | mg/L  | 0.034 U      | 0.050           | 0.034 | 04/23/18 09:49 |            |
| Sulfate   | mg/L  | 2.5 U        | 5.0             | 2.5   | 04/23/18 09:49 |            |

LABORATORY CONTROL SAMPLE: 2399161

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Chloride  | mg/L  | 50          | 47.2       | 94        | 90-110       |            |
| Fluoride  | mg/L  | 5           | 4.9        | 98        | 90-110       |            |
| Sulfate   | mg/L  | 50          | 47.4       | 95        | 90-110       |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2399162 2399163

| Parameter | Units | 35386853003 |       | MS          |             | MSD    |        | MS    |        | MSD |    | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|-------------|-------|-------------|-------------|--------|--------|-------|--------|-----|----|--------------|-----|---------|------|
|           |       | Result      | Conc. | Spike Conc. | Spike Conc. | Result | Result | % Rec | % Rec  |     |    |              |     |         |      |
| Chloride  | mg/L  | 5.7         | 50    | 50          | 53.9        | 54.2   | 96     | 97    | 90-110 | 1   | 20 |              |     |         |      |
| Fluoride  | mg/L  | 0.094       | 5     | 5           | 5.0         | 5.0    | 98     | 99    | 90-110 | 1   | 20 |              |     |         |      |
| Sulfate   | mg/L  | 4.0 I       | 50    | 50          | 51.3        | 51.9   | 95     | 96    | 90-110 | 1   | 20 |              |     |         |      |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2400173 2400174

| Parameter | Units | 35385116004 |       | MS          |             | MSD    |        | MS    |        | MSD |    | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|-------------|-------|-------------|-------------|--------|--------|-------|--------|-----|----|--------------|-----|---------|------|
|           |       | Result      | Conc. | Spike Conc. | Spike Conc. | Result | Result | % Rec | % Rec  |     |    |              |     |         |      |
| Chloride  | mg/L  | 3.8 I       | 50    | 50          | 50.4        | 48.9   | 93     | 90    | 90-110 | 3   | 20 |              |     |         |      |
| Fluoride  | mg/L  | 0.21        | 5     | 5           | 5.2         | 5.0    | 99     | 96    | 90-110 | 3   | 20 |              |     |         |      |
| Sulfate   | mg/L  | 2.5 U       | 50    | 50          | 49.0        | 47.4   | 94     | 91    | 90-110 | 3   | 20 |              |     |         |      |

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**QUALITY CONTROL DATA**

Project: D18A030  
Pace Project No.: 35385116

QC Batch: 440395 Analysis Method: EPA 353.2  
QC Batch Method: EPA 353.2 Analysis Description: 353.2 Nitrate + Nitrite, preserved  
Associated Lab Samples: 35385116001, 35385116002, 35385116003, 35385116004, 35385116005, 35385116006, 35385116007, 35385116008, 35385116009, 35385116010, 35385116011, 35385116012, 35385116013

METHOD BLANK: 2390579 Matrix: Water  
Associated Lab Samples: 35385116001, 35385116002, 35385116003, 35385116004, 35385116005, 35385116006, 35385116007, 35385116008, 35385116009, 35385116010, 35385116011, 35385116012, 35385116013

| Parameter              | Units | Blank Result | Reporting Limit | MDL   | Analyzed       | Qualifiers |
|------------------------|-------|--------------|-----------------|-------|----------------|------------|
| Nitrogen, NO2 plus NO3 | mg/L  | 0.025 U      | 0.050           | 0.025 | 04/16/18 14:47 |            |

LABORATORY CONTROL SAMPLE: 2390580

| Parameter              | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|------------------------|-------|-------------|------------|-----------|--------------|------------|
| Nitrogen, NO2 plus NO3 | mg/L  | 2           | 2.1        | 103       | 90-110       |            |

MATRIX SPIKE SAMPLE: 2390582

| Parameter              | Units | 35383884001 Result | Spike Conc. | MS Result | MS % Rec | % Rec Limits | Qualifiers |
|------------------------|-------|--------------------|-------------|-----------|----------|--------------|------------|
| Nitrogen, NO2 plus NO3 | mg/L  | 0.025 U            | 2           | 1.2       | 62       | 90-110       | J(M1)      |

MATRIX SPIKE SAMPLE: 2390584

| Parameter              | Units | 35385116004 Result | Spike Conc. | MS Result | MS % Rec | % Rec Limits | Qualifiers |
|------------------------|-------|--------------------|-------------|-----------|----------|--------------|------------|
| Nitrogen, NO2 plus NO3 | mg/L  | 0.034 I            | 2           | 1.5       | 74       | 90-110       | J(M1)      |

SAMPLE DUPLICATE: 2390581

| Parameter              | Units | 35383884001 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|--------------------|------------|-----|---------|------------|
| Nitrogen, NO2 plus NO3 | mg/L  | 0.025 U            | 0.025 U    |     | 20      |            |

SAMPLE DUPLICATE: 2390583

| Parameter              | Units | 35385116004 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|--------------------|------------|-----|---------|------------|
| Nitrogen, NO2 plus NO3 | mg/L  | 0.034 I            | 0.029 I    |     | 20      |            |

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### QUALITY CONTROL DATA

Project: D18A030  
Pace Project No.: 35385116

QC Batch: 440396 Analysis Method: EPA 353.2  
QC Batch Method: EPA 353.2 Analysis Description: 353.2 Nitrate + Nitrite, preserved  
Associated Lab Samples: 35385116014, 35385116015

METHOD BLANK: 2390585 Matrix: Water  
Associated Lab Samples: 35385116014, 35385116015

| Parameter              | Units | Blank Result | Reporting Limit | MDL   | Analyzed       | Qualifiers |
|------------------------|-------|--------------|-----------------|-------|----------------|------------|
| Nitrogen, NO2 plus NO3 | mg/L  | 0.025 U      | 0.050           | 0.025 | 04/16/18 15:25 |            |

LABORATORY CONTROL SAMPLE: 2390586

| Parameter              | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|------------------------|-------|-------------|------------|-----------|--------------|------------|
| Nitrogen, NO2 plus NO3 | mg/L  | 2           | 2.1        | 107       | 90-110       |            |

MATRIX SPIKE SAMPLE: 2390588

| Parameter              | Units | 35385116014 Result | Spike Conc. | MS Result | MS % Rec | % Rec Limits | Qualifiers |
|------------------------|-------|--------------------|-------------|-----------|----------|--------------|------------|
| Nitrogen, NO2 plus NO3 | mg/L  | 0.025 U            | 2           | 2.0       | 100      | 90-110       |            |

MATRIX SPIKE SAMPLE: 2390590

| Parameter              | Units | 35385218001 Result | Spike Conc. | MS Result | MS % Rec | % Rec Limits | Qualifiers |
|------------------------|-------|--------------------|-------------|-----------|----------|--------------|------------|
| Nitrogen, NO2 plus NO3 | mg/L  | 0.23               | 2           | 2.3       | 105      | 90-110       |            |

SAMPLE DUPLICATE: 2390587

| Parameter              | Units | 35385116014 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|--------------------|------------|-----|---------|------------|
| Nitrogen, NO2 plus NO3 | mg/L  | 0.025 U            | 0.025 U    |     | 20      |            |

SAMPLE DUPLICATE: 2390589

| Parameter              | Units | 35385218001 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|--------------------|------------|-----|---------|------------|
| Nitrogen, NO2 plus NO3 | mg/L  | 0.23               | 0.22       | 1   | 20      |            |

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**QUALITY CONTROL DATA**

Project: D18A030  
Pace Project No.: 35385116

|                         |   |                       |           |
|-------------------------|---|-----------------------|-----------|
| QC Batch:               | 441990  | Analysis Method:      | SM 5310B  |
| QC Batch Method:        | SM 5310B  | Analysis Description: | 5310B TOC |
| Associated Lab Samples: | 35385116001, 35385116002, 35385116003, 35385116004, 35385116005, 35385116006, 35385116007, 35385116008, 35385116009, 35385116010, 35385116011, 35385116012, 35385116013, 35385116014, 35385116015 |                       |           |

|                         |   |         |       |
|-------------------------|---|---------|-------|
| METHOD BLANK:           | 2399076   | Matrix: | Water |
| Associated Lab Samples: | 35385116001, 35385116002, 35385116003, 35385116004, 35385116005, 35385116006, 35385116007, 35385116008, 35385116009, 35385116010, 35385116011, 35385116012, 35385116013, 35385116014, 35385116015 |         |       |

| Parameter            | Units | Blank Result | Reporting Limit | MDL  | Analyzed       | Qualifiers |
|----------------------|-------|--------------|-----------------|------|----------------|------------|
| Total Organic Carbon | mg/L  | 0.50 U       | 1.0             | 0.50 | 04/22/18 22:37 |            |

| LABORATORY CONTROL SAMPLE: 2399077 |       |             |            |           |              |            |
|------------------------------------|-------|-------------|------------|-----------|--------------|------------|
| Parameter                          | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
| Total Organic Carbon               | mg/L  | 20          | 19.8       | 99        | 90-110       |            |

| MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2399078 |       |                    |                |                 |           |            |          |           |              |     | 2399079 |      |  |
|--|-------|--------------------|----------------|-----------------|-----------|------------|----------|-----------|--------------|-----|---------|------|--|
| Parameter                                      | Units | 35384997007 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |  |
| Total Organic Carbon                           | mg/L  | 0.88 I             | 20             | 20              | 19.8      | 19.9       | 95       | 95        | 80-120       | 1   | 20      |      |  |

| MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2399080 |       |                    |                |                 |           |            |          |           |              |     | 2399081 |      |  |
|--|-------|--------------------|----------------|-----------------|-----------|------------|----------|-----------|--------------|-----|---------|------|--|
| Parameter                                      | Units | 35385116009 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |  |
| Total Organic Carbon                           | mg/L  | 20.0               | 20             | 20              | 39.0      | 38.6       | 95       | 93        | 80-120       | 1   | 20      |      |  |

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# Total Suspended Solids - Non-Filterable Residue - SM2540D

Date 4/6/18  
 Time 10:35  
 Analyst S. Phillips  
 Batch 1815015

Quarter: Week #4 CCR

Duplicate Source: D18A031-02

| Sample ID    | ID        | Initial Filter Weight (g) | Sample Volume (mL) | Dry filter and Sample Final Wgt (g) | TSS, Final Result mg/L | Reporting Limit mg/L | Qual |
|--------------|-----------|---------------------------|--------------------|-------------------------------------|------------------------|----------------------|------|
| 1815015-BLK1 | BLANK     | 0.1156                    | 500                | 0.1155                              | -0.2                   | 1.0                  | U    |
| 1815015-SRM1 | BLIND QC  | 0.1173                    | 500                | 0.1570                              | 79.4                   | 1.0                  |      |
| 1815015-DUP1 | DUPLICATE | 0.1154                    | 500                | 0.1155                              | 0.2                    | 1.0                  | U    |
| D18A031-01   | SIS1      | 0.1154                    | 500                | 0.1155                              | 0.2                    | 1.0                  | U    |
| D18A031-02   | SIS2      | 0.1156                    | 500                | 0.1156                              | 0.0                    | 1.0                  | U    |
| D18A031-03   | SIS3      | 0.1183                    | 500                | 0.1186                              | 0.6                    | 1.0                  | U    |
| D18A031-04   | SIS4      | 0.1179                    | 500                | 0.1181                              | 0.4                    | 1.0                  | U    |
| D18A031-05   | LF1       | 0.1130                    | 500                | 0.1130                              | 0.0                    | 1.0                  | U    |
| D18A031-06   | LF2       | 0.1145                    | 500                | 0.1153                              | 1.6                    | 1.0                  | I    |
| D18A031-07   | LF3       | 0.1115                    | 500                | 0.1116                              | 0.2                    | 1.0                  | U    |
| D18A031-08   | LF4       | 0.1162                    | 500                | 0.1168                              | 1.2                    | 1.0                  | I    |
|              |           |                           |                    |                                     |                        |                      |      |
|              |           |                           |                    |                                     |                        |                      |      |
|              |           |                           |                    |                                     |                        |                      |      |
|              |           |                           |                    |                                     |                        |                      |      |
|              |           |                           |                    |                                     |                        |                      |      |
|              |           |                           |                    |                                     |                        |                      |      |
|              |           |                           |                    |                                     |                        |                      |      |
|              |           |                           |                    |                                     |                        |                      |      |
|              |           |                           |                    |                                     |                        |                      |      |
|              |           |                           |                    |                                     |                        |                      |      |
|              |           |                           |                    |                                     |                        |                      |      |
|              |           |                           |                    |                                     |                        |                      |      |
|              |           |                           |                    |                                     |                        |                      |      |
|              |           |                           |                    |                                     |                        |                      |      |
|              |           |                           |                    |                                     |                        |                      |      |
|              |           |                           |                    |                                     |                        |                      |      |
|              |           |                           |                    |                                     |                        |                      |      |
|              |           |                           |                    |                                     |                        |                      |      |

Balance S/N: U07797

Oven S/N: U08230

|                  |       |         |
|------------------|-------|---------|
| SRM TV, mg/L     | 82.0  |         |
| SRM, mg/L        | 79.4  |         |
| % Recovery       | 96.83 | % Range |
| Low Range, mg/L  | 67.0  | 81.71   |
| High Range, mg/L | 91.3  | 111.34  |

|           |   |
|-----------|---|
| Sample    | 1 |
| Duplicate | 1 |
| %RPD      | 0 |

Total Suspended Solids = (Dry Filter and Sample(g) - Initial Filter(g))\*1000000/Sample Volume(mL)

*Shelley Phillips*

Reviewed By: *JB*

# Total Suspended Solids - Non-Filterable Residue - SM2540D

Date 4/9/18  
 Time 0:00  
 Analyst S. Phillips  
 Work Order D18A030  
 Batch 1815014

Quarter: 2Q18

*CCR week #4 assessment*

Duplicate Source: D18A030-12

| Sample ID    | ID         | Initial Filter Weight (g) | Sample Volume (mL) | Dry filter and Sample Final Wgt (g) | TSS, Final Result mg/L | Reporting Limit mg/L | Qual |
|--------------|------------|---------------------------|--------------------|-------------------------------------|------------------------|----------------------|------|
| 1815014-BLK1 | Blank      | 0.1147                    | 500                | 0.1146                              | -0.2                   | 1.0                  | U    |
| 1815014-SRM1 | Blind QC   | 0.1194                    | 500                | 0.1589                              | 79.0                   | 1.0                  |      |
| 1815014-DUP1 | Duplicate  | 0.1167                    | 500                | 0.1167                              | 0.0                    | 1.0                  | U    |
| D18A030-01   | R1T6       | 0.1183                    | 500                | 0.1233                              | 10.0                   | 1.0                  |      |
| D18A030-02   | R2T1       | 0.1188                    | 500                | 0.1187                              | -0.2                   | 1.0                  | U    |
| D18A030-03   | R3T7       | 0.1188                    | 500                | 0.1189                              | 0.2                    | 1.0                  | U    |
| D18A030-04   | R4T5b      | 0.1147                    | 500                | 0.1149                              | 0.4                    | 1.0                  | U    |
| D18A030-05   | R6T1b      | 0.1175                    | 500                | 0.1175                              | 0.0                    | 1.0                  | U    |
| D18A030-06   | R6T4b      | 0.1190                    | 500                | 0.1189                              | -0.2                   | 1.0                  | U    |
| D18A030-07   | R6T8b      | 0.1169                    | 500                | 0.1168                              | -0.2                   | 1.0                  | U    |
| D18A030-08   | R6T12b     | 0.1138                    | 500                | 0.1138                              | 0.0                    | 1.0                  | U    |
| D18A030-09   | R8T10      | 0.1123                    | 500                | 0.1122                              | -0.2                   | 1.0                  | U    |
| D18A030-10   | R9T5b      | 0.1166                    | 500                | 0.1164                              | -0.4                   | 1.0                  | U    |
| D18A030-11   | R10T8      | 0.1154                    | 500                | 0.1153                              | -0.2                   | 1.0                  | U    |
| D18A030-12   | R11T4b     | 0.1152                    | 500                | 0.1151                              | -0.2                   | 1.0                  | U    |
| D18A030-13   | DEEP WELL  | 0.1185                    | 500                | 0.1183                              | -0.4                   | 1.0                  | U    |
| D18A030-14   | EBLANK     | 0.1138                    | 500                | 0.1138                              | 0.0                    | 1.0                  | U    |
| D18A030-15   | FIELD DUPE | 0.1174                    | 500                | 0.1174                              | 0.0                    | 1.0                  | U    |

Balance S/N: U07797

Oven S/N: U08230

|                  |       |         |
|------------------|-------|---------|
| SRM TV, mg/L     | 82.0  |         |
| SRM, mg/L        | 79.0  |         |
| % Recovery       | 96.34 | % Range |
| Low Range, mg/L  | 67.0  | 81.7    |
| High Range, mg/L | 91.3  | 111.3   |

|           |   |
|-----------|---|
| Sample    | 1 |
| Duplicate | 1 |
| %RPD      | 0 |

Total Suspended Solids = (Dry Filter and Sample(g) - Initial Filter(g))\*1000000/Sample Volume(mL)

*Shelley Phillips*

Reviewed By: JB



**SUBCONTRACT ORDER**  
**Deerhaven Generating Station**  
**D18A032**

**SENDING LABORATORY:**

Gainesville Regional Utilities  
 Deerhaven Generating Station  
 10001 NW 13th Street  
 Gainesville, FL 32653  
 Phone: 352-334-3434  
 Fax: 352-334-3149  
 Project Manager: Jeff Boudreau

**RECEIVING LABORATORY:**

Kanapaha Laboratory  
 3901 SW 63rd BLVD  
 Gainesville, FL/USA 32608  
 Phone :352-393-6777  
 Fax: 352-334-2732

| Analysis                      | Expires         | Laboratory ID                   | Comments |
|-------------------------------|-----------------|---------------------------------|----------|
| <b>Sample Name: Barnstead</b> |                 |                                 |          |
| <b>Sample ID: D18A032-01</b>  | <b>Water</b>    | <b>Sampled: 19-Jan-18 08:43</b> |          |
| K_Mercury, cold vapor         | 16-Feb-18 08:43 |                                 |          |
| K_Barium                      | 18-Jul-18 08:43 |                                 |          |
| K_Beryllium                   | 18-Jul-18 08:43 |                                 |          |
| K_Cadmium                     | 18-Jul-18 08:43 |                                 |          |
| K_Calcium                     | 18-Jul-18 08:43 |                                 |          |
| K_Chromium                    | 18-Jul-18 08:43 |                                 |          |
| K_Cobalt                      | 18-Jul-18 08:43 |                                 |          |
| K_Copper                      | 18-Jul-18 08:43 |                                 |          |
| K_Iron                        | 18-Jul-18 08:43 |                                 |          |
| K_Aluminum                    | 18-Jul-18 08:43 |                                 |          |
| K_Manganese                   | 18-Jul-18 08:43 |                                 |          |
| K_Zinc                        | 18-Jul-18 08:43 |                                 |          |
| K_Molybdenum                  | 18-Jul-18 08:43 |                                 |          |
| K_Nickel                      | 18-Jul-18 08:43 |                                 |          |
| K_Potassium                   | 18-Jul-18 08:43 |                                 |          |
| K_Selenium                    | 18-Jul-18 08:43 |                                 |          |
| K_Silver                      | 18-Jul-18 08:43 |                                 |          |
| K_Sodium                      | 18-Jul-18 08:43 |                                 |          |
| K_Strontium                   | 18-Jul-18 08:43 |                                 |          |
| K_Vanadium                    | 18-Jul-18 08:43 |                                 |          |
| K_Magnesium                   | 18-Jul-18 08:43 |                                 |          |
| <i>Containers Supplied:</i>   |                 |                                 |          |
| D_HDPE, HNO3 pH<2 - 500mL (A) |                 |                                 |          |

|                     |                |             |      |
|---------------------|----------------|-------------|------|
| Released By         | Date           | Received By | Date |
| <i>Mully Philip</i> | <i>1-29-18</i> |             |      |
|                     |                |             |      |
| Released By         | Date           | Received By | Date |



*Kanapaha Laboratory*

3901 South West 63rd Blvd  
Gainesville, FL 32608  
(352) 393-6777

Florida Department of Health Certification E52099

March 21, 2018

Jeff Boudreau  
Deerhaven Laboratory  
Station D-38  
Gainesville, FL/USA 32614-7117

RE: Environmental

Enclosed are the results of analyses for samples received by the laboratory on 1/30/2018. If you have any questions concerning this report, please feel free to contact me.

Please note that all results were determined in accordance with NELAP requirements. All data is subject to a degree of uncertainty. Kanapaha Lab uncertainty is based upon LCS quality control statistics.

Sincerely,

Jaclyn M Dlhos  
Laboratory Supervisor



Deerhaven Laboratory  
Station D-38  
Gainesville, FL/USA 32614-7117

Project: Environmental  
Project Number: D18A024  
Project Manager: Jeff Boudreau

**Reported:**  
03/21/2018 11:54

### ANALYTICAL REPORT FOR SAMPLES

| Laboratory ID | Sample ID                      | Matrix      | Date Sampled     | Date Received    |
|---------------|--------------------------------|-------------|------------------|------------------|
| K18A093-01    | D18A024-01 (MWD-1-6 (R1T6))    | Groundwater | 01/21/2018 16:42 | 01/30/2018 12:00 |
| K18A093-02    | D18A024-02 (MWB-2-1 (R2T1))    | Groundwater | 01/23/2018 12:04 | 01/30/2018 12:00 |
| K18A093-03    | D18A024-03 (MWI-3-7 (R3T7))    | Groundwater | 01/26/2018 15:38 | 01/30/2018 12:00 |
| K18A093-04    | D18A024-04 (MWI-4-5 (R4T5B))   | Groundwater | 01/24/2018 09:10 | 01/30/2018 12:00 |
| K18A093-05    | D18A024-05 (MWD-6-1 (R6T1B))   | Groundwater | 01/21/2018 10:52 | 01/30/2018 12:00 |
| K18A093-06    | D18A024-06 (MWI-6-4 (R6T4B))   | Groundwater | 01/23/2018 15:25 | 01/30/2018 12:00 |
| K18A093-07    | D18A024-07 (MWI-6-8 (R6T8B))   | Groundwater | 01/26/2018 13:30 | 01/30/2018 12:00 |
| K18A093-08    | D18A024-08 (MWD-6-12 (R6T12))  | Groundwater | 01/25/2018 15:07 | 01/30/2018 12:00 |
| K18A093-09    | D18A024-09 (MWC-8-10 (R8T10))  | Groundwater | 01/27/2018 10:00 | 01/30/2018 12:00 |
| K18A093-10    | D18A024-10 (MWI-9-5 (R9T5B))   | Groundwater | 01/25/2018 14:10 | 01/30/2018 12:00 |
| K18A093-11    | D18A024-11 (MWC-10-8 (R10T8))  | Groundwater | 01/26/2018 10:14 | 01/30/2018 12:00 |
| K18A093-12    | D18A024-12 (MWC-11-4 (R11T4B)) | Groundwater | 01/26/2018 08:42 | 01/30/2018 12:00 |
| K18A093-13    | D18A024-13 (MWC-DEEP (DEEP-1)) | Groundwater | 01/25/2018 16:47 | 01/30/2018 12:00 |
| K18A093-14    | D18A024-14 (EBLANK)            | Groundwater | 01/25/2018 12:27 | 01/30/2018 12:00 |



Deerhaven Laboratory  
Station D-38  
Gainesville, FL/USA 32614-7117

Project: Environmental  
Project Number: D18A024  
Project Manager: Jeff Boudreau

**Reported:**  
03/21/2018 11:54

**D18A024-01 (MWD-1-6 (R1T6))**  
**K18A093-01 (Groundwater, Grab)**  
Collected: 01/21/2018 4:42 pm

| Analyte | Result | Qual | MDL | PQL | Units | Dil | Prepared | Analyzed | Method |
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|

**Laboratory: Kanapaha Laboratory**

**Metals by EPA 200 Series Methods**

|         |       |   |       |       |      |   |            |            |           |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|
| Mercury | 0.100 | U | 0.100 | 0.400 | ug/L | 1 | 02/13/2018 | 02/13/2018 | EPA 245.1 |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|

**D18A024-02 (MWB-2-1 (R2T1))**  
**K18A093-02 (Groundwater, Grab)**  
Collected: 01/23/2018 12:04 pm

| Analyte | Result | Qual | MDL | PQL | Units | Dil | Prepared | Analyzed | Method |
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|

**Laboratory: Kanapaha Laboratory**

**Metals by EPA 200 Series Methods**

|         |       |   |       |       |      |   |            |            |           |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|
| Mercury | 0.100 | U | 0.100 | 0.400 | ug/L | 1 | 02/13/2018 | 02/13/2018 | EPA 245.1 |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|

**D18A024-03 (MWI-3-7 (R3T7))**  
**K18A093-03 (Groundwater, Grab)**  
Collected: 01/26/2018 3:38 pm

| Analyte | Result | Qual | MDL | PQL | Units | Dil | Prepared | Analyzed | Method |
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|

**Laboratory: Kanapaha Laboratory**

**Metals by EPA 200 Series Methods**

|         |       |   |       |       |      |   |            |            |           |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|
| Mercury | 0.100 | U | 0.100 | 0.400 | ug/L | 1 | 02/13/2018 | 02/13/2018 | EPA 245.1 |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|

**D18A024-04 (MWI-4-5 (R4T5B))**  
**K18A093-04 (Groundwater, Grab)**  
Collected: 01/24/2018 9:10 am

| Analyte | Result | Qual | MDL | PQL | Units | Dil | Prepared | Analyzed | Method |
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|

**Laboratory: Kanapaha Laboratory**

**Metals by EPA 200 Series Methods**

|         |       |   |       |       |      |   |            |            |           |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|
| Mercury | 0.100 | U | 0.100 | 0.400 | ug/L | 1 | 02/13/2018 | 02/13/2018 | EPA 245.1 |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|





Deerhaven Laboratory  
Station D-38  
Gainesville, FL/USA 32614-7117

Project: Environmental  
Project Number: D18A024  
Project Manager: Jeff Boudreau

**Reported:**  
03/21/2018 11:54

**D18A024-05 (MWD-6-1 (R6T1B))**  
**K18A093-05 (Groundwater, Grab)**  
Collected: 01/21/2018 10:52 am

| Analyte | Result | Qual | MDL | PQL | Units | Dil | Prepared | Analyzed | Method |
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|

**Laboratory: Kanapaha Laboratory**

**Metals by EPA 200 Series Methods**

|         |       |   |       |       |      |   |            |            |           |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|
| Mercury | 0.100 | U | 0.100 | 0.400 | ug/L | 1 | 02/13/2018 | 02/13/2018 | EPA 245.1 |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|

**D18A024-06 (MWI-6-4 (R6T4B))**  
**K18A093-06 (Groundwater, Grab)**  
Collected: 01/23/2018 3:25 pm

| Analyte | Result | Qual | MDL | PQL | Units | Dil | Prepared | Analyzed | Method |
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|

**Laboratory: Kanapaha Laboratory**

**Metals by EPA 200 Series Methods**

|         |       |   |       |       |      |   |            |            |           |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|
| Mercury | 0.100 | U | 0.100 | 0.400 | ug/L | 1 | 02/13/2018 | 02/13/2018 | EPA 245.1 |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|

**D18A024-07 (MWI-6-8 (R6T8B))**  
**K18A093-07 (Groundwater, Grab)**  
Collected: 01/26/2018 1:30 pm

| Analyte | Result | Qual | MDL | PQL | Units | Dil | Prepared | Analyzed | Method |
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|

**Laboratory: Kanapaha Laboratory**

**Metals by EPA 200 Series Methods**

|         |       |   |       |       |      |   |            |            |           |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|
| Mercury | 0.100 | U | 0.100 | 0.400 | ug/L | 1 | 02/13/2018 | 02/13/2018 | EPA 245.1 |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|

**D18A024-08 (MWD-6-12 (R6T12))**  
**K18A093-08 (Groundwater, Grab)**  
Collected: 01/25/2018 3:07 pm

| Analyte | Result | Qual | MDL | PQL | Units | Dil | Prepared | Analyzed | Method |
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|

**Laboratory: Kanapaha Laboratory**

**Metals by EPA 200 Series Methods**

|         |       |   |       |       |      |   |            |            |           |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|
| Mercury | 0.100 | U | 0.100 | 0.400 | ug/L | 1 | 02/13/2018 | 02/13/2018 | EPA 245.1 |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|



Deerhaven Laboratory  
Station D-38  
Gainesville, FL/USA 32614-7117

Project: Environmental  
Project Number: D18A024  
Project Manager: Jeff Boudreau

**Reported:**  
03/21/2018 11:54

**D18A024-09 (MWC-8-10 (R8T10))**  
**K18A093-09 (Groundwater, Grab)**  
Collected: 01/27/2018 10:00 am

| Analyte | Result | Qual | MDL | PQL | Units | Dil | Prepared | Analyzed | Method |
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|

**Laboratory: Kanapaha Laboratory**

**Metals by EPA 200 Series Methods**

|         |       |   |       |       |      |   |            |            |           |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|
| Mercury | 0.100 | U | 0.100 | 0.400 | ug/L | 1 | 02/13/2018 | 02/13/2018 | EPA 245.1 |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|

**D18A024-10 (MWI-9-5 (R9T5B))**  
**K18A093-10 (Groundwater, Grab)**  
Collected: 01/25/2018 2:10 pm

| Analyte | Result | Qual | MDL | PQL | Units | Dil | Prepared | Analyzed | Method |
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|

**Laboratory: Kanapaha Laboratory**

**Metals by EPA 200 Series Methods**

|         |       |   |       |       |      |   |            |            |           |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|
| Mercury | 0.100 | U | 0.100 | 0.400 | ug/L | 1 | 02/13/2018 | 02/13/2018 | EPA 245.1 |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|

**D18A024-11 (MWC-10-8 (R10T8))**  
**K18A093-11 (Groundwater, Grab)**  
Collected: 01/26/2018 10:14 am

| Analyte | Result | Qual | MDL | PQL | Units | Dil | Prepared | Analyzed | Method |
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|

**Laboratory: Kanapaha Laboratory**

**Metals by EPA 200 Series Methods**

|         |       |   |       |       |      |   |            |            |           |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|
| Mercury | 0.100 | U | 0.100 | 0.400 | ug/L | 1 | 02/13/2018 | 02/13/2018 | EPA 245.1 |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|

**D18A024-12 (MWC-11-4 (R11T4B))**  
**K18A093-12 (Groundwater, Grab)**  
Collected: 01/26/2018 8:42 am

| Analyte | Result | Qual | MDL | PQL | Units | Dil | Prepared | Analyzed | Method |
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|

**Laboratory: Kanapaha Laboratory**

**Metals by EPA 200 Series Methods**

|         |       |   |       |       |      |   |            |            |           |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|
| Mercury | 0.100 | U | 0.100 | 0.400 | ug/L | 1 | 02/13/2018 | 02/13/2018 | EPA 245.1 |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|



Deerhaven Laboratory  
Station D-38  
Gainesville, FL/USA 32614-7117

Project: Environmental  
Project Number: D18A024  
Project Manager: Jeff Boudreau

**Reported:**  
03/21/2018 11:54

**D18A024-13 (MWC-DEEP (DEEP-1))**

**K18A093-13 (Groundwater, Grab)**

Collected: 01/25/2018 4:47 pm

| Analyte | Result | Qual | MDL | PQL | Units | Dil | Prepared | Analyzed | Method |
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|

**Laboratory: Kanapaha Laboratory**

**Metals by EPA 200 Series Methods**

|         |       |   |       |       |      |   |            |            |           |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|
| Mercury | 0.100 | U | 0.100 | 0.400 | ug/L | 1 | 02/13/2018 | 02/13/2018 | EPA 245.1 |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|

**D18A024-14 (EBLANK)**

**K18A093-14 (Groundwater, Grab)**

Collected: 01/25/2018 12:27 pm

| Analyte | Result | Qual | MDL | PQL | Units | Dil | Prepared | Analyzed | Method |
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|

**Laboratory: Kanapaha Laboratory**

**Metals by EPA 200 Series Methods**

|         |       |   |       |       |      |   |            |            |           |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|
| Mercury | 0.100 | U | 0.100 | 0.400 | ug/L | 1 | 02/13/2018 | 02/13/2018 | EPA 245.1 |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|



Deerhaven Laboratory  
Station D-38  
Gainesville, FL/USA 32614-7117

Project: Environmental  
Project Number: D18A024  
Project Manager: Jeff Boudreau

**Reported:**  
03/21/2018 11:54

### Metals by EPA 200 Series Methods - Quality Control Laboratory: Kanapaha Laboratory

| Analyte                                | Result | Qual | MDL                       | PQL   | Units | Spike Level                    | Source Result | %REC | % REC Limits | RSD    | RSD Limit |
|--|--------|------|---------------------------|-------|-------|--------------------------------|---------------|------|--------------|--------|-----------|
| <b>Batch B18B099 - MERCURY</b>         |        |      |                           |       |       |                                |               |      |              |        |           |
| <b>Blank (B18B099-BLK1)</b>            |        |      |                           |       |       | Prepared & Analyzed: 2/13/2018 |               |      |              |        |           |
| Mercury                                | 0.100  | U    | 0.100                     | 0.400 | ug/L  |                                |               |      |              |        | NR        |
| <b>Blank (B18B099-BLK2)</b>            |        |      |                           |       |       | Prepared & Analyzed: 2/13/2018 |               |      |              |        |           |
| Mercury                                | 0.100  | U    | 0.100                     | 0.400 | ug/L  |                                |               |      |              |        | NR        |
| <b>Blank (B18B099-BLK3)</b>            |        |      |                           |       |       | Prepared & Analyzed: 2/13/2018 |               |      |              |        |           |
| Mercury                                | 0.100  | U    | 0.100                     | 0.400 | ug/L  |                                |               |      |              |        | NR        |
| <b>LCS (B18B099-BS1)</b>               |        |      |                           |       |       | Prepared & Analyzed: 2/13/2018 |               |      |              |        |           |
| Mercury                                | 19.3   |      |                           |       | ug/L  | 20.0                           |               | 96.5 | 90-110       | 0.114  |           |
| <b>LCS (B18B099-BS2)</b>               |        |      |                           |       |       | Prepared & Analyzed: 2/13/2018 |               |      |              |        |           |
| Mercury                                | 19.3   |      |                           |       | ug/L  | 20.0                           |               | 96.7 | 90-110       | 0.114  |           |
| <b>LCS (B18B099-BS3)</b>               |        |      |                           |       |       | Prepared & Analyzed: 2/13/2018 |               |      |              |        |           |
| Mercury                                | 19.3   |      |                           |       | ug/L  | 20.0                           |               | 96.6 | 90-110       | 0.114  |           |
| <b>Duplicate (B18B099-DUP1)</b>        |        |      | <b>Source: K18A093-10</b> |       |       | Prepared & Analyzed: 2/13/2018 |               |      |              |        |           |
| Mercury                                | 0.100  | U    | 0.100                     | 0.400 | ug/L  |                                | ND            |      |              | 8.66   |           |
| <b>Duplicate (B18B099-DUP2)</b>        |        |      | <b>Source: K18A093-13</b> |       |       | Prepared & Analyzed: 2/13/2018 |               |      |              |        |           |
| Mercury                                | 0.100  | U    | 0.100                     | 0.400 | ug/L  |                                | ND            |      |              |        | NR        |
| <b>Matrix Spike (B18B099-MS1)</b>      |        |      | <b>Source: K18A093-10</b> |       |       | Prepared & Analyzed: 2/13/2018 |               |      |              |        |           |
| Mercury                                | 1.99   |      | 0.100                     | 0.400 | ug/L  | 2.00                           | ND            | 99.6 | 90-110       | 0.557  |           |
| <b>Matrix Spike (B18B099-MS2)</b>      |        |      | <b>Source: K18A093-13</b> |       |       | Prepared & Analyzed: 2/13/2018 |               |      |              |        |           |
| Mercury                                | 1.96   |      | 0.100                     | 0.400 | ug/L  | 2.00                           | ND            | 97.9 | 90-110       | 0.0373 |           |
| <b>Matrix Spike Dup (B18B099-MSD1)</b> |        |      | <b>Source: K18A093-10</b> |       |       | Prepared & Analyzed: 2/13/2018 |               |      |              |        |           |
| Mercury                                | 2.01   |      | 0.100                     | 0.400 | ug/L  | 2.00                           | ND            | 100  | 90-110       | 0.557  |           |
| <b>Matrix Spike Dup (B18B099-MSD2)</b> |        |      | <b>Source: K18A093-13</b> |       |       | Prepared & Analyzed: 2/13/2018 |               |      |              |        |           |
| Mercury                                | 1.96   |      | 0.100                     | 0.400 | ug/L  | 2.00                           | ND            | 97.8 | 90-110       | 0.0373 |           |



Deerhaven Laboratory  
Station D-38  
Gainesville, FL/USA 32614-7117

Project: Environmental  
Project Number: D18A024  
Project Manager: Jeff Boudreau

**Reported:**  
03/21/2018 11:54

### Notes and Definitions

| <u>Qualifier</u> | <u>Description</u>  |
|------------------|---|
| NR               | Not Reported  |
| RSD              | Relative Standard Deviation   |
| U                | Compound was analyzed for but not detected                              |
| N                | Presumptive evidence of presence of material                            |
| L                | Off-scale high. Actual value is known to be greater than value given    |
| I                | The reported value is between the laboratory MDL and the laboratory PQL |
| V                | Analyte was detected in both the sample and the associated method blank |



**SUBCONTRACT ORDER**  
**Deerhaven Generating Station**  
**D18A024**

**SENDING LABORATORY:**

Gainesville Regional Utilities  
 Deerhaven Generating Station  
 10001 NW 13th Street  
 Gainesville, FL 32653  
 Phone: 352-334-3434  
 Fax: 352-334-3149  
 Project Manager: Jeff Boudreau

**RECEIVING LABORATORY:**

Kanapaha Laboratory  
 3901 SW 63rd BLVD  
 Gainesville, FL/USA 32608  
 Phone :352-393-6777  
 Fax: 352-334-2732

| Analysis                      | Expires         | Laboratory ID           | Comments   |
|-------------------------------|-----------------|-------------------------|------------|
| Sample Name: MWD-1-6 (R1T6)   |                 |                         |            |
| Sample ID: D18A024-01         | Water           | Sampled:21-Jan-18 16:42 | K18A024-01 |
| K_Selenium                    | 20-Jul-18 16:42 |                         |            |
| K_Aluminum                    | 20-Jul-18 16:42 |                         |            |
| K_Zinc                        | 20-Jul-18 16:42 |                         |            |
| K_Vanadium                    | 20-Jul-18 16:42 |                         |            |
| K_Strontium                   | 20-Jul-18 16:42 |                         |            |
| K_Silver                      | 20-Jul-18 16:42 |                         |            |
| K_Potassium                   | 20-Jul-18 16:42 |                         |            |
| K_Nickel                      | 20-Jul-18 16:42 |                         |            |
| K_Molybdenum                  | 20-Jul-18 16:42 |                         |            |
| K_Mercury, cold vapor         | 18-Feb-18 16:42 |                         |            |
| K_Beryllium                   | 20-Jul-18 16:42 |                         |            |
| K_Sodium                      | 20-Jul-18 16:42 |                         |            |
| K_Barium                      | 20-Jul-18 16:42 |                         |            |
| K_Manganese                   | 20-Jul-18 16:42 |                         |            |
| K_Cadmium                     | 20-Jul-18 16:42 |                         |            |
| K_Calcium                     | 20-Jul-18 16:42 |                         |            |
| K_Cobalt                      | 20-Jul-18 16:42 |                         |            |
| K_Copper                      | 20-Jul-18 16:42 |                         |            |
| K_Iron                        | 20-Jul-18 16:42 |                         |            |
| K_Magnesium                   | 20-Jul-18 16:42 |                         |            |
| K_Chromium                    | 20-Jul-18 16:42 |                         |            |
| <i>Containers Supplied:</i>   |                 |                         |            |
| D_HDPE, HNO3 pH<2 - 500mL (E) |                 |                         |            |

*Shelby Phillips* via Inter-office (I-O) mail  
 1-29-18  
 Released By \_\_\_\_\_ Date \_\_\_\_\_ Received By *John M. DeB* Date *01/30/18 @ 1200*  
 Released By \_\_\_\_\_ Date \_\_\_\_\_ Received By \_\_\_\_\_ Date \_\_\_\_\_



**SUBCONTRACT ORDER**  
**Deerhaven Generating Station**  
**D18A024**

| Analysis                      | Expires         | Laboratory ID            | Comments |
|-------------------------------|-----------------|--------------------------|----------|
| Sample Name: MWB-2-1 (R2T1)   |                 | K18A093-02               |          |
| Sample ID: D18A024-02         | Water           | Sampled: 23-Jan-18 12:04 |          |
| K_Vanadium                    | 22-Jul-18 12:04 |                          |          |
| K_Molybdenum                  | 22-Jul-18 12:04 |                          |          |
| K_Nickel                      | 22-Jul-18 12:04 |                          |          |
| K_Potassium                   | 22-Jul-18 12:04 |                          |          |
| K_Selenium                    | 22-Jul-18 12:04 |                          |          |
| K_Silver                      | 22-Jul-18 12:04 |                          |          |
| K_Zinc                        | 22-Jul-18 12:04 |                          |          |
| K_Strontium                   | 22-Jul-18 12:04 |                          |          |
| K_Calcium                     | 22-Jul-18 12:04 |                          |          |
| K_Mercury, cold vapor         | 20-Feb-18 12:04 |                          |          |
| K_Sodium                      | 22-Jul-18 12:04 |                          |          |
| K_Barium                      | 22-Jul-18 12:04 |                          |          |
| K_Cobalt                      | 22-Jul-18 12:04 |                          |          |
| K_Aluminum                    | 22-Jul-18 12:04 |                          |          |
| K_Manganese                   | 22-Jul-18 12:04 |                          |          |
| K_Beryllium                   | 22-Jul-18 12:04 |                          |          |
| K_Cadmium                     | 22-Jul-18 12:04 |                          |          |
| K_Chromium                    | 22-Jul-18 12:04 |                          |          |
| K_Copper                      | 22-Jul-18 12:04 |                          |          |
| K_Iron                        | 22-Jul-18 12:04 |                          |          |
| K_Magnesium                   | 22-Jul-18 12:04 |                          |          |
| <i>Containers Supplied:</i>   |                 |                          |          |
| D_HDPE, HNO3 pH<2 - 500mL (E) |                 |                          |          |

|                    |                    |                |                   |                        |
|--------------------|--------------------|----------------|-------------------|------------------------|
| <i>J. Phillips</i> | <i>via IO mail</i> | <i>1-29-18</i> | <i>John M Deh</i> | <i>01/30/18 @ 1200</i> |
| Released By        |                    | Date           | Received By       | Date                   |
| Released By        |                    | Date           | Received By       | Date                   |



**SUBCONTRACT ORDER**  
**Deerhaven Generating Station**  
**D18A024**

| Analysis                      | Expires         | Laboratory ID            | Comments   |
|-------------------------------|-----------------|--------------------------|------------|
| Sample Name: MWI-3-7 (R3T7)   |                 |                          |            |
| Sample ID: D18A024-03         | Water           | Sampled: 26-Jan-18 15:38 | K18A093-03 |
| K_Cobalt                      | 25-Jul-18 15:38 |                          |            |
| K_Zinc                        | 25-Jul-18 15:38 |                          |            |
| K_Silver                      | 25-Jul-18 15:38 |                          |            |
| K_Selenium                    | 25-Jul-18 15:38 |                          |            |
| K_Potassium                   | 25-Jul-18 15:38 |                          |            |
| K_Copper                      | 25-Jul-18 15:38 |                          |            |
| K_Chromium                    | 25-Jul-18 15:38 |                          |            |
| K_Calcium                     | 25-Jul-18 15:38 |                          |            |
| K_Cadmium                     | 25-Jul-18 15:38 |                          |            |
| K_Sodium                      | 25-Jul-18 15:38 |                          |            |
| K_Magnesium                   | 25-Jul-18 15:38 |                          |            |
| K_Nickel                      | 25-Jul-18 15:38 |                          |            |
| K_Vanadium                    | 25-Jul-18 15:38 |                          |            |
| K_Barium                      | 25-Jul-18 15:38 |                          |            |
| K_Beryllium                   | 25-Jul-18 15:38 |                          |            |
| K_Iron                        | 25-Jul-18 15:38 |                          |            |
| K_Manganese                   | 25-Jul-18 15:38 |                          |            |
| K_Mercury, cold vapor         | 23-Feb-18 15:38 |                          |            |
| K_Molybdenum                  | 25-Jul-18 15:38 |                          |            |
| K_Strontium                   | 25-Jul-18 15:38 |                          |            |
| K_Aluminum                    | 25-Jul-18 15:38 |                          |            |
| <i>Containers Supplied:</i>   |                 |                          |            |
| D_HDPE, HNO3 pH<2 - 500mL (E) |                 |                          |            |

*J. Phillip* *via I-0 mail* *1-29-18* *Johy M Deh* *01/30/18 @ 1200*  
 Released By \_\_\_\_\_ Date \_\_\_\_\_ Received By \_\_\_\_\_ Date \_\_\_\_\_  
 Released By \_\_\_\_\_ Date \_\_\_\_\_ Received By \_\_\_\_\_ Date \_\_\_\_\_





**SUBCONTRACT ORDER**  
**Deerhaven Generating Station**  
**D18A024**

| Analysis                      | Expires         | Laboratory ID | Comments                 |
|-------------------------------|-----------------|---------------|--------------------------|
| Sample Name: MWI-4-5 (R4T5B)  |                 | K18A093-04    |                          |
| Sample ID: D18A024-04         | Water           |               | Sampled: 24-Jan-18 09:10 |
| K_Cobalt                      | 23-Jul-18 09:10 |               |                          |
| K_Mercury, cold vapor         | 21-Feb-18 09:10 |               |                          |
| K_Manganese                   | 23-Jul-18 09:10 |               |                          |
| K_Magnesium                   | 23-Jul-18 09:10 |               |                          |
| K_Iron                        | 23-Jul-18 09:10 |               |                          |
| K_Copper                      | 23-Jul-18 09:10 |               |                          |
| K_Zinc                        | 23-Jul-18 09:10 |               |                          |
| K_Sodium                      | 23-Jul-18 09:10 |               |                          |
| K_Chromium                    | 23-Jul-18 09:10 |               |                          |
| K_Beryllium                   | 23-Jul-18 09:10 |               |                          |
| K_Molybdenum                  | 23-Jul-18 09:10 |               |                          |
| K_Nickel                      | 23-Jul-18 09:10 |               |                          |
| K_Potassium                   | 23-Jul-18 09:10 |               |                          |
| K_Selenium                    | 23-Jul-18 09:10 |               |                          |
| K_Silver                      | 23-Jul-18 09:10 |               |                          |
| K_Barium                      | 23-Jul-18 09:10 |               |                          |
| K_Aluminum                    | 23-Jul-18 09:10 |               |                          |
| K_Cadmium                     | 23-Jul-18 09:10 |               |                          |
| K_Vanadium                    | 23-Jul-18 09:10 |               |                          |
| K_Strontium                   | 23-Jul-18 09:10 |               |                          |
| K_Calcium                     | 23-Jul-18 09:10 |               |                          |
| <i>Containers Supplied:</i>   |                 |               |                          |
| D_HDPE, HNO3 pH<2 - 500mL (E) |                 |               |                          |

*S. Phillip*      *v.a I-O mail*      *John M Dab*      *01/30/18 @ 1200*  
 1-29-18  
 Released By      Date      Received By      Date  
 \_\_\_\_\_  
 Released By      Date      Received By      Date



**SUBCONTRACT ORDER**  
**Deerhaven Generating Station**  
**D18A024**

| Analysis                            | Expires         | Laboratory ID                   | Comments          |
|-------------------------------------|-----------------|---------------------------------|-------------------|
| <b>Sample Name: MWD-6-1 (R6T1B)</b> |                 |                                 |                   |
| <b>Sample ID: D18A024-05</b>        | <b>Water</b>    | <b>Sampled: 21-Jan-18 10:52</b> | <b>K18A093-05</b> |
| K_Iron                              | 20-Jul-18 10:52 |                                 |                   |
| K_Barium                            | 20-Jul-18 10:52 |                                 |                   |
| K_Cadmium                           | 20-Jul-18 10:52 |                                 |                   |
| K_Magnesium                         | 20-Jul-18 10:52 |                                 |                   |
| K_Chromium                          | 20-Jul-18 10:52 |                                 |                   |
| K_Copper                            | 20-Jul-18 10:52 |                                 |                   |
| K_Mercury, cold vapor               | 18-Feb-18 10:52 |                                 |                   |
| K_Molybdenum                        | 20-Jul-18 10:52 |                                 |                   |
| K_Nickel                            | 20-Jul-18 10:52 |                                 |                   |
| K_Potassium                         | 20-Jul-18 10:52 |                                 |                   |
| K_Cobalt                            | 20-Jul-18 10:52 |                                 |                   |
| K_Aluminum                          | 20-Jul-18 10:52 |                                 |                   |
| K_Calcium                           | 20-Jul-18 10:52 |                                 |                   |
| K_Selenium                          | 20-Jul-18 10:52 |                                 |                   |
| K_Silver                            | 20-Jul-18 10:52 |                                 |                   |
| K_Sodium                            | 20-Jul-18 10:52 |                                 |                   |
| K_Strontium                         | 20-Jul-18 10:52 |                                 |                   |
| K_Vanadium                          | 20-Jul-18 10:52 |                                 |                   |
| K_Zinc                              | 20-Jul-18 10:52 |                                 |                   |
| K_Manganese                         | 20-Jul-18 10:52 |                                 |                   |
| K_Beryllium                         | 20-Jul-18 10:52 |                                 |                   |
| <i>Containers Supplied:</i>         |                 |                                 |                   |
| D_HDPE, HNO3 pH<2 - 500mL (E)       |                 |                                 |                   |

|                   |                     |                  |                        |
|-------------------|---------------------|------------------|------------------------|
| <i>J. Phillip</i> | <i>via F-D mail</i> | <i>J. M. DEN</i> | <i>01/30/18 @ 1200</i> |
| Released By       | Date                | Received By      | Date                   |
|                   | <i>1-29-18</i>      |                  |                        |
| Released By       | Date                | Received By      | Date                   |





**SUBCONTRACT ORDER**  
**Deerhaven Generating Station**  
**D18A024**

| Analysis                      | Expires         | Laboratory ID | Comments                 |
|-------------------------------|-----------------|---------------|--------------------------|
| Sample Name: MWI-6-8 (R6T8B)  |                 | K18A093-07    |                          |
| Sample ID: D18A024-07         | Water           |               | Sampled: 26-Jan-18 13:30 |
| K_Vanadium                    | 25-Jul-18 13:30 |               |                          |
| K_Chromium                    | 25-Jul-18 13:30 |               |                          |
| K_Cobalt                      | 25-Jul-18 13:30 |               |                          |
| K_Copper                      | 25-Jul-18 13:30 |               |                          |
| K_Iron                        | 25-Jul-18 13:30 |               |                          |
| K_Potassium                   | 25-Jul-18 13:30 |               |                          |
| K_Selenium                    | 25-Jul-18 13:30 |               |                          |
| K_Silver                      | 25-Jul-18 13:30 |               |                          |
| K_Sodium                      | 25-Jul-18 13:30 |               |                          |
| K_Strontium                   | 25-Jul-18 13:30 |               |                          |
| K_Zinc                        | 25-Jul-18 13:30 |               |                          |
| K_Mercury, cold vapor         | 23-Feb-18 13:30 |               |                          |
| K_Nickel                      | 25-Jul-18 13:30 |               |                          |
| K_Calcium                     | 25-Jul-18 13:30 |               |                          |
| K_Molybdenum                  | 25-Jul-18 13:30 |               |                          |
| K_Manganese                   | 25-Jul-18 13:30 |               |                          |
| K_Magnesium                   | 25-Jul-18 13:30 |               |                          |
| K_Cadmium                     | 25-Jul-18 13:30 |               |                          |
| K_Beryllium                   | 25-Jul-18 13:30 |               |                          |
| K_Barium                      | 25-Jul-18 13:30 |               |                          |
| K_Aluminum                    | 25-Jul-18 13:30 |               |                          |
| <i>Containers Supplied:</i>   |                 |               |                          |
| D_HDPE, HNO3 pH<2 - 500mL (E) |                 |               |                          |

*via F.O. mail*  
 Released By: Shelby Phillips Date: 1-29-18  
 Received By: John M. DeWitt Date: 01/30/18 @ 1200

Released By \_\_\_\_\_ Date \_\_\_\_\_ Received By \_\_\_\_\_ Date \_\_\_\_\_



**SUBCONTRACT ORDER**  
**Deerhaven Generating Station**  
**D18A024**

| Analysis                             | Expires         | Laboratory ID | Comments                        |
|--------------------------------------|-----------------|---------------|---------------------------------|
| <b>Sample Name: MWD-6-12 (R6T12)</b> |                 | K18A093-08    |                                 |
| <b>Sample ID: D18A024-08</b>         | <b>Water</b>    |               | <b>Sampled: 25-Jan-18 15:07</b> |
| K_Copper                             | 24-Jul-18 15:07 |               |                                 |
| K_Beryllium                          | 24-Jul-18 15:07 |               |                                 |
| K_Iron                               | 24-Jul-18 15:07 |               |                                 |
| K_Magnesium                          | 24-Jul-18 15:07 |               |                                 |
| K_Cadmium                            | 24-Jul-18 15:07 |               |                                 |
| K_Calcium                            | 24-Jul-18 15:07 |               |                                 |
| K_Aluminum                           | 24-Jul-18 15:07 |               |                                 |
| K_Cobalt                             | 24-Jul-18 15:07 |               |                                 |
| K_Vanadium                           | 24-Jul-18 15:07 |               |                                 |
| K_Nickel                             | 24-Jul-18 15:07 |               |                                 |
| K_Potassium                          | 24-Jul-18 15:07 |               |                                 |
| K_Selenium                           | 24-Jul-18 15:07 |               |                                 |
| K_Silver                             | 24-Jul-18 15:07 |               |                                 |
| K_Sodium                             | 24-Jul-18 15:07 |               |                                 |
| K_Manganese                          | 24-Jul-18 15:07 |               |                                 |
| K_Mercury, cold vapor                | 22-Feb-18 15:07 |               |                                 |
| K_Zinc                               | 24-Jul-18 15:07 |               |                                 |
| K_Molybdenum                         | 24-Jul-18 15:07 |               |                                 |
| K_Barium                             | 24-Jul-18 15:07 |               |                                 |
| K_Strontium                          | 24-Jul-18 15:07 |               |                                 |
| K_Chromium                           | 24-Jul-18 15:07 |               |                                 |
| <i>Containers Supplied:</i>          |                 |               |                                 |
| D_HDPE, HNO3 pH<2 - 500mL (E)        |                 |               |                                 |

|                   |                   |                     |                        |
|-------------------|-------------------|---------------------|------------------------|
| <i>S. Phillip</i> | <i>via I-mail</i> | <i>John M. Debr</i> | <i>01/30/18 @ 1200</i> |
| Released By       | Date              | Received By         | Date                   |
|                   | <i>1-29-18</i>    |                     |                        |
| Released By       | Date              | Received By         | Date                   |



**SUBCONTRACT ORDER**  
**Deerhaven Generating Station**  
**D18A024**

| Analysis                      | Expires         | Laboratory ID            | Comments |
|-------------------------------|-----------------|--------------------------|----------|
| Sample Name: MWC-8-10 (R8T10) |                 | K18A093-09               |          |
| Sample ID: D18A024-09         | Water           | Sampled: 27-Jan-18 10:00 |          |
| K_Calcium                     | 26-Jul-18 10:00 |                          |          |
| K_Aluminum                    | 26-Jul-18 10:00 |                          |          |
| K_Cadmium                     | 26-Jul-18 10:00 |                          |          |
| K_Zinc                        | 26-Jul-18 10:00 |                          |          |
| K_Vanadium                    | 26-Jul-18 10:00 |                          |          |
| K_Strontium                   | 26-Jul-18 10:00 |                          |          |
| K_Sodium                      | 26-Jul-18 10:00 |                          |          |
| K_Mercury, cold vapor         | 24-Feb-18 10:00 |                          |          |
| K_Manganese                   | 26-Jul-18 10:00 |                          |          |
| K_Magnesium                   | 26-Jul-18 10:00 |                          |          |
| K_Iron                        | 26-Jul-18 10:00 |                          |          |
| K_Barium                      | 26-Jul-18 10:00 |                          |          |
| K_Beryllium                   | 26-Jul-18 10:00 |                          |          |
| K_Potassium                   | 26-Jul-18 10:00 |                          |          |
| K_Chromium                    | 26-Jul-18 10:00 |                          |          |
| K_Cobalt                      | 26-Jul-18 10:00 |                          |          |
| K_Copper                      | 26-Jul-18 10:00 |                          |          |
| K_Nickel                      | 26-Jul-18 10:00 |                          |          |
| K_Selenium                    | 26-Jul-18 10:00 |                          |          |
| K_Silver                      | 26-Jul-18 10:00 |                          |          |
| K_Molybdenum                  | 26-Jul-18 10:00 |                          |          |
| <i>Containers Supplied:</i>   |                 |                          |          |
| D_HDPE, HNO3 pH<2 - 500mL (E) |                 |                          |          |

*via I-0 mail*  
 Released By: S. Phillip Date: 1-29-18  
 Received By: John M. Deh Date: 01/30/18 @ 1200

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Released By: \_\_\_\_\_ Date: \_\_\_\_\_  
 Received By: \_\_\_\_\_ Date: \_\_\_\_\_



**SUBCONTRACT ORDER**  
**Deerhaven Generating Station**  
**D18A024**

| Analysis                      | Expires         | Laboratory ID | Comments                 |
|-------------------------------|-----------------|---------------|--------------------------|
| Sample Name: MWI-9-5 (R9T5B)  |                 | K18A093-10    |                          |
| Sample ID: D18A024-10         | Water           |               | Sampled: 25-Jan-18 14:10 |
| K_Sodium                      | 24-Jul-18 14:10 |               |                          |
| K_Vanadium                    | 24-Jul-18 14:10 |               |                          |
| K_Mercury, cold vapor         | 22-Feb-18 14:10 |               |                          |
| K_Strontium                   | 24-Jul-18 14:10 |               |                          |
| K_Potassium                   | 24-Jul-18 14:10 |               |                          |
| K_Zinc                        | 24-Jul-18 14:10 |               |                          |
| K_Silver                      | 24-Jul-18 14:10 |               |                          |
| K_Selenium                    | 24-Jul-18 14:10 |               |                          |
| K_Nickel                      | 24-Jul-18 14:10 |               |                          |
| K_Molybdenum                  | 24-Jul-18 14:10 |               |                          |
| K_Barium                      | 24-Jul-18 14:10 |               |                          |
| K_Chromium                    | 24-Jul-18 14:10 |               |                          |
| K_Aluminum                    | 24-Jul-18 14:10 |               |                          |
| K_Cadmium                     | 24-Jul-18 14:10 |               |                          |
| K_Manganese                   | 24-Jul-18 14:10 |               |                          |
| K_Calcium                     | 24-Jul-18 14:10 |               |                          |
| K_Beryllium                   | 24-Jul-18 14:10 |               |                          |
| K_Copper                      | 24-Jul-18 14:10 |               |                          |
| K_Magnesium                   | 24-Jul-18 14:10 |               |                          |
| K_Iron                        | 24-Jul-18 14:10 |               |                          |
| K_Cobalt                      | 24-Jul-18 14:10 |               |                          |
| <i>Containers Supplied:</i>   |                 |               |                          |
| D_HDPE, HNO3 pH<2 - 500mL (E) |                 |               |                          |

*via I-D mail*  
 Released By: S. Phillips Date: 1-29-18  
 Received By: John M. Deh Date: 01/30/18 @ 1200

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Released By: \_\_\_\_\_ Date: \_\_\_\_\_  
 Received By: \_\_\_\_\_ Date: \_\_\_\_\_



**SUBCONTRACT ORDER**  
**Deerhaven Generating Station**  
**D18A024**

| Analysis                      | Expires         | Laboratory ID | Comments                 |
|-------------------------------|-----------------|---------------|--------------------------|
| Sample Name: MWC-10-8 (R10T8) |                 | K18A093-11    |                          |
| Sample ID: D18A024-11         | Water           |               | Sampled: 26-Jan-18 10:14 |
| K_Chromium                    | 25-Jul-18 10:14 |               |                          |
| K_Cobalt                      | 25-Jul-18 10:14 |               |                          |
| K_Copper                      | 25-Jul-18 10:14 |               |                          |
| K_Iron                        | 25-Jul-18 10:14 |               |                          |
| K_Magnesium                   | 25-Jul-18 10:14 |               |                          |
| K_Selenium                    | 25-Jul-18 10:14 |               |                          |
| K_Silver                      | 25-Jul-18 10:14 |               |                          |
| K_Sodium                      | 25-Jul-18 10:14 |               |                          |
| K_Strontium                   | 25-Jul-18 10:14 |               |                          |
| K_Zinc                        | 25-Jul-18 10:14 |               |                          |
| K_Barium                      | 25-Jul-18 10:14 |               |                          |
| K_Vanadium                    | 25-Jul-18 10:14 |               |                          |
| K_Potassium                   | 25-Jul-18 10:14 |               |                          |
| K_Nickel                      | 25-Jul-18 10:14 |               |                          |
| K_Molybdenum                  | 25-Jul-18 10:14 |               |                          |
| K_Mercury, cold vapor         | 23-Feb-18 10:14 |               |                          |
| K_Manganese                   | 25-Jul-18 10:14 |               |                          |
| K_Calcium                     | 25-Jul-18 10:14 |               |                          |
| K_Cadmium                     | 25-Jul-18 10:14 |               |                          |
| K_Beryllium                   | 25-Jul-18 10:14 |               |                          |
| K_Aluminum                    | 25-Jul-18 10:14 |               |                          |
| <i>Containers Supplied:</i>   |                 |               |                          |
| D_HDPE, HNO3 pH<2 - 500mL (E) |                 |               |                          |

*S. Phillips* *Via E-mail* *1-29-18* *Jody MDA* *01/30/18 @ 1200*  
 Released By \_\_\_\_\_ Date \_\_\_\_\_ Received By \_\_\_\_\_ Date \_\_\_\_\_  
 Released By \_\_\_\_\_ Date \_\_\_\_\_ Received By \_\_\_\_\_ Date \_\_\_\_\_





**SUBCONTRACT ORDER**  
**Deerhaven Generating Station**  
**D18A024**

| Analysis                              | Expires         | Laboratory ID                   | Comments          |
|---------------------------------------|-----------------|---------------------------------|-------------------|
| <b>Sample Name: MWC-11-4 (R11T4B)</b> |                 |                                 |                   |
| <b>Sample ID: D18A024-12</b>          | <b>Water</b>    | <b>Sampled: 26-Jan-18 08:42</b> | <b>K18A093-12</b> |
| K_Potassium                           | 25-Jul-18 08:42 |                                 |                   |
| K_Silver                              | 25-Jul-18 08:42 |                                 |                   |
| K_Chromium                            | 25-Jul-18 08:42 |                                 |                   |
| K_Cobalt                              | 25-Jul-18 08:42 |                                 |                   |
| K_Copper                              | 25-Jul-18 08:42 |                                 |                   |
| K_Iron                                | 25-Jul-18 08:42 |                                 |                   |
| K_Sodium                              | 25-Jul-18 08:42 |                                 |                   |
| K_Calcium                             | 25-Jul-18 08:42 |                                 |                   |
| K_Vanadium                            | 25-Jul-18 08:42 |                                 |                   |
| K_Aluminum                            | 25-Jul-18 08:42 |                                 |                   |
| K_Selenium                            | 25-Jul-18 08:42 |                                 |                   |
| K_Beryllium                           | 25-Jul-18 08:42 |                                 |                   |
| K_Cadmium                             | 25-Jul-18 08:42 |                                 |                   |
| K_Magnesium                           | 25-Jul-18 08:42 |                                 |                   |
| K_Manganese                           | 25-Jul-18 08:42 |                                 |                   |
| K_Mercury, cold vapor                 | 23-Feb-18 08:42 |                                 |                   |
| K_Barium                              | 25-Jul-18 08:42 |                                 |                   |
| K_Nickel                              | 25-Jul-18 08:42 |                                 |                   |
| K_Strontium                           | 25-Jul-18 08:42 |                                 |                   |
| K_Zinc                                | 25-Jul-18 08:42 |                                 |                   |
| K_Molybdenum                          | 25-Jul-18 08:42 |                                 |                   |
| <i>Containers Supplied:</i>           |                 |                                 |                   |
| D_HDPE, HNO3 pH<2 - 500mL (E)         |                 |                                 |                   |

*Via E-mail*

Released By: De Phillip      Date: 1-29-18     
 Received By: John M. DeH      Date: 01/30/18 @ 1200

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Released By: \_\_\_\_\_      Date: \_\_\_\_\_     
 Received By: \_\_\_\_\_      Date: \_\_\_\_\_



**SUBCONTRACT ORDER**  
**Deerhaven Generating Station**  
**D18A024**

| Analysis                       | Expires         | Laboratory ID            | Comments |
|--------------------------------|-----------------|--------------------------|----------|
| Sample Name: MWC-DEEP (DEEP-1) |                 | K18A093-13               |          |
| Sample ID: D18A024-13          | Water           | Sampled: 25-Jan-18 16:47 |          |
| K_Silver                       | 24-Jul-18 16:47 |                          |          |
| K_Selenium                     | 24-Jul-18 16:47 |                          |          |
| K_Potassium                    | 24-Jul-18 16:47 |                          |          |
| K_Nickel                       | 24-Jul-18 16:47 |                          |          |
| K_Copper                       | 24-Jul-18 16:47 |                          |          |
| K_Cobalt                       | 24-Jul-18 16:47 |                          |          |
| K_Chromium                     | 24-Jul-18 16:47 |                          |          |
| K_Calcium                      | 24-Jul-18 16:47 |                          |          |
| K_Cadmium                      | 24-Jul-18 16:47 |                          |          |
| K_Iron                         | 24-Jul-18 16:47 |                          |          |
| K_Sodium                       | 24-Jul-18 16:47 |                          |          |
| K_Beryllium                    | 24-Jul-18 16:47 |                          |          |
| K_Manganese                    | 24-Jul-18 16:47 |                          |          |
| K_Barium                       | 24-Jul-18 16:47 |                          |          |
| K_Magnesium                    | 24-Jul-18 16:47 |                          |          |
| K_Mercury, cold vapor          | 22-Feb-18 16:47 |                          |          |
| K_Molybdenum                   | 24-Jul-18 16:47 |                          |          |
| K_Strontium                    | 24-Jul-18 16:47 |                          |          |
| K_Vanadium                     | 24-Jul-18 16:47 |                          |          |
| K_Zinc                         | 24-Jul-18 16:47 |                          |          |
| K_Aluminum                     | 24-Jul-18 16:47 |                          |          |
| <i>Containers Supplied:</i>    |                 |                          |          |
| D_HDPE, HNO3 pH<2 - 500mL (E)  |                 |                          |          |

*S. Phillips* *Via E-mail* *1-29-18*  
 Released By \_\_\_\_\_ Date \_\_\_\_\_  
*John M. DeB...* *01/30/18 @ 1200*  
 Received By \_\_\_\_\_ Date \_\_\_\_\_  
 Released By \_\_\_\_\_ Date \_\_\_\_\_  
 Received By \_\_\_\_\_ Date \_\_\_\_\_



**SUBCONTRACT ORDER**  
**Deerhaven Generating Station**  
**D18A024**

| Analysis                      | Expires         | Laboratory ID            | Comments   |
|-------------------------------|-----------------|--------------------------|------------|
| Sample Name: EBLANK           |                 |                          |            |
| Sample ID: D18A024-14         | Water           | Sampled: 25-Jan-18 12:27 | K18A093-14 |
| K_Calcium                     | 24-Jul-18 12:27 |                          |            |
| K_Strontium                   | 24-Jul-18 12:27 |                          |            |
| K_Mercury, cold vapor         | 22-Feb-18 12:27 |                          |            |
| K_Sodium                      | 24-Jul-18 12:27 |                          |            |
| K_Silver                      | 24-Jul-18 12:27 |                          |            |
| K_Selenium                    | 24-Jul-18 12:27 |                          |            |
| K_Potassium                   | 24-Jul-18 12:27 |                          |            |
| K_Vanadium                    | 24-Jul-18 12:27 |                          |            |
| K_Nickel                      | 24-Jul-18 12:27 |                          |            |
| K_Molybdenum                  | 24-Jul-18 12:27 |                          |            |
| K_Manganese                   | 24-Jul-18 12:27 |                          |            |
| K_Magnesium                   | 24-Jul-18 12:27 |                          |            |
| K_Iron                        | 24-Jul-18 12:27 |                          |            |
| K_Copper                      | 24-Jul-18 12:27 |                          |            |
| K_Chromium                    | 24-Jul-18 12:27 |                          |            |
| K_Beryllium                   | 24-Jul-18 12:27 |                          |            |
| K_Cadmium                     | 24-Jul-18 12:27 |                          |            |
| K_Zinc                        | 24-Jul-18 12:27 |                          |            |
| K_Aluminum                    | 24-Jul-18 12:27 |                          |            |
| K_Barium                      | 24-Jul-18 12:27 |                          |            |
| K_Cobalt                      | 24-Jul-18 12:27 |                          |            |
| <i>Containers Supplied:</i>   |                 |                          |            |
| D_HDPE, HNO3 pH<2 - 500mL (E) |                 |                          |            |

*S. Pulhio* *via Email* *1-29-18* *John M. DeB* *01/30/18 @ 1200*  
 Released By \_\_\_\_\_ Date \_\_\_\_\_ Received By \_\_\_\_\_ Date \_\_\_\_\_  
 Released By \_\_\_\_\_ Date \_\_\_\_\_ Received By \_\_\_\_\_ Date \_\_\_\_\_



August 06, 2018

Jeffery Boudreau  
Gainesville Regional Utilities  
10001 NW 13th St  
Gainesville, FL 32653

3Q18 Metal Results for:  
R4T5  
R6T4  
R6T8  
R10T8  
R11T4  
Eblank

Service Request No: J1805315

**Laboratory Results for: D18F068**

Dear Jeffery,

Enclosed are the results of the sample(s) submitted to our laboratory July 24, 2018  
For your reference, these analyses have been assigned our service request number **J1805315**.

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and ALS Environmental is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report. In accordance to the NELAC 2003 Standard, a statement on the estimated uncertainty of measurement of any quantitative analysis will be supplied upon request.

Respectfully submitted,

**ALS Group USA, Corp. dba ALS Environmental**

Gina Bondani  
Project Manager

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ALS Group USA, Corp.  
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## Table of Contents

|                                 |    |
|---------------------------------|----|
| CoverLetter                     | 1  |
| Table of Contents               | 2  |
| Narrative Documents             | 4  |
| Narrative Documents             | 5  |
| Hit Summary List                | 6  |
| Sample Receipt Information      | 12 |
| Sample Cross-Reference          | 13 |
| Chain Of Custody                | 14 |
| Miscellaneous Forms             | 16 |
| Qualifiers                      | 17 |
| Acronyms                        | 19 |
| Analyst Summary                 | 20 |
| Sample Results                  | 24 |
| Metals                          | 25 |
| D18F068-01 - Metals             | 26 |
| D18F068-02 - Metals             | 27 |
| D18F068-03 - Metals             | 28 |
| D18F068-04 - Metals <i>RYTS</i> | 29 |
| D18F068-05 - Metals             | 30 |
| D18F068-06 - Metals <i>RYTY</i> | 31 |
| D18F068-07 - Metals <i>RYTY</i> | 32 |
| D18F068-08 - Metals             | 33 |

## Table of Contents (continued)

|   |    |
|---|----|
| D18F068-09 - Metals                     | 34 |
| D18F068-10 - Metals                     | 35 |
| D18F068-11 - Metals R10T8               | 36 |
| D18F068-12 - Metals R11T4               | 37 |
| D18F068-13 - Metals                     | 38 |
| D18F068-14 - Metals Eblank              | 39 |
| QC Summary Forms                        | 40 |
| Metals                                  | 41 |
| Metals                                  |    |
| Method Blank - Metals                   | 42 |
| Method Blank - Metals                   | 43 |
| J1805315-LCS1 - LCS Metals              | 44 |
| J1805315-LCS2 - LCS Metals              | 46 |
| J1805315-004DMS D18F068-04 - DMS Metals | 48 |
| J1805315-005DMS D18F068-05 - DMS Metals | 49 |
| Detection Limit: J-ICP-AES-01           | 50 |
| Detection Limit: J-ICP-MS-02            | 51 |
| Raw Data                                | 52 |
| Metals                                  | 53 |
| Sample Prep and Screen Data.pdf         | 54 |
| 200.7 - Metals T - 318262               | 55 |
| 200.8 - Metals T - 318474               | 59 |
| 200.7 - Metals T - 318352               | 63 |
| 200.8 - Metals T - 318716               | 67 |



## Narrative Documents

**ALS Environmental—Jacksonville Laboratory**  
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[www.alsglobal.com](http://www.alsglobal.com)

RIGHT SOLUTIONS RIGHT PARTNER



**Client:** Gainesville Regional Utilities  
**Project:** D18F068/D18F068  
**Sample Matrix:** Water

**Service Request:** J1805315  
**Date Received:** 7/24/18

### CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier II data deliverables, including results of QC samples analyzed from this delivery group. When appropriate to the procedure, method blank results have been reported with each analytical test. Analytical procedures performed by the lab are validated in accordance with NELAC standards. Parameters that are included in the NELAC Fields of Testing but are not included in the lab's NELAC accreditation are identified in the discussion of each analytical procedure.

#### Sample Receipt

14 water samples were received for analysis at ALS Environmental on 7/24/18. The samples were received in good condition and consistent with the accompanying chain of custody form. Samples are refrigerated at  $\leq 6^{\circ}\text{C}$  upon receipt at the lab except for aqueous samples designated for metals analyses, which are stored at room temperature.

#### Metals Analyses:

The reporting limit is elevated for Vanadium analyzed by ICP/AES in sample(s) J1805315-010 due to sample matrix interference.

#### Revision Notes:

This analytical report is a revision of the original report generated on 07/31/2018. The following specific changes were made to the report: Metals prep sheets included

Approved by

*Siva Budan*

Date 8/6/2018





**SAMPLE DETECTION SUMMARY**

**CLIENT ID: D18F068-01** **Lab ID: J1805315-001**

| Analyte           | Results | Flag | MDL    | MRL   | Units | Method |
|-------------------|---------|------|--------|-------|-------|--------|
| Aluminum, Total   | 0.01    | I    | 0.010  | 0.10  | mg/L  | 200.7  |
| Arsenic           | 15.7    |      | 0.10   | 1.0   | ug/L  | 200.8  |
| Barium, Total     | 0.015   |      | 0.001  | 0.010 | mg/L  | 200.7  |
| Calcium, Total    | 51.4    |      | 0.04   | 0.10  | mg/L  | 200.7  |
| Cobalt            | 3.2     |      | 0.03   | 1.0   | ug/L  | 200.8  |
| Iron, Total       | 6.77    |      | 0.010  | 0.10  | mg/L  | 200.7  |
| Magnesium, Total  | 28.8    |      | 0.009  | 0.10  | mg/L  | 200.7  |
| Manganese, Total  | 0.144   |      | 0.0007 | 0.010 | mg/L  | 200.7  |
| Molybdenum, Total | 0.006   | I    | 0.0003 | 0.010 | mg/L  | 200.7  |
| Nickel, Total     | 0.003   | I    | 0.0007 | 0.010 | mg/L  | 200.7  |
| Potassium, Total  | 0.5     | I    | 0.05   | 2.0   | mg/L  | 200.7  |
| Selenium, Total   | 0.008   | IV   | 0.002  | 0.010 | mg/L  | 200.7  |
| Sodium, Total     | 11.8    |      | 0.02   | 0.50  | mg/L  | 200.7  |
| Strontium, Total  | 0.042   |      | 0.0001 | 0.010 | mg/L  | 200.7  |

**CLIENT ID: D18F068-02** **Lab ID: J1805315-002**

| Analyte          | Results | Flag | MDL    | MRL   | Units | Method |
|------------------|---------|------|--------|-------|-------|--------|
| Aluminum, Total  | 0.17    |      | 0.010  | 0.10  | mg/L  | 200.7  |
| Arsenic          | 0.2     | I    | 0.10   | 1.0   | ug/L  | 200.8  |
| Barium, Total    | 0.002   | I    | 0.001  | 0.010 | mg/L  | 200.7  |
| Calcium, Total   | 4.01    |      | 0.04   | 0.10  | mg/L  | 200.7  |
| Chromium, Total  | 0.005   | I    | 0.0004 | 0.010 | mg/L  | 200.7  |
| Cobalt           | 0.4     | I    | 0.03   | 1.0   | ug/L  | 200.8  |
| Iron, Total      | 0.23    |      | 0.010  | 0.10  | mg/L  | 200.7  |
| Magnesium, Total | 0.64    |      | 0.009  | 0.10  | mg/L  | 200.7  |
| Manganese, Total | 0.008   | I    | 0.0007 | 0.010 | mg/L  | 200.7  |
| Nickel, Total    | 0.005   | I    | 0.0007 | 0.010 | mg/L  | 200.7  |
| Potassium, Total | 0.09    | I    | 0.05   | 2.0   | mg/L  | 200.7  |
| Selenium, Total  | 0.002   | IV   | 0.002  | 0.010 | mg/L  | 200.7  |
| Sodium, Total    | 3.48    |      | 0.02   | 0.50  | mg/L  | 200.7  |
| Strontium, Total | 0.019   |      | 0.0001 | 0.010 | mg/L  | 200.7  |

**CLIENT ID: D18F068-03** **Lab ID: J1805315-003**

| Analyte         | Results | Flag | MDL    | MRL   | Units | Method |
|-----------------|---------|------|--------|-------|-------|--------|
| Aluminum, Total | 0.03    | I    | 0.010  | 0.10  | mg/L  | 200.7  |
| Arsenic         | 1.7     |      | 0.10   | 1.0   | ug/L  | 200.8  |
| Barium, Total   | 0.004   | I    | 0.001  | 0.010 | mg/L  | 200.7  |
| Calcium, Total  | 54.2    |      | 0.04   | 0.10  | mg/L  | 200.7  |
| Cobalt          | 0.8     | I    | 0.03   | 1.0   | ug/L  | 200.8  |
| Copper, Total   | 0.001   | IV   | 0.0010 | 0.010 | mg/L  | 200.7  |
| Iron, Total     | 0.72    |      | 0.010  | 0.10  | mg/L  | 200.7  |
| Lead            | 0.11    | I    | 0.03   | 0.50  | ug/L  | 200.8  |



**SAMPLE DETECTION SUMMARY**

**CLIENT ID: D18F068-03** **Lab ID: J1805315-003**

| Analyte           | Results | Flag | MDL    | MRL   | Units | Method |
|-------------------|---------|------|--------|-------|-------|--------|
| Magnesium, Total  | 17.4    |      | 0.009  | 0.10  | mg/L  | 200.7  |
| Manganese, Total  | 0.026   |      | 0.0007 | 0.010 | mg/L  | 200.7  |
| Molybdenum, Total | 0.035   |      | 0.0003 | 0.010 | mg/L  | 200.7  |
| Nickel, Total     | 0.008   | I    | 0.0007 | 0.010 | mg/L  | 200.7  |
| Potassium, Total  | 8.7     |      | 0.05   | 2.0   | mg/L  | 200.7  |
| Selenium, Total   | 0.010   | V    | 0.002  | 0.010 | mg/L  | 200.7  |
| Sodium, Total     | 95.7    |      | 0.02   | 0.50  | mg/L  | 200.7  |
| Strontium, Total  | 0.521   |      | 0.0001 | 0.010 | mg/L  | 200.7  |
| Zinc, Total       | 0.009   | I    | 0.006  | 0.020 | mg/L  | 200.7  |

**CLIENT ID: D18F068-04** **Lab ID: J1805315-004**

| Analyte           | Results | Flag | MDL    | MRL   | Units | Method |
|-------------------|---------|------|--------|-------|-------|--------|
| Aluminum, Total   | 0.21    |      | 0.010  | 0.10  | mg/L  | 200.7  |
| Arsenic, Total    | 7.7     |      | 0.10   | 1.0   | ug/L  | 200.8  |
| Barium, Total     | 0.013   |      | 0.001  | 0.010 | mg/L  | 200.7  |
| Boron, Total      | 0.028   | IV   | 0.025  | 0.050 | mg/L  | 200.7  |
| Calcium, Total    | 81.9    |      | 0.04   | 0.10  | mg/L  | 200.7  |
| Chromium, Total   | 0.008   | I    | 0.0004 | 0.010 | mg/L  | 200.7  |
| Cobalt, Total     | 0.1     | I    | 0.03   | 1.0   | ug/L  | 200.8  |
| Iron, Total       | 28.9    |      | 0.010  | 0.10  | mg/L  | 200.7  |
| Magnesium, Total  | 27.9    |      | 0.009  | 0.10  | mg/L  | 200.7  |
| Manganese, Total  | 0.136   |      | 0.0007 | 0.010 | mg/L  | 200.7  |
| Molybdenum, Total | 0.008   | I    | 0.0003 | 0.010 | mg/L  | 200.7  |
| Nickel, Total     | 0.002   | I    | 0.0007 | 0.010 | mg/L  | 200.7  |
| Potassium, Total  | 0.6     | I    | 0.05   | 2.0   | mg/L  | 200.7  |
| Selenium, Total   | 0.014   | V    | 0.002  | 0.010 | mg/L  | 200.7  |
| Sodium, Total     | 13.7    |      | 0.02   | 0.50  | mg/L  | 200.7  |
| Strontium, Total  | 0.077   |      | 0.0001 | 0.010 | mg/L  | 200.7  |

**CLIENT ID: D18F068-05** **Lab ID: J1805315-005**

| Analyte           | Results | Flag | MDL    | MRL   | Units | Method |
|-------------------|---------|------|--------|-------|-------|--------|
| Aluminum, Total   | 0.15    |      | 0.010  | 0.10  | mg/L  | 200.7  |
| Arsenic           | 0.1     | I    | 0.10   | 1.0   | ug/L  | 200.8  |
| Barium, Total     | 0.018   |      | 0.001  | 0.010 | mg/L  | 200.7  |
| Calcium, Total    | 7.32    |      | 0.04   | 0.10  | mg/L  | 200.7  |
| Cobalt            | 0.4     | I    | 0.03   | 1.0   | ug/L  | 200.8  |
| Iron, Total       | 0.35    |      | 0.010  | 0.10  | mg/L  | 200.7  |
| Magnesium, Total  | 4.03    |      | 0.009  | 0.10  | mg/L  | 200.7  |
| Manganese, Total  | 0.002   | I    | 0.0007 | 0.010 | mg/L  | 200.7  |
| Molybdenum, Total | 0.001   | I    | 0.0003 | 0.010 | mg/L  | 200.7  |
| Nickel, Total     | 0.002   | I    | 0.0007 | 0.010 | mg/L  | 200.7  |
| Potassium, Total  | 3.9     |      | 0.05   | 2.0   | mg/L  | 200.7  |



**SAMPLE DETECTION SUMMARY**

**CLIENT ID: D18F068-05** **Lab ID: J1805315-005**

| Analyte          | Results | Flag | MDL    | MRL   | Units | Method |
|------------------|---------|------|--------|-------|-------|--------|
| Selenium, Total  | 0.005   | IV   | 0.002  | 0.010 | mg/L  | 200.7  |
| Sodium, Total    | 29.8    |      | 0.02   | 0.50  | mg/L  | 200.7  |
| Strontium, Total | 0.054   |      | 0.0001 | 0.010 | mg/L  | 200.7  |

**CLIENT ID: D18F068-06** **Lab ID: J1805315-006**

| Analyte           | Results | Flag | MDL    | MRL   | Units | Method |
|-------------------|---------|------|--------|-------|-------|--------|
| Aluminum, Total   | 0.06    | IV   | 0.010  | 0.10  | mg/L  | 200.7  |
| Antimony, Total   | 0.2     | I    | 0.04   | 1.0   | ug/L  | 200.8  |
| Arsenic, Total    | 1.6     |      | 0.10   | 1.0   | ug/L  | 200.8  |
| Barium, Total     | 0.017   |      | 0.001  | 0.010 | mg/L  | 200.7  |
| Calcium, Total    | 65.9    |      | 0.04   | 0.10  | mg/L  | 200.7  |
| Cobalt, Total     | 0.2     | I    | 0.03   | 1.0   | ug/L  | 200.8  |
| Iron, Total       | 0.56    |      | 0.010  | 0.10  | mg/L  | 200.7  |
| Magnesium, Total  | 4.56    |      | 0.009  | 0.10  | mg/L  | 200.7  |
| Manganese, Total  | 0.056   |      | 0.0007 | 0.010 | mg/L  | 200.7  |
| Molybdenum, Total | 0.007   | I    | 0.0003 | 0.010 | mg/L  | 200.7  |
| Nickel, Total     | 0.001   | I    | 0.0007 | 0.010 | mg/L  | 200.7  |
| Potassium, Total  | 1.2     | I    | 0.05   | 2.0   | mg/L  | 200.7  |
| Selenium, Total   | 0.015   | V    | 0.002  | 0.010 | mg/L  | 200.7  |
| Sodium, Total     | 7.22    |      | 0.02   | 0.50  | mg/L  | 200.7  |
| Strontium, Total  | 0.135   |      | 0.0001 | 0.010 | mg/L  | 200.7  |

**CLIENT ID: D18F068-07** **Lab ID: J1805315-007**

| Analyte           | Results | Flag | MDL    | MRL   | Units | Method |
|-------------------|---------|------|--------|-------|-------|--------|
| Aluminum, Total   | 0.15    |      | 0.010  | 0.10  | mg/L  | 200.7  |
| Antimony, Total   | 0.07    | I    | 0.04   | 1.0   | ug/L  | 200.8  |
| Arsenic, Total    | 1.9     |      | 0.10   | 1.0   | ug/L  | 200.8  |
| Barium, Total     | 0.014   |      | 0.001  | 0.010 | mg/L  | 200.7  |
| Calcium, Total    | 39.3    |      | 0.04   | 0.10  | mg/L  | 200.7  |
| Cobalt, Total     | 1.9     |      | 0.03   | 1.0   | ug/L  | 200.8  |
| Iron, Total       | 1.25    |      | 0.010  | 0.10  | mg/L  | 200.7  |
| Magnesium, Total  | 17.1    |      | 0.009  | 0.10  | mg/L  | 200.7  |
| Manganese, Total  | 0.127   |      | 0.0007 | 0.010 | mg/L  | 200.7  |
| Molybdenum, Total | 0.005   | I    | 0.0003 | 0.010 | mg/L  | 200.7  |
| Nickel, Total     | 0.002   | I    | 0.0007 | 0.010 | mg/L  | 200.7  |
| Potassium, Total  | 1.0     | I    | 0.05   | 2.0   | mg/L  | 200.7  |
| Selenium, Total   | 0.012   | V    | 0.002  | 0.010 | mg/L  | 200.7  |
| Sodium, Total     | 6.89    |      | 0.02   | 0.50  | mg/L  | 200.7  |
| Strontium, Total  | 0.065   |      | 0.0001 | 0.010 | mg/L  | 200.7  |
| Thallium, Total   | 0.23    |      | 0.02   | 0.20  | ug/L  | 200.8  |



**SAMPLE DETECTION SUMMARY**

**CLIENT ID: D18F068-08** **Lab ID: J1805315-008**

| Analyte           | Results | Flag | MDL    | MRL    | Units | Method |
|-------------------|---------|------|--------|--------|-------|--------|
| Aluminum, Total   | 0.34    |      | 0.010  | 0.10   | mg/L  | 200.7  |
| Arsenic           | 3.3     |      | 0.10   | 1.0    | ug/L  | 200.8  |
| Barium, Total     | 0.011   |      | 0.001  | 0.010  | mg/L  | 200.7  |
| Cadmium, Total    | 0.0010  | I    | 0.0002 | 0.0050 | mg/L  | 200.7  |
| Calcium, Total    | 22.7    |      | 0.04   | 0.10   | mg/L  | 200.7  |
| Chromium, Total   | 0.001   | I    | 0.0004 | 0.010  | mg/L  | 200.7  |
| Cobalt            | 2.0     |      | 0.03   | 1.0    | ug/L  | 200.8  |
| Copper, Total     | 0.035   |      | 0.0010 | 0.010  | mg/L  | 200.7  |
| Iron, Total       | 1.00    |      | 0.010  | 0.10   | mg/L  | 200.7  |
| Lead              | 0.38    | I    | 0.03   | 0.50   | ug/L  | 200.8  |
| Magnesium, Total  | 2.55    |      | 0.009  | 0.10   | mg/L  | 200.7  |
| Manganese, Total  | 0.021   |      | 0.0007 | 0.010  | mg/L  | 200.7  |
| Molybdenum, Total | 0.003   | I    | 0.0003 | 0.010  | mg/L  | 200.7  |
| Nickel, Total     | 0.004   | I    | 0.0007 | 0.010  | mg/L  | 200.7  |
| Potassium, Total  | 0.2     | I    | 0.05   | 2.0    | mg/L  | 200.7  |
| Selenium, Total   | 0.009   | IV   | 0.002  | 0.010  | mg/L  | 200.7  |
| Sodium, Total     | 13.9    |      | 0.02   | 0.50   | mg/L  | 200.7  |
| Strontium, Total  | 0.046   |      | 0.0001 | 0.010  | mg/L  | 200.7  |
| Vanadium, Total   | 0.006   | I    | 0.0008 | 0.020  | mg/L  | 200.7  |
| Zinc, Total       | 0.008   | I    | 0.006  | 0.020  | mg/L  | 200.7  |

**CLIENT ID: D18F068-09** **Lab ID: J1805315-009**

| Analyte           | Results | Flag | MDL    | MRL   | Units | Method |
|-------------------|---------|------|--------|-------|-------|--------|
| Aluminum, Total   | 0.74    |      | 0.010  | 0.10  | mg/L  | 200.7  |
| Arsenic           | 7.9     |      | 0.10   | 1.0   | ug/L  | 200.8  |
| Barium, Total     | 0.006   | I    | 0.001  | 0.010 | mg/L  | 200.7  |
| Calcium, Total    | 21.6    |      | 0.04   | 0.10  | mg/L  | 200.7  |
| Chromium, Total   | 0.006   | I    | 0.0004 | 0.010 | mg/L  | 200.7  |
| Cobalt            | 2.8     |      | 0.03   | 1.0   | ug/L  | 200.8  |
| Copper, Total     | 0.001   | IV   | 0.0010 | 0.010 | mg/L  | 200.7  |
| Iron, Total       | 6.69    |      | 0.010  | 0.10  | mg/L  | 200.7  |
| Lead              | 0.05    | I    | 0.03   | 0.50  | ug/L  | 200.8  |
| Magnesium, Total  | 6.74    |      | 0.009  | 0.10  | mg/L  | 200.7  |
| Manganese, Total  | 0.007   | I    | 0.0007 | 0.010 | mg/L  | 200.7  |
| Molybdenum, Total | 0.003   | I    | 0.0003 | 0.010 | mg/L  | 200.7  |
| Nickel, Total     | 0.003   | I    | 0.0007 | 0.010 | mg/L  | 200.7  |
| Potassium, Total  | 0.1     | I    | 0.05   | 2.0   | mg/L  | 200.7  |
| Selenium, Total   | 0.009   | IV   | 0.002  | 0.010 | mg/L  | 200.7  |
| Sodium, Total     | 68.4    |      | 0.02   | 0.50  | mg/L  | 200.7  |
| Strontium, Total  | 0.015   |      | 0.0001 | 0.010 | mg/L  | 200.7  |
| Vanadium, Total   | 0.028   |      | 0.0008 | 0.020 | mg/L  | 200.7  |



**SAMPLE DETECTION SUMMARY**

**CLIENT ID: D18F068-10** **Lab ID: J1805315-010**

| Analyte           | Results | Flag | MDL    | MRL   | Units | Method |
|-------------------|---------|------|--------|-------|-------|--------|
| Aluminum, Total   | 0.12    |      | 0.010  | 0.10  | mg/L  | 200.7  |
| Arsenic           | 0.6     | I    | 0.10   | 1.0   | ug/L  | 200.8  |
| Barium, Total     | 0.061   |      | 0.001  | 0.010 | mg/L  | 200.7  |
| Calcium, Total    | 39.8    |      | 0.04   | 0.10  | mg/L  | 200.7  |
| Cobalt            | 1.5     |      | 0.03   | 1.0   | ug/L  | 200.8  |
| Iron, Total       | 5.49    |      | 0.010  | 0.10  | mg/L  | 200.7  |
| Magnesium, Total  | 30.0    |      | 0.009  | 0.10  | mg/L  | 200.7  |
| Manganese, Total  | 0.350   |      | 0.0007 | 0.010 | mg/L  | 200.7  |
| Molybdenum, Total | 0.004   | I    | 0.0003 | 0.010 | mg/L  | 200.7  |
| Nickel, Total     | 0.001   | I    | 0.0007 | 0.010 | mg/L  | 200.7  |
| Potassium, Total  | 5.8     |      | 0.05   | 2.0   | mg/L  | 200.7  |
| Selenium, Total   | 0.011   | V    | 0.002  | 0.010 | mg/L  | 200.7  |
| Sodium, Total     | 42.1    |      | 0.02   | 0.50  | mg/L  | 200.7  |
| Strontium, Total  | 0.390   |      | 0.0001 | 0.010 | mg/L  | 200.7  |

**CLIENT ID: D18F068-11** **Lab ID: J1805315-011**

| Analyte           | Results | Flag | MDL    | MRL   | Units | Method |
|-------------------|---------|------|--------|-------|-------|--------|
| Aluminum, Total   | 0.03    | IV   | 0.010  | 0.10  | mg/L  | 200.7  |
| Arsenic, Total    | 0.2     | I    | 0.10   | 1.0   | ug/L  | 200.8  |
| Barium, Total     | 0.003   | I    | 0.001  | 0.010 | mg/L  | 200.7  |
| Calcium, Total    | 15.9    |      | 0.04   | 0.10  | mg/L  | 200.7  |
| Cobalt, Total     | 0.06    | I    | 0.03   | 1.0   | ug/L  | 200.8  |
| Iron, Total       | 0.22    |      | 0.010  | 0.10  | mg/L  | 200.7  |
| Magnesium, Total  | 2.48    |      | 0.009  | 0.10  | mg/L  | 200.7  |
| Manganese, Total  | 0.007   | I    | 0.0007 | 0.010 | mg/L  | 200.7  |
| Molybdenum, Total | 0.002   | I    | 0.0003 | 0.010 | mg/L  | 200.7  |
| Potassium, Total  | 0.2     | I    | 0.05   | 2.0   | mg/L  | 200.7  |
| Selenium, Total   | 0.006   | IV   | 0.002  | 0.010 | mg/L  | 200.7  |
| Sodium, Total     | 3.53    |      | 0.02   | 0.50  | mg/L  | 200.7  |
| Strontium, Total  | 0.015   |      | 0.0001 | 0.010 | mg/L  | 200.7  |

**CLIENT ID: D18F068-12** **Lab ID: J1805315-012**

| Analyte          | Results | Flag | MDL    | MRL   | Units | Method |
|------------------|---------|------|--------|-------|-------|--------|
| Aluminum, Total  | 0.09    | IV   | 0.010  | 0.10  | mg/L  | 200.7  |
| Arsenic, Total   | 0.3     | I    | 0.10   | 1.0   | ug/L  | 200.8  |
| Barium, Total    | 0.004   | I    | 0.001  | 0.010 | mg/L  | 200.7  |
| Boron, Total     | 0.325   | V    | 0.025  | 0.050 | mg/L  | 200.7  |
| Calcium, Total   | 5.54    |      | 0.04   | 0.10  | mg/L  | 200.7  |
| Cobalt, Total    | 0.5     | I    | 0.03   | 1.0   | ug/L  | 200.8  |
| Iron, Total      | 0.59    |      | 0.010  | 0.10  | mg/L  | 200.7  |
| Magnesium, Total | 3.47    |      | 0.009  | 0.10  | mg/L  | 200.7  |
| Manganese, Total | 0.010   |      | 0.0007 | 0.010 | mg/L  | 200.7  |



**SAMPLE DETECTION SUMMARY**

**CLIENT ID: D18F068-12** **Lab ID: J1805315-012**

| Analyte           | Results | Flag | MDL    | MRL   | Units | Method |
|-------------------|---------|------|--------|-------|-------|--------|
| Molybdenum, Total | 0.001   | I    | 0.0003 | 0.010 | mg/L  | 200.7  |
| Nickel, Total     | 0.001   | I    | 0.0007 | 0.010 | mg/L  | 200.7  |
| Potassium, Total  | 1.2     | I    | 0.05   | 2.0   | mg/L  | 200.7  |
| Sodium, Total     | 36.2    |      | 0.02   | 0.50  | mg/L  | 200.7  |
| Strontium, Total  | 0.004   | I    | 0.0001 | 0.010 | mg/L  | 200.7  |

**CLIENT ID: D18F068-13** **Lab ID: J1805315-013**

| Analyte           | Results | Flag | MDL    | MRL   | Units | Method |
|-------------------|---------|------|--------|-------|-------|--------|
| Arsenic           | 1.2     |      | 0.10   | 1.0   | ug/L  | 200.8  |
| Barium, Total     | 0.012   |      | 0.001  | 0.010 | mg/L  | 200.7  |
| Calcium, Total    | 57.2    |      | 0.04   | 0.10  | mg/L  | 200.7  |
| Magnesium, Total  | 19.8    |      | 0.009  | 0.10  | mg/L  | 200.7  |
| Manganese, Total  | 0.007   | I    | 0.0007 | 0.010 | mg/L  | 200.7  |
| Molybdenum, Total | 0.006   | I    | 0.0003 | 0.010 | mg/L  | 200.7  |
| Potassium, Total  | 0.9     | I    | 0.05   | 2.0   | mg/L  | 200.7  |
| Selenium, Total   | 0.012   | V    | 0.002  | 0.010 | mg/L  | 200.7  |
| Sodium, Total     | 8.46    |      | 0.02   | 0.50  | mg/L  | 200.7  |
| Strontium, Total  | 1.08    |      | 0.0001 | 0.010 | mg/L  | 200.7  |

**CLIENT ID: D18F068-14** **Lab ID: J1805315-014**

| Analyte          | Results | Flag | MDL   | MRL   | Units | Method |
|------------------|---------|------|-------|-------|-------|--------|
| Aluminum, Total  | 0.01    | IV   | 0.010 | 0.10  | mg/L  | 200.7  |
| Magnesium, Total | 0.02    | IV   | 0.009 | 0.10  | mg/L  | 200.7  |
| Selenium, Total  | 0.003   | IV   | 0.002 | 0.010 | mg/L  | 200.7  |



## Sample Receipt Information

**ALS Environmental—Jacksonville Laboratory**  
9143 Philips Highway, Suite 200, Jacksonville, FL 32256  
Phone (904) 739-2277 Fax (904) 739-2011  
[www.alsglobal.com](http://www.alsglobal.com)

RIGHT SOLUTIONS RIGHT PARTNER

**Client:** Gainesville Regional Utilities  
**Project:** D18F068/D18F068

**Service Request:** J1805315

**SAMPLE CROSS-REFERENCE**

| <u>SAMPLE #</u> | <u>CLIENT SAMPLE ID</u> | <u>DATE</u> | <u>TIME</u> |
|-----------------|-------------------------|-------------|-------------|
| J1805315-001    | D18F068-01              | 7/16/2018   | 1710        |
| J1805315-002    | D18F068-02              | 7/16/2018   | 1340        |
| J1805315-003    | D18F068-03              | 7/17/2018   | 0756        |
| J1805315-004    | D18F068-04              | 7/18/2018   | 0724        |
| J1805315-005    | D18F068-05              | 7/16/2018   | 1019        |
| J1805315-006    | D18F068-06              | 7/17/2018   | 1545        |
| J1805315-007    | D18F068-07              | 7/19/2018   | 1117        |
| J1805315-008    | D18F068-08              | 7/17/2018   | 0918        |
| J1805315-009    | D18F068-09              | 7/17/2018   | 1146        |
| J1805315-010    | D18F068-10              | 7/17/2018   | 1322        |
| J1805315-011    | D18F068-11              | 7/19/2018   | 1510        |
| J1805315-012    | D18F068-12              | 7/19/2018   | 1349        |
| J1805315-013    | D18F068-13              | 7/17/2018   | 0830        |
| J1805315-014    | D18F068-14              | 7/18/2018   | 0825        |







Cooler Receipt Form

Client: GRU

Service Request #: J1805315

Project: D18 F068

Shipping paid by ALS?

Cooler received on 7/24/18 and opened on 7/24/18 by Yes No N/A

COURIER: ALS UPS FEDEX DHL Client Other Airbill # 8127 8324 8376

- 1 Were custody seals on outside of cooler? Yes  No   
If yes, how many and where? #: \_\_\_ on lid other
- 2 Were seals intact and signature and date correct? Yes No  N/A
- 3 Were custody papers properly filled out?  Yes No N/A
- 4 Temperature of cooler(s) upon receipt (Should be 0°C and ≤ 6°C) Ambient
- 5 Thermometer ID
- 6 Temperature Blank Present? Yes  No
- 7 Were Ice or Ice Packs present Ice Ice Packs  No
- 8 Did all bottles arrive in good condition (unbroken, etc....)?  Yes No N/A
- 9 Type of packing material present Netting Vial Holder Bubble Wrap Paper Styrofoam Other N/A
- 10 Were all bottle labels complete (sample ID, preservation, etc....)?  Yes No N/A
- 11 Did all bottle labels and tags agree with custody papers?  Yes No N/A
- 12 Were the correct bottles used for the tests indicated?  Yes No N/A
- 13 Were all of the preserved bottles received with the appropriate preservative?  Yes No N/A  
HNO3 pH<2 H2SO4 pH<2 ZnAc2/NaOH pH>9 NaOH pH>12 HCl pH<2  
Preservative additions noted below
- 14 Were all samples received within analysis holding times?  Yes No N/A
- 15 Were VOA vials free of air bubbles greater than 6mm? If present, note below Yes No  N/A
- 16 Where did the bottles originate?  ALS Client

| Sample ID | Reagent | Lot # | ml added | Initials Date/Time |
|-----------|---------|-------|----------|--------------------|
|           |         |       |          |                    |
|           |         |       |          |                    |
|           |         |       |          |                    |
|           |         |       |          |                    |
|           |         |       |          |                    |
|           |         |       |          |                    |
|           |         |       |          |                    |
|           |         |       |          |                    |
|           |         |       |          |                    |
|           |         |       |          |                    |

Additional comments and/or explanation of all discrepancies noted above:

Client approval to run samples if discrepancies noted: Date:



J1805315

5

Gainesville Regional Utilities  
D18F068



GAINESVILLE REGIONAL UTILITIES

Energy Supply –Deerhaven

July 23, 2018

ALS Global –Jacksonville  
Gina Bondani  
9143 Philips Hwy Suite 200  
Jacksonville, FL 32256  
904-739-2277

Dear Ms. Gina Bondani,

Enclosed are 14 samples for Project D18F068:

- 6 samples for As, Co, Pb, Sb & Tl analysis by **Method 200.8** and Al, B, Ba, Be, Cd, Ca, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, V, Zn by **Method 200.7**.
- 8 samples for As, Co & Pb analysis by **Method 200.8** and Al, Ba, Be, Cd, Ca, Cr, Cu, Fe, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, V, Zn by **Method 200.7**.

See COC, bottle labels and/or the spreadsheet if clarification is needed.

Enclosed is 1 sample for Project D18F070:

- 1 sample for As, Co, Pb, Sb & Tl analysis by **Method 200.8** and all the rest of the metals by **Method 200.7**. (Includes B and Li) See COC for metal list.

NOTES:

- 1) Samples are not filtered.
- 2) Samples have been acidified to a pH less than 2.

Please be sure to log the samples in by using the **unique** SIDN numbers (i.e. D18F068-##) and not the station identifiers (i.e. SIS1). Station ID is not unique to the sampling event. If you have any questions or concerns, please contact me.

Thank you,

Jeffery Boudreau  
GRU - Deerhaven Generating Station  
Laboratory Technical Director  
352-393-6346  
[boudreaujp@gru.com](mailto:boudreaujp@gru.com)



## Miscellaneous Forms

**ALS Environmental—Jacksonville Laboratory**  
9143 Philips Highway, Suite 200, Jacksonville, FL 32256  
Phone (904) 739-2277 Fax (904) 739-2011  
[www.alsglobal.com](http://www.alsglobal.com)

RIGHTS/CONDITIONS: Right Hand Side





## FLORIDA DEP DATA QUALIFIERS

- B Results based upon colony counts outside the acceptable range.
- D Measurement was made in the field.
- H Value based on field kit determination; results may not be accurate.
- I The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
- J Estimated value (one of the following reasons is discussed in the project case narrative).
1. The result may be inaccurate because the surrogate recovery limits have been exceeded.
  2. No known quality control criteria exists for the component.
  3. The reported value failed to meet the established quality control criteria for either precision or accuracy.
  4. The sample matrix interfered with the ability to make any accurate determination (e.g., primary and confirmation results show greater than 40% RPD).
  5. The data is questionable because of improper laboratory or field protocols (e.g., GC/MS Tune did not meet method criteria).
- K Off scale low. The value is less than the lowest calibration standard but greater than the method reporting limit (MRL).
- L Off scale high. The analyte is above the upper limit of the linear calibration range.
- M The MDL/MRL has been elevated because the analyte could not be accurately quantified due to matrix interference.
- N Presumptive evidence of the analyte. Confirmation was not performed.
- Q Sample held beyond the accepted holding time.
- T Value reported is less than the laboratory method detection limit. The value is reported for informational purposes only.
- U Indicates that the compound was analyzed for but not detected.
- V Indicates that the analyte was detected in both the sample and the associated method blank.
- Y The laboratory analysis was from an improperly preserved sample.
- Z Too many colonies were present (TNTC). The numeric value represents the filtration volume.



**Jacksonville Lab ID # for State Certifications<sup>1</sup>**

| <b>Agency</b>  | <b>Number</b>    | <b>Expiration Date</b> |
|--|------------------|------------------------|
| Department of Defense  | 66206            | 6/30/2020              |
| Florida Department of Health                                   | E82502           | 6/30/2019              |
| Georgia Department of Natural Resources                        | 958              | 6/30/2019              |
| Kentucky Division of Waste Management                          | 123042           | 6/30/2019              |
| Louisiana Department of Environmental Quality                  | 02086            | 6/30/2019              |
| Maine Department of Health and Human Services                  | 2017003          | 2/3/2019               |
| North Carolina Department of Environment and Natural Resources | 527              | 12/31/2018             |
| Pennsylvania Department of Environmental Protection            | 68-04835         | 8/31/2018              |
| South Carolina Department of Health and Environmental Control  | 96021001         | 6/30/2018              |
| Texas Commission on Environmental Quality                      | T104704197-18-10 | 5/31/2019              |
| Virginia Environmental Accreditation Program                   | 460191           | 12/14/2018             |

<sup>1</sup> Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state or agency requirements. The test results meet requirements of the current NELAP/TNI standards or state or agency requirements, where applicable, except as noted in the laboratory case narrative provided. For a specific list of accredited analytes, refer to <http://www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads/North-America-Downloads>



## ACRONYMS

|            |  |
|------------|--|
| ASTM       | American Society for Testing and Materials   |
| A2LA       | American Association for Laboratory Accreditation  |
| CARB       | California Air Resources Board   |
| CAS Number | Chemical Abstract Service registry Number  |
| CFC        | Chlorofluorocarbon   |
| CFU        | Colony-Forming Unit  |
| DEC        | Department of Environmental Conservation   |
| DEQ        | Department of Environmental Quality  |
| DHS        | Department of Health Services  |
| DOE        | Department of Ecology  |
| DOH        | Department of Health   |
| EPA        | U. S. Environmental Protection Agency  |
| ELAP       | Environmental Laboratory Accreditation Program   |
| GC         | Gas Chromatography   |
| GC/MS      | Gas Chromatography/Mass Spectrometry   |
| LUFT       | Leaking Underground Fuel Tank  |
| M          | Modified   |
| MCL        | Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA. |
| MDL        | Method Detection Limit   |
| MPN        | Most Probable Number   |
| MRL        | Method Reporting Limit   |
| NA         | Not Applicable   |
| NC         | Not Calculated   |
| NCASI      | National Council of the Paper Industry for Air and Stream Improvement  |
| ND         | Not Detected   |
| NIOSH      | National Institute for Occupational Safety and Health  |
| PQL        | Practical Quantitation Limit   |
| RCRA       | Resource Conservation and Recovery Act   |
| SIM        | Selected Ion Monitoring  |
| TPH        | Total Petroleum Hydrocarbons   |
| tr         | Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.                           |





ALS Group USA, Corp.

dba ALS Environmental

Analyst Summary report

**Client:** Gainesville Regional Utilities  
**Project:** D18F068/D18F068

**Service Request:** J1805315

**Sample Name:** D18F068-01  
**Lab Code:** J1805315-001  
**Sample Matrix:** Water

**Date Collected:** 07/16/18  
**Date Received:** 07/24/18

**Analysis Method**

200.7  
200.8

**Extracted/Digested By**

EGARDNER  
CSULLIVAN

**Analyzed By**

EGARDNER  
CSULLIVAN

**Sample Name:** D18F068-02  
**Lab Code:** J1805315-002  
**Sample Matrix:** Water

**Date Collected:** 07/16/18  
**Date Received:** 07/24/18

**Analysis Method**

200.7  
200.8

**Extracted/Digested By**

EGARDNER  
CSULLIVAN

**Analyzed By**

EGARDNER  
CSULLIVAN

**Sample Name:** D18F068-03  
**Lab Code:** J1805315-003  
**Sample Matrix:** Water

**Date Collected:** 07/17/18  
**Date Received:** 07/24/18

**Analysis Method**

200.7  
200.8

**Extracted/Digested By**

EGARDNER  
CSULLIVAN

**Analyzed By**

EGARDNER  
CSULLIVAN

**Sample Name:** D18F068-04  
**Lab Code:** J1805315-004  
**Sample Matrix:** Water

**Date Collected:** 07/18/18  
**Date Received:** 07/24/18

**Analysis Method**

200.7  
200.8

**Extracted/Digested By**

EGARDNER  
CSULLIVAN

**Analyzed By**

EGARDNER  
CSULLIVAN

ALS Group USA, Corp.  
dba ALS Environmental

Analyst Summary report

**Client:** Gainesville Regional Utilities  
**Project:** D18F068/D18F068

**Service Request:** J1805315

**Sample Name:** D18F068-05  
**Lab Code:** J1805315-005  
**Sample Matrix:** Water

**Date Collected:** 07/16/18  
**Date Received:** 07/24/18

**Analysis Method**  
200.7  
200.8

**Extracted/Digested By**  
EGARDNER  
CSULLIVAN

**Analyzed By**  
EGARDNER  
CSULLIVAN

**Sample Name:** D18F068-06  
**Lab Code:** J1805315-006  
**Sample Matrix:** Water

**Date Collected:** 07/17/18  
**Date Received:** 07/24/18

**Analysis Method**  
200.7  
200.8

**Extracted/Digested By**  
EGARDNER  
CSULLIVAN

**Analyzed By**  
EGARDNER  
CSULLIVAN

**Sample Name:** D18F068-07  
**Lab Code:** J1805315-007  
**Sample Matrix:** Water

**Date Collected:** 07/19/18  
**Date Received:** 07/24/18

**Analysis Method**  
200.7  
200.8

**Extracted/Digested By**  
EGARDNER  
CSULLIVAN

**Analyzed By**  
EGARDNER  
CSULLIVAN

**Sample Name:** D18F068-08  
**Lab Code:** J1805315-008  
**Sample Matrix:** Water

**Date Collected:** 07/17/18  
**Date Received:** 07/24/18

**Analysis Method**  
200.7  
200.8

**Extracted/Digested By**  
EGARDNER  
CSULLIVAN

**Analyzed By**  
EGARDNER  
CSULLIVAN

ALS Group USA, Corp.  
dba ALS Environmental  
Analyst Summary report

**Client:** Gainesville Regional Utilities  
**Project:** D18F068/D18F068

**Service Request:** J1805315

**Sample Name:** D18F068-09  
**Lab Code:** J1805315-009  
**Sample Matrix:** Water

**Date Collected:** 07/17/18  
**Date Received:** 07/24/18

**Analysis Method**  
200.7  
200.8

**Extracted/Digested By**  
EGARDNER  
CSULLIVAN

**Analyzed By**  
EGARDNER  
CSULLIVAN

**Sample Name:** D18F068-10  
**Lab Code:** J1805315-010  
**Sample Matrix:** Water

**Date Collected:** 07/17/18  
**Date Received:** 07/24/18

**Analysis Method**  
200.7  
200.8

**Extracted/Digested By**  
EGARDNER  
CSULLIVAN

**Analyzed By**  
EGARDNER  
CSULLIVAN

**Sample Name:** D18F068-11  
**Lab Code:** J1805315-011  
**Sample Matrix:** Water

**Date Collected:** 07/19/18  
**Date Received:** 07/24/18

**Analysis Method**  
200.7  
200.8

**Extracted/Digested By**  
EGARDNER  
EGARDNER

**Analyzed By**  
EGARDNER  
VSPEARS

**Sample Name:** D18F068-12  
**Lab Code:** J1805315-012  
**Sample Matrix:** Water

**Date Collected:** 07/19/18  
**Date Received:** 07/24/18

**Analysis Method**  
200.7  
200.8

**Extracted/Digested By**  
EGARDNER  
EGARDNER

**Analyzed By**  
EGARDNER  
VSPEARS

ALS Group USA, Corp.  
dba ALS Environmental

Analyst Summary report

**Client:** Gainesville Regional Utilities  
**Project:** D18F068/D18F068

**Service Request:** J1805315

**Sample Name:** D18F068-13  
**Lab Code:** J1805315-013  
**Sample Matrix:** Water

**Date Collected:** 07/17/18  
**Date Received:** 07/24/18

**Analysis Method**  
200.7  
200.8

**Extracted/Digested By**  
EGARDNER  
EGARDNER

**Analyzed By**  
EGARDNER  
VSPEARS

**Sample Name:** D18F068-14  
**Lab Code:** J1805315-014  
**Sample Matrix:** Water

**Date Collected:** 07/18/18  
**Date Received:** 07/24/18

**Analysis Method**  
200.7  
200.8

**Extracted/Digested By**  
EGARDNER  
EGARDNER

**Analyzed By**  
EGARDNER  
VSPEARS



## Sample Results

**ALS Environmental—Jacksonville Laboratory**  
9143 Philips Highway, Suite 200, Jacksonville, FL 32256  
Phone (904) 739-2277 Fax (904) 739-2011  
[www.alsglobal.com](http://www.alsglobal.com)

ALS ENVIRONMENTAL IS A LEAD PARTNER



## Metals

**ALS Environmental—Jacksonville Laboratory**  
9143 Philips Highway, Suite 200, Jacksonville, FL 32256  
Phone (904)739-2277 Fax (904)739-2011  
[www.alsglobal.com](http://www.alsglobal.com)

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ALS Group USA, Corp.  
dba ALS Environmental

Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** D18F068/D18F068  
**Sample Matrix:** Water

**Service Request:** J1805315  
**Date Collected:** 07/18/18 07:24  
**Date Received:** 07/24/18 09:50

**Sample Name:** D18F068-04  
**Lab Code:** J1805315-004

**Basis:** NA

R4TS

Inorganic Parameters

| Analyte Name      | Analysis Method | Result    | Units | PQL    | MDL     | Dil. | Date Analyzed  | Date Extracted | Q |
|-------------------|-----------------|-----------|-------|--------|---------|------|----------------|----------------|---|
| Aluminum, Total   | 200.7           | 0.21      | mg/L  | 0.10   | 0.010   | 1    | 07/27/18 01:02 | 07/25/18       |   |
| Antimony, Total   | 200.8           | 0.04 U    | ug/L  | 1.0    | 0.04    | 1    | 07/27/18 14:47 | 07/26/18       |   |
| Arsenic, Total    | 200.8           | 7.7       | ug/L  | 1.0    | 0.10    | 1    | 07/27/18 14:47 | 07/26/18       |   |
| Barium, Total     | 200.7           | 0.013     | mg/L  | 0.010  | 0.001   | 1    | 07/27/18 01:03 | 07/25/18       |   |
| Beryllium, Total  | 200.7           | 0.00006 U | mg/L  | 0.0040 | 0.00006 | 1    | 07/27/18 01:03 | 07/25/18       |   |
| Boron, Total      | 200.7           | 0.028 IV  | mg/L  | 0.050  | 0.025   | 1    | 07/27/18 01:03 | 07/25/18       |   |
| Cadmium, Total    | 200.7           | 0.0002 U  | mg/L  | 0.0050 | 0.0002  | 1    | 07/27/18 01:03 | 07/25/18       |   |
| Calcium, Total    | 200.7           | 81.9      | mg/L  | 0.10   | 0.04    | 1    | 07/27/18 01:02 | 07/25/18       |   |
| Chromium, Total   | 200.7           | 0.008 I   | mg/L  | 0.010  | 0.0004  | 1    | 07/27/18 01:03 | 07/25/18       |   |
| Cobalt, Total     | 200.8           | 0.1 I     | ug/L  | 1.0    | 0.03    | 1    | 07/27/18 14:47 | 07/26/18       |   |
| Copper, Total     | 200.7           | 0.0010 U  | mg/L  | 0.010  | 0.0010  | 1    | 07/27/18 01:03 | 07/25/18       |   |
| Iron, Total       | 200.7           | 28.9      | mg/L  | 0.10   | 0.010   | 1    | 07/27/18 01:02 | 07/25/18       |   |
| Lead, Total       | 200.8           | 0.03 U    | ug/L  | 0.50   | 0.03    | 1    | 07/27/18 14:47 | 07/26/18       |   |
| Lithium, Total    | 200.7           | 0.002 U   | mg/L  | 0.10   | 0.002   | 1    | 07/27/18 01:02 | 07/25/18       |   |
| Magnesium, Total  | 200.7           | 27.9      | mg/L  | 0.10   | 0.009   | 1    | 07/27/18 01:02 | 07/25/18       |   |
| Manganese, Total  | 200.7           | 0.136     | mg/L  | 0.010  | 0.0007  | 1    | 07/27/18 01:03 | 07/25/18       |   |
| Molybdenum, Total | 200.7           | 0.008 I   | mg/L  | 0.010  | 0.0003  | 1    | 07/27/18 01:03 | 07/25/18       |   |
| Nickel, Total     | 200.7           | 0.002 I   | mg/L  | 0.010  | 0.0007  | 1    | 07/27/18 01:03 | 07/25/18       |   |
| Potassium, Total  | 200.7           | 0.6 I     | mg/L  | 2.0    | 0.05    | 1    | 07/27/18 01:02 | 07/25/18       |   |
| Selenium, Total   | 200.7           | 0.014 V   | mg/L  | 0.010  | 0.002   | 1    | 07/27/18 01:03 | 07/25/18       |   |
| Silver, Total     | 200.7           | 0.0004 U  | mg/L  | 0.010  | 0.0004  | 1    | 07/27/18 01:03 | 07/25/18       |   |
| Sodium, Total     | 200.7           | 13.7      | mg/L  | 0.50   | 0.02    | 1    | 07/27/18 01:02 | 07/25/18       |   |
| Strontium, Total  | 200.7           | 0.077     | mg/L  | 0.010  | 0.0001  | 1    | 07/27/18 01:02 | 07/25/18       |   |
| Thallium, Total   | 200.8           | 0.02 U    | ug/L  | 0.20   | 0.02    | 1    | 07/27/18 14:47 | 07/26/18       |   |
| Vanadium, Total   | 200.7           | 0.0008 U  | mg/L  | 0.020  | 0.0008  | 1    | 07/27/18 01:03 | 07/25/18       |   |
| Zinc, Total       | 200.7           | 0.006 U   | mg/L  | 0.020  | 0.006   | 1    | 07/27/18 01:03 | 07/25/18       |   |



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Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** D18F068/D18F068  
**Sample Matrix:** Water  
**Sample Name:** D18F068-06  
**Lab Code:** J1805315-006

**Service Request:** J1805315  
**Date Collected:** 07/17/18 15:45  
**Date Received:** 07/24/18 09:50

**Basis:** NA

*RLTY*

Inorganic Parameters

| Analyte Name      | Analysis Method | Result    | Units | PQL    | MDL     | Dil. | Date Analyzed  | Date Extracted | Q |
|-------------------|-----------------|-----------|-------|--------|---------|------|----------------|----------------|---|
| Aluminum, Total   | 200.7           | 0.06 IV   | mg/L  | 0.10   | 0.010   | 1    | 07/27/18 01:33 | 07/25/18       |   |
| Antimony, Total   | 200.8           | 0.2 I     | ug/L  | 1.0    | 0.04    | 1    | 07/27/18 14:57 | 07/26/18       |   |
| Arsenic, Total    | 200.8           | 1.6       | ug/L  | 1.0    | 0.10    | 1    | 07/27/18 14:57 | 07/26/18       |   |
| Barium, Total     | 200.7           | 0.017     | mg/L  | 0.010  | 0.001   | 1    | 07/27/18 01:34 | 07/25/18       |   |
| Beryllium, Total  | 200.7           | 0.00006 U | mg/L  | 0.0040 | 0.00006 | 1    | 07/27/18 01:34 | 07/25/18       |   |
| Boron, Total      | 200.7           | 0.025 U   | mg/L  | 0.050  | 0.025   | 1    | 07/27/18 01:34 | 07/25/18       |   |
| Cadmium, Total    | 200.7           | 0.0002 U  | mg/L  | 0.0050 | 0.0002  | 1    | 07/27/18 01:34 | 07/25/18       |   |
| Calcium, Total    | 200.7           | 65.9      | mg/L  | 0.10   | 0.04    | 1    | 07/27/18 01:33 | 07/25/18       |   |
| Chromium, Total   | 200.7           | 0.0004 U  | mg/L  | 0.010  | 0.0004  | 1    | 07/27/18 01:34 | 07/25/18       |   |
| Cobalt, Total     | 200.8           | 0.2 I     | ug/L  | 1.0    | 0.03    | 1    | 07/27/18 14:57 | 07/26/18       |   |
| Copper, Total     | 200.7           | 0.0010 U  | mg/L  | 0.010  | 0.0010  | 1    | 07/27/18 01:34 | 07/25/18       |   |
| Iron, Total       | 200.7           | 0.56      | mg/L  | 0.10   | 0.010   | 1    | 07/27/18 01:33 | 07/25/18       |   |
| Lead, Total       | 200.8           | 0.03 U    | ug/L  | 0.50   | 0.03    | 1    | 07/27/18 14:57 | 07/26/18       |   |
| Lithium, Total    | 200.7           | 0.002 U   | mg/L  | 0.10   | 0.002   | 1    | 07/27/18 01:33 | 07/25/18       |   |
| Magnesium, Total  | 200.7           | 4.56      | mg/L  | 0.10   | 0.009   | 1    | 07/27/18 01:33 | 07/25/18       |   |
| Manganese, Total  | 200.7           | 0.056     | mg/L  | 0.010  | 0.0007  | 1    | 07/27/18 01:34 | 07/25/18       |   |
| Molybdenum, Total | 200.7           | 0.007 I   | mg/L  | 0.010  | 0.0003  | 1    | 07/27/18 01:34 | 07/25/18       |   |
| Nickel, Total     | 200.7           | 0.001 I   | mg/L  | 0.010  | 0.0007  | 1    | 07/27/18 01:34 | 07/25/18       |   |
| Potassium, Total  | 200.7           | 1.2 I     | mg/L  | 2.0    | 0.05    | 1    | 07/27/18 01:33 | 07/25/18       |   |
| Selenium, Total   | 200.7           | 0.015 V   | mg/L  | 0.010  | 0.002   | 1    | 07/27/18 01:34 | 07/25/18       |   |
| Silver, Total     | 200.7           | 0.0004 U  | mg/L  | 0.010  | 0.0004  | 1    | 07/27/18 01:34 | 07/25/18       |   |
| Sodium, Total     | 200.7           | 7.22      | mg/L  | 0.50   | 0.02    | 1    | 07/27/18 01:33 | 07/25/18       |   |
| Strontium, Total  | 200.7           | 0.135     | mg/L  | 0.010  | 0.0001  | 1    | 07/27/18 01:33 | 07/25/18       |   |
| Thallium, Total   | 200.8           | 0.02 U    | ug/L  | 0.20   | 0.02    | 1    | 07/27/18 14:57 | 07/26/18       |   |
| Vanadium, Total   | 200.7           | 0.0008 U  | mg/L  | 0.020  | 0.0008  | 1    | 07/27/18 01:34 | 07/25/18       |   |
| Zinc, Total       | 200.7           | 0.006 U   | mg/L  | 0.020  | 0.006   | 1    | 07/27/18 01:34 | 07/25/18       |   |

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Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** D18F068/D18F068  
**Sample Matrix:** Water  
**Sample Name:** D18F068-07  
**Lab Code:** J1805315-007

**Service Request:** J1805315  
**Date Collected:** 07/19/18 11:17  
**Date Received:** 07/24/18 09:50

**Basis:** NA

*RLT8*

Inorganic Parameters

| Analyte Name      | Analysis Method | Result         | Units | PQL    | MDL     | Dil. | Date Analyzed  | Date Extracted | Q |
|-------------------|-----------------|----------------|-------|--------|---------|------|----------------|----------------|---|
| Aluminum, Total   | 200.7           | <b>0.15</b>    | mg/L  | 0.10   | 0.010   | 1    | 07/27/18 01:38 | 07/25/18       |   |
| Antimony, Total   | 200.8           | <b>0.07 I</b>  | ug/L  | 1.0    | 0.04    | 1    | 07/27/18 15:02 | 07/26/18       |   |
| Arsenic, Total    | 200.8           | <b>1.9</b>     | ug/L  | 1.0    | 0.10    | 1    | 07/27/18 15:02 | 07/26/18       |   |
| Barium, Total     | 200.7           | <b>0.014</b>   | mg/L  | 0.010  | 0.001   | 1    | 07/27/18 01:39 | 07/25/18       |   |
| Beryllium, Total  | 200.7           | 0.00006 U      | mg/L  | 0.0040 | 0.00006 | 1    | 07/27/18 01:39 | 07/25/18       |   |
| Boron, Total      | 200.7           | 0.025 U        | mg/L  | 0.050  | 0.025   | 1    | 07/27/18 01:39 | 07/25/18       |   |
| Cadmium, Total    | 200.7           | 0.0002 U       | mg/L  | 0.0050 | 0.0002  | 1    | 07/27/18 01:39 | 07/25/18       |   |
| Calcium, Total    | 200.7           | <b>39.3</b>    | mg/L  | 0.10   | 0.04    | 1    | 07/27/18 01:38 | 07/25/18       |   |
| Chromium, Total   | 200.7           | 0.0004 U       | mg/L  | 0.010  | 0.0004  | 1    | 07/27/18 01:39 | 07/25/18       |   |
| Cobalt, Total     | 200.8           | <b>1.9</b>     | ug/L  | 1.0    | 0.03    | 1    | 07/27/18 15:02 | 07/26/18       |   |
| Copper, Total     | 200.7           | 0.0010 U       | mg/L  | 0.010  | 0.0010  | 1    | 07/27/18 01:39 | 07/25/18       |   |
| Iron, Total       | 200.7           | <b>1.25</b>    | mg/L  | 0.10   | 0.010   | 1    | 07/27/18 01:38 | 07/25/18       |   |
| Lead, Total       | 200.8           | 0.03 U         | ug/L  | 0.50   | 0.03    | 1    | 07/27/18 15:02 | 07/26/18       |   |
| Lithium, Total    | 200.7           | 0.002 U        | mg/L  | 0.10   | 0.002   | 1    | 07/27/18 01:38 | 07/25/18       |   |
| Magnesium, Total  | 200.7           | <b>17.1</b>    | mg/L  | 0.10   | 0.009   | 1    | 07/27/18 01:38 | 07/25/18       |   |
| Manganese, Total  | 200.7           | <b>0.127</b>   | mg/L  | 0.010  | 0.0007  | 1    | 07/27/18 01:39 | 07/25/18       |   |
| Molybdenum, Total | 200.7           | <b>0.005 I</b> | mg/L  | 0.010  | 0.0003  | 1    | 07/27/18 01:39 | 07/25/18       |   |
| Nickel, Total     | 200.7           | <b>0.002 I</b> | mg/L  | 0.010  | 0.0007  | 1    | 07/27/18 01:39 | 07/25/18       |   |
| Potassium, Total  | 200.7           | <b>1.0 I</b>   | mg/L  | 2.0    | 0.05    | 1    | 07/27/18 01:38 | 07/25/18       |   |
| Selenium, Total   | 200.7           | <b>0.012 V</b> | mg/L  | 0.010  | 0.002   | 1    | 07/27/18 01:39 | 07/25/18       |   |
| Silver, Total     | 200.7           | 0.0004 U       | mg/L  | 0.010  | 0.0004  | 1    | 07/27/18 01:39 | 07/25/18       |   |
| Sodium, Total     | 200.7           | <b>6.89</b>    | mg/L  | 0.50   | 0.02    | 1    | 07/27/18 01:38 | 07/25/18       |   |
| Strontium, Total  | 200.7           | <b>0.065</b>   | mg/L  | 0.010  | 0.0001  | 1    | 07/27/18 01:38 | 07/25/18       |   |
| Thallium, Total   | 200.8           | <b>0.23</b>    | ug/L  | 0.20   | 0.02    | 1    | 07/27/18 15:02 | 07/26/18       |   |
| Vanadium, Total   | 200.7           | 0.0008 U       | mg/L  | 0.020  | 0.0008  | 1    | 07/27/18 01:39 | 07/25/18       |   |
| Zinc, Total       | 200.7           | 0.006 U        | mg/L  | 0.020  | 0.006   | 1    | 07/27/18 01:39 | 07/25/18       |   |

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Analytical Report

Client: Gainesville Regional Utilities  
Project: D18F068/D18F068  
Sample Matrix: Water

Service Request: J1805315  
Date Collected: 07/19/18 15:10  
Date Received: 07/24/18 09:50

Sample Name: D18F068-11  
Lab Code: J1805315-011

Basis: NA

R1074

Inorganic Parameters

| Analyte Name      | Analysis Method | Result    | Units | PQL    | MDL     | Dil. | Date Analyzed  | Date Extracted | Q |
|-------------------|-----------------|-----------|-------|--------|---------|------|----------------|----------------|---|
| Aluminum, Total   | 200.7           | 0.03 IV   | mg/L  | 0.10   | 0.010   | 1    | 07/27/18 01:58 | 07/25/18       |   |
| Antimony, Total   | 200.8           | 0.04 U    | ug/L  | 1.0    | 0.04    | 1    | 07/30/18 21:20 | 07/30/18       |   |
| Arsenic, Total    | 200.8           | 0.2 I     | ug/L  | 1.0    | 0.10    | 1    | 07/30/18 21:20 | 07/30/18       |   |
| Barium, Total     | 200.7           | 0.003 I   | mg/L  | 0.010  | 0.001   | 1    | 07/27/18 01:59 | 07/25/18       |   |
| Beryllium, Total  | 200.7           | 0.00006 U | mg/L  | 0.0040 | 0.00006 | 1    | 07/27/18 01:59 | 07/25/18       |   |
| Boron, Total      | 200.7           | 0.025 U   | mg/L  | 0.050  | 0.025   | 1    | 07/27/18 01:59 | 07/25/18       |   |
| Cadmium, Total    | 200.7           | 0.0002 U  | mg/L  | 0.0050 | 0.0002  | 1    | 07/27/18 01:59 | 07/25/18       |   |
| Calcium, Total    | 200.7           | 15.9      | mg/L  | 0.10   | 0.04    | 1    | 07/27/18 01:58 | 07/25/18       |   |
| Chromium, Total   | 200.7           | 0.0004 U  | mg/L  | 0.010  | 0.0004  | 1    | 07/27/18 01:59 | 07/25/18       |   |
| Cobalt, Total     | 200.8           | 0.06 I    | ug/L  | 1.0    | 0.03    | 1    | 07/30/18 21:20 | 07/30/18       |   |
| Copper, Total     | 200.7           | 0.0010 U  | mg/L  | 0.010  | 0.0010  | 1    | 07/27/18 01:59 | 07/25/18       |   |
| Iron, Total       | 200.7           | 0.22      | mg/L  | 0.10   | 0.010   | 1    | 07/27/18 01:58 | 07/25/18       |   |
| Lead, Total       | 200.8           | 0.03 U    | ug/L  | 0.50   | 0.03    | 1    | 07/30/18 21:20 | 07/30/18       |   |
| Lithium, Total    | 200.7           | 0.002 U   | mg/L  | 0.10   | 0.002   | 1    | 07/27/18 01:58 | 07/25/18       |   |
| Magnesium, Total  | 200.7           | 2.48      | mg/L  | 0.10   | 0.009   | 1    | 07/27/18 01:58 | 07/25/18       |   |
| Manganese, Total  | 200.7           | 0.007 I   | mg/L  | 0.010  | 0.0007  | 1    | 07/27/18 01:59 | 07/25/18       |   |
| Molybdenum, Total | 200.7           | 0.002 I   | mg/L  | 0.010  | 0.0003  | 1    | 07/27/18 01:59 | 07/25/18       |   |
| Nickel, Total     | 200.7           | 0.0007 U  | mg/L  | 0.010  | 0.0007  | 1    | 07/27/18 01:59 | 07/25/18       |   |
| Potassium, Total  | 200.7           | 0.2 I     | mg/L  | 2.0    | 0.05    | 1    | 07/27/18 01:58 | 07/25/18       |   |
| Selenium, Total   | 200.7           | 0.006 IV  | mg/L  | 0.010  | 0.002   | 1    | 07/27/18 01:59 | 07/25/18       |   |
| Silver, Total     | 200.7           | 0.0004 U  | mg/L  | 0.010  | 0.0004  | 1    | 07/27/18 01:59 | 07/25/18       |   |
| Sodium, Total     | 200.7           | 3.53      | mg/L  | 0.50   | 0.02    | 1    | 07/27/18 01:58 | 07/25/18       |   |
| Strontium, Total  | 200.7           | 0.015     | mg/L  | 0.010  | 0.0001  | 1    | 07/27/18 01:58 | 07/25/18       |   |
| Thallium, Total   | 200.8           | 0.02 U    | ug/L  | 0.20   | 0.02    | 1    | 07/30/18 21:20 | 07/30/18       |   |
| Vanadium, Total   | 200.7           | 0.0008 U  | mg/L  | 0.020  | 0.0008  | 1    | 07/27/18 01:59 | 07/25/18       |   |
| Zinc, Total       | 200.7           | 0.006 U   | mg/L  | 0.020  | 0.006   | 1    | 07/27/18 01:59 | 07/25/18       |   |

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Analytical Report

Client: Gainesville Regional Utilities  
Project: D18F068/D18F068  
Sample Matrix: Water

Service Request: J1805315  
Date Collected: 07/19/18 13:49  
Date Received: 07/24/18 09:50

Sample Name: D18F068-12  
Lab Code: J1805315-012

Basis: NA

R1174

Inorganic Parameters

| Analyte Name      | Analysis Method | Result    | Units | PQL    | MDL     | Dil. | Date Analyzed  | Date Extracted | Q |
|-------------------|-----------------|-----------|-------|--------|---------|------|----------------|----------------|---|
| Aluminum, Total   | 200.7           | 0.09 IV   | mg/L  | 0.10   | 0.010   | 1    | 07/27/18 02:19 | 07/25/18       |   |
| Antimony, Total   | 200.8           | 0.04 U    | ug/L  | 1.0    | 0.04    | 1    | 07/30/18 21:22 | 07/30/18       |   |
| Arsenic, Total    | 200.8           | 0.3 I     | ug/L  | 1.0    | 0.10    | 1    | 07/30/18 21:22 | 07/30/18       |   |
| Barium, Total     | 200.7           | 0.004 I   | mg/L  | 0.010  | 0.001   | 1    | 07/27/18 02:21 | 07/25/18       |   |
| Beryllium, Total  | 200.7           | 0.00006 U | mg/L  | 0.0040 | 0.00006 | 1    | 07/27/18 02:20 | 07/25/18       |   |
| Boron, Total      | 200.7           | 0.325 V   | mg/L  | 0.050  | 0.025   | 1    | 07/27/18 02:21 | 07/25/18       |   |
| Cadmium, Total    | 200.7           | 0.0002 U  | mg/L  | 0.0050 | 0.0002  | 1    | 07/27/18 02:21 | 07/25/18       |   |
| Calcium, Total    | 200.7           | 5.54      | mg/L  | 0.10   | 0.04    | 1    | 07/27/18 02:19 | 07/25/18       |   |
| Chromium, Total   | 200.7           | 0.0004 U  | mg/L  | 0.010  | 0.0004  | 1    | 07/27/18 02:21 | 07/25/18       |   |
| Cobalt, Total     | 200.8           | 0.5 I     | ug/L  | 1.0    | 0.03    | 1    | 07/30/18 21:22 | 07/30/18       |   |
| Copper, Total     | 200.7           | 0.0010 U  | mg/L  | 0.010  | 0.0010  | 1    | 07/27/18 02:20 | 07/25/18       |   |
| Iron, Total       | 200.7           | 0.59      | mg/L  | 0.10   | 0.010   | 1    | 07/27/18 02:19 | 07/25/18       |   |
| Lead, Total       | 200.8           | 0.03 U    | ug/L  | 0.50   | 0.03    | 1    | 07/30/18 21:22 | 07/30/18       |   |
| Lithium, Total    | 200.7           | 0.002 U   | mg/L  | 0.10   | 0.002   | 1    | 07/27/18 02:19 | 07/25/18       |   |
| Magnesium, Total  | 200.7           | 3.47      | mg/L  | 0.10   | 0.009   | 1    | 07/27/18 02:19 | 07/25/18       |   |
| Manganese, Total  | 200.7           | 0.010     | mg/L  | 0.010  | 0.0007  | 1    | 07/27/18 02:20 | 07/25/18       |   |
| Molybdenum, Total | 200.7           | 0.001 I   | mg/L  | 0.010  | 0.0003  | 1    | 07/27/18 02:21 | 07/25/18       |   |
| Nickel, Total     | 200.7           | 0.001 I   | mg/L  | 0.010  | 0.0007  | 1    | 07/27/18 02:21 | 07/25/18       |   |
| Potassium, Total  | 200.7           | 1.2 I     | mg/L  | 2.0    | 0.05    | 1    | 07/27/18 02:19 | 07/25/18       |   |
| Selenium, Total   | 200.7           | 0.002 U   | mg/L  | 0.010  | 0.002   | 1    | 07/27/18 02:21 | 07/25/18       |   |
| Silver, Total     | 200.7           | 0.0004 U  | mg/L  | 0.010  | 0.0004  | 1    | 07/27/18 02:20 | 07/25/18       |   |
| Sodium, Total     | 200.7           | 36.2      | mg/L  | 0.50   | 0.02    | 1    | 07/27/18 02:19 | 07/25/18       |   |
| Strontium, Total  | 200.7           | 0.004 I   | mg/L  | 0.010  | 0.0001  | 1    | 07/27/18 02:19 | 07/25/18       |   |
| Thallium, Total   | 200.8           | 0.02 U    | ug/L  | 0.20   | 0.02    | 1    | 07/30/18 21:22 | 07/30/18       |   |
| Vanadium, Total   | 200.7           | 0.0008 U  | mg/L  | 0.020  | 0.0008  | 1    | 07/27/18 02:20 | 07/25/18       |   |
| Zinc, Total       | 200.7           | 0.006 U   | mg/L  | 0.020  | 0.006   | 1    | 07/27/18 02:21 | 07/25/18       |   |

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Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** D18F068/D18F068  
**Sample Matrix:** Water

**Service Request:** J1805315  
**Date Collected:** 07/18/18 08:25  
**Date Received:** 07/24/18 09:50

**Sample Name:** D18F068-14  
**Lab Code:** J1805315-014

**Basis:** NA

*Eblank*

Inorganic Parameters

| Analyte Name      | Analysis Method | Result          | Units | PQL    | MDL     | Dil. | Date Analyzed  | Date Extracted | Q |
|-------------------|-----------------|-----------------|-------|--------|---------|------|----------------|----------------|---|
| Aluminum, Total   | 200.7           | <b>0.01 IV</b>  | mg/L  | 0.10   | 0.010   | 1    | 07/27/18 02:31 | 07/25/18       |   |
| Antimony, Total   | 200.8           | 0.04 U          | ug/L  | 1.0    | 0.04    | 1    | 07/30/18 21:25 | 07/30/18       |   |
| Arsenic, Total    | 200.8           | 0.10 U          | ug/L  | 1.0    | 0.10    | 1    | 07/30/18 21:25 | 07/30/18       |   |
| Barium, Total     | 200.7           | 0.001 U         | mg/L  | 0.010  | 0.001   | 1    | 07/27/18 02:32 | 07/25/18       |   |
| Beryllium, Total  | 200.7           | 0.00006 U       | mg/L  | 0.0040 | 0.00006 | 1    | 07/27/18 02:32 | 07/25/18       |   |
| Boron, Total      | 200.7           | 0.025 U         | mg/L  | 0.050  | 0.025   | 1    | 07/27/18 02:32 | 07/25/18       |   |
| Cadmium, Total    | 200.7           | 0.0002 U        | mg/L  | 0.0050 | 0.0002  | 1    | 07/27/18 02:32 | 07/25/18       |   |
| Calcium, Total    | 200.7           | 0.04 U          | mg/L  | 0.10   | 0.04    | 1    | 07/27/18 02:31 | 07/25/18       |   |
| Chromium, Total   | 200.7           | 0.0004 U        | mg/L  | 0.010  | 0.0004  | 1    | 07/27/18 02:32 | 07/25/18       |   |
| Cobalt, Total     | 200.8           | 0.03 U          | ug/L  | 1.0    | 0.03    | 1    | 07/30/18 21:25 | 07/30/18       |   |
| Copper, Total     | 200.7           | 0.0010 U        | mg/L  | 0.010  | 0.0010  | 1    | 07/27/18 02:32 | 07/25/18       |   |
| Iron, Total       | 200.7           | 0.010 U         | mg/L  | 0.10   | 0.010   | 1    | 07/27/18 02:31 | 07/25/18       |   |
| Lead, Total       | 200.8           | 0.03 U          | ug/L  | 0.50   | 0.03    | 1    | 07/30/18 21:25 | 07/30/18       |   |
| Lithium, Total    | 200.7           | 0.002 U         | mg/L  | 0.10   | 0.002   | 1    | 07/27/18 02:31 | 07/25/18       |   |
| Magnesium, Total  | 200.7           | <b>0.02 IV</b>  | mg/L  | 0.10   | 0.009   | 1    | 07/27/18 02:31 | 07/25/18       |   |
| Manganese, Total  | 200.7           | 0.0007 U        | mg/L  | 0.010  | 0.0007  | 1    | 07/27/18 02:32 | 07/25/18       |   |
| Molybdenum, Total | 200.7           | 0.0003 U        | mg/L  | 0.010  | 0.0003  | 1    | 07/27/18 02:32 | 07/25/18       |   |
| Nickel, Total     | 200.7           | 0.0007 U        | mg/L  | 0.010  | 0.0007  | 1    | 07/27/18 02:32 | 07/25/18       |   |
| Potassium, Total  | 200.7           | 0.05 U          | mg/L  | 2.0    | 0.05    | 1    | 07/27/18 02:31 | 07/25/18       |   |
| Selenium, Total   | 200.7           | <b>0.003 IV</b> | mg/L  | 0.010  | 0.002   | 1    | 07/27/18 02:32 | 07/25/18       |   |
| Silver, Total     | 200.7           | 0.0004 U        | mg/L  | 0.010  | 0.0004  | 1    | 07/27/18 02:32 | 07/25/18       |   |
| Sodium, Total     | 200.7           | 0.02 U          | mg/L  | 0.50   | 0.02    | 1    | 07/27/18 02:31 | 07/25/18       |   |
| Strontium, Total  | 200.7           | 0.0001 U        | mg/L  | 0.010  | 0.0001  | 1    | 07/27/18 02:31 | 07/25/18       |   |
| Thallium, Total   | 200.8           | 0.02 U          | ug/L  | 0.20   | 0.02    | 1    | 07/30/18 21:25 | 07/30/18       |   |
| Vanadium, Total   | 200.7           | 0.0008 U        | mg/L  | 0.020  | 0.0008  | 1    | 07/27/18 02:32 | 07/25/18       |   |
| Zinc, Total       | 200.7           | 0.006 U         | mg/L  | 0.020  | 0.006   | 1    | 07/27/18 02:32 | 07/25/18       |   |



## QC Summary Forms

**ALS Environmental - Jacksonville Laboratory**  
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## Metals

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Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** D18F068/D18F068  
**Sample Matrix:** Water  
  
**Sample Name:** Method Blank  
**Lab Code:** J1805315-MB1

**Service Request:** J1805315  
**Date Collected:** NA  
**Date Received:** NA  
  
**Basis:** NA

Inorganic Parameters

| Analyte Name      | Analysis Method | Result    | Units | PQL    | MDL     | Dil. | Date Analyzed  | Date Extracted | Q |
|-------------------|-----------------|-----------|-------|--------|---------|------|----------------|----------------|---|
| Aluminum, Total   | 200.7           | 0.01 I    | mg/L  | 0.10   | 0.010   | 1    | 07/26/18 23:46 | 07/25/18       |   |
| Antimony, Total   | 200.8           | 0.04 U    | ug/L  | 1.0    | 0.04    | 1    | 07/27/18 14:36 | 07/26/18       |   |
| Arsenic, Total    | 200.8           | 0.10 U    | ug/L  | 1.0    | 0.10    | 1    | 07/27/18 14:36 | 07/26/18       |   |
| Barium, Total     | 200.7           | 0.001 U   | mg/L  | 0.010  | 0.001   | 1    | 07/26/18 23:47 | 07/25/18       |   |
| Beryllium, Total  | 200.7           | 0.00006 U | mg/L  | 0.0040 | 0.00006 | 1    | 07/26/18 23:47 | 07/25/18       |   |
| Boron, Total      | 200.7           | 0.035 I   | mg/L  | 0.050  | 0.025   | 1    | 07/26/18 23:47 | 07/25/18       |   |
| Cadmium, Total    | 200.7           | 0.0002 U  | mg/L  | 0.0050 | 0.0002  | 1    | 07/26/18 23:47 | 07/25/18       |   |
| Calcium, Total    | 200.7           | 0.04 U    | mg/L  | 0.10   | 0.04    | 1    | 07/26/18 23:46 | 07/25/18       |   |
| Chromium, Total   | 200.7           | 0.0004 U  | mg/L  | 0.010  | 0.0004  | 1    | 07/26/18 23:47 | 07/25/18       |   |
| Cobalt, Total     | 200.8           | 0.03 U    | ug/L  | 1.0    | 0.03    | 1    | 07/27/18 14:36 | 07/26/18       |   |
| Copper, Total     | 200.7           | 0.001 I   | mg/L  | 0.010  | 0.0010  | 1    | 07/26/18 23:47 | 07/25/18       |   |
| Iron, Total       | 200.7           | 0.010 U   | mg/L  | 0.10   | 0.010   | 1    | 07/26/18 23:46 | 07/25/18       |   |
| Lead, Total       | 200.8           | 0.03 U    | ug/L  | 0.50   | 0.03    | 1    | 07/27/18 14:36 | 07/26/18       |   |
| Lithium, Total    | 200.7           | 0.002 U   | mg/L  | 0.10   | 0.002   | 1    | 07/26/18 23:45 | 07/25/18       |   |
| Magnesium, Total  | 200.7           | 0.02 I    | mg/L  | 0.10   | 0.009   | 1    | 07/26/18 23:46 | 07/25/18       |   |
| Manganese, Total  | 200.7           | 0.0007 U  | mg/L  | 0.010  | 0.0007  | 1    | 07/26/18 23:47 | 07/25/18       |   |
| Molybdenum, Total | 200.7           | 0.0003 U  | mg/L  | 0.010  | 0.0003  | 1    | 07/26/18 23:47 | 07/25/18       |   |
| Nickel, Total     | 200.7           | 0.0007 U  | mg/L  | 0.010  | 0.0007  | 1    | 07/26/18 23:47 | 07/25/18       |   |
| Potassium, Total  | 200.7           | 0.05 U    | mg/L  | 2.0    | 0.05    | 1    | 07/26/18 23:45 | 07/25/18       |   |
| Selenium, Total   | 200.7           | 0.004 I   | mg/L  | 0.010  | 0.002   | 1    | 07/26/18 23:47 | 07/25/18       |   |
| Silver, Total     | 200.7           | 0.0004 U  | mg/L  | 0.010  | 0.0004  | 1    | 07/26/18 23:47 | 07/25/18       |   |
| Sodium, Total     | 200.7           | 0.03 I    | mg/L  | 0.50   | 0.02    | 1    | 07/26/18 23:45 | 07/25/18       |   |
| Strontium, Total  | 200.7           | 0.0001 U  | mg/L  | 0.010  | 0.0001  | 1    | 07/26/18 23:46 | 07/25/18       |   |
| Thallium, Total   | 200.8           | 0.02 U    | ug/L  | 0.20   | 0.02    | 1    | 07/27/18 14:36 | 07/26/18       |   |
| Vanadium, Total   | 200.7           | 0.0008 U  | mg/L  | 0.020  | 0.0008  | 1    | 07/26/18 23:47 | 07/25/18       |   |
| Zinc, Total       | 200.7           | 0.006 U   | mg/L  | 0.020  | 0.006   | 1    | 07/26/18 23:47 | 07/25/18       |   |



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Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** D18F068/D18F068  
**Sample Matrix:** Water  
**Sample Name:** Method Blank  
**Lab Code:** J1805315-MB2

**Service Request:** J1805315  
**Date Collected:** NA  
**Date Received:** NA  
**Basis:** NA

Inorganic Parameters

| Analyte Name      | Analysis Method | Result         | Units | PQL    | MDL     | Dil. | Date Analyzed  | Date Extracted | Q |
|-------------------|-----------------|----------------|-------|--------|---------|------|----------------|----------------|---|
| Aluminum, Total   | 200.7           | 0.01 U         | mg/L  | 0.10   | 0.01    | 1    | 07/27/18 03:39 | 07/25/18       |   |
| Antimony, Total   | 200.8           | 0.04 U         | ug/L  | 1.0    | 0.04    | 1    | 07/30/18 21:17 | 07/30/18       |   |
| Arsenic, Total    | 200.8           | 0.10 U         | ug/L  | 1.0    | 0.10    | 1    | 07/30/18 21:17 | 07/30/18       |   |
| Barium, Total     | 200.7           | 0.001 U        | mg/L  | 0.010  | 0.001   | 1    | 07/27/18 03:40 | 07/25/18       |   |
| Beryllium, Total  | 200.7           | 0.00006 U      | mg/L  | 0.0040 | 0.00006 | 1    | 07/27/18 03:40 | 07/25/18       |   |
| Cadmium, Total    | 200.7           | 0.0002 U       | mg/L  | 0.0050 | 0.0002  | 1    | 07/27/18 03:40 | 07/25/18       |   |
| Calcium, Total    | 200.7           | 0.04 U         | mg/L  | 0.10   | 0.04    | 1    | 07/27/18 03:39 | 07/25/18       |   |
| Chromium, Total   | 200.7           | 0.0004 U       | mg/L  | 0.010  | 0.0004  | 1    | 07/27/18 03:40 | 07/25/18       |   |
| Cobalt, Total     | 200.8           | 0.03 U         | ug/L  | 1.0    | 0.03    | 1    | 07/30/18 21:17 | 07/30/18       |   |
| Copper, Total     | 200.7           | <b>0.001 I</b> | mg/L  | 0.010  | 0.001   | 1    | 07/27/18 03:40 | 07/25/18       |   |
| Iron, Total       | 200.7           | 0.010 U        | mg/L  | 0.10   | 0.010   | 1    | 07/27/18 03:39 | 07/25/18       |   |
| Lead, Total       | 200.8           | 0.03 U         | ug/L  | 0.50   | 0.03    | 1    | 07/30/18 21:17 | 07/30/18       |   |
| Magnesium, Total  | 200.7           | <b>0.02 I</b>  | mg/L  | 0.10   | 0.009   | 1    | 07/27/18 03:39 | 07/25/18       |   |
| Manganese, Total  | 200.7           | 0.0007 U       | mg/L  | 0.010  | 0.0007  | 1    | 07/27/18 03:40 | 07/25/18       |   |
| Molybdenum, Total | 200.7           | 0.0003 U       | mg/L  | 0.010  | 0.0003  | 1    | 07/27/18 03:40 | 07/25/18       |   |
| Nickel, Total     | 200.7           | 0.0007 U       | mg/L  | 0.010  | 0.0007  | 1    | 07/27/18 03:40 | 07/25/18       |   |
| Potassium, Total  | 200.7           | 0.05 U         | mg/L  | 2.0    | 0.05    | 1    | 07/27/18 03:38 | 07/25/18       |   |
| Selenium, Total   | 200.7           | <b>0.002 I</b> | mg/L  | 0.010  | 0.002   | 1    | 07/27/18 03:40 | 07/25/18       |   |
| Silver, Total     | 200.7           | 0.0004 U       | mg/L  | 0.010  | 0.0004  | 1    | 07/27/18 03:40 | 07/25/18       |   |
| Sodium, Total     | 200.7           | 0.02 U         | mg/L  | 0.50   | 0.02    | 1    | 07/27/18 03:38 | 07/25/18       |   |
| Strontium, Total  | 200.7           | 0.0001 U       | mg/L  | 0.010  | 0.0001  | 1    | 07/27/18 03:39 | 07/25/18       |   |
| Thallium, Total   | 200.8           | 0.02 U         | ug/L  | 0.20   | 0.02    | 1    | 07/30/18 21:17 | 07/30/18       |   |
| Vanadium, Total   | 200.7           | 0.0008 U       | mg/L  | 0.020  | 0.0008  | 1    | 07/27/18 03:40 | 07/25/18       |   |
| Zinc, Total       | 200.7           | 0.006 U        | mg/L  | 0.020  | 0.006   | 1    | 07/27/18 03:40 | 07/25/18       |   |

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QA/QC Report

**Client:** Gainesville Regional Utilities  
**Project:** D18F068/D18F068  
**Sample Matrix:** Water

**Service Request:** J1805315  
**Date Analyzed:** 07/26/18

**Lab Control Sample Summary**  
**Inorganic Parameters**

**Units:**mg/L  
**Basis:**NA

**Lab Control Sample**  
J1805315-LCS1

| Analyte Name      | Analytical Method | Result | Spike Amount | % Rec | % Rec Limits |
|-------------------|-------------------|--------|--------------|-------|--------------|
| Aluminum, Total   | 200.7             | 5.15   | 5.00         | 103   | 85-115       |
| Barium, Total     | 200.7             | 0.507  | 0.500        | 101   | 85-115       |
| Beryllium, Total  | 200.7             | 0.202  | 0.200        | 101   | 85-115       |
| Boron, Total      | 200.7             | 2.62   | 2.50         | 105   | 85-115       |
| Cadmium, Total    | 200.7             | 0.253  | 0.250        | 101   | 85-115       |
| Calcium, Total    | 200.7             | 5.08   | 5.00         | 102   | 85-115       |
| Chromium, Total   | 200.7             | 0.500  | 0.500        | 100   | 85-115       |
| Copper, Total     | 200.7             | 0.513  | 0.500        | 103   | 85-115       |
| Iron, Total       | 200.7             | 5.17   | 5.00         | 103   | 85-115       |
| Lithium, Total    | 200.7             | 5.16   | 5.00         | 103   | 85-115       |
| Magnesium, Total  | 200.7             | 5.17   | 5.00         | 103   | 85-115       |
| Manganese, Total  | 200.7             | 0.508  | 0.500        | 102   | 85-115       |
| Molybdenum, Total | 200.7             | 0.509  | 0.500        | 102   | 85-115       |
| Nickel, Total     | 200.7             | 0.532  | 0.500        | 106   | 85-115       |
| Potassium, Total  | 200.7             | 101    | 100          | 101   | 85-115       |
| Selenium, Total   | 200.7             | 0.517  | 0.500        | 103   | 85-115       |
| Silver, Total     | 200.7             | 0.515  | 0.500        | 103   | 85-115       |
| Sodium, Total     | 200.7             | 25.5   | 25.0         | 102   | 85-115       |
| Strontium, Total  | 200.7             | 0.506  | 0.500        | 101   | 85-115       |
| Vanadium, Total   | 200.7             | 0.995  | 1.00         | 100   | 85-115       |
| Zinc, Total       | 200.7             | 1.01   | 1.00         | 101   | 85-115       |

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QA/QC Report

**Client:** Gainesville Regional Utilities  
**Project:** D18F068/D18F068  
**Sample Matrix:** Water

**Service Request:** J1805315  
**Date Analyzed:** 07/27/18

**Lab Control Sample Summary**  
**Inorganic Parameters**

**Units:**ug/L  
**Basis:**NA

**Lab Control Sample**  
J1805315-LCS1

| Analyte Name    | Analytical Method | Result | Spike Amount | % Rec | % Rec Limits |
|-----------------|-------------------|--------|--------------|-------|--------------|
| Antimony, Total | 200.8             | 51.3   | 50.0         | 103   | 85-115       |
| Arsenic, Total  | 200.8             | 49.9   | 50.0         | 100   | 85-115       |
| Cobalt, Total   | 200.8             | 52.3   | 50.0         | 105   | 85-115       |
| Lead, Total     | 200.8             | 25.9   | 25.0         | 104   | 85-115       |
| Thallium, Total | 200.8             | 10.2   | 10.0         | 102   | 85-115       |

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QA/QC Report

**Client:** Gainesville Regional Utilities  
**Project:** D18F068/D18F068  
**Sample Matrix:** Water

**Service Request:** J1805315  
**Date Analyzed:** 07/27/18

**Lab Control Sample Summary**  
**Inorganic Parameters**

**Units:**mg/L  
**Basis:**NA

**Lab Control Sample**  
J1805315-LCS2

| Analyte Name      | Analytical Method | Result | Spike Amount | % Rec | % Rec Limits |
|-------------------|-------------------|--------|--------------|-------|--------------|
| Aluminum, Total   | 200.7             | 5.12   | 5.00         | 102   | 85-115       |
| Barium, Total     | 200.7             | 0.497  | 0.500        | 99    | 85-115       |
| Beryllium, Total  | 200.7             | 0.198  | 0.200        | 99    | 85-115       |
| Cadmium, Total    | 200.7             | 0.250  | 0.250        | 100   | 85-115       |
| Calcium, Total    | 200.7             | 5.05   | 5.00         | 101   | 85-115       |
| Chromium, Total   | 200.7             | 0.491  | 0.500        | 98    | 85-115       |
| Copper, Total     | 200.7             | 0.502  | 0.500        | 100   | 85-115       |
| Iron, Total       | 200.7             | 5.13   | 5.00         | 103   | 85-115       |
| Magnesium, Total  | 200.7             | 5.15   | 5.00         | 103   | 85-115       |
| Manganese, Total  | 200.7             | 0.498  | 0.500        | 100   | 85-115       |
| Molybdenum, Total | 200.7             | 0.494  | 0.500        | 99    | 85-115       |
| Nickel, Total     | 200.7             | 0.522  | 0.500        | 104   | 85-115       |
| Potassium, Total  | 200.7             | 99.7   | 100          | 100   | 85-115       |
| Selenium, Total   | 200.7             | 0.512  | 0.500        | 102   | 85-115       |
| Silver, Total     | 200.7             | 0.505  | 0.500        | 101   | 85-115       |
| Sodium, Total     | 200.7             | 25.1   | 25.0         | 100   | 85-115       |
| Strontium, Total  | 200.7             | 0.500  | 0.500        | 100   | 85-115       |
| Vanadium, Total   | 200.7             | 0.976  | 1.00         | 98    | 85-115       |
| Zinc, Total       | 200.7             | 0.986  | 1.00         | 99    | 85-115       |

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QA/QC Report

**Client:** Gainesville Regional Utilities  
**Project:** D18F068/D18F068  
**Sample Matrix:** Water

**Service Request:** J1805315  
**Date Analyzed:** 07/30/18

**Lab Control Sample Summary**  
**Inorganic Parameters**

**Units:**ug/L  
**Basis:**NA

**Lab Control Sample**  
J1805315-LCS2

| <b>Analyte Name</b> | <b>Analytical Method</b> | <b>Result</b> | <b>Spike Amount</b> | <b>% Rec</b> | <b>% Rec Limits</b> |
|---------------------|--------------------------|---------------|---------------------|--------------|---------------------|
| Antimony, Total     | 200.8                    | 51.9          | 50.0                | 104          | 85-115              |
| Arsenic, Total      | 200.8                    | 54.0          | 50.0                | 108          | 85-115              |
| Cobalt, Total       | 200.8                    | 53.3          | 50.0                | 107          | 85-115              |
| Lead, Total         | 200.8                    | 26.1          | 25.0                | 104          | 85-115              |
| Thallium, Total     | 200.8                    | 10.5          | 10.0                | 105          | 85-115              |

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QA/QC Report

**Client:** Gainesville Regional Utilities  
**Project:** D18F068/D18F068  
**Sample Matrix:** Water

**Service Request:** J1805315  
**Date Collected:** 07/18/18  
**Date Received:** 07/24/18  
**Date Analyzed:** 07/27/18  
**Date Extracted:** 07/25/18

**Duplicate Matrix Spike Summary**  
**Inorganic Parameters**

**Sample Name:** D18F068-04  
**Lab Code:** J1805315-004  
**Analysis Method:** 200.7  
**Prep Method:** EPA 3005A

**Units:** mg/L  
**Basis:** NA

| Analyte Name      | Matrix Spike<br>J1805315-004MS |        |                 |       | Duplicate Matrix Spike<br>J1805315-004DMS |                 |       |                 | RPD | RPD<br>Limit |
|-------------------|--------------------------------|--------|-----------------|-------|---|-----------------|-------|-----------------|-----|--------------|
|                   | Sample<br>Result               | Result | Spike<br>Amount | % Rec | Result                                    | Spike<br>Amount | % Rec | % Rec<br>Limits |     |              |
| Aluminum, Total   | 0.21                           | 5.45   | 5.00            | 105   | 5.75                                      | 5.00            | 111   | 70-130          | 5   | 20           |
| Barium, Total     | 0.013                          | 0.519  | 0.500           | 101   | 0.528                                     | 0.500           | 103   | 70-130          | 2   | 20           |
| Beryllium, Total  | 0.00006 U                      | 0.206  | 0.200           | 103   | 0.209                                     | 0.200           | 105   | 70-130          | 1   | 20           |
| Boron, Total      | 0.028 IV                       | 2.69   | 2.50            | 107   | 2.67                                      | 2.50            | 106   | 70-130          | <1  | 20           |
| Cadmium, Total    | 0.0002 U                       | 0.257  | 0.250           | 103   | 0.256                                     | 0.250           | 102   | 70-130          | <1  | 20           |
| Calcium, Total    | 81.9                           | 87.7   | 5.00            | 115 # | 88.5                                      | 5.00            | 131 # | 70-130          | <1  | 20           |
| Chromium, Total   | 0.008 I                        | 0.509  | 0.500           | 100   | 0.519                                     | 0.500           | 102   | 70-130          | 2   | 20           |
| Copper, Total     | 0.0010 U                       | 0.510  | 0.500           | 102   | 0.523                                     | 0.500           | 105   | 70-130          | 3   | 20           |
| Iron, Total       | 28.9                           | 34.4   | 5.00            | 111 # | 36.7                                      | 5.00            | 156 # | 70-130          | 6   | 20           |
| Magnesium, Total  | 27.9                           | 33.4   | 5.00            | 109 # | 35.5                                      | 5.00            | 151 # | 70-130          | 6   | 20           |
| Manganese, Total  | 0.136                          | 0.644  | 0.500           | 102   | 0.656                                     | 0.500           | 104   | 70-130          | 2   | 20           |
| Molybdenum, Total | 0.008 I                        | 0.534  | 0.500           | 105   | 0.521                                     | 0.500           | 103   | 70-130          | 2   | 20           |
| Nickel, Total     | 0.002 I                        | 0.534  | 0.500           | 106   | 0.526                                     | 0.500           | 105   | 70-130          | 2   | 20           |
| Potassium, Total  | 0.6 I                          | 104    | 100             | 103   | 103                                       | 100             | 103   | 70-130          | <1  | 20           |
| Selenium, Total   | 0.014 V                        | 0.544  | 0.500           | 106   | 0.543                                     | 0.500           | 106   | 70-130          | <1  | 20           |
| Silver, Total     | 0.0004 U                       | 0.522  | 0.500           | 104   | 0.536                                     | 0.500           | 107   | 70-130          | 3   | 20           |
| Sodium, Total     | 13.7                           | 39.8   | 25.0            | 105   | 39.8                                      | 25.0            | 104   | 70-130          | <1  | 20           |
| Strontium, Total  | 0.077                          | 0.591  | 0.500           | 103   | 0.589                                     | 0.500           | 102   | 70-130          | <1  | 20           |
| Vanadium, Total   | 0.0008 U                       | 1.01   | 1.00            | 101   | 1.03                                      | 1.00            | 103   | 70-130          | 2   | 20           |
| Zinc, Total       | 0.006 U                        | 1.00   | 1.00            | 100   | 0.996                                     | 1.00            | 100   | 70-130          | <1  | 20           |
| Lithium, Total    | 0.002 U                        | 5.19   | 5.00            | 104   | 5.18                                      | 5.00            | 104   | 70-130          | <1  | 20           |

Results flagged with an asterisk (\*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.  
dba ALS Environmental

QA/QC Report

**Client:** Gainesville Regional Utilities  
**Project:** D18F068/D18F068  
**Sample Matrix:** Water

**Service Request:** J1805315  
**Date Collected:** 07/16/18  
**Date Received:** 07/24/18  
**Date Analyzed:** 07/27/18  
**Date Extracted:** 07/26/18

**Duplicate Matrix Spike Summary  
Inorganic Parameters**

**Sample Name:** D18F068-05  
**Lab Code:** J1805315-005  
**Analysis Method:** 200.8  
**Prep Method:** EPA 3005A

**Units:** ug/L  
**Basis:** NA

| Analyte Name | Sample Result | Result | Matrix Spike<br>J1805315-005MS |       | Duplicate Matrix Spike<br>J1805315-005DMS |              | % Rec Limits | RPD    | RPD Limit |       |
|--------------|---------------|--------|--------------------------------|-------|---|--------------|--------------|--------|-----------|-------|
|              |               |        | Spike Amount                   | % Rec | Result                                    | Spike Amount |              |        |           | % Rec |
| Arsenic      | 0.1 I         | 49.4   | 50.0                           | 99    | 51.5                                      | 50.0         | 103          | 70-130 | 4         | 20    |
| Cobalt       | 0.4 I         | 51.6   | 50.0                           | 103   | 53.0                                      | 50.0         | 105          | 70-130 | 3         | 20    |
| Lead         | 0.03 U        | 25.6   | 25.0                           | 102   | 25.9                                      | 25.0         | 104          | 70-130 | 1         | 20    |

Results flagged with an asterisk (\*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.  
dba ALS Environmental

QA/QC Report

**Client:** Gainesville Regional Utilities  
**Project:** D18F068/D18F068

**Service Request:** J1805315

**Detection Limits**

**Instrument:** J-ICP-AES-01

**Matrix:** Water

| <b>Analyte</b> | <b>Wavelength<br/>(nm)</b> | <b>Units</b> | <b>MRL</b> | <b>MDL</b> | <b>Method</b> |
|----------------|----------------------------|--------------|------------|------------|---------------|
| Aluminum,      |                            | mg/L         | 0.10       | 0.010      | 200.7         |
| Barium,        |                            | mg/L         | 0.010      | 0.001      | 200.7         |
| Beryllium,     |                            | mg/L         | 0.0040     | 0.00006    | 200.7         |
| Boron,         |                            | mg/L         | 0.050      | 0.025      | 200.7         |
| Cadmium,       |                            | mg/L         | 0.0050     | 0.0002     | 200.7         |
| Calcium,       |                            | mg/L         | 0.10       | 0.04       | 200.7         |
| Chromium,      |                            | mg/L         | 0.010      | 0.0004     | 200.7         |
| Copper,        |                            | mg/L         | 0.010      | 0.0010     | 200.7         |
| Iron,          |                            | mg/L         | 0.10       | 0.010      | 200.7         |
| Lithium,       |                            | mg/L         | 0.10       | 0.002      | 200.7         |
| Magnesium,     |                            | mg/L         | 0.10       | 0.009      | 200.7         |
| Manganese,     |                            | mg/L         | 0.010      | 0.0007     | 200.7         |
| Molybdenum,    |                            | mg/L         | 0.010      | 0.0003     | 200.7         |
| Nickel,        |                            | mg/L         | 0.010      | 0.0007     | 200.7         |
| Potassium,     |                            | mg/L         | 2.0        | 0.05       | 200.7         |
| Selenium,      |                            | mg/L         | 0.010      | 0.002      | 200.7         |
| Silver,        |                            | mg/L         | 0.010      | 0.0004     | 200.7         |
| Sodium,        |                            | mg/L         | 0.50       | 0.02       | 200.7         |
| Strontium,     |                            | mg/L         | 0.010      | 0.0001     | 200.7         |
| Vanadium,      |                            | mg/L         | 0.020      | 0.0008     | 200.7         |
| Zinc,          |                            | mg/L         | 0.020      | 0.006      | 200.7         |



ALS Group USA, Corp.  
dba ALS Environmental

QA/QC Report

**Client:** Gainesville Regional Utilities  
**Project:** D18F068/D18F068

**Service Request:** J1805315

**Detection Limits**

**Instrument:** J-ICP-MS-02

**Matrix:** Water

| Analyte   | Wavelength<br>(nm) | Units | MRL  | MDL  | Method |
|-----------|--------------------|-------|------|------|--------|
| Antimony, |                    | ug/L  | 1.0  | 0.04 | 200.8  |
| Arsenic   |                    | ug/L  | 1.0  | 0.10 | 200.8  |
| Cobalt    |                    | ug/L  | 1.0  | 0.03 | 200.8  |
| Lead      |                    | ug/L  | 0.50 | 0.03 | 200.8  |
| Thallium, |                    | ug/L  | 0.20 | 0.02 | 200.8  |



3Q18 Results (Cl, F1, SO4)  
R4T5, R6T4, R6T8, R10T8,  
R11T4 and EBlank

Pace Analytical Services, LLC  
8 East Tower Circle  
Ormond Beach, FL 32174  
(386)672-5668

August 06, 2018

Mr. Jeffery Boudreau  
Deerhaven Lab  
P.O. Box 147117, Station D38  
Gainesville, FL 32614

RE: Project: D18F068  
Pace Project No.: 35406247

Dear Mr. Boudreau:

Enclosed are the analytical results for sample(s) received by the laboratory on July 24, 2018. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,

Jeff Baylor  
jeff.baylor@pacelabs.com  
(386)672-5668  
Project Manager

Enclosures

cc: Kent Brakefield  
Shelley Phillips, Deerhaven Lab



**REPORT OF LABORATORY ANALYSIS**

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## CERTIFICATIONS

Project: D18F068  
Pace Project No.: 35406247

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### Pennsylvania Certification IDs

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601  
ANAB DOD-ELAP Rad Accreditation #: L2417  
Alabama Certification #: 41590  
Arizona Certification #: AZ0734  
Arkansas Certification  
California Certification #: 04222CA  
Colorado Certification #: PA01547  
Connecticut Certification #: PH-0694  
Delaware Certification  
EPA Region 4 DW Rad  
Florida/TNI Certification #: E87683  
Georgia Certification #: C040  
Guam Certification  
Hawaii Certification  
Idaho Certification  
Illinois Certification  
Indiana Certification  
Iowa Certification #: 391  
Kansas/TNI Certification #: E-10358  
Kentucky Certification #: KY90133  
KY WW Permit #: KY0098221  
KY WW Permit #: KY0000221  
Louisiana DHH/TNI Certification #: LA180012  
Louisiana DEQ/TNI Certification #: 4086  
Maine Certification #: 2017020  
Maryland Certification #: 308  
Massachusetts Certification #: M-PA1457  
Michigan/PADEP Certification #: 9991

Missouri Certification #: 235  
Montana Certification #: Cert0082  
Nebraska Certification #: NE-OS-29-14  
Nevada Certification #: PA014572018-1  
New Hampshire/TNI Certification #: 297617  
New Jersey/TNI Certification #: PA051  
New Mexico Certification #: PA01457  
New York/TNI Certification #: 10888  
North Carolina Certification #: 42706  
North Dakota Certification #: R-190  
Ohio EPA Rad Approval: #41249  
Oregon/TNI Certification #: PA200002-010  
Pennsylvania/TNI Certification #: 65-00282  
Puerto Rico Certification #: PA01457  
Rhode Island Certification #: 65-00282  
South Dakota Certification  
Tennessee Certification #: 02867  
Texas/TNI Certification #: T104704188-17-3  
Utah/TNI Certification #: PA014572017-9  
USDA Soil Permit #: P330-17-00091  
Vermont Dept. of Health: ID# VT-0282  
Virgin Island/PADEP Certification  
Virginia/VELAP Certification #: 9526  
Washington Certification #: C868  
West Virginia DEP Certification #: 143  
West Virginia DHHR Certification #: 9964C  
Wisconsin Approve List for Rad  
Wyoming Certification #: 8TMS-L

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### Ormond Beach Certification IDs

8 East Tower Circle, Ormond Beach, FL 32174  
Alabama Certification #: 41320  
Connecticut Certification #: PH-0216  
Florida Certification #: E83079  
Georgia Certification #: 955  
Guam Certification: FL NELAC Reciprocity  
Hawaii Certification: FL NELAC Reciprocity  
Illinois Certification #: 200068  
Indiana Certification: FL NELAC Reciprocity  
Kansas Certification #: E-10383  
Kentucky Certification #: 90050  
Louisiana Certification #: FL NELAC Reciprocity  
Louisiana Environmental Certificate #: 05007  
Maryland Certification: #346  
Michigan Certification #: 9911  
Mississippi Certification: FL NELAC Reciprocity  
Missouri Certification #: 236  
Montana Certification #: Cert 0074  
Nebraska Certification: NE-OS-28-14

Nevada Certification: FL NELAC Reciprocity  
New Hampshire Certification #: 2958  
New Jersey Certification #: FL022  
New York Certification #: 11608  
North Carolina Environmental Certificate #: 667  
North Carolina Certification #: 12710  
North Dakota Certification #: R-216  
Oklahoma Certification #: D9947  
Pennsylvania Certification #: 68-00547  
Puerto Rico Certification #: FL01264  
South Carolina Certification: #96042001  
Tennessee Certification #: TN02974  
Texas Certification: FL NELAC Reciprocity  
US Virgin Islands Certification: FL NELAC Reciprocity  
Virginia Environmental Certification #: 460165  
Wyoming Certification: FL NELAC Reciprocity  
West Virginia Certification #: 9962C  
Wisconsin Certification #: 399079670  
Wyoming (EPA Region 8): FL NELAC Reciprocity

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## REPORT OF LABORATORY ANALYSIS

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**SAMPLE SUMMARY**

Project: D18F068  
Pace Project No.: 35406247

| Lab ID      | Sample ID          | Matrix | Date Collected | Date Received  |
|-------------|--------------------|--------|----------------|----------------|
| 35406247001 | D18F068-01         | Water  | 07/16/18 17:10 | 07/24/18 11:35 |
| 35406247002 | D18F068-02         | Water  | 07/16/18 13:40 | 07/24/18 11:35 |
| 35406247003 | D18F068-03         | Water  | 07/17/18 07:56 | 07/24/18 11:35 |
| 35406247004 | D18F068-04 R4T5    | Water  | 07/18/18 07:24 | 07/24/18 11:35 |
| 35406247005 | D18F068-05         | Water  | 07/16/18 10:19 | 07/24/18 11:35 |
| 35406247006 | D18F068-06 R6T4    | Water  | 07/17/18 15:45 | 07/24/18 11:35 |
| 35406247007 | D18F068-07 R6T8    | Water  | 07/19/18 11:17 | 07/24/18 11:35 |
| 35406247008 | D18F068-08         | Water  | 07/17/18 09:18 | 07/24/18 11:35 |
| 35406247009 | D18F068-09         | Water  | 07/17/18 11:46 | 07/24/18 11:35 |
| 35406247010 | D18F068-10         | Water  | 07/17/18 13:22 | 07/24/18 11:35 |
| 35406247011 | D18F068-11 R10T8   | Water  | 07/19/18 15:10 | 07/24/18 11:35 |
| 35406247012 | D18F068-12 R11T4   | Water  | 07/19/18 13:49 | 07/24/18 11:35 |
| 35406247013 | D18F068-13         | Water  | 07/17/18 08:30 | 07/24/18 11:35 |
| 35406247014 | D18F068-14 E blank | Water  | 07/18/18 08:25 | 07/24/18 11:35 |

**REPORT OF LABORATORY ANALYSIS**

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**SAMPLE ANALYTE COUNT**

Project: D18F068  
 Pace Project No.: 35406247

| Lab ID      | Sample ID  | Method    | Analysts | Analytes Reported | Laboratory |
|-------------|------------|-----------|----------|-------------------|------------|
| 35406247001 | D18F068-01 | EPA 900.0 | NEG      | 1                 | PASI-PA    |
|             |            | EPA 300.0 | CMD      | 2                 | PASI-O     |
|             |            | EPA 353.2 | AMP      | 1                 | PASI-O     |
|             |            | SM 5310B  | FGF      | 1                 | PASI-O     |
| 35406247002 | D18F068-02 | EPA 900.0 | NEG      | 1                 | PASI-PA    |
|             |            | EPA 300.0 | CMD      | 2                 | PASI-O     |
|             |            | EPA 353.2 | AMP      | 1                 | PASI-O     |
|             |            | SM 5310B  | FGF      | 1                 | PASI-O     |
| 35406247003 | D18F068-03 | EPA 900.0 | NEG      | 1                 | PASI-PA    |
|             |            | EPA 300.0 | CMD      | 2                 | PASI-O     |
|             |            | EPA 353.2 | AMP      | 1                 | PASI-O     |
|             |            | SM 5310B  | FGF      | 1                 | PASI-O     |
| 35406247004 | D18F068-04 | EPA 900.0 | NEG      | 1                 | PASI-PA    |
|             |            | EPA 300.0 | CMD      | 3                 | PASI-O     |
|             |            | EPA 353.2 | AMP      | 1                 | PASI-O     |
|             |            | SM 5310B  | FGF      | 1                 | PASI-O     |
| 35406247005 | D18F068-05 | EPA 900.0 | NEG      | 1                 | PASI-PA    |
|             |            | EPA 300.0 | CMD      | 2                 | PASI-O     |
|             |            | EPA 353.2 | AMP      | 1                 | PASI-O     |
|             |            | SM 5310B  | FGF      | 1                 | PASI-O     |
| 35406247006 | D18F068-06 | EPA 900.0 | NEG      | 1                 | PASI-PA    |
|             |            | EPA 300.0 | CMD      | 3                 | PASI-O     |
|             |            | EPA 353.2 | AMP      | 1                 | PASI-O     |
|             |            | SM 5310B  | FGF      | 1                 | PASI-O     |
| 35406247007 | D18F068-07 | EPA 900.0 | NEG      | 1                 | PASI-PA    |
|             |            | EPA 300.0 | CMD      | 3                 | PASI-O     |
|             |            | EPA 353.2 | AMP      | 1                 | PASI-O     |
|             |            | SM 5310B  | FGF      | 1                 | PASI-O     |
| 35406247008 | D18F068-08 | EPA 900.0 | NEG      | 1                 | PASI-PA    |
|             |            | EPA 300.0 | CMD      | 2                 | PASI-O     |
|             |            | EPA 353.2 | AMP      | 1                 | PASI-O     |
|             |            | SM 5310B  | FGF      | 1                 | PASI-O     |
| 35406247009 | D18F068-09 | EPA 900.0 | NEG      | 1                 | PASI-PA    |
|             |            | EPA 300.0 | CMD      | 2                 | PASI-O     |
|             |            | EPA 353.2 | AMP      | 1                 | PASI-O     |
|             |            | SM 5310B  | FGF      | 1                 | PASI-O     |
| 35406247010 | D18F068-10 | EPA 900.0 | NEG      | 1                 | PASI-PA    |

**REPORT OF LABORATORY ANALYSIS**

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**SAMPLE ANALYTE COUNT**

Project: D18F068  
 Pace Project No.: 35406247

| Lab ID      | Sample ID  | Method    | Analysts | Analytes Reported | Laboratory |
|-------------|------------|-----------|----------|-------------------|------------|
| 35406247011 | D18F068-11 | EPA 300.0 | CMD      | 2                 | PASI-O     |
|             |            | EPA 353.2 | AMP      | 1                 | PASI-O     |
|             |            | SM 5310B  | FGF      | 1                 | PASI-O     |
|             |            | EPA 900.0 | NEG      | 1                 | PASI-PA    |
|             |            | EPA 300.0 | CMD      | 3                 | PASI-O     |
| 35406247012 | D18F068-12 | EPA 353.2 | AMP      | 1                 | PASI-O     |
|             |            | SM 5310B  | FGF      | 1                 | PASI-O     |
|             |            | EPA 900.0 | NEG      | 1                 | PASI-PA    |
|             |            | EPA 300.0 | CMD      | 3                 | PASI-O     |
|             |            | EPA 353.2 | AMP      | 1                 | PASI-O     |
| 35406247013 | D18F068-13 | SM 5310B  | FGF      | 1                 | PASI-O     |
|             |            | EPA 900.0 | NEG      | 1                 | PASI-PA    |
|             |            | EPA 300.0 | CMD      | 2                 | PASI-O     |
|             |            | EPA 353.2 | AMP      | 1                 | PASI-O     |
|             |            | SM 5310B  | FGF      | 1                 | PASI-O     |
| 35406247014 | D18F068-14 | EPA 900.0 | NEG      | 1                 | PASI-PA    |
|             |            | EPA 300.0 | CMD      | 3                 | PASI-O     |
|             |            | EPA 353.2 | AMP      | 1                 | PASI-O     |
|             |            | SM 5310B  | FGF      | 1                 | PASI-O     |

**REPORT OF LABORATORY ANALYSIS**

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**ANALYTICAL RESULTS**

Project: D18F068  
 Pace Project No.: 35406247

*R475*

**Sample: D18F068-04**      **Lab ID: 35406247004**      Collected: 07/18/18 07:24      Received: 07/24/18 11:35      Matrix: Water

| Parameters                           | Results                      | Units | PQL   | MDL   | DF | Prepared | Analyzed       | CAS No.    | Qual |
|--------------------------------------|------------------------------|-------|-------|-------|----|----------|----------------|------------|------|
| <b>300.0 IC Anions 28 Days</b>       | Analytical Method: EPA 300.0 |       |       |       |    |          |                |            |      |
| Chloride                             | <b>4.2 I</b>                 | mg/L  | 5.0   | 2.5   | 1  |          | 08/04/18 02:47 | 16887-00-6 |      |
| Fluoride                             | <b>0.27</b>                  | mg/L  | 0.050 | 0.034 | 1  |          | 08/04/18 02:47 | 16984-48-8 |      |
| Sulfate                              | <b>2.5 U</b>                 | mg/L  | 5.0   | 2.5   | 1  |          | 08/04/18 02:47 | 14808-79-8 |      |
| <b>353.2 Nitrogen, NO2/NO3 pres.</b> | Analytical Method: EPA 353.2 |       |       |       |    |          |                |            |      |
| Nitrogen, NO2 plus NO3               | <b>0.13</b>                  | mg/L  | 0.050 | 0.025 | 1  |          | 07/25/18 14:49 |            |      |
| <b>5310B TOC</b>                     | Analytical Method: SM 5310B  |       |       |       |    |          |                |            |      |
| Total Organic Carbon                 | <b>52.0</b>                  | mg/L  | 1.0   | 0.50  | 1  |          | 07/28/18 08:28 | 7440-44-0  |      |

**REPORT OF LABORATORY ANALYSIS**

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### ANALYTICAL RESULTS

Project: D18F068  
Pace Project No.: 35406247

*RLeT4*

**Sample: D18F068-06**      **Lab ID: 35406247006**      Collected: 07/17/18 15:45      Received: 07/24/18 11:35      Matrix: Water

| Parameters                           | Results      | Units | PQL   | MDL   | DF | Prepared | Analyzed       | CAS No.    | Qual |
|--------------------------------------|--------------|-------|-------|-------|----|----------|----------------|------------|------|
| <b>300.0 IC Anions 28 Days</b>       |              |       |       |       |    |          |                |            |      |
| Analytical Method: EPA 300.0         |              |       |       |       |    |          |                |            |      |
| Chloride                             | <b>3.4 I</b> | mg/L  | 5.0   | 2.5   | 1  |          | 08/04/18 03:10 | 16887-00-6 |      |
| Fluoride                             | <b>0.081</b> | mg/L  | 0.050 | 0.034 | 1  |          | 08/04/18 03:10 | 16984-48-8 |      |
| Sulfate                              | <b>5.7</b>   | mg/L  | 5.0   | 2.5   | 1  |          | 08/04/18 03:10 | 14808-79-8 |      |
| <b>353.2 Nitrogen, NO2/NO3 pres.</b> |              |       |       |       |    |          |                |            |      |
| Analytical Method: EPA 353.2         |              |       |       |       |    |          |                |            |      |
| Nitrogen, NO2 plus NO3               | <b>0.16</b>  | mg/L  | 0.050 | 0.025 | 1  |          | 07/25/18 14:52 |            |      |
| <b>5310B TOC</b>                     |              |       |       |       |    |          |                |            |      |
| Analytical Method: SM 5310B          |              |       |       |       |    |          |                |            |      |
| Total Organic Carbon                 | <b>12.8</b>  | mg/L  | 1.0   | 0.50  | 1  |          | 07/28/18 09:00 | 7440-44-0  |      |

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**ANALYTICAL RESULTS**

Project: D18F068  
 Pace Project No.: 35406247

*R6T8*

**Sample: D18F068-07**      **Lab ID: 35406247007**      Collected: 07/19/18 11:17      Received: 07/24/18 11:35      Matrix: Water

| Parameters                           | Results | Units                        | PQL   | MDL   | DF | Prepared | Analyzed       | CAS No.    | Qual |
|--------------------------------------|---------|------------------------------|-------|-------|----|----------|----------------|------------|------|
| <b>300.0 IC Anions 28 Days</b>       |         | Analytical Method: EPA 300.0 |       |       |    |          |                |            |      |
| Chloride                             | 7.7     | mg/L                         | 5.0   | 2.5   | 1  |          | 08/04/18 03:32 | 16887-00-6 |      |
| Fluoride                             | 0.38    | mg/L                         | 0.050 | 0.034 | 1  |          | 08/04/18 03:32 | 16984-48-8 |      |
| Sulfate                              | 2.6 I   | mg/L                         | 5.0   | 2.5   | 1  |          | 08/04/18 03:32 | 14808-79-8 |      |
| <b>353.2 Nitrogen, NO2/NO3 pres.</b> |         | Analytical Method: EPA 353.2 |       |       |    |          |                |            |      |
| Nitrogen, NO2 plus NO3               | 0.025 U | mg/L                         | 0.050 | 0.025 | 1  |          | 07/25/18 14:53 |            |      |
| <b>5310B TOC</b>                     |         | Analytical Method: SM 5310B  |       |       |    |          |                |            |      |
| Total Organic Carbon                 | 22.2    | mg/L                         | 1.0   | 0.50  | 1  |          | 07/28/18 09:53 | 7440-44-0  |      |

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**ANALYTICAL RESULTS**

Project: D18F068  
 Pace Project No.: 35406247

R10T8

Sample: D18F068-11 Lab ID: 35406247011 Collected: 07/19/18 15:10 Received: 07/24/18 11:35 Matrix: Water

| Parameters                           | Results                      | Units | PQL   | MDL   | DF | Prepared | Analyzed       | CAS No.    | Qual |
|--------------------------------------|------------------------------|-------|-------|-------|----|----------|----------------|------------|------|
| <b>300.0 IC Anions 28 Days</b>       | Analytical Method: EPA 300.0 |       |       |       |    |          |                |            |      |
| Chloride                             | 5.0 I                        | mg/L  | 5.0   | 2.5   | 1  |          | 08/04/18 04:16 | 16887-00-6 |      |
| Fluoride                             | 0.078                        | mg/L  | 0.050 | 0.034 | 1  |          | 08/04/18 04:16 | 16984-48-8 |      |
| Sulfate                              | 17.5                         | mg/L  | 5.0   | 2.5   | 1  |          | 08/04/18 04:16 | 14808-79-8 |      |
| <b>353.2 Nitrogen, NO2/NO3 pres.</b> | Analytical Method: EPA 353.2 |       |       |       |    |          |                |            |      |
| Nitrogen, NO2 plus NO3               | 0.025 U                      | mg/L  | 0.050 | 0.025 | 1  |          | 07/25/18 15:01 |            |      |
| <b>5310B TOC</b>                     | Analytical Method: SM 5310B  |       |       |       |    |          |                |            |      |
| Total Organic Carbon                 | 2.1                          | mg/L  | 1.0   | 0.50  | 1  |          | 07/28/18 10:55 | 7440-44-0  |      |

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**ANALYTICAL RESULTS**

R1174

Project: D18F068  
 Pace Project No.: 35406247

Sample: D18F068-12 Lab ID: 35406247012 Collected: 07/19/18 13:49 Received: 07/24/18 11:35 Matrix: Water

| Parameters                           | Results | Units                        | PQL   | MDL   | DF | Prepared | Analyzed       | CAS No.    | Qual |
|--------------------------------------|---------|------------------------------|-------|-------|----|----------|----------------|------------|------|
| <b>300.0 IC Anions 28 Days</b>       |         | Analytical Method: EPA 300.0 |       |       |    |          |                |            |      |
| Chloride                             | 26.2    | mg/L                         | 5.0   | 2.5   | 1  |          | 08/04/18 04:38 | 16887-00-6 |      |
| Fluoride                             | 0.13    | mg/L                         | 0.050 | 0.034 | 1  |          | 08/04/18 04:38 | 16984-48-8 |      |
| Sulfate                              | 34.6    | mg/L                         | 5.0   | 2.5   | 1  |          | 08/04/18 04:38 | 14808-79-8 |      |
| <b>353.2 Nitrogen, NO2/NO3 pres.</b> |         | Analytical Method: EPA 353.2 |       |       |    |          |                |            |      |
| Nitrogen, NO2 plus NO3               | 0.025 U | mg/L                         | 0.050 | 0.025 | 1  |          | 07/25/18 15:02 |            |      |
| <b>5310B TOC</b>                     |         | Analytical Method: SM 5310B  |       |       |    |          |                |            |      |
| Total Organic Carbon                 | 11.1    | mg/L                         | 1.0   | 0.50  | 1  |          | 07/28/18 11:10 | 7440-44-0  |      |

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**ANALYTICAL RESULTS**

*Eblank*

Project: D18F068  
 Pace Project No.: 35406247

Sample: D18F068-14 Lab ID: 35406247014 Collected: 07/18/18 08:25 Received: 07/24/18 11:35 Matrix: Water

| Parameters                           | Results                      | Units | PQL   | MDL   | DF | Prepared | Analyzed       | CAS No.    | Qual |
|--------------------------------------|------------------------------|-------|-------|-------|----|----------|----------------|------------|------|
| <b>300.0 IC Anions 28 Days</b>       | Analytical Method: EPA 300.0 |       |       |       |    |          |                |            |      |
| Chloride                             | 2.5 U                        | mg/L  | 5.0   | 2.5   | 1  |          | 08/04/18 05:23 | 16887-00-6 |      |
| Fluoride                             | 0.034 U                      | mg/L  | 0.050 | 0.034 | 1  |          | 08/04/18 05:23 | 16984-48-8 |      |
| Sulfate                              | 2.5 U                        | mg/L  | 5.0   | 2.5   | 1  |          | 08/04/18 05:23 | 14808-79-8 |      |
| <b>353.2 Nitrogen, NO2/NO3 pres.</b> | Analytical Method: EPA 353.2 |       |       |       |    |          |                |            |      |
| Nitrogen, NO2 plus NO3               | 0.025 U                      | mg/L  | 0.050 | 0.025 | 1  |          | 07/26/18 12:38 |            |      |
| <b>5310B TOC</b>                     | Analytical Method: SM 5310B  |       |       |       |    |          |                |            |      |
| Total Organic Carbon                 | 0.50 U                       | mg/L  | 1.0   | 0.50  | 1  |          | 07/28/18 12:06 | 7440-44-0  |      |

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**QUALITY CONTROL DATA**

Project: D18F068  
Pace Project No.: 35406247

QC Batch: 465536 Analysis Method: EPA 300.0  
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions  
Associated Lab Samples: 35406247001, 35406247002, 35406247003, 35406247005, 35406247008, 35406247010

METHOD BLANK: 2517843 Matrix: Water  
Associated Lab Samples: 35406247001, 35406247002, 35406247003, 35406247005, 35406247008, 35406247010

| Parameter | Units | Blank Result | Reporting Limit | MDL | Analyzed       | Qualifiers |
|-----------|-------|--------------|-----------------|-----|----------------|------------|
| Chloride  | mg/L  | 2.5 U        | 5.0             | 2.5 | 07/31/18 22:14 |            |
| Sulfate   | mg/L  | 2.5 U        | 5.0             | 2.5 | 07/31/18 22:14 |            |

LABORATORY CONTROL SAMPLE: 2517844

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Chloride  | mg/L  | 50          | 50.3       | 101       | 90-110       |            |
| Sulfate   | mg/L  | 50          | 49.7       | 99        | 90-110       |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2517992 2517993

| Parameter | Units | 35406247002 |                | 35406247003     |           | 2517992    |          | 2517993   |        | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|-------------|----------------|-----------------|-----------|------------|----------|-----------|--------|--------------|-----|---------|------|
|           |       | MS Result   | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec |        |              |     |         |      |
| Chloride  | mg/L  | 7.0         | 50             | 50              | 55.7      | 55.7       | 97       | 97        | 90-110 | 0            | 20  |         |      |
| Sulfate   | mg/L  | 2.5 U       | 50             | 50              | 49.9      | 50.2       | 95       | 96        | 90-110 | 1            | 20  |         |      |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2517994 2517995

| Parameter | Units | 35407413003 |                | 35407413004     |           | 2517994    |          | 2517995   |        | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|-------------|----------------|-----------------|-----------|------------|----------|-----------|--------|--------------|-----|---------|------|
|           |       | MS Result   | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec |        |              |     |         |      |
| Chloride  | mg/L  | 54.9        | 50             | 50              | 105       | 105        | 99       | 99        | 90-110 | 0            | 20  |         |      |
| Sulfate   | mg/L  | 14.9        | 50             | 50              | 65.0      | 65.6       | 100      | 101       | 90-110 | 1            | 20  |         |      |

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**QUALITY CONTROL DATA**

Project: D18F068  
 Pace Project No.: 35406247

QC Batch: 466568 Analysis Method: EPA 300.0  
 QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions  
 Associated Lab Samples: 35406247004, 35406247006, 35406247007, 35406247009, 35406247011, 35406247012, 35406247013, 35406247014

METHOD BLANK: 2523145 Matrix: Water  
 Associated Lab Samples: 35406247004, 35406247006, 35406247007, 35406247009, 35406247011, 35406247012, 35406247013, 35406247014

| Parameter | Units | Blank Result | Reporting Limit | MDL   | Analyzed       | Qualifiers |
|-----------|-------|--------------|-----------------|-------|----------------|------------|
| Chloride  | mg/L  | 2.5 U        | 5.0             | 2.5   | 08/04/18 00:34 |            |
| Fluoride  | mg/L  | 0.034 U      | 0.050           | 0.034 | 08/04/18 00:34 |            |
| Sulfate   | mg/L  | 2.5 U        | 5.0             | 2.5   | 08/04/18 00:34 |            |

LABORATORY CONTROL SAMPLE: 2523146

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Chloride  | mg/L  | 50          | 48.2       | 96        | 90-110       |            |
| Fluoride  | mg/L  | 5           | 5.0        | 101       | 90-110       |            |
| Sulfate   | mg/L  | 50          | 48.0       | 96        | 90-110       |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2524002 2524003

| Parameter | Units | 35407219001 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | Max RPD | RPD | Qual |
|-----------|-------|--------------------|----------------|-----------------|-----------|------------|----------|-----------|--------------|---------|-----|------|
| Chloride  | mg/L  | 5.3                | 50             | 50              | 53.2      | 53.0       | 96       | 95        | 90-110       | 1       | 20  |      |
| Fluoride  | mg/L  | 0.20               | 5              | 5               | 5.3       | 5.2        | 101      | 101       | 90-110       | 0       | 20  |      |
| Sulfate   | mg/L  | 30.3               | 50             | 50              | 83.6      | 83.5       | 107      | 106       | 90-110       | 0       | 20  |      |

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**QUALITY CONTROL DATA**

Project: D18F068  
Pace Project No.: 35406247

QC Batch: 464088 Analysis Method: EPA 353.2  
QC Batch Method: EPA 353.2 Analysis Description: 353.2 Nitrate + Nitrite, preserved  
Associated Lab Samples: 35406247001, 35406247002, 35406247003, 35406247004, 35406247005, 35406247006, 35406247007, 35406247008, 35406247009, 35406247010, 35406247011, 35406247012

METHOD BLANK: 2509997 Matrix: Water  
Associated Lab Samples: 35406247001, 35406247002, 35406247003, 35406247004, 35406247005, 35406247006, 35406247007, 35406247008, 35406247009, 35406247010, 35406247011, 35406247012

| Parameter              | Units | Blank Result | Reporting Limit | MDL   | Analyzed       | Qualifiers |
|------------------------|-------|--------------|-----------------|-------|----------------|------------|
| Nitrogen, NO2 plus NO3 | mg/L  | 0.025 U      | 0.050           | 0.025 | 07/25/18 14:29 |            |

LABORATORY CONTROL SAMPLE: 2509998

| Parameter              | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|------------------------|-------|-------------|------------|-----------|--------------|------------|
| Nitrogen, NO2 plus NO3 | mg/L  | 2           | 2.1        | 107       | 90-110       |            |

MATRIX SPIKE SAMPLE: 2510000

| Parameter              | Units | 35406154004 Result | Spike Conc. | MS Result | MS % Rec | % Rec Limits | Qualifiers |
|------------------------|-------|--------------------|-------------|-----------|----------|--------------|------------|
| Nitrogen, NO2 plus NO3 | mg/L  | 1.2                | 2           | 3.1       | 97       | 90-110       |            |

MATRIX SPIKE SAMPLE: 2510002

| Parameter              | Units | 35406247003 Result | Spike Conc. | MS Result | MS % Rec | % Rec Limits | Qualifiers |
|------------------------|-------|--------------------|-------------|-----------|----------|--------------|------------|
| Nitrogen, NO2 plus NO3 | mg/L  | 0.91               | 2           | 2.8       | 93       | 90-110       |            |

SAMPLE DUPLICATE: 2509999

| Parameter              | Units | 35406154004 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|--------------------|------------|-----|---------|------------|
| Nitrogen, NO2 plus NO3 | mg/L  | 1.2                | 1.2        | 0   | 20      |            |

SAMPLE DUPLICATE: 2510001

| Parameter              | Units | 35406247003 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|--------------------|------------|-----|---------|------------|
| Nitrogen, NO2 plus NO3 | mg/L  | 0.91               | 0.93       | 2   | 20      |            |

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**QUALITY CONTROL DATA**

Project: D18F068  
Pace Project No.: 35406247

QC Batch: 464395 Analysis Method: EPA 353.2  
QC Batch Method: EPA 353.2 Analysis Description: 353.2 Nitrate + Nitrite, preserved  
Associated Lab Samples: 35406247013, 35406247014

METHOD BLANK: 2511843 Matrix: Water  
Associated Lab Samples: 35406247013, 35406247014

| Parameter              | Units | Blank Result | Reporting Limit | MDL   | Analyzed       | Qualifiers |
|------------------------|-------|--------------|-----------------|-------|----------------|------------|
| Nitrogen, NO2 plus NO3 | mg/L  | 0.025 U      | 0.050           | 0.025 | 07/26/18 12:19 |            |

LABORATORY CONTROL SAMPLE: 2511844

| Parameter              | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|------------------------|-------|-------------|------------|-----------|--------------|------------|
| Nitrogen, NO2 plus NO3 | mg/L  | 2           | 2.1        | 103       | 90-110       |            |

MATRIX SPIKE SAMPLE: 2511846

| Parameter              | Units | 2080800001 Result | Spike Conc. | MS Result | MS % Rec | % Rec Limits | Qualifiers |
|------------------------|-------|-------------------|-------------|-----------|----------|--------------|------------|
| Nitrogen, NO2 plus NO3 | mg/L  | 0.59              | 2           | 2.5       | 96       | 80-120       |            |

MATRIX SPIKE SAMPLE: 2511848

| Parameter              | Units | 35406256001 Result | Spike Conc. | MS Result | MS % Rec | % Rec Limits | Qualifiers |
|------------------------|-------|--------------------|-------------|-----------|----------|--------------|------------|
| Nitrogen, NO2 plus NO3 | mg/L  | 0.077              | 2           | 2.1       | 100      | 90-110       |            |

SAMPLE DUPLICATE: 2511845

| Parameter              | Units | 2080800001 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|-------------------|------------|-----|---------|------------|
| Nitrogen, NO2 plus NO3 | mg/L  | 0.59              | 0.59       | 0   | 20      |            |

SAMPLE DUPLICATE: 2511847

| Parameter              | Units | 35406256001 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|--------------------|------------|-----|---------|------------|
| Nitrogen, NO2 plus NO3 | mg/L  | 0.077              | 0.072      | 7   | 20      |            |

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**QUALITY CONTROL DATA**

Project: D18F068  
 Pace Project No.: 35406247

QC Batch: 464636 Analysis Method: SM 5310B  
 QC Batch Method: SM 5310B Analysis Description: 5310B TOC  
 Associated Lab Samples: 35406247001, 35406247002

METHOD BLANK: 2513357 Matrix: Water  
 Associated Lab Samples: 35406247001, 35406247002

| Parameter            | Units | Blank Result | Reporting Limit | MDL  | Analyzed       | Qualifiers |
|----------------------|-------|--------------|-----------------|------|----------------|------------|
| Total Organic Carbon | mg/L  | 0.50 U       | 1.0             | 0.50 | 07/27/18 23:00 |            |

LABORATORY CONTROL SAMPLE: 2513358

| Parameter            | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|----------------------|-------|-------------|------------|-----------|--------------|------------|
| Total Organic Carbon | mg/L  | 20          | 19.8       | 99        | 90-110       |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2513359 2513360

| Parameter            | Units | 35406683003 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | Max |     | Qual |
|----------------------|-------|--------------------|----------------|-----------------|-----------|------------|----------|-----------|--------------|-----|-----|------|
|                      |       |                    |                |                 |           |            |          |           |              | RPD | RPD |      |
| Total Organic Carbon | mg/L  | 26.1               | 20             | 20              | 45.6      | 45.5       | 98       | 97        | 80-120       | 0   | 20  |      |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2513361 2513362

| Parameter            | Units | 35406410003 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | Max |     | Qual |
|----------------------|-------|--------------------|----------------|-----------------|-----------|------------|----------|-----------|--------------|-----|-----|------|
|                      |       |                    |                |                 |           |            |          |           |              | RPD | RPD |      |
| Total Organic Carbon | mg/L  | 10.2               | 20             | 20              | 29.0      | 29.5       | 94       | 97        | 80-120       | 2   | 20  |      |

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**QUALITY CONTROL DATA**

Project: D18F068  
 Pace Project No.: 35406247

QC Batch: 464637 Analysis Method: SM 5310B  
 QC Batch Method: SM 5310B Analysis Description: 5310B TOC  
 Associated Lab Samples: 35406247003, 35406247004, 35406247005, 35406247006, 35406247007, 35406247008, 35406247009, 35406247010, 35406247011, 35406247012, 35406247013, 35406247014

METHOD BLANK: 2513363 Matrix: Water  
 Associated Lab Samples: 35406247003, 35406247004, 35406247005, 35406247006, 35406247007, 35406247008, 35406247009, 35406247010, 35406247011, 35406247012, 35406247013, 35406247014

| Parameter            | Units | Blank Result | Reporting Limit | MDL  | Analyzed       | Qualifiers |
|----------------------|-------|--------------|-----------------|------|----------------|------------|
| Total Organic Carbon | mg/L  | 0.50 U       | 1.0             | 0.50 | 07/28/18 07:16 |            |

LABORATORY CONTROL SAMPLE: 2513364

| Parameter            | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|----------------------|-------|-------------|------------|-----------|--------------|------------|
| Total Organic Carbon | mg/L  | 20          | 19.9       | 100       | 90-110       |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2513365 2513366

| Parameter            | Units | 35406247003 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | Max RPD | RPD | Qual |
|----------------------|-------|--------------------|----------------|-----------------|-----------|------------|----------|-----------|--------------|---------|-----|------|
| Total Organic Carbon | mg/L  | 4.1                | 20             | 20              | 24.3      | 24.7       | 101      | 103       | 80-120       | 2       | 20  |      |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2513367 2513368

| Parameter            | Units | 35406247013 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | Max RPD | RPD | Qual |
|----------------------|-------|--------------------|----------------|-----------------|-----------|------------|----------|-----------|--------------|---------|-----|------|
| Total Organic Carbon | mg/L  | 0.97 I             | 20             | 20              | 21.3      | 21.2       | 102      | 101       | 80-120       | 0       | 20  |      |

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## QUALIFIERS

Project: D18F068  
Pace Project No.: 35406247

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.  
ND - Not Detected at or above adjusted reporting limit.  
TNTC - Too Numerous To Count  
MDL - Adjusted Method Detection Limit.  
PQL - Practical Quantitation Limit.  
RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.  
S - Surrogate  
1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.  
Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.  
LCS(D) - Laboratory Control Sample (Duplicate)  
MS(D) - Matrix Spike (Duplicate)  
DUP - Sample Duplicate  
RPD - Relative Percent Difference  
NC - Not Calculable.  
SG - Silica Gel - Clean-Up  
U - Indicates the compound was analyzed for, but not detected.  
N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.  
Act - Activity  
Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval).  
Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)  
(MDC) - Minimum Detectable Concentration  
Trac - Tracer Recovery (%)  
Carr - Carrier Recovery (%)  
Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.  
TNI - The NELAC Institute.

### LABORATORIES

PASI-O Pace Analytical Services - Ormond Beach  
PASI-PA Pace Analytical Services - Greensburg

### ANALYTE QUALIFIERS

I The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.  
U Compound was analyzed for but not detected.

## REPORT OF LABORATORY ANALYSIS

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**QUALITY CONTROL DATA CROSS REFERENCE TABLE**

Project: D18F068  
Pace Project No.: 35406247

| Lab ID      | Sample ID  | QC Batch Method | QC Batch | Analytical Method | Analytical Batch |
|-------------|------------|-----------------|----------|-------------------|------------------|
| 35406247001 | D18F068-01 | EPA 900.0       | 308008   |                   |                  |
| 35406247002 | D18F068-02 | EPA 900.0       | 308008   |                   |                  |
| 35406247003 | D18F068-03 | EPA 900.0       | 308010   |                   |                  |
| 35406247004 | D18F068-04 | EPA 900.0       | 308010   |                   |                  |
| 35406247005 | D18F068-05 | EPA 900.0       | 308010   |                   |                  |
| 35406247006 | D18F068-06 | EPA 900.0       | 308010   |                   |                  |
| 35406247007 | D18F068-07 | EPA 900.0       | 308010   |                   |                  |
| 35406247008 | D18F068-08 | EPA 900.0       | 308010   |                   |                  |
| 35406247009 | D18F068-09 | EPA 900.0       | 308010   |                   |                  |
| 35406247010 | D18F068-10 | EPA 900.0       | 308010   |                   |                  |
| 35406247011 | D18F068-11 | EPA 900.0       | 308010   |                   |                  |
| 35406247012 | D18F068-12 | EPA 900.0       | 308010   |                   |                  |
| 35406247013 | D18F068-13 | EPA 900.0       | 308010   |                   |                  |
| 35406247014 | D18F068-14 | EPA 900.0       | 308010   |                   |                  |
| 35406247001 | D18F068-01 | EPA 300.0       | 465536   |                   |                  |
| 35406247002 | D18F068-02 | EPA 300.0       | 465536   |                   |                  |
| 35406247003 | D18F068-03 | EPA 300.0       | 465536   |                   |                  |
| 35406247004 | D18F068-04 | EPA 300.0       | 466568   |                   |                  |
| 35406247005 | D18F068-05 | EPA 300.0       | 465536   |                   |                  |
| 35406247006 | D18F068-06 | EPA 300.0       | 466568   |                   |                  |
| 35406247007 | D18F068-07 | EPA 300.0       | 466568   |                   |                  |
| 35406247008 | D18F068-08 | EPA 300.0       | 465536   |                   |                  |
| 35406247009 | D18F068-09 | EPA 300.0       | 466568   |                   |                  |
| 35406247010 | D18F068-10 | EPA 300.0       | 465536   |                   |                  |
| 35406247011 | D18F068-11 | EPA 300.0       | 466568   |                   |                  |
| 35406247012 | D18F068-12 | EPA 300.0       | 466568   |                   |                  |
| 35406247013 | D18F068-13 | EPA 300.0       | 466568   |                   |                  |
| 35406247014 | D18F068-14 | EPA 300.0       | 466568   |                   |                  |
| 35406247001 | D18F068-01 | EPA 353.2       | 464088   |                   |                  |
| 35406247002 | D18F068-02 | EPA 353.2       | 464088   |                   |                  |
| 35406247003 | D18F068-03 | EPA 353.2       | 464088   |                   |                  |
| 35406247004 | D18F068-04 | EPA 353.2       | 464088   |                   |                  |
| 35406247005 | D18F068-05 | EPA 353.2       | 464088   |                   |                  |
| 35406247006 | D18F068-06 | EPA 353.2       | 464088   |                   |                  |
| 35406247007 | D18F068-07 | EPA 353.2       | 464088   |                   |                  |
| 35406247008 | D18F068-08 | EPA 353.2       | 464088   |                   |                  |
| 35406247009 | D18F068-09 | EPA 353.2       | 464088   |                   |                  |
| 35406247010 | D18F068-10 | EPA 353.2       | 464088   |                   |                  |
| 35406247011 | D18F068-11 | EPA 353.2       | 464088   |                   |                  |
| 35406247012 | D18F068-12 | EPA 353.2       | 464088   |                   |                  |
| 35406247013 | D18F068-13 | EPA 353.2       | 464395   |                   |                  |
| 35406247014 | D18F068-14 | EPA 353.2       | 464395   |                   |                  |
| 35406247001 | D18F068-01 | SM 5310B        | 464636   |                   |                  |

**REPORT OF LABORATORY ANALYSIS**

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**QUALITY CONTROL DATA CROSS REFERENCE TABLE**

Project: D18F068  
Pace Project No.: 35406247

| Lab ID      | Sample ID  | QC Batch Method | QC Batch | Analytical Method | Analytical Batch |
|-------------|------------|-----------------|----------|-------------------|------------------|
| 35406247002 | D18F068-02 | SM 5310B        | 464636   |                   |                  |
| 35406247003 | D18F068-03 | SM 5310B        | 464637   |                   |                  |
| 35406247004 | D18F068-04 | SM 5310B        | 464637   |                   |                  |
| 35406247005 | D18F068-05 | SM 5310B        | 464637   |                   |                  |
| 35406247006 | D18F068-06 | SM 5310B        | 464637   |                   |                  |
| 35406247007 | D18F068-07 | SM 5310B        | 464637   |                   |                  |
| 35406247008 | D18F068-08 | SM 5310B        | 464637   |                   |                  |
| 35406247009 | D18F068-09 | SM 5310B        | 464637   |                   |                  |
| 35406247010 | D18F068-10 | SM 5310B        | 464637   |                   |                  |
| 35406247011 | D18F068-11 | SM 5310B        | 464637   |                   |                  |
| 35406247012 | D18F068-12 | SM 5310B        | 464637   |                   |                  |
| 35406247013 | D18F068-13 | SM 5310B        | 464637   |                   |                  |
| 35406247014 | D18F068-14 | SM 5310B        | 464637   |                   |                  |

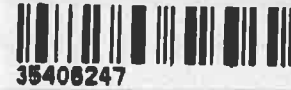
**REPORT OF LABORATORY ANALYSIS**

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**SUBCONTRACT ORDER**  
**Deerhaven Generating Station**  
**D18F068**

**WO# : 35406247**



**SENDING LABORATORY:**

Gainesville Regional Utilities  
 Deerhaven Generating Station  
 10001 NW 13th Street  
 Gainesville, FL 32653  
 Phone: 352-334-3434  
 Fax: 352-334-3149  
 Project Manager: Jeff Boudreau

**RECEIVING LABORATORY:**

Pace Analytical  
 8 East Tower Circle  
 Ormond Beach, FL 32174  
 Phone : (386) 672-5668  
 Fax: (386) 673-4001

| Analysis                                     | Expires         | Laboratory ID                   | Comments    |
|--|-----------------|---------------------------------|-------------|
| <b>Sample Name: MWD-1-6 (R1T6)</b>           |                 |                                 |             |
| <b>Sample ID: D18F068-01</b>                 | <b>Water</b>    | <b>Sampled: 16-Jul-18 17:10</b> |             |
| D_Anions - Sulfates                          | 13-Aug-18 17:10 |                                 |             |
| D_Gross Alpha                                | 08-Jan-19 17:10 |                                 | Cond = 536  |
| D_NO3/NO2                                    | 13-Aug-18 17:10 |                                 |             |
| D_TOC  | 13-Aug-18 17:10 |                                 |             |
| D_Anions - Chlorides                         | 13-Aug-18 17:10 |                                 |             |
| <i>Containers Supplied:</i>                  |                 |                                 |             |
| D_HDPE, Chill @<6°C - 250mL (B)              |                 |                                 |             |
| D_HDPE, H2SO4 Chill @<6°C - pH<2 - 250mL (C) |                 |                                 |             |
| D_HDPE, HNO3 pH<2 - 1000mL (D)               |                 |                                 |             |
| <b>Sample Name: MWB-2-1 (R2T1)</b>           |                 |                                 |             |
| <b>Sample ID: D18F068-02</b>                 | <b>Water</b>    | <b>Sampled: 16-Jul-18 13:40</b> |             |
| D_Gross Alpha                                | 08-Jan-19 13:40 |                                 | Cond = 50.8 |
| D_NO3/NO2                                    | 13-Aug-18 13:40 |                                 |             |
| D_Anions - Sulfates                          | 13-Aug-18 13:40 |                                 |             |
| D_Anions - Chlorides                         | 13-Aug-18 13:40 |                                 |             |
| D_TOC  | 13-Aug-18 13:40 |                                 |             |
| <i>Containers Supplied:</i>                  |                 |                                 |             |
| D_HDPE, Chill @<6°C - 250mL (B)              |                 |                                 |             |
| D_HDPE, H2SO4 Chill @<6°C - pH<2 - 250mL (C) |                 |                                 |             |
| D_HDPE, HNO3 pH<2 - 1000mL (D)               |                 |                                 |             |

*via fedex*

*T345 110*

*Melinda Phillips*

*7-23-18*

*M. Gray*

*7/24/18 1135*

Released By

Date

Received By

Date

Released By

Date

Received By

Date



**SUBCONTRACT ORDER**  
**Deerhaven Generating Station**  
**D18F068**

| Analysis                                     | Expires         | Laboratory ID                   | Comments   |
|--|-----------------|---------------------------------|------------|
| <b>Sample Name: MWI-3-7 (R3T7)</b>           |                 |                                 |            |
| <b>Sample ID: D18F068-03</b>                 | <b>Water</b>    | <b>Sampled: 17-Jul-18 07:56</b> |            |
| D_Anions - Chlorides                         | 14-Aug-18 07:56 |                                 |            |
| D_Anions - Sulfates                          | 14-Aug-18 07:56 |                                 |            |
| D_Gross Alpha                                | 09-Jan-19 07:56 |                                 | Cond = 869 |
| D_NO3/NO2                                    | 14-Aug-18 07:56 |                                 |            |
| D_TOC  | 14-Aug-18 07:56 |                                 |            |
| <i>Containers Supplied:</i>                  |                 |                                 |            |
| D_HDPE, Chill @<6*C - 250mL (B)              |                 |                                 |            |
| D_HDPE, H2SO4 Chill @<6*C - pH<2 - 250mL (C) |                 |                                 |            |
| D_HDPE, HNO3 pH<2 - 1000mL (D)               |                 |                                 |            |
| <b>Sample Name: MWI-4-5 (R4T5B)</b>          |                 |                                 |            |
| <b>Sample ID: D18F068-04</b>                 | <b>Water</b>    | <b>Sampled: 18-Jul-18 07:24</b> |            |
| D_Gross Alpha                                | 10-Jan-19 07:24 |                                 | Cond = 717 |
| D_NO3/NO2                                    | 15-Aug-18 07:24 |                                 |            |
| D_Anions - Chlorides                         | 15-Aug-18 07:24 |                                 |            |
| D_Anions - Fluoride                          | 15-Aug-18 07:24 |                                 |            |
| D_Anions - Sulfates                          | 15-Aug-18 07:24 |                                 |            |
| D_TOC  | 15-Aug-18 07:24 |                                 |            |
| <i>Containers Supplied:</i>                  |                 |                                 |            |
| D_HDPE, Chill @<6*C - 250mL (B)              |                 |                                 |            |
| D_HDPE, H2SO4 Chill @<6*C - pH<2 - 250mL (C) |                 |                                 |            |
| D_HDPE, HNO3 pH<2 - 1000mL (D)               |                 |                                 |            |
| <b>Sample Name: MWD-6-1 (R6T1B)</b>          |                 |                                 |            |
| <b>Sample ID: D18F068-05</b>                 | <b>Water</b>    | <b>Sampled: 16-Jul-18 10:19</b> |            |
| D_Anions - Chlorides                         | 13-Aug-18 10:19 |                                 |            |
| D_Anions - Sulfates                          | 13-Aug-18 10:19 |                                 |            |
| D_Gross Alpha                                | 08-Jan-19 10:19 |                                 | Cond = 265 |
| D_NO3/NO2                                    | 13-Aug-18 10:19 |                                 |            |
| D_TOC  | 13-Aug-18 10:19 |                                 |            |
| <i>Containers Supplied:</i>                  |                 |                                 |            |
| D_HDPE, Chill @<6*C - 250mL (B)              |                 |                                 |            |
| D_HDPE, H2SO4 Chill @<6*C - pH<2 - 250mL (C) |                 |                                 |            |
| D_HDPE, HNO3 pH<2 - 1000mL (D)               |                 |                                 |            |

*via Fedex*

*T345 1.0*

*Shelby Kelly*      *7-23-18*      *M. Tracy*      *7/24/18 1135*

Released By      Date      Received By      Date



**SUBCONTRACT ORDER**  
**Deerhaven Generating Station**  
**D18F068**

| Analysis                                     | Expires         | Laboratory ID                   | Comments   |
|--|-----------------|---------------------------------|------------|
| <b>Sample Name: MWI-6-4 (R6T4B)</b>          |                 |                                 |            |
| <b>Sample ID: D18F068-06</b>                 | <b>Water</b>    | <b>Sampled: 17-Jul-18 15:45</b> |            |
| D_Anions - Chlorides                         | 14-Aug-18 15:45 |                                 |            |
| D_TOC  | 14-Aug-18 15:45 |                                 |            |
| D_NO3/NO2                                    | 14-Aug-18 15:45 |                                 |            |
| D_Gross Alpha                                | 09-Jan-19 15:45 |                                 | Cond = 382 |
| D_Anions - Fluoride                          | 14-Aug-18 15:45 |                                 |            |
| D_Anions - Sulfates                          | 14-Aug-18 15:45 |                                 |            |
| <i>Containers Supplied:</i>                  |                 |                                 |            |
| D_HDPE, Chill @<6°C - 250mL (B)              |                 |                                 |            |
| D_HDPE, H2SO4 Chill @<6°C - pH<2 - 250mL (C) |                 |                                 |            |
| D_HDPE, HNO3 pH<2 - 1000mL (D)               |                 |                                 |            |
| <b>Sample Name: MWI-6-8 (R6T8B)</b>          |                 |                                 |            |
| <b>Sample ID: D18F068-07</b>                 | <b>Water</b>    | <b>Sampled: 19-Jul-18 11:17</b> |            |
| D_NO3/NO2                                    | 16-Aug-18 11:17 |                                 |            |
| D_Anions - Chlorides                         | 16-Aug-18 11:17 |                                 |            |
| D_Anions - Fluoride                          | 16-Aug-18 11:17 |                                 |            |
| D_Anions - Sulfates                          | 16-Aug-18 11:17 |                                 |            |
| D_Gross Alpha                                | 11-Jan-19 11:17 |                                 | Cond = 353 |
| D_TOC  | 16-Aug-18 11:17 |                                 |            |
| <i>Containers Supplied:</i>                  |                 |                                 |            |
| D_HDPE, Chill @<6°C - 250mL (B)              |                 |                                 |            |
| D_HDPE, H2SO4 Chill @<6°C - pH<2 - 250mL (C) |                 |                                 |            |
| D_HDPE, HNO3 pH<2 - 1000mL (D)               |                 |                                 |            |
| <b>Sample Name: MWD-6-12 (R6T12)</b>         |                 |                                 |            |
| <b>Sample ID: D18F068-08</b>                 | <b>Water</b>    | <b>Sampled: 17-Jul-18 09:18</b> |            |
| D_Anions - Sulfates                          | 14-Aug-18 09:18 |                                 |            |
| D_Gross Alpha                                | 09-Jan-19 09:18 |                                 | Cond = 258 |
| D_NO3/NO2                                    | 14-Aug-18 09:18 |                                 |            |
| D_TOC  | 14-Aug-18 09:18 |                                 |            |
| D_Anions - Chlorides                         | 14-Aug-18 09:18 |                                 |            |
| <i>Containers Supplied:</i>                  |                 |                                 |            |
| D_HDPE, Chill @<6°C - 250mL (B)              |                 |                                 |            |
| D_HDPE, H2SO4 Chill @<6°C - pH<2 - 250mL (C) |                 |                                 |            |
| D_HDPE, HNO3 pH<2 - 1000mL (D)               |                 |                                 |            |

*via FedEx*

T 345 1.0

|                        |                |                  |                      |
|------------------------|----------------|------------------|----------------------|
| <i>Shelby Phillips</i> | <i>7-23-18</i> | <i>M. Murray</i> | <i>7/24/18 11:35</i> |
| Released By            | Date           | Received By      | Date                 |
| Released By            | Date           | Received By      | Date                 |





**SUBCONTRACT ORDER**  
**Deerhaven Generating Station**  
**D18F068**

| Analysis                                     | Expires         | Laboratory ID                   | Comments   |
|--|-----------------|---------------------------------|------------|
| <b>Sample Name: MWC-8-10 (R8T10)</b>         |                 |                                 |            |
| <b>Sample ID: D18F068-09</b>                 | <b>Water</b>    | <b>Sampled: 17-Jul-18 11:46</b> |            |
| D_Anions - Chlorides                         | 14-Aug-18 11:46 |                                 |            |
| D_Anions - Sulfates                          | 14-Aug-18 11:46 |                                 |            |
| D_TOC  | 14-Aug-18 11:46 |                                 |            |
| D_Gross Alpha                                | 09-Jan-19 11:46 |                                 | Cond = 542 |
| D_NO3/NO2                                    | 14-Aug-18 11:46 |                                 |            |
| <i>Containers Supplied:</i>                  |                 |                                 |            |
| D_HDPE, Chill @<6°C - 250mL (B)              |                 |                                 |            |
| D_HDPE, H2SO4 Chill @<6°C - pH<2 - 250mL (C) |                 |                                 |            |
| D_HDPE, HNO3 pH<2 - 1000mL (D)               |                 |                                 |            |
| <b>Sample Name: MWI-9-5 (R9T5B)</b>          |                 |                                 |            |
| <b>Sample ID: D18F068-10</b>                 | <b>Water</b>    | <b>Sampled: 17-Jul-18 13:22</b> |            |
| D_Gross Alpha                                | 09-Jan-19 13:22 |                                 | Cond = 748 |
| D_Anions - Chlorides                         | 14-Aug-18 13:22 |                                 |            |
| D_Anions - Sulfates                          | 14-Aug-18 13:22 |                                 |            |
| D_NO3/NO2                                    | 14-Aug-18 13:22 |                                 |            |
| D_TOC  | 14-Aug-18 13:22 |                                 |            |
| <i>Containers Supplied:</i>                  |                 |                                 |            |
| D_HDPE, Chill @<6°C - 250mL (B)              |                 |                                 |            |
| D_HDPE, H2SO4 Chill @<6°C - pH<2 - 250mL (C) |                 |                                 |            |
| D_HDPE, HNO3 pH<2 - 1000mL (D)               |                 |                                 |            |
| <b>Sample Name: MWC-10-8 (R10T8)</b>         |                 |                                 |            |
| <b>Sample ID: D18F068-11</b>                 | <b>Water</b>    | <b>Sampled: 19-Jul-18 15:10</b> |            |
| D_Anions - Chlorides                         | 16-Aug-18 15:10 |                                 |            |
| D_Anions - Sulfates                          | 16-Aug-18 15:10 |                                 |            |
| D_Gross Alpha                                | 11-Jan-19 15:10 |                                 | Cond = 129 |
| D_NO3/NO2                                    | 16-Aug-18 15:10 |                                 |            |
| D_Anions - Fluoride                          | 16-Aug-18 15:10 |                                 |            |
| D_TOC  | 16-Aug-18 15:10 |                                 |            |
| <i>Containers Supplied:</i>                  |                 |                                 |            |
| D_HDPE, Chill @<6°C - 250mL (B)              |                 |                                 |            |
| D_HDPE, H2SO4 Chill @<6°C - pH<2 - 250mL (C) |                 |                                 |            |
| D_HDPE, HNO3 pH<2 - 1000mL (D)               |                 |                                 |            |

*via FedEx*

*T3405 1.0*

*Shelley Phillips*

*7-23-18*

*Melroy*

*7/24/18*

*1135*

Released By

Date

Received By

Date

Released By

Date

Received By

Date



**SUBCONTRACT ORDER**  
**Deerhaven Generating Station**  
**D18F068**

| Analysis                                     | Expires         | Laboratory ID                   | Comments    |
|--|-----------------|---------------------------------|-------------|
| <b>Sample Name: MWC-11-4 (R11T4B)</b>        |                 |                                 |             |
| <b>Sample ID: D18F068-12</b>                 | <b>Water</b>    | <b>Sampled: 19-Jul-18 13:49</b> |             |
| D_NO3/NO2                                    | 16-Aug-18 13:49 |                                 |             |
| D_Anions - Chlorides                         | 16-Aug-18 13:49 |                                 |             |
| D_TOC  | 16-Aug-18 13:49 |                                 |             |
| D_Gross Alpha                                | 11-Jan-19 13:49 |                                 | Cond = 253  |
| D_Anions - Sulfates                          | 16-Aug-18 13:49 |                                 |             |
| D_Anions - Fluoride                          | 16-Aug-18 13:49 |                                 |             |
| <i>Containers Supplied:</i>                  |                 |                                 |             |
| D_HDPE, Chill @<6*C - 250mL (B)              |                 |                                 |             |
| D_HDPE, H2SO4 Chill @<6*C - pH<2 - 250mL (C) |                 |                                 |             |
| D_HDPE, HNO3 pH<2 - 1000mL (D)               |                 |                                 |             |
| <b>Sample Name: MWC-DEEP (DEEP-1)</b>        |                 |                                 |             |
| <b>Sample ID: D18F068-13</b>                 | <b>Water</b>    | <b>Sampled: 17-Jul-18 08:30</b> |             |
| D_Anions - Chlorides                         | 14-Aug-18 08:30 |                                 |             |
| D_Anions - Sulfates                          | 14-Aug-18 08:30 |                                 |             |
| D_Gross Alpha                                | 09-Jan-19 08:30 |                                 | Cond = 480  |
| D_TOC  | 14-Aug-18 08:30 |                                 |             |
| D_NO3/NO2                                    | 14-Aug-18 08:30 |                                 |             |
| <i>Containers Supplied:</i>                  |                 |                                 |             |
| D_HDPE, Chill @<6*C - 250mL (B)              |                 |                                 |             |
| D_HDPE, H2SO4 Chill @<6*C - pH<2 - 250mL (C) |                 |                                 |             |
| D_HDPE, HNO3 pH<2 - 1000mL (D)               |                 |                                 |             |
| <b>Sample Name: EBLANK</b>                   |                 |                                 |             |
| <b>Sample ID: D18F068-14</b>                 | <b>Water</b>    | <b>Sampled: 18-Jul-18 08:25</b> |             |
| D_Anions - Fluoride                          | 15-Aug-18 08:25 |                                 |             |
| D_TOC  | 15-Aug-18 08:25 |                                 |             |
| D_NO3/NO2                                    | 15-Aug-18 08:25 |                                 |             |
| D_Anions - Sulfates                          | 15-Aug-18 08:25 |                                 |             |
| D_Anions - Chlorides                         | 15-Aug-18 08:25 |                                 |             |
| D_Gross Alpha                                | 10-Jan-19 08:25 |                                 | Cond = 0.76 |
| <i>Containers Supplied:</i>                  |                 |                                 |             |
| D_HDPE, Chill @<6*C - 250mL (B)              |                 |                                 |             |
| D_HDPE, H2SO4 Chill @<6*C - pH<2 - 250mL (C) |                 |                                 |             |
| D_HDPE, HNO3 pH<2 - 1000mL (D)               |                 |                                 |             |

Released By: *Shelby Phillips*      Date: *7-23-18*      via FedEx  
 Received By: *Melroy*      Date: *7/24/18 1135*      T-345 1.0

Released By \_\_\_\_\_ Date \_\_\_\_\_ Received By \_\_\_\_\_ Date \_\_\_\_\_



Document Name:  
Sample Condition Upon Receipt Form  
Document No.:  
F-FL-C-007 rev. 13

Document Revised:  
May 30, 2018  
Issuing Authority:  
Pace Florida Quality Office

**Sample Condition Upon Receipt Form (SCUR)**

**Project #** **WO# : 35406247**  
**Project Manager:** **PM: JSB** **Due Date: 08/07/18**  
**Client:** **CLIENT: DEELAB**

**Date and Initials of person:**  
**Examining contents:** \_\_\_\_\_  
**Label:** \_\_\_\_\_  
**Deliver:** \_\_\_\_\_  
**pH:** \_\_\_\_\_

Thermometer Used: T345 Date: 7/24/18 Time: 1135 Initials: AKP

State of Origin: +0.2  For WV projects all containers verified to  $\pm 6^\circ\text{C}$

|  |  |
|--|--|
| Cooler #1 Temp. °C <u>0.8</u> (Visual) <u>+0.2</u> (Correction Factor) <u>1.0</u> (Actual)   | <input type="checkbox"/> Samples on ice, cooling process has begun |
| Cooler #2 Temp. °C <u>25.3</u> (Visual) <u>1</u> (Correction Factor) <u>25.5</u> (Actual)    | <input type="checkbox"/> Samples on ice, cooling process has begun |
| Cooler #3 Temp. °C <u>26.3</u> (Visual) _____ (Correction Factor) <u>26.5</u> (Actual)       | <input type="checkbox"/> Samples on ice, cooling process has begun |
| Cooler #4 Temp. °C <u>26.4</u> (Visual) <u>26.6</u> (Correction Factor) <u>26.6</u> (Actual) | <input type="checkbox"/> Samples on ice, cooling process has begun |
| Cooler #5 Temp. °C <u>24.8</u> (Visual) _____ (Correction Factor) <u>25.0</u> (Actual)       | <input type="checkbox"/> Samples on ice, cooling process has begun |
| Cooler #6 Temp. °C <u>24.5</u> (Visual) _____ (Correction Factor) <u>24.7</u> (Actual)       | <input type="checkbox"/> Samples on ice, cooling process has begun |

Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace  Other \_\_\_\_\_

Shipping Method:  First Overnight  Priority Overnight  Standard Overnight  Ground  International Priority  
 Other \_\_\_\_\_

Billing:  Recipient  Sender  Third Party  Credit Card  Unknown

Tracking # 8127 8324 8398 / 8127 8324 8387 / 8127 8324 8365 / 8127 8324 83

Custody Seal on Cooler/Box Present:  Yes  No Seals intact:  Yes  No Ice: Wet Blue Dry None

Packing Material:  Bubble Wrap  Bubble Bags  None  Other \_\_\_\_\_

Samples shorted to lab (If Yes, complete) Shorted Date: \_\_\_\_\_ Shorted Time: \_\_\_\_\_ Qty: \_\_\_\_\_

**Comments:**

|   |  |  |
|---|--|--|
| Chain of Custody Present  | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |  |
| Chain of Custody Filled Out   | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |  |
| Relinquished Signature & Sampler Name COC   | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |  |
| Samples Arrived within Hold Time  | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |  |
| Rush TAT requested on COC   | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A |  |
| Sufficient Volume   | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |  |
| Correct Containers Used   | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |  |
| Containers Intact   | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |  |
| Sample Labels match COC (sample IDs & date/time of collection)  | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |  |
| All containers needing acid/base preservation have been checked.  | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Preservation Information:<br>Preservative: _____<br>Lot #/Trace #: _____<br>Date: _____ Time: _____<br>Initials: _____ |
| All Containers needing preservation are found to be in compliance with EPA recommendation:<br>Exceptions: VOA, Coliform, TOC, O&G, Carbamates | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |  |
| Headspace in VOA Vials? (>6mm):   | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A |  |
| Trip Blank Present:   | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A |  |

**Client Notification/ Resolution:**  
 Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

**Comments/ Resolution (use back for additional comments):** 8127 8324 8402 / 8127 8324 8418

Project Manager Review: \_\_\_\_\_ Date: \_\_\_\_\_

August 07, 2018

Mr. Jeffery Boudreau  
Deerhaven Lab  
P.O. Box 147117, Station D38  
Gainesville, FL 32614

RE: Project: D18F069  
Pace Project No.: 35406244

Dear Mr. Boudreau:

Enclosed are the analytical results for sample(s) received by the laboratory on July 24, 2018. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

The container for sample ID D18F069-14 arrived with the top off at the sub-contract lab and there was no volume remaining for analysis.

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

Sincerely,



Jeff Baylor  
jeff.baylor@pacelabs.com  
(386)672-5668  
Project Manager

Enclosures

cc: Kent Brakefield  
Shelley Phillips, Deerhaven Lab



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: D18F069

Pace Project No.: 35406244

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### Pennsylvania Certification IDs

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601

ANAB DOD-ELAP Rad Accreditation #: L2417

Alabama Certification #: 41590

Arizona Certification #: AZ0734

Arkansas Certification

California Certification #: 04222CA

Colorado Certification #: PA01547

Connecticut Certification #: PH-0694

Delaware Certification

EPA Region 4 DW Rad

Florida/TNI Certification #: E87683

Georgia Certification #: C040

Guam Certification

Hawaii Certification

Idaho Certification

Illinois Certification

Indiana Certification

Iowa Certification #: 391

Kansas/TNI Certification #: E-10358

Kentucky Certification #: KY90133

KY WW Permit #: KY0098221

KY WW Permit #: KY0000221

Louisiana DHH/TNI Certification #: LA180012

Louisiana DEQ/TNI Certification #: 4086

Maine Certification #: 2017020

Maryland Certification #: 308

Massachusetts Certification #: M-PA1457

Michigan/PADEP Certification #: 9991

Missouri Certification #: 235

Montana Certification #: Cert0082

Nebraska Certification #: NE-OS-29-14

Nevada Certification #: PA014572018-1

New Hampshire/TNI Certification #: 297617

New Jersey/TNI Certification #: PA051

New Mexico Certification #: PA01457

New York/TNI Certification #: 10888

North Carolina Certification #: 42706

North Dakota Certification #: R-190

Ohio EPA Rad Approval: #41249

Oregon/TNI Certification #: PA200002-010

Pennsylvania/TNI Certification #: 65-00282

Puerto Rico Certification #: PA01457

Rhode Island Certification #: 65-00282

South Dakota Certification

Tennessee Certification #: 02867

Texas/TNI Certification #: T104704188-17-3

Utah/TNI Certification #: PA014572017-9

USDA Soil Permit #: P330-17-00091

Vermont Dept. of Health: ID# VT-0282

Virgin Island/PADEP Certification

Virginia/VELAP Certification #: 9526

Washington Certification #: C868

West Virginia DEP Certification #: 143

West Virginia DHHR Certification #: 9964C

Wisconsin Approve List for Rad

Wyoming Certification #: 8TMS-L

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### Ormond Beach Certification IDs

8 East Tower Circle, Ormond Beach, FL 32174

Alabama Certification #: 41320

Connecticut Certification #: PH-0216

Florida Certification #: E83079

Georgia Certification #: 955

Guam Certification: FL NELAC Reciprocity

Hawaii Certification: FL NELAC Reciprocity

Illinois Certification #: 200068

Indiana Certification: FL NELAC Reciprocity

Kansas Certification #: E-10383

Kentucky Certification #: 90050

Louisiana Certification #: FL NELAC Reciprocity

Louisiana Environmental Certificate #: 05007

Maryland Certification #: #346

Michigan Certification #: 9911

Mississippi Certification: FL NELAC Reciprocity

Missouri Certification #: 236

Montana Certification #: Cert 0074

Nebraska Certification: NE-OS-28-14

Nevada Certification: FL NELAC Reciprocity

New Hampshire Certification #: 2958

New Jersey Certification #: FL022

New York Certification #: 11608

North Carolina Environmental Certificate #: 667

North Carolina Certification #: 12710

North Dakota Certification #: R-216

Oklahoma Certification #: D9947

Pennsylvania Certification #: 68-00547

Puerto Rico Certification #: FL01264

South Carolina Certification: #96042001

Tennessee Certification #: TN02974

Texas Certification: FL NELAC Reciprocity

US Virgin Islands Certification: FL NELAC Reciprocity

Virginia Environmental Certification #: 460165

Wyoming Certification: FL NELAC Reciprocity

West Virginia Certification #: 9962C

Wisconsin Certification #: 399079670

Wyoming (EPA Region 8): FL NELAC Reciprocity

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## SAMPLE SUMMARY

Project: D18F069

Pace Project No.: 35406244

| Lab ID      | Sample ID  | Matrix | Date Collected | Date Received  |
|-------------|------------|--------|----------------|----------------|
| 35406244001 | D18F069-01 | Water  | 07/17/18 16:40 | 07/24/18 11:35 |
| 35406244002 | D18F069-02 | Water  | 07/18/18 10:03 | 07/24/18 11:35 |
| 35406244003 | D18F069-03 | Water  | 07/19/18 07:35 | 07/24/18 11:35 |
| 35406244004 | D18F069-04 | Water  | 07/18/18 11:34 | 07/24/18 11:35 |
| 35406244005 | D18F069-05 | Water  | 07/17/18 14:27 | 07/24/18 11:35 |
| 35406244006 | D18F069-06 | Water  | 07/18/18 15:40 | 07/24/18 11:35 |
| 35406244007 | D18F069-07 | Water  | 07/18/18 13:59 | 07/24/18 11:35 |
| 35406244008 | D18F069-08 | Water  | 07/18/18 12:39 | 07/24/18 11:35 |
| 35406244009 | D18F069-09 | Water  | 07/18/18 07:24 | 07/24/18 11:35 |
| 35406244010 | D18F069-10 | Water  | 07/17/18 15:45 | 07/24/18 11:35 |
| 35406244011 | D18F069-11 | Water  | 07/19/18 11:17 | 07/24/18 11:35 |
| 35406244012 | D18F069-12 | Water  | 07/19/18 15:10 | 07/24/18 11:35 |
| 35406244013 | D18F069-13 | Water  | 07/19/18 13:49 | 07/24/18 11:35 |

## REPORT OF LABORATORY ANALYSIS

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**SAMPLE ANALYTE COUNT**

Project: D18F069  
Pace Project No.: 35406244

| Lab ID      | Sample ID  | Method                   | Analysts | Analytes Reported | Laboratory |
|-------------|------------|--------------------------|----------|-------------------|------------|
| 35406244001 | D18F069-01 | EPA 903.1                | MK1      | 1                 | PASI-PA    |
|             |            | EPA 904.0                | JLW      | 1                 | PASI-PA    |
|             |            | Total Radium Calculation | CMC      | 1                 | PASI-PA    |
|             |            | EPA 300.0                | CMB      | 3                 | PASI-O     |
| 35406244002 | D18F069-02 | EPA 903.1                | MK1      | 1                 | PASI-PA    |
|             |            | EPA 904.0                | JLW      | 1                 | PASI-PA    |
|             |            | Total Radium Calculation | CMC      | 1                 | PASI-PA    |
|             |            | EPA 300.0                | CMB      | 3                 | PASI-O     |
| 35406244003 | D18F069-03 | EPA 903.1                | MK1      | 1                 | PASI-PA    |
|             |            | EPA 904.0                | JLW      | 1                 | PASI-PA    |
|             |            | Total Radium Calculation | CMC      | 1                 | PASI-PA    |
|             |            | EPA 300.0                | CMB      | 3                 | PASI-O     |
| 35406244004 | D18F069-04 | EPA 903.1                | MK1      | 1                 | PASI-PA    |
|             |            | EPA 904.0                | JLW      | 1                 | PASI-PA    |
|             |            | Total Radium Calculation | CMC      | 1                 | PASI-PA    |
|             |            | EPA 300.0                | CMB      | 3                 | PASI-O     |
| 35406244005 | D18F069-05 | EPA 903.1                | MK1      | 1                 | PASI-PA    |
|             |            | EPA 904.0                | JLW      | 1                 | PASI-PA    |
|             |            | Total Radium Calculation | CMC      | 1                 | PASI-PA    |
|             |            | EPA 300.0                | CMB      | 3                 | PASI-O     |
| 35406244006 | D18F069-06 | EPA 903.1                | MK1      | 1                 | PASI-PA    |
|             |            | EPA 904.0                | JLW      | 1                 | PASI-PA    |
|             |            | Total Radium Calculation | CMC      | 1                 | PASI-PA    |
|             |            | EPA 300.0                | CMB      | 3                 | PASI-O     |
| 35406244007 | D18F069-07 | EPA 903.1                | MK1      | 1                 | PASI-PA    |
|             |            | EPA 904.0                | JLW      | 1                 | PASI-PA    |
|             |            | Total Radium Calculation | CMC      | 1                 | PASI-PA    |
|             |            | EPA 300.0                | CMB      | 3                 | PASI-O     |
| 35406244008 | D18F069-08 | EPA 903.1                | MK1      | 1                 | PASI-PA    |
|             |            | EPA 904.0                | JLW      | 1                 | PASI-PA    |
|             |            | Total Radium Calculation | CMC      | 1                 | PASI-PA    |
|             |            | EPA 300.0                | CMB      | 3                 | PASI-O     |
| 35406244009 | D18F069-09 | EPA 903.1                | MK1      | 1                 | PASI-PA    |
|             |            | EPA 904.0                | JLW      | 1                 | PASI-PA    |
|             |            | Total Radium Calculation | CMC      | 1                 | PASI-PA    |
|             |            | EPA 300.0                | CMB      | 3                 | PASI-O     |
| 35406244010 | D18F069-10 | EPA 903.1                | MK1      | 1                 | PASI-PA    |
|             |            | EPA 904.0                | JLW      | 1                 | PASI-PA    |

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### SAMPLE ANALYTE COUNT

Project: D18F069

Pace Project No.: 35406244

| Lab ID      | Sample ID  | Method                   | Analysts | Analytes Reported | Laboratory |
|-------------|------------|--------------------------|----------|-------------------|------------|
| 35406244011 | D18F069-11 | Total Radium Calculation | CMC      | 1                 | PASI-PA    |
|             |            | EPA 903.1                | MK1      | 1                 | PASI-PA    |
|             |            | EPA 904.0                | JLW      | 1                 | PASI-PA    |
| 35406244012 | D18F069-12 | Total Radium Calculation | CMC      | 1                 | PASI-PA    |
|             |            | EPA 903.1                | MK1      | 1                 | PASI-PA    |
|             |            | EPA 904.0                | JLW      | 1                 | PASI-PA    |
| 35406244013 | D18F069-13 | Total Radium Calculation | CMC      | 1                 | PASI-PA    |
|             |            | EPA 903.1                | MK1      | 1                 | PASI-PA    |
|             |            | EPA 904.0                | JLW      | 1                 | PASI-PA    |
|             |            | Total Radium Calculation | CMC      | 1                 | PASI-PA    |

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## ANALYTICAL RESULTS

Project: D18F069

Pace Project No.: 35406244

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**Sample: D18F069-01**      **Lab ID: 35406244001**      Collected: 07/17/18 16:40      Received: 07/24/18 11:35      Matrix: Water

| Parameters                     | Results     | Units                        | PQL   | MDL   | DF | Prepared | Analyzed       | CAS No.    | Qual |
|--------------------------------|-------------|------------------------------|-------|-------|----|----------|----------------|------------|------|
| <b>300.0 IC Anions 28 Days</b> |             | Analytical Method: EPA 300.0 |       |       |    |          |                |            |      |
| Chloride                       | <b>8.4</b>  | mg/L                         | 5.0   | 2.5   | 1  |          | 08/04/18 11:47 | 16887-00-6 |      |
| Fluoride                       | <b>0.22</b> | mg/L                         | 0.050 | 0.034 | 1  |          | 08/04/18 11:47 | 16984-48-8 |      |
| Sulfate                        | <b>7.6</b>  | mg/L                         | 5.0   | 2.5   | 1  |          | 08/04/18 11:47 | 14808-79-8 |      |

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## ANALYTICAL RESULTS

Project: D18F069

Pace Project No.: 35406244

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**Sample: D18F069-02**      **Lab ID: 35406244002**      Collected: 07/18/18 10:03      Received: 07/24/18 11:35      Matrix: Water

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| Parameters                     | Results      | Units                        | PQL   | MDL   | DF | Prepared | Analyzed       | CAS No.    | Qual |
|--------------------------------|--------------|------------------------------|-------|-------|----|----------|----------------|------------|------|
| <b>300.0 IC Anions 28 Days</b> |              | Analytical Method: EPA 300.0 |       |       |    |          |                |            |      |
| Chloride                       | <b>2.7 I</b> | mg/L                         | 5.0   | 2.5   | 1  |          | 08/04/18 12:09 | 16887-00-6 |      |
| Fluoride                       | <b>0.34</b>  | mg/L                         | 0.050 | 0.034 | 1  |          | 08/04/18 12:09 | 16984-48-8 |      |
| Sulfate                        | <b>9.9</b>   | mg/L                         | 5.0   | 2.5   | 1  |          | 08/04/18 12:09 | 14808-79-8 |      |

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## ANALYTICAL RESULTS

Project: D18F069

Pace Project No.: 35406244

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**Sample: D18F069-03**      **Lab ID: 35406244003**      Collected: 07/19/18 07:35      Received: 07/24/18 11:35      Matrix: Water

| Parameters                     | Results      | Units                        | PQL   | MDL   | DF | Prepared | Analyzed       | CAS No.    | Qual |
|--------------------------------|--------------|------------------------------|-------|-------|----|----------|----------------|------------|------|
| <b>300.0 IC Anions 28 Days</b> |              | Analytical Method: EPA 300.0 |       |       |    |          |                |            |      |
| Chloride                       | <b>8.7</b>   | mg/L                         | 5.0   | 2.5   | 1  |          | 08/04/18 12:31 | 16887-00-6 |      |
| Fluoride                       | <b>0.18</b>  | mg/L                         | 0.050 | 0.034 | 1  |          | 08/04/18 12:31 | 16984-48-8 |      |
| Sulfate                        | <b>4.7 I</b> | mg/L                         | 5.0   | 2.5   | 1  |          | 08/04/18 12:31 | 14808-79-8 |      |

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## ANALYTICAL RESULTS

Project: D18F069

Pace Project No.: 35406244

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**Sample: D18F069-04**      **Lab ID: 35406244004**      Collected: 07/18/18 11:34      Received: 07/24/18 11:35      Matrix: Water

| Parameters                     | Results     | Units                        | PQL   | MDL   | DF | Prepared | Analyzed       | CAS No.    | Qual |
|--------------------------------|-------------|------------------------------|-------|-------|----|----------|----------------|------------|------|
| <b>300.0 IC Anions 28 Days</b> |             | Analytical Method: EPA 300.0 |       |       |    |          |                |            |      |
| Chloride                       | <b>34.2</b> | mg/L                         | 5.0   | 2.5   | 1  |          | 08/04/18 12:53 | 16887-00-6 |      |
| Fluoride                       | <b>0.23</b> | mg/L                         | 0.050 | 0.034 | 1  |          | 08/04/18 12:53 | 16984-48-8 |      |
| Sulfate                        | <b>127</b>  | mg/L                         | 10.0  | 5.0   | 2  |          | 08/05/18 08:26 | 14808-79-8 |      |

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## ANALYTICAL RESULTS

Project: D18F069

Pace Project No.: 35406244

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**Sample: D18F069-05**      **Lab ID: 35406244005**      Collected: 07/17/18 14:27      Received: 07/24/18 11:35      Matrix: Water

| Parameters                     | Results        | Units                        | PQL   | MDL   | DF | Prepared | Analyzed       | CAS No.    | Qual |
|--------------------------------|----------------|------------------------------|-------|-------|----|----------|----------------|------------|------|
| <b>300.0 IC Anions 28 Days</b> |                | Analytical Method: EPA 300.0 |       |       |    |          |                |            |      |
| Chloride                       | <b>10.9</b>    | mg/L                         | 5.0   | 2.5   | 1  |          | 08/04/18 13:15 | 16887-00-6 |      |
| Fluoride                       | <b>0.048 I</b> | mg/L                         | 0.050 | 0.034 | 1  |          | 08/04/18 13:15 | 16984-48-8 |      |
| Sulfate                        | <b>26.5</b>    | mg/L                         | 5.0   | 2.5   | 1  |          | 08/04/18 13:15 | 14808-79-8 |      |

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## ANALYTICAL RESULTS

Project: D18F069

Pace Project No.: 35406244

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**Sample: D18F069-06**      **Lab ID: 35406244006**      Collected: 07/18/18 15:40      Received: 07/24/18 11:35      Matrix: Water

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| Parameters                     | Results     | Units                        | PQL  | MDL   | DF | Prepared | Analyzed       | CAS No.    | Qual |
|--------------------------------|-------------|------------------------------|------|-------|----|----------|----------------|------------|------|
| <b>300.0 IC Anions 28 Days</b> |             | Analytical Method: EPA 300.0 |      |       |    |          |                |            |      |
| Chloride                       | <b>26.0</b> | mg/L                         | 10.0 | 5.0   | 2  |          | 08/04/18 13:37 | 16887-00-6 |      |
| Fluoride                       | <b>0.25</b> | mg/L                         | 0.10 | 0.068 | 2  |          | 08/04/18 13:37 | 16984-48-8 |      |
| Sulfate                        | <b>195</b>  | mg/L                         | 10.0 | 5.0   | 2  |          | 08/04/18 13:37 | 14808-79-8 |      |

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## ANALYTICAL RESULTS

Project: D18F069

Pace Project No.: 35406244

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**Sample: D18F069-07**      **Lab ID: 35406244007**      Collected: 07/18/18 13:59      Received: 07/24/18 11:35      Matrix: Water

| Parameters                     | Results     | Units                        | PQL   | MDL   | DF | Prepared | Analyzed       | CAS No.    | Qual |
|--------------------------------|-------------|------------------------------|-------|-------|----|----------|----------------|------------|------|
| <b>300.0 IC Anions 28 Days</b> |             | Analytical Method: EPA 300.0 |       |       |    |          |                |            |      |
| Chloride                       | <b>31.5</b> | mg/L                         | 5.0   | 2.5   | 1  |          | 08/05/18 08:49 | 16887-00-6 |      |
| Fluoride                       | <b>0.17</b> | mg/L                         | 0.050 | 0.034 | 1  |          | 08/05/18 08:49 | 16984-48-8 |      |
| Sulfate                        | <b>322</b>  | mg/L                         | 25.0  | 12.5  | 5  |          | 08/04/18 13:59 | 14808-79-8 |      |

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## ANALYTICAL RESULTS

Project: D18F069

Pace Project No.: 35406244

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**Sample: D18F069-08**      **Lab ID: 35406244008**      Collected: 07/18/18 12:39      Received: 07/24/18 11:35      Matrix: Water

| Parameters                     | Results     | Units                        | PQL  | MDL   | DF | Prepared | Analyzed       | CAS No.    | Qual |
|--------------------------------|-------------|------------------------------|------|-------|----|----------|----------------|------------|------|
| <b>300.0 IC Anions 28 Days</b> |             | Analytical Method: EPA 300.0 |      |       |    |          |                |            |      |
| Chloride                       | <b>17.5</b> | mg/L                         | 10.0 | 5.0   | 2  |          | 08/04/18 14:21 | 16887-00-6 |      |
| Fluoride                       | <b>0.22</b> | mg/L                         | 0.10 | 0.068 | 2  |          | 08/04/18 14:21 | 16984-48-8 |      |
| Sulfate                        | <b>190</b>  | mg/L                         | 10.0 | 5.0   | 2  |          | 08/04/18 14:21 | 14808-79-8 |      |

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: D18F069  
Pace Project No.: 35406244

QC Batch: 466733 Analysis Method: EPA 300.0  
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions  
Associated Lab Samples: 35406244001, 35406244002, 35406244003, 35406244004, 35406244005, 35406244006, 35406244007, 35406244008

METHOD BLANK: 2524052 Matrix: Water  
Associated Lab Samples: 35406244001, 35406244002, 35406244003, 35406244004, 35406244005, 35406244006, 35406244007, 35406244008

| Parameter | Units | Blank Result | Reporting Limit | MDL   | Analyzed       | Qualifiers |
|-----------|-------|--------------|-----------------|-------|----------------|------------|
| Chloride  | mg/L  | 2.5 U        | 5.0             | 2.5   | 08/04/18 11:03 |            |
| Fluoride  | mg/L  | 0.034 U      | 0.050           | 0.034 | 08/04/18 11:03 |            |
| Sulfate   | mg/L  | 2.5 U        | 5.0             | 2.5   | 08/04/18 11:03 |            |

LABORATORY CONTROL SAMPLE: 2524053

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Chloride  | mg/L  | 50          | 48.7       | 97        | 90-110       |            |
| Fluoride  | mg/L  | 5           | 4.9        | 97        | 90-110       |            |
| Sulfate   | mg/L  | 50          | 48.7       | 97        | 90-110       |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2524054 2524055

| Parameter | Units | 35406905001    |                 | 2524055   |            | MS % Rec | MSD % Rec | % Rec Limits | RPD    | Max RPD | Qual |             |
|-----------|-------|----------------|-----------------|-----------|------------|----------|-----------|--------------|--------|---------|------|-------------|
|           |       | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result |          |           |              |        |         |      |             |
| Chloride  | mg/L  | 69.4           | 50              | 50        | 126        | 125      | 114       | 111          | 90-110 | 1       | 20   | J(M1),<br>L |
| Fluoride  | mg/L  | 0.44           | 5               | 5         | 5.3        | 5.2      | 97        | 95           | 90-110 | 2       | 20   |             |
| Sulfate   | mg/L  | 21.3           | 50              | 50        | 72.6       | 71.1     | 103       | 100          | 90-110 | 2       | 20   |             |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: D18F069  
Pace Project No.: 35406244

**Sample: D18F069-01**      **Lab ID: 35406244001**      Collected: 07/17/18 16:40      Received: 07/24/18 11:35      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters   | Method                   | Act ± Unc (MDC) Carr Trac                          | Units | Analyzed       | CAS No.    | Qual |
|--------------|--------------------------|--|-------|----------------|------------|------|
| Radium-226   | EPA 903.1                | <b>0.968U ± 0.676 (0.968)</b><br><b>C:NA T:90%</b> | pCi/L | 08/06/18 09:57 | 13982-63-3 |      |
| Radium-228   | EPA 904.0                | <b>1.71 ± 0.638 (0.973)</b><br><b>C:71% T:75%</b>  | pCi/L | 08/06/18 13:24 | 15262-20-1 |      |
| Total Radium | Total Radium Calculation | <b>2.48 ± 1.31 (1.94)</b>                          | pCi/L | 08/07/18 14:05 | 7440-14-4  |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: D18F069

Pace Project No.: 35406244

| Parameters   | Method                   | Act ± Unc (MDC) Carr Trac                    | Units | Analyzed       | CAS No.    | Qual |
|--------------|--------------------------|--|-------|----------------|------------|------|
| Radium-226   | EPA 903.1                | <b>0.745U ± 0.414 (0.745)</b><br>C:NA T:89%  | pCi/L | 08/06/18 10:13 | 13982-63-3 |      |
| Radium-228   | EPA 904.0                | <b>0.781U ± 0.356 (0.781)</b><br>C:75% T:82% | pCi/L | 08/06/18 13:24 | 15262-20-1 |      |
| Total Radium | Total Radium Calculation | <b>1.53U ± 0.770 (1.53)</b>                  | pCi/L | 08/07/18 14:05 | 7440-14-4  |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: D18F069

Pace Project No.: 35406244

**Sample: D18F069-03**      **Lab ID: 35406244003**      Collected: 07/19/18 07:35      Received: 07/24/18 11:35      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters   | Method                      | Act ± Unc (MDC) Carr Trac                         | Units | Analyzed       | CAS No.    | Qual |
|--------------|-----------------------------|---|-------|----------------|------------|------|
| Radium-226   | EPA 903.1                   | <b>1.08U ± 0.624 (1.08)</b><br><b>C:NA T:81%</b>  | pCi/L | 08/06/18 10:26 | 13982-63-3 |      |
| Radium-228   | EPA 904.0                   | <b>1.07 ± 0.533 (0.938)</b><br><b>C:69% T:76%</b> | pCi/L | 08/06/18 13:24 | 15262-20-1 |      |
| Total Radium | Total Radium<br>Calculation | <b>2.02U ± 1.16 (2.02)</b>                        | pCi/L | 08/07/18 14:05 | 7440-14-4  |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: D18F069

Pace Project No.: 35406244

**Sample: D18F069-04**      **Lab ID: 35406244004**      Collected: 07/18/18 11:34      Received: 07/24/18 11:35      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters   | Method                      | Act ± Unc (MDC) Carr Trac                           | Units | Analyzed       | CAS No.    | Qual |
|--------------|-----------------------------|---|-------|----------------|------------|------|
| Radium-226   | EPA 903.1                   | <b>0.971U ± 0.640 (0.971)</b><br><b>C:NA T:92%</b>  | pCi/L | 08/06/18 10:13 | 13982-63-3 |      |
| Radium-228   | EPA 904.0                   | <b>0.940U ± 0.462 (0.940)</b><br><b>C:71% T:80%</b> | pCi/L | 08/06/18 13:24 | 15262-20-1 |      |
| Total Radium | Total Radium<br>Calculation | <b>1.91U ± 1.10 (1.91)</b>                          | pCi/L | 08/07/18 14:05 | 7440-14-4  |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: D18F069

Pace Project No.: 35406244

**Sample: D18F069-05**      **Lab ID: 35406244005**      Collected: 07/17/18 14:27      Received: 07/24/18 11:35      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters   | Method                      | Act ± Unc (MDC) Carr Trac                         | Units | Analyzed       | CAS No.    | Qual |
|--------------|-----------------------------|---|-------|----------------|------------|------|
| Radium-226   | EPA 903.1                   | <b>1.09U ± 0.681 (1.09)</b><br><b>C:NA T:93%</b>  | pCi/L | 08/06/18 10:13 | 13982-63-3 |      |
| Radium-228   | EPA 904.0                   | <b>1.10U ± 0.509 (1.10)</b><br><b>C:76% T:83%</b> | pCi/L | 08/06/18 16:44 | 15262-20-1 |      |
| Total Radium | Total Radium<br>Calculation | <b>2.19U ± 1.19 (2.19)</b>                        | pCi/L | 08/07/18 14:05 | 7440-14-4  |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: D18F069

Pace Project No.: 35406244

**Sample: D18F069-06**      **Lab ID: 35406244006**      Collected: 07/18/18 15:40      Received: 07/24/18 11:35      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters   | Method                      | Act ± Unc (MDC) Carr Trac                  | Units | Analyzed       | CAS No.    | Qual |
|--------------|-----------------------------|--|-------|----------------|------------|------|
| Radium-226   | EPA 903.1                   | <b>2.26 ± 0.958 (0.887)</b><br>C:NA T:94%  | pCi/L | 08/06/18 10:13 | 13982-63-3 |      |
| Radium-228   | EPA 904.0                   | <b>1.29U ± 0.700 (1.29)</b><br>C:73% T:73% | pCi/L | 08/06/18 16:44 | 15262-20-1 |      |
| Total Radium | Total Radium<br>Calculation | <b>3.47 ± 1.66 (2.18)</b>                  | pCi/L | 08/07/18 14:05 | 7440-14-4  |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: D18F069

Pace Project No.: 35406244

**Sample: D18F069-07**      **Lab ID: 35406244007**      Collected: 07/18/18 13:59      Received: 07/24/18 11:35      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters   | Method                   | Act ± Unc (MDC) Carr Trac                        | Units | Analyzed       | CAS No.    | Qual |
|--------------|--------------------------|--|-------|----------------|------------|------|
| Radium-226   | EPA 903.1                | <b>2.00 ± 1.02 (1.18)</b><br><b>C:NA T:83%</b>   | pCi/L | 08/06/18 10:13 | 13982-63-3 |      |
| Radium-228   | EPA 904.0                | <b>1.67 ± 0.754 (1.24)</b><br><b>C:66% T:78%</b> | pCi/L | 08/06/18 16:44 | 15262-20-1 |      |
| Total Radium | Total Radium Calculation | <b>3.67 ± 1.77 (2.42)</b>                        | pCi/L | 08/07/18 14:05 | 7440-14-4  |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: D18F069

Pace Project No.: 35406244

**Sample: D18F069-08**      **Lab ID: 35406244008**      Collected: 07/18/18 12:39      Received: 07/24/18 11:35      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters   | Method                      | Act ± Unc (MDC) Carr Trac                 | Units | Analyzed       | CAS No.    | Qual |
|--------------|-----------------------------|---|-------|----------------|------------|------|
| Radium-226   | EPA 903.1                   | <b>1.49 ± 0.720 (0.682)</b><br>C:NA T:91% | pCi/L | 08/06/18 10:29 | 13982-63-3 |      |
| Radium-228   | EPA 904.0                   | <b>1.35 ± 0.639 (1.16)</b><br>C:72% T:85% | pCi/L | 08/06/18 13:30 | 15262-20-1 |      |
| Total Radium | Total Radium<br>Calculation | <b>2.84 ± 1.36 (1.84)</b>                 | pCi/L | 08/07/18 14:05 | 7440-14-4  |      |

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## ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: D18F069

Pace Project No.: 35406244

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**Sample: D18F069-09**      **Lab ID: 35406244009**      Collected: 07/18/18 07:24      Received: 07/24/18 11:35      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters   | Method                   | Act ± Unc (MDC) Carr Trac                  | Units | Analyzed       | CAS No.    | Qual |
|--------------|--------------------------|--|-------|----------------|------------|------|
| Radium-226   | EPA 903.1                | <b>0.706 ± 0.505 (0.563)</b><br>C:NA T:95% | pCi/L | 08/06/18 10:53 | 13982-63-3 |      |
| Radium-228   | EPA 904.0                | <b>1.02U ± 0.518 (1.02)</b><br>C:66% T:86% | pCi/L | 08/06/18 13:30 | 15262-20-1 |      |
| Total Radium | Total Radium Calculation | <b>1.58U ± 1.02 (1.58)</b>                 | pCi/L | 08/07/18 14:05 | 7440-14-4  |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: D18F069

Pace Project No.: 35406244

| Parameters   | Method                   | Act ± Unc (MDC) Carr Trac                   | Units | Analyzed       | CAS No.    | Qual |
|--------------|--------------------------|---|-------|----------------|------------|------|
| Radium-226   | EPA 903.1                | <b>0.817U ± 0.489 (0.817)</b><br>C:NA T:90% | pCi/L | 08/06/18 10:29 | 13982-63-3 |      |
| Radium-228   | EPA 904.0                | <b>1.02U ± 0.456 (1.02)</b><br>C:60% T:90%  | pCi/L | 08/06/18 13:30 | 15262-20-1 |      |
| Total Radium | Total Radium Calculation | <b>1.84U ± 0.945 (1.84)</b>                 | pCi/L | 08/07/18 14:05 | 7440-14-4  |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: D18F069

Pace Project No.: 35406244

**Sample: D18F069-11**      **Lab ID: 35406244011**      Collected: 07/19/18 11:17      Received: 07/24/18 11:35      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters   | Method                      | Act ± Unc (MDC) Carr Trac                  | Units | Analyzed       | CAS No.    | Qual |
|--------------|-----------------------------|--|-------|----------------|------------|------|
| Radium-226   | EPA 903.1                   | <b>1.18 ± 0.645 (0.585)</b><br>C:NA T:84%  | pCi/L | 08/06/18 10:29 | 13982-63-3 |      |
| Radium-228   | EPA 904.0                   | <b>1.10U ± 0.516 (1.10)</b><br>C:70% T:83% | pCi/L | 08/06/18 13:30 | 15262-20-1 |      |
| Total Radium | Total Radium<br>Calculation | <b>1.69U ± 1.16 (1.69)</b>                 | pCi/L | 08/07/18 14:05 | 7440-14-4  |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: D18F069

Pace Project No.: 35406244

**Sample: D18F069-12**      **Lab ID: 35406244012**      Collected: 07/19/18 15:10      Received: 07/24/18 11:35      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters   | Method                      | Act ± Unc (MDC) Carr Trac                           | Units | Analyzed       | CAS No.    | Qual |
|--------------|-----------------------------|---|-------|----------------|------------|------|
| Radium-226   | EPA 903.1                   | <b>0.943U ± 0.476 (0.943)</b><br><b>C:NA T:93%</b>  | pCi/L | 08/06/18 10:29 | 13982-63-3 |      |
| Radium-228   | EPA 904.0                   | <b>0.892U ± 0.459 (0.892)</b><br><b>C:71% T:90%</b> | pCi/L | 08/06/18 13:30 | 15262-20-1 |      |
| Total Radium | Total Radium<br>Calculation | <b>1.84U ± 0.935 (1.84)</b>                         | pCi/L | 08/07/18 14:05 | 7440-14-4  |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: D18F069

Pace Project No.: 35406244

**Sample: D18F069-13**      **Lab ID: 35406244013**      Collected: 07/19/18 13:49      Received: 07/24/18 11:35      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters   | Method                      | Act ± Unc (MDC) Carr Trac                   | Units | Analyzed       | CAS No.    | Qual |
|--------------|-----------------------------|---|-------|----------------|------------|------|
| Radium-226   | EPA 903.1                   | <b>0.850U ± 0.594 (0.850)</b><br>C:NA T:94% | pCi/L | 08/06/18 10:29 | 13982-63-3 |      |
| Radium-228   | EPA 904.0                   | <b>1.13U ± 0.539 (1.13)</b><br>C:71% T:83%  | pCi/L | 08/06/18 16:53 | 15262-20-1 |      |
| Total Radium | Total Radium<br>Calculation | <b>1.98U ± 1.13 (1.98)</b>                  | pCi/L | 08/07/18 14:05 | 7440-14-4  |      |

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: D18F069  
Pace Project No.: 35406244

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|                         |   |                       |                  |
|-------------------------|---|-----------------------|------------------|
| QC Batch:               | 307910  | Analysis Method:      | EPA 903.1        |
| QC Batch Method:        | EPA 903.1   | Analysis Description: | 903.1 Radium-226 |
| Associated Lab Samples: | 35406244001, 35406244002, 35406244003, 35406244004, 35406244005, 35406244006, 35406244007, 35406244008, 35406244009, 35406244010, 35406244011, 35406244012, 35406244013 |                       |                  |

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|                         |   |         |       |
|-------------------------|---|---------|-------|
| METHOD BLANK:           | 1505189   | Matrix: | Water |
| Associated Lab Samples: | 35406244001, 35406244002, 35406244003, 35406244004, 35406244005, 35406244006, 35406244007, 35406244008, 35406244009, 35406244010, 35406244011, 35406244012, 35406244013 |         |       |

| Parameter  | Act ± Unc (MDC) Carr Trac         | Units | Analyzed       | Qualifiers |
|------------|-----------------------------------|-------|----------------|------------|
| Radium-226 | 0.0287 ± 0.406 (0.828) C:NA T:89% | pCi/L | 08/06/18 09:57 |            |

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: D18F069  
Pace Project No.: 35406244

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|                         |   |                       |                  |
|-------------------------|---|-----------------------|------------------|
| QC Batch:               | 307912  | Analysis Method:      | EPA 904.0        |
| QC Batch Method:        | EPA 904.0   | Analysis Description: | 904.0 Radium 228 |
| Associated Lab Samples: | 35406244001, 35406244002, 35406244003, 35406244004, 35406244005, 35406244006, 35406244007, 35406244008, 35406244009, 35406244010, 35406244011, 35406244012, 35406244013 |                       |                  |

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|                         |   |         |       |
|-------------------------|---|---------|-------|
| METHOD BLANK:           | 1505191   | Matrix: | Water |
| Associated Lab Samples: | 35406244001, 35406244002, 35406244003, 35406244004, 35406244005, 35406244006, 35406244007, 35406244008, 35406244009, 35406244010, 35406244011, 35406244012, 35406244013 |         |       |

| Parameter  | Act ± Unc (MDC) Carr Trac         | Units | Analyzed       | Qualifiers |
|------------|-----------------------------------|-------|----------------|------------|
| Radium-228 | 0.754 ± 0.361 (0.584) C:72% T:85% | pCi/L | 08/06/18 13:27 |            |

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## QUALIFIERS

Project: D18F069  
Pace Project No.: 35406244

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.  
ND - Not Detected at or above adjusted reporting limit.  
TNTC - Too Numerous To Count  
MDL - Adjusted Method Detection Limit.  
PQL - Practical Quantitation Limit.  
RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.  
S - Surrogate  
1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.  
Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.  
LCS(D) - Laboratory Control Sample (Duplicate)  
MS(D) - Matrix Spike (Duplicate)  
DUP - Sample Duplicate  
RPD - Relative Percent Difference  
NC - Not Calculable.  
SG - Silica Gel - Clean-Up  
U - Indicates the compound was analyzed for, but not detected.  
N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.  
Act - Activity  
Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval).  
Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)  
(MDC) - Minimum Detectable Concentration  
Trac - Tracer Recovery (%)  
Carr - Carrier Recovery (%)  
Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.  
TNI - The NELAC Institute.

### LABORATORIES

PASI-O Pace Analytical Services - Ormond Beach  
PASI-PA Pace Analytical Services - Greensburg

### ANALYTE QUALIFIERS

I The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.  
U Compound was analyzed for but not detected.  
J(M1) Estimated Value. Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.  
L Off-scale high. Actual value is known to be greater than value given.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: D18F069  
Pace Project No.: 35406244

| Lab ID      | Sample ID  | QC Batch Method          | QC Batch | Analytical Method | Analytical Batch |
|-------------|------------|--------------------------|----------|-------------------|------------------|
| 35406244001 | D18F069-01 | EPA 903.1                | 307910   |                   |                  |
| 35406244002 | D18F069-02 | EPA 903.1                | 307910   |                   |                  |
| 35406244003 | D18F069-03 | EPA 903.1                | 307910   |                   |                  |
| 35406244004 | D18F069-04 | EPA 903.1                | 307910   |                   |                  |
| 35406244005 | D18F069-05 | EPA 903.1                | 307910   |                   |                  |
| 35406244006 | D18F069-06 | EPA 903.1                | 307910   |                   |                  |
| 35406244007 | D18F069-07 | EPA 903.1                | 307910   |                   |                  |
| 35406244008 | D18F069-08 | EPA 903.1                | 307910   |                   |                  |
| 35406244009 | D18F069-09 | EPA 903.1                | 307910   |                   |                  |
| 35406244010 | D18F069-10 | EPA 903.1                | 307910   |                   |                  |
| 35406244011 | D18F069-11 | EPA 903.1                | 307910   |                   |                  |
| 35406244012 | D18F069-12 | EPA 903.1                | 307910   |                   |                  |
| 35406244013 | D18F069-13 | EPA 903.1                | 307910   |                   |                  |
| 35406244001 | D18F069-01 | EPA 904.0                | 307912   |                   |                  |
| 35406244002 | D18F069-02 | EPA 904.0                | 307912   |                   |                  |
| 35406244003 | D18F069-03 | EPA 904.0                | 307912   |                   |                  |
| 35406244004 | D18F069-04 | EPA 904.0                | 307912   |                   |                  |
| 35406244005 | D18F069-05 | EPA 904.0                | 307912   |                   |                  |
| 35406244006 | D18F069-06 | EPA 904.0                | 307912   |                   |                  |
| 35406244007 | D18F069-07 | EPA 904.0                | 307912   |                   |                  |
| 35406244008 | D18F069-08 | EPA 904.0                | 307912   |                   |                  |
| 35406244009 | D18F069-09 | EPA 904.0                | 307912   |                   |                  |
| 35406244010 | D18F069-10 | EPA 904.0                | 307912   |                   |                  |
| 35406244011 | D18F069-11 | EPA 904.0                | 307912   |                   |                  |
| 35406244012 | D18F069-12 | EPA 904.0                | 307912   |                   |                  |
| 35406244013 | D18F069-13 | EPA 904.0                | 307912   |                   |                  |
| 35406244001 | D18F069-01 | Total Radium Calculation | 308690   |                   |                  |
| 35406244002 | D18F069-02 | Total Radium Calculation | 308690   |                   |                  |
| 35406244003 | D18F069-03 | Total Radium Calculation | 308690   |                   |                  |
| 35406244004 | D18F069-04 | Total Radium Calculation | 308690   |                   |                  |
| 35406244005 | D18F069-05 | Total Radium Calculation | 308690   |                   |                  |
| 35406244006 | D18F069-06 | Total Radium Calculation | 308690   |                   |                  |
| 35406244007 | D18F069-07 | Total Radium Calculation | 308690   |                   |                  |
| 35406244008 | D18F069-08 | Total Radium Calculation | 308690   |                   |                  |
| 35406244009 | D18F069-09 | Total Radium Calculation | 308690   |                   |                  |
| 35406244010 | D18F069-10 | Total Radium Calculation | 308690   |                   |                  |
| 35406244011 | D18F069-11 | Total Radium Calculation | 308690   |                   |                  |
| 35406244012 | D18F069-12 | Total Radium Calculation | 308690   |                   |                  |
| 35406244013 | D18F069-13 | Total Radium Calculation | 308690   |                   |                  |
| 35406244001 | D18F069-01 | EPA 300.0                | 466733   |                   |                  |
| 35406244002 | D18F069-02 | EPA 300.0                | 466733   |                   |                  |
| 35406244003 | D18F069-03 | EPA 300.0                | 466733   |                   |                  |
| 35406244004 | D18F069-04 | EPA 300.0                | 466733   |                   |                  |
| 35406244005 | D18F069-05 | EPA 300.0                | 466733   |                   |                  |
| 35406244006 | D18F069-06 | EPA 300.0                | 466733   |                   |                  |
| 35406244007 | D18F069-07 | EPA 300.0                | 466733   |                   |                  |
| 35406244008 | D18F069-08 | EPA 300.0                | 466733   |                   |                  |

### REPORT OF LABORATORY ANALYSIS

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without the written consent of Pace Analytical Services, LLC.



**SUBCONTRACT ORDER**  
**Deerhaven Generating Station**  
**D18F069**

**WO# : 35406244**



**SENDING LABORATORY:**

Gainesville Regional Utilities  
 Deerhaven Generating Station  
 10001 NW 13th Street  
 Gainesville, FL 32653  
 Phone: 352-334-3434  
 Fax: 352-334-3149  
 Project Manager: Jeff Boudreau

**RECEIVING LABORATORY:**

Pace Analytical  
 8 East Tower Circle  
 Ormond Beach, FL 32174  
 Phone : (386) 672-5668  
 Fax: (386) 673-4001

| Analysis                        | Expires         | Laboratory ID                   | Comments   |
|---------------------------------|-----------------|---------------------------------|------------|
| <b>Sample Name: SIS-1</b>       |                 |                                 |            |
| <b>Sample ID: D18F069-01</b>    | <b>Water</b>    | <b>Sampled: 17-Jul-18 16:40</b> | [Redacted] |
| D_Anions - Fluoride             | 14-Aug-18 16:40 |                                 |            |
| D_Anions - Sulfates             | 14-Aug-18 16:40 |                                 |            |
| D_Radium226+228_Combined        | 09-Jan-19 16:40 |                                 |            |
| D_Anions - Chlorides            | 14-Aug-18 16:40 |                                 |            |
| <i>Containers Supplied:</i>     |                 |                                 |            |
| D_HDPE, Chill @<6*C - 250mL (B) |                 |                                 |            |
| D_HDPE, HNO3 pH<2 - 2000mL (C)  |                 |                                 |            |
| <b>Sample Name: SIS-2</b>       |                 |                                 |            |
| <b>Sample ID: D18F069-02</b>    | <b>Water</b>    | <b>Sampled: 18-Jul-18 10:03</b> | [Redacted] |
| D_Anions - Chlorides            | 15-Aug-18 10:03 |                                 |            |
| D_Anions - Fluoride             | 15-Aug-18 10:03 |                                 |            |
| D_Anions - Sulfates             | 15-Aug-18 10:03 |                                 |            |
| D_Radium226+228_Combined        | 10-Jan-19 10:03 |                                 |            |
| <i>Containers Supplied:</i>     |                 |                                 |            |
| D_HDPE, Chill @<6*C - 250mL (B) |                 |                                 |            |
| D_HDPE, HNO3 pH<2 - 2000mL (C)  |                 |                                 |            |
| <b>Sample Name: SIS-3</b>       |                 |                                 |            |
| <b>Sample ID: D18F069-03</b>    | <b>Water</b>    | <b>Sampled: 19-Jul-18 07:35</b> | [Redacted] |
| D_Anions - Chlorides            | 16-Aug-18 07:35 |                                 |            |
| D_Radium226+228_Combined        | 11-Jan-19 07:35 |                                 |            |
| D_Anions - Fluoride             | 16-Aug-18 07:35 |                                 |            |
| D_Anions - Sulfates             | 16-Aug-18 07:35 |                                 |            |
| <i>Containers Supplied:</i>     |                 |                                 |            |
| D_HDPE, Chill @<6*C - 250mL (B) |                 |                                 |            |
| D_HDPE, HNO3 pH<2 - 2000mL (C)  |                 |                                 |            |

*via FedEx*

Released By: *Shelby Kelly* Date: *7-23-18* Received By: *N. Richards* Date: *7/24/18 at 11:35*

Released By: \_\_\_\_\_ Date: \_\_\_\_\_ Received By: \_\_\_\_\_ Date: \_\_\_\_\_



**SUBCONTRACT ORDER**  
**Deerhaven Generating Station**  
**D18F069**

| Analysis                        | Expires         | Laboratory ID                  | Comments |
|---------------------------------|-----------------|--------------------------------|----------|
| <b>Sample Name: SIS-4</b>       |                 |                                |          |
| <b>Sample ID: D18F069-04</b>    | <b>Water</b>    | <b>Sampled:18-Jul-18 11:34</b> |          |
| D_Anions - Chlorides            | 15-Aug-18 11:34 |                                |          |
| D_Anions - Fluoride             | 15-Aug-18 11:34 |                                |          |
| D_Anions - Sulfates             | 15-Aug-18 11:34 |                                |          |
| D_Radium226+228_Combined        | 10-Jan-19 11:34 |                                |          |
| <i>Containers Supplied:</i>     |                 |                                |          |
| D_HDPE, Chill @<6*C - 250mL (B) |                 |                                |          |
| D_HDPE, HNO3 pH<2 - 2000mL (C)  |                 |                                |          |
| <b>Sample Name: LF-1</b>        |                 |                                |          |
| <b>Sample ID: D18F069-05</b>    | <b>Water</b>    | <b>Sampled:17-Jul-18 14:27</b> |          |
| D_Anions - Sulfates             | 14-Aug-18 14:27 |                                |          |
| D_Anions - Chlorides            | 14-Aug-18 14:27 |                                |          |
| D_Radium226+228_Combined        | 09-Jan-19 14:27 |                                |          |
| D_Anions - Fluoride             | 14-Aug-18 14:27 |                                |          |
| <i>Containers Supplied:</i>     |                 |                                |          |
| D_HDPE, Chill @<6*C - 250mL (B) |                 |                                |          |
| D_HDPE, HNO3 pH<2 - 2000mL (C)  |                 |                                |          |
| <b>Sample Name: LF-2</b>        |                 |                                |          |
| <b>Sample ID: D18F069-06</b>    | <b>Water</b>    | <b>Sampled:18-Jul-18 15:40</b> |          |
| D_Anions - Chlorides            | 15-Aug-18 15:40 |                                |          |
| D_Anions - Fluoride             | 15-Aug-18 15:40 |                                |          |
| D_Anions - Sulfates             | 15-Aug-18 15:40 |                                |          |
| D_Radium226+228_Combined        | 10-Jan-19 15:40 |                                |          |
| <i>Containers Supplied:</i>     |                 |                                |          |
| D_HDPE, Chill @<6*C - 250mL (B) |                 |                                |          |
| D_HDPE, HNO3 pH<2 - 2000mL (C)  |                 |                                |          |
| <b>Sample Name: LF-3</b>        |                 |                                |          |
| <b>Sample ID: D18F069-07</b>    | <b>Water</b>    | <b>Sampled:18-Jul-18 13:59</b> |          |
| D_Radium226+228_Combined        | 10-Jan-19 13:59 |                                |          |
| D_Anions - Chlorides            | 15-Aug-18 13:59 |                                |          |
| D_Anions - Fluoride             | 15-Aug-18 13:59 |                                |          |
| D_Anions - Sulfates             | 15-Aug-18 13:59 |                                |          |
| <i>Containers Supplied:</i>     |                 |                                |          |
| D_HDPE, Chill @<6*C - 250mL (B) |                 |                                |          |
| D_HDPE, HNO3 pH<2 - 2000mL (C)  |                 |                                |          |

*via Fedex*

Released By *Shelly Phillips* Date *7-23-18* Received By *N. Richards* Date *7/24/18 at 11:35*

Released By \_\_\_\_\_ Date \_\_\_\_\_ Received By \_\_\_\_\_ Date \_\_\_\_\_



**SUBCONTRACT ORDER**  
**Deerhaven Generating Station**  
**D18F069**

| Analysis                              | Expires         | Laboratory ID                   | Comments |
|---------------------------------------|-----------------|---------------------------------|----------|
| <b>Sample Name: LF-4</b>              |                 |                                 |          |
| <b>Sample ID: D18F069-08</b>          | <b>Water</b>    | <b>Sampled: 18-Jul-18 12:39</b> |          |
| D_Radium226+228_Combined              | 10-Jan-19 12:39 |                                 |          |
| D_Anions - Sulfates                   | 15-Aug-18 12:39 |                                 |          |
| D_Anions - Chlorides                  | 15-Aug-18 12:39 |                                 |          |
| D_Anions - Fluoride                   | 15-Aug-18 12:39 |                                 |          |
| <i>Containers Supplied:</i>           |                 |                                 |          |
| D_HDPE, Chill @<6*C - 250mL (B)       |                 |                                 |          |
| D_HDPE, HNO3 pH<2 - 2000mL (C)        |                 |                                 |          |
| <b>Sample Name: MWI-4-5 (R4T5B)</b>   |                 |                                 |          |
| <b>Sample ID: D18F069-09</b>          | <b>Water</b>    | <b>Sampled: 18-Jul-18 07:24</b> |          |
| D_Radium226+228_Combined              | 10-Jan-19 07:24 |                                 |          |
| <i>Containers Supplied:</i>           |                 |                                 |          |
| D_HDPE, HNO3 pH<2 - 2000mL (C)        |                 |                                 |          |
| <b>Sample Name: MWI-6-4 (R6T4B)</b>   |                 |                                 |          |
| <b>Sample ID: D18F069-10</b>          | <b>Water</b>    | <b>Sampled: 17-Jul-18 15:45</b> |          |
| D_Radium226+228_Combined              | 09-Jan-19 15:45 |                                 |          |
| <i>Containers Supplied:</i>           |                 |                                 |          |
| D_HDPE, HNO3 pH<2 - 2000mL (C)        |                 |                                 |          |
| <b>Sample Name: MWI-6-8 (R6T8B)</b>   |                 |                                 |          |
| <b>Sample ID: D18F069-11</b>          | <b>Water</b>    | <b>Sampled: 19-Jul-18 11:17</b> |          |
| D_Radium226+228_Combined              | 11-Jan-19 11:17 |                                 |          |
| <i>Containers Supplied:</i>           |                 |                                 |          |
| D_HDPE, HNO3 pH<2 - 2000mL (C)        |                 |                                 |          |
| <b>Sample Name: MWC-10-8 (R10T8)</b>  |                 |                                 |          |
| <b>Sample ID: D18F069-12</b>          | <b>Water</b>    | <b>Sampled: 19-Jul-18 15:10</b> |          |
| D_Radium226+228_Combined              | 11-Jan-19 15:10 |                                 |          |
| <i>Containers Supplied:</i>           |                 |                                 |          |
| D_HDPE, HNO3 pH<2 - 2000mL (C)        |                 |                                 |          |
| <b>Sample Name: MWC-11-4 (R11T4B)</b> |                 |                                 |          |
| <b>Sample ID: D18F069-13</b>          | <b>Water</b>    | <b>Sampled: 19-Jul-18 13:49</b> |          |
| D_Radium226+228_Combined              | 11-Jan-19 13:49 |                                 |          |
| <i>Containers Supplied:</i>           |                 |                                 |          |
| D_HDPE, HNO3 pH<2 - 2000mL (C)        |                 |                                 |          |
| <b>Sample Name: EBLANK</b>            |                 |                                 |          |
| <b>Sample ID: D18F069-14</b>          | <b>Water</b>    | <b>Sampled: 18-Jul-18 08:25</b> |          |
| D_Radium226+228_Combined              | 10-Jan-19 08:25 |                                 |          |
| <i>Containers Supplied:</i>           |                 |                                 |          |
| D_HDPE, HNO3 pH<2 - 2000mL (C)        |                 |                                 |          |

*Via Fedex*

*Melby Kelly*

*7-23-18*

*N. Richards*

*7/24/18 at 11:35*

Released By

Date

Received By

Date

Released By

Date

Received By

Date



Document Name:  
Sample Condition Upon Receipt Form  
Document No.:  
F-FL-C-007 rev. 13

Document Revised:  
May 30, 2018  
Issuing Authority:  
Pace Florida Quality Office

**Sample Condition Upon Receipt Form (SCUR)**

**Project #** **WO# : 35406244**  
**Project Manager:** PM: JSB **Due Date:** 08/07/18  
**Client:** CLIENT: DEELAB

**Date and Initials of person:**  
**Examining contents:** \_\_\_\_\_  
**Label:** \_\_\_\_\_  
**Deliver:** \_\_\_\_\_  
**pH:** \_\_\_\_\_

Thermometer Used: T345 Date: 7/24/18 Time: 1135 Initials: AKP

State of Origin: +0.2  For WV projects, all containers verified to  $\leq 6$  °C

Cooler #1 Temp. °C 0.8 (Visual) +0.2 (Correction Factor) 1.0 (Actual)  
Cooler #2 Temp. °C 25.3 (Visual) 1 (Correction Factor) 25.5 (Actual)  
Cooler #3 Temp. °C 26.3 (Visual) \_\_\_\_\_ (Correction Factor) 26.5 (Actual)  
Cooler #4 Temp. °C 26.4 (Visual) 26.6 (Correction Factor) 26.6 (Actual)  
Cooler #5 Temp. °C 24.8 (Visual) \_\_\_\_\_ (Correction Factor) 25.0 (Actual)  
Cooler #6 Temp. °C 24.5 (Visual) \_\_\_\_\_ (Correction Factor) 24.7 (Actual)

Samples on ice, cooling process has begun  
 Samples on ice, cooling process has begun  
 Samples on ice, cooling process has begun  
 Samples on ice, cooling process has begun  
 Samples on ice, cooling process has begun  
 Samples on ice, cooling process has begun

Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace  Other \_\_\_\_\_  
Shipping Method:  First Overnight  Priority Overnight  Standard Overnight  Ground  International Priority  
 Other \_\_\_\_\_

Billing:  Recipient  Sender  Third Party  Credit Card  Unknown

Tracking # 8127 8324 8398 / 8127 8324 8387 / 8127 8324 8365 / 8127 8324 8354

Custody Seal on Cooler/Box Present:  Yes  No Seals intact:  Yes  No Ice: Wet Blue Dry None

Packing Material:  Bubble Wrap  Bubble Bags  None  Other \_\_\_\_\_

Samples shorted to lab (If Yes, complete) Shorted Date: \_\_\_\_\_ Shorted Time: \_\_\_\_\_ Qty: \_\_\_\_\_

**Comments:**

|   |  |  |
|---|--|--|
| Chain of Custody Present  | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |  |
| Chain of Custody Filled Out   | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |  |
| Relinquished Signature & Sampler Name COC   | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |  |
| Samples Arrived within Hold Time  | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |  |
| Rush TAT requested on COC   | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A |  |
| Sufficient Volume   | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |  |
| Correct Containers Used   | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |  |
| Containers Intact   | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |  |
| Sample Labels match COC (sample IDs & date/time of collection)  | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |  |
| All containers needing acid/base preservation have been checked.  | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Preservation Information:<br>Preservative: _____<br>Lot #/Trace #: _____<br>Date: _____ Time: _____<br>Initials: _____ |
| All Containers needing preservation are found to be in compliance with EPA recommendation:<br>Exceptions: VOA, Coliform, TOC, O&G, Carbamates | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |  |
| Headspace in VOA Vials? (>6mm):   | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A |  |
| Trip Blank Present:   | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A |  |

**Client Notification/ Resolution:**  
Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

**Comments/ Resolution (use back for additional comments):** 8127 8324 8402 / 8127 8324 8413

Project Manager Review: \_\_\_\_\_

Date: \_\_\_\_\_

July 23, 2018

Jeff Baylor, Project Manager  
Pace Analytical Services, Inc.  
8 East Tower Circle  
Ormond Beach, FL 32174

Dear Mr. Jeff Baylor,

Enclosed are 22 samples with a COC for Project D18F069:

- 8 samples for Anion (Cl, Fl, and SO<sub>4</sub>) analysis - *in cooler*
- 14 samples for Radium 226 & 228 Combined - *3 boxes (1 with 6, 2 with 4 ea)*

NOTES:

1. All fluoride samples have been chilled to  $\leq 6^{\circ}\text{C}$ .
2. Radium samples have been acidified to pH  $< 2$  using environmental grade nitric acid
3. Samples have not been filtered

Please be sure to log the samples in by using the **unique** SIDN numbers (i.e. D18F069-##) and not the station identifiers (i.e. SIS1). Station ID is not unique to the sampling event.

In addition, please send the data in the excel format for GRU.

If you have any questions or notice any anomalies, please contact me at 352-393-6346.

Thank you,

Jeffery Boudreau  
GRU - Deerhaven Generating Station  
Laboratory Technical Director  
352-393-6346  
[boudreaujp@gru.com](mailto:boudreaujp@gru.com)



August 02, 2018

Service Request No:J1805321

Jeffery Boudreau  
Gainesville Regional Utilities  
10001 NW 13th St  
Gainesville, FL 32653

**Laboratory Results for: D18F069**

Dear Jeffery,

Enclosed are the results of the sample(s) submitted to our laboratory July 24, 2018  
For your reference, these analyses have been assigned our service request number **J1805321**.

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and ALS Environmental is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report. In accordance to the NELAC 2003 Standard, a statement on the estimated uncertainty of measurement of any quantitative analysis will be supplied upon request.

Respectfully submitted,

**ALS Group USA, Corp. dba ALS Environmental**

Gina Bondani  
Project Manager

ADDRESS 9143 Philips Highway, Suite 200, Jacksonville, FL 32256  
PHONE +1 904 739 2277 | FAX +1 904 739 2011  
ALS Group USA, Corp.  
dba ALS Environmental





---

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ALS Group USA, Corp  
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## Table of Contents

|                            |    |
|----------------------------|----|
| CoverLetter                | 1  |
| Table of Contents          | 2  |
| Narrative Documents        | 4  |
| Narrative Documents        | 5  |
| Hit Summary List           | 6  |
| Sample Receipt Information | 9  |
| Sample Cross-Reference     | 10 |
| Chain Of Custody           | 11 |
| Miscellaneous Forms        | 13 |
| Qualifiers                 | 14 |
| Acronyms                   | 16 |
| Analyst Summary            | 17 |
| Sample Results             | 19 |
| Metals                     | 20 |
| D18F069-01 - Metals        | 21 |
| D18F069-02 - Metals        | 22 |
| D18F069-03 - Metals        | 23 |
| D18F069-04 - Metals        | 24 |
| D18F069-05 - Metals        | 25 |
| D18F069-06 - Metals        | 26 |
| D18F069-07 - Metals        | 27 |
| D18F069-08 - Metals        | 28 |

## Table of Contents (continued)

|   |    |
|---|----|
| QC Summary Forms                        | 29 |
| Metals                                  | 30 |
| Metals                                  |    |
| Method Blank - Metals                   | 31 |
| J1805321-004DMS D18F069-04 - DMS Metals | 32 |
| J1805321-LCS - LCS Metals               | 33 |



# Narrative Documents

**ALS Environmental—Jacksonville Laboratory**  
9143 Philips Highway, Suite 200, Jacksonville, FL 32256  
Phone (904) 739-2277 Fax (904) 739-2011  
[www.alsglobal.com](http://www.alsglobal.com)



**Client:** Gainesville Regional Utilities  
**Project:** D18F069/D18F069  
**Sample Matrix:** Water

**Service Request:** J1805321  
**Date Received:** 7/24/18

### CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier II data deliverables, including results of QC samples analyzed from this delivery group. When appropriate to the procedure, method blank results have been reported with each analytical test. Analytical procedures performed by the lab are validated in accordance with NELAC standards. Parameters that are included in the NELAC Fields of Testing but are not included in the lab's NELAC accreditation are identified in the discussion of each analytical procedure.

#### Sample Receipt

8 water samples were received for analysis at ALS Environmental on 7/24/18. The samples were received in good condition and consistent with the accompanying chain of custody form. Samples are refrigerated at  $\leq 6^{\circ}\text{C}$  upon receipt at the lab except for aqueous samples designated for metals analyses, which are stored at room temperature.

#### Metals Analyses:

No significant data anomalies were noted with this analysis.

#### Revision Notes:

This analytical report is a revision of the original report generated on 07/30/2018 @ 11:53am. The following specific changes were made to the report: metals reporting list adjusted.

Approved by  Date 8/2/2018



**SAMPLE DETECTION SUMMARY**

**CLIENT ID: D18F069-01** **Lab ID: J1805321-001**

| Analyte           | Results | Flag | MDL    | MRL   | Units | Method |
|-------------------|---------|------|--------|-------|-------|--------|
| Antimony, Total   | 0.2     | I    | 0.04   | 1.0   | ug/L  | 200.8  |
| Arsenic, Total    | 3.5     |      | 0.10   | 1.0   | ug/L  | 200.8  |
| Barium, Total     | 0.019   |      | 0.001  | 0.010 | mg/L  | 200.7  |
| Calcium, Total    | 75.1    |      | 0.04   | 0.10  | mg/L  | 200.7  |
| Cobalt, Total     | 0.3     | I    | 0.03   | 1.0   | ug/L  | 200.8  |
| Lead, Total       | 0.06    | I    | 0.03   | 0.50  | ug/L  | 200.8  |
| Molybdenum, Total | 0.008   | I    | 0.0003 | 0.010 | mg/L  | 200.7  |
| Selenium, Total   | 0.015   | V    | 0.002  | 0.010 | mg/L  | 200.7  |
| Thallium, Total   | 0.03    | I    | 0.02   | 0.20  | ug/L  | 200.8  |

**CLIENT ID: D18F069-02** **Lab ID: J1805321-002**

| Analyte           | Results | Flag | MDL    | MRL   | Units | Method |
|-------------------|---------|------|--------|-------|-------|--------|
| Antimony, Total   | 0.2     | I    | 0.04   | 1.0   | ug/L  | 200.8  |
| Arsenic, Total    | 1.2     |      | 0.10   | 1.0   | ug/L  | 200.8  |
| Barium, Total     | 0.008   | I    | 0.001  | 0.010 | mg/L  | 200.7  |
| Calcium, Total    | 91.7    |      | 0.04   | 0.10  | mg/L  | 200.7  |
| Cobalt, Total     | 0.1     | I    | 0.03   | 1.0   | ug/L  | 200.8  |
| Lead, Total       | 0.03    | I    | 0.03   | 0.50  | ug/L  | 200.8  |
| Molybdenum, Total | 0.008   | I    | 0.0003 | 0.010 | mg/L  | 200.7  |
| Selenium, Total   | 0.019   | V    | 0.002  | 0.010 | mg/L  | 200.7  |

**CLIENT ID: D18F069-03** **Lab ID: J1805321-003**

| Analyte           | Results | Flag | MDL    | MRL   | Units | Method |
|-------------------|---------|------|--------|-------|-------|--------|
| Antimony, Total   | 0.3     | I    | 0.04   | 1.0   | ug/L  | 200.8  |
| Arsenic, Total    | 2.8     |      | 0.10   | 1.0   | ug/L  | 200.8  |
| Barium, Total     | 0.024   |      | 0.001  | 0.010 | mg/L  | 200.7  |
| Boron, Total      | 0.025   | IV   | 0.025  | 0.050 | mg/L  | 200.7  |
| Calcium, Total    | 81.1    |      | 0.04   | 0.10  | mg/L  | 200.7  |
| Cobalt, Total     | 0.4     | I    | 0.03   | 1.0   | ug/L  | 200.8  |
| Lead, Total       | 0.06    | I    | 0.03   | 0.50  | ug/L  | 200.8  |
| Molybdenum, Total | 0.009   | I    | 0.0003 | 0.010 | mg/L  | 200.7  |
| Selenium, Total   | 0.014   | V    | 0.002  | 0.010 | mg/L  | 200.7  |
| Thallium, Total   | 0.07    | I    | 0.02   | 0.20  | ug/L  | 200.8  |

**CLIENT ID: D18F069-04** **Lab ID: J1805321-004**

| Analyte           | Results | Flag | MDL    | MRL   | Units | Method |
|-------------------|---------|------|--------|-------|-------|--------|
| Antimony, Total   | 0.2     | I    | 0.04   | 1.0   | ug/L  | 200.8  |
| Arsenic, Total    | 1.5     |      | 0.10   | 1.0   | ug/L  | 200.8  |
| Barium, Total     | 0.041   |      | 0.001  | 0.010 | mg/L  | 200.7  |
| Calcium, Total    | 69.5    |      | 0.04   | 0.10  | mg/L  | 200.7  |
| Cobalt, Total     | 0.9     | I    | 0.03   | 1.0   | ug/L  | 200.8  |
| Lead, Total       | 0.04    | I    | 0.03   | 0.50  | ug/L  | 200.8  |
| Molybdenum, Total | 0.006   | I    | 0.0003 | 0.010 | mg/L  | 200.7  |



**SAMPLE DETECTION SUMMARY**

**CLIENT ID: D18F069-04** **Lab ID: J1805321-004**

| Analyte         | Results | Flag | MDL   | MRL   | Units | Method |
|-----------------|---------|------|-------|-------|-------|--------|
| Selenium, Total | 0.015   | V    | 0.002 | 0.010 | mg/L  | 200.7  |
| Thallium, Total | 0.03    | I    | 0.02  | 0.20  | ug/L  | 200.8  |

**CLIENT ID: D18F069-05** **Lab ID: J1805321-005**

| Analyte           | Results | Flag | MDL    | MRL   | Units | Method |
|-------------------|---------|------|--------|-------|-------|--------|
| Antimony, Total   | 0.4     | I    | 0.04   | 1.0   | ug/L  | 200.8  |
| Arsenic, Total    | 0.6     | I    | 0.10   | 1.0   | ug/L  | 200.8  |
| Barium, Total     | 0.097   |      | 0.001  | 0.010 | mg/L  | 200.7  |
| Boron, Total      | 0.215   | V    | 0.025  | 0.050 | mg/L  | 200.7  |
| Calcium, Total    | 19.9    |      | 0.04   | 0.10  | mg/L  | 200.7  |
| Cobalt, Total     | 0.4     | I    | 0.03   | 1.0   | ug/L  | 200.8  |
| Molybdenum, Total | 0.007   | I    | 0.0003 | 0.010 | mg/L  | 200.7  |
| Selenium, Total   | 0.008   | IV   | 0.002  | 0.010 | mg/L  | 200.7  |
| Thallium, Total   | 0.14    | I    | 0.02   | 0.20  | ug/L  | 200.8  |

**CLIENT ID: D18F069-06** **Lab ID: J1805321-006**

| Analyte           | Results | Flag | MDL    | MRL   | Units | Method |
|-------------------|---------|------|--------|-------|-------|--------|
| Antimony, Total   | 1.3     |      | 0.04   | 1.0   | ug/L  | 200.8  |
| Arsenic, Total    | 1.4     |      | 0.10   | 1.0   | ug/L  | 200.8  |
| Barium, Total     | 0.133   |      | 0.001  | 0.010 | mg/L  | 200.7  |
| Boron, Total      | 0.356   |      | 0.025  | 0.050 | mg/L  | 200.7  |
| Calcium, Total    | 114     |      | 0.04   | 0.10  | mg/L  | 200.7  |
| Chromium, Total   | 0.001   | I    | 0.0004 | 0.010 | mg/L  | 200.7  |
| Cobalt, Total     | 0.9     | I    | 0.03   | 1.0   | ug/L  | 200.8  |
| Lead, Total       | 0.13    | I    | 0.03   | 0.50  | ug/L  | 200.8  |
| Molybdenum, Total | 0.043   |      | 0.0003 | 0.010 | mg/L  | 200.7  |
| Selenium, Total   | 0.019   | V    | 0.002  | 0.010 | mg/L  | 200.7  |
| Thallium, Total   | 0.14    | I    | 0.02   | 0.20  | ug/L  | 200.8  |

**CLIENT ID: D18F069-07** **Lab ID: J1805321-007**

| Analyte           | Results | Flag | MDL    | MRL   | Units | Method |
|-------------------|---------|------|--------|-------|-------|--------|
| Antimony, Total   | 0.3     | I    | 0.04   | 1.0   | ug/L  | 200.8  |
| Arsenic, Total    | 6.9     |      | 0.10   | 1.0   | ug/L  | 200.8  |
| Barium, Total     | 0.083   |      | 0.001  | 0.010 | mg/L  | 200.7  |
| Boron, Total      | 3.35    |      | 0.025  | 0.050 | mg/L  | 200.7  |
| Calcium, Total    | 90.7    |      | 0.04   | 0.10  | mg/L  | 200.7  |
| Chromium, Total   | 0.003   | I    | 0.0004 | 0.010 | mg/L  | 200.7  |
| Cobalt, Total     | 0.8     | I    | 0.03   | 1.0   | ug/L  | 200.8  |
| Lead, Total       | 0.13    | I    | 0.03   | 0.50  | ug/L  | 200.8  |
| Lithium, Total    | 0.01    | I    | 0.002  | 0.10  | mg/L  | 200.7  |
| Molybdenum, Total | 0.123   |      | 0.0003 | 0.010 | mg/L  | 200.7  |
| Selenium, Total   | 0.013   | V    | 0.002  | 0.010 | mg/L  | 200.7  |
| Thallium, Total   | 0.04    | I    | 0.02   | 0.20  | ug/L  | 200.8  |



**SAMPLE DETECTION SUMMARY**

|                              |                             |
|------------------------------|-----------------------------|
| <b>CLIENT ID: D18F069-07</b> | <b>Lab ID: J1805321-007</b> |
|------------------------------|-----------------------------|

| Analyte | Results | Flag | MDL | MRL | Units | Method |
|---------|---------|------|-----|-----|-------|--------|
|---------|---------|------|-----|-----|-------|--------|

|                              |                             |
|------------------------------|-----------------------------|
| <b>CLIENT ID: D18F069-08</b> | <b>Lab ID: J1805321-008</b> |
|------------------------------|-----------------------------|

| Analyte           | Results | Flag | MDL    | MRL   | Units | Method |
|-------------------|---------|------|--------|-------|-------|--------|
| Antimony, Total   | 4.3     |      | 0.04   | 1.0   | ug/L  | 200.8  |
| Arsenic, Total    | 3.8     |      | 0.10   | 1.0   | ug/L  | 200.8  |
| Barium, Total     | 0.075   |      | 0.001  | 0.010 | mg/L  | 200.7  |
| Boron, Total      | 0.968   |      | 0.025  | 0.050 | mg/L  | 200.7  |
| Calcium, Total    | 136     |      | 0.04   | 0.10  | mg/L  | 200.7  |
| Chromium, Total   | 0.001   | I    | 0.0004 | 0.010 | mg/L  | 200.7  |
| Cobalt, Total     | 1.2     |      | 0.03   | 1.0   | ug/L  | 200.8  |
| Lithium, Total    | 0.22    |      | 0.002  | 0.10  | mg/L  | 200.7  |
| Molybdenum, Total | 0.101   |      | 0.0003 | 0.010 | mg/L  | 200.7  |
| Selenium, Total   | 0.016   | V    | 0.002  | 0.010 | mg/L  | 200.7  |
| Thallium, Total   | 0.61    |      | 0.02   | 0.20  | ug/L  | 200.8  |



## Sample Receipt Information

**ALS Environmental—Jacksonville Laboratory**  
9143 Philips Highway, Suite 200, Jacksonville, FL 32256  
Phone (904) 739-2277 Fax (904) 739-2011  
[www.alsglobal.com](http://www.alsglobal.com)



**Client:** Gainesville Regional Utilities  
**Project:** D18F069/D18F069

**Service Request:**J1805321

**SAMPLE CROSS-REFERENCE**

| <u>SAMPLE #</u> | <u>CLIENT SAMPLE ID</u> | <u>DATE</u> | <u>TIME</u> |
|-----------------|-------------------------|-------------|-------------|
| J1805321-001    | D18F069-01              | 7/17/2018   | 1640        |
| J1805321-002    | D18F069-02              | 7/18/2018   | 1003        |
| J1805321-003    | D18F069-03              | 7/19/2018   | 0735        |
| J1805321-004    | D18F069-04              | 7/18/2018   | 1134        |
| J1805321-005    | D18F069-05              | 7/17/2018   | 1427        |
| J1805321-006    | D18F069-06              | 7/18/2018   | 1540        |
| J1805321-007    | D18F069-07              | 7/18/2018   | 1359        |
| J1805321-008    | D18F069-08              | 7/18/2018   | 1239        |

**Cooler Receipt Form**

Client: GPU Service Request #: J1805321  
 Project: DISFO69 Shipping paid by ALS?  
 Cooler received on 7/24/18 and opened on 7/24/18 by CR Yes No N/A  
 COURIER: ALS UPS FEDEX DHL Client Other \_\_\_\_\_ Airbill # 81278324 8376

- |    |  |                                      |                                     |  |
|----|--|--------------------------------------|-------------------------------------|--|
| 1  | Were custody seals on outside of cooler?<br>If yes, how many and where?  | Yes                                  | <input checked="" type="radio"/> No |  |
| 2  | Were seals intact and signature and date correct?  | Yes                                  | No                                  | <input checked="" type="radio"/> N/A       |
| 3  | Were custody papers properly filled out?   | <input checked="" type="radio"/> Yes | No                                  | N/A  |
| 4  | Temperature of cooler(s) upon receipt (Should be 0°C and ≤ 6°C) <u>Ambient</u>   |                                      |                                     |  |
| 5  | Thermometer ID _____   |                                      |                                     |  |
| 6  | Temperature Blank Present?   | Yes                                  | <input checked="" type="radio"/> No |  |
| 7  | Were Ice or Ice Packs present  | Ice                                  | Ice Packs                           | <input checked="" type="radio"/> No        |
| 8  | Did all bottles arrive in good condition (unbroken, etc....)?  | <input checked="" type="radio"/> Yes | No                                  | N/A  |
| 9  | Type of packing material present   | Netting                              | Vial Holder                         | Bubble Wrap                                |
| 10 | Were all bottle labels complete (sample ID, preservation, etc....)?  | Paper                                | Styrofoam                           | Other <input checked="" type="radio"/> N/A |
| 11 | Did all bottle labels and tags agree with custody papers?  | <input checked="" type="radio"/> Yes | No                                  | N/A  |
| 12 | Were the correct bottles used for the tests indicated?   | <input checked="" type="radio"/> Yes | No                                  | N/A  |
| 13 | Were all of the preserved bottles received with the appropriate preservative?<br><u>HNO3 pH&lt;2</u> <u>H2SO4 pH&lt;2</u> <u>ZnAc2/NaOH pH&gt;9</u> <u>NaOH pH&gt;12</u> <u>HCl pH&lt;2</u><br><small>Preservative additions noted below</small> | <input checked="" type="radio"/> Yes | No                                  | N/A  |
| 14 | Were all samples received within analysis holding times?   | <input checked="" type="radio"/> Yes | No                                  | N/A  |
| 15 | Were VOA vials free of air bubbles greater than 6mm? If present, note below  | Yes                                  | No                                  | <input checked="" type="radio"/> N/A       |
| 16 | Where did the bottles originate?   | <input checked="" type="radio"/> ALS | Client                              |  |

| Sample ID | Reagent | Lot # | ml added | Initials Date/Time |
|-----------|---------|-------|----------|--------------------|
|           |         |       |          |                    |
|           |         |       |          |                    |
|           |         |       |          |                    |
|           |         |       |          |                    |
|           |         |       |          |                    |
|           |         |       |          |                    |
|           |         |       |          |                    |
|           |         |       |          |                    |
|           |         |       |          |                    |
|           |         |       |          |                    |

Additional comments and/or explanation of all discrepancies noted above:  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Client approval to run samples if discrepancies noted: \_\_\_\_\_ Date: \_\_\_\_\_

J1805321

5

Energy Supply –Deerhaven

Gainesville Regional Utilities  
D18F069



July 23, 2018

ALS Global –Jacksonville  
Gina Bondani  
9143 Philips Hwy Suite 200  
Jacksonville, FL 32256  
904-739-2277

Dear Ms. Gina Bondani,

Enclosed are 8 samples for **Project D18F069**:

- 8 samples for As, Co, Pb, Sb & Tl analysis by **Method 200.8** and the rest of the metals by **Method 200.7**. Four of the 8 are not analyzed for Be and the other 4 are not analyzed for Cd. Refer to the COC, the bottle labels, or attached spreadsheet.

Please be sure to log the samples in by using the **unique** SIDN numbers (i.e. D18F069-##) and not the station identifiers (i.e. SIS1). Station ID is not unique to the sampling event. If you have any questions or concerns, please contact me.

NOTES:

- 1) Samples are not filtered.
- 2) Samples have been acidified to a pH less than 2.

Thank you,

Jeffery Boudreau  
GRU - Deerhaven Generating Station  
Laboratory Technical Director  
352-393-6346  
[boudreaujp@gru.com](mailto:boudreaujp@gru.com)



## Miscellaneous Forms

**ALS Environmental—Jacksonville Laboratory**  
9143 Philips Highway, Suite 200, Jacksonville, FL 32256  
Phone (904) 739-2277 Fax (904) 739-2011  
[www.alsglobal.com](http://www.alsglobal.com)



## **FLORIDA DEP DATA QUALIFIERS**

- B Results based upon colony counts outside the acceptable range.
- D Measurement was made in the field.
- H Value based on field kit determination; results may not be accurate.
- I The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
- J Estimated value (one of the following reasons is discussed in the project case narrative).
1. The result may be inaccurate because the surrogate recovery limits have been exceeded.
  2. No known quality control criteria exists for the component.
  3. The reported value failed to meet the established quality control criteria for either precision or accuracy.
  4. The sample matrix interfered with the ability to make any accurate determination (e.g., primary and confirmation results show greater than 40% RPD).
  5. The data is questionable because of improper laboratory or field protocols (e.g., GC/MS Tune did not meet method criteria).
- K Off scale low. The value is less than the lowest calibration standard but greater than the method reporting limit (MRL).
- L Off scale high. The analyte is above the upper limit of the linear calibration range.
- M The MDL/MRL has been elevated because the analyte could not be accurately quantified due to matrix interference.
- N Presumptive evidence of the analyte. Confirmation was not performed.
- Q Sample held beyond the accepted holding time.
- T Value reported is less than the laboratory method detection limit. The value is reported for informational purposes only.
- U Indicates that the compound was analyzed for but not detected.
- V Indicates that the analyte was detected in both the sample and the associated method blank.
- Y The laboratory analysis was from an improperly preserved sample.
- Z Too many colonies were present (TNTC). The numeric value represents the filtration volume.



**Jacksonville Lab ID # for State Certifications<sup>1</sup>**

| <b>Agency</b>  | <b>Number</b>    | <b>Expiration Date</b> |
|--|------------------|------------------------|
| Department of Defense  | 66206            | 6/30/2020              |
| Florida Department of Health                                   | E82502           | 6/30/2019              |
| Georgia Department of Natural Resources                        | 958              | 6/30/2019              |
| Kentucky Division of Waste Management                          | 123042           | 6/30/2019              |
| Louisiana Department of Environmental Quality                  | 02086            | 6/30/2019              |
| Maine Department of Health and Human Services                  | 2017003          | 2/3/2019               |
| North Carolina Department of Environment and Natural Resources | 527              | 12/31/2018             |
| Pennsylvania Department of Environmental Protection            | 68-04835         | 8/31/2018              |
| South Carolina Department of Health and Environmental Control  | 96021001         | 6/30/2018              |
| Texas Commission on Environmental Quality                      | T104704197-18-10 | 5/31/2019              |
| Virginia Environmental Accreditation Program                   | 460191           | 12/14/2018             |

<sup>1</sup> Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state or agency requirements. The test results meet requirements of the current NELAP/TNI standards or state or agency requirements, where applicable, except as noted in the laboratory case narrative provided. For a specific list of accredited analytes, refer to <http://www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads/North-America-Downloads>



## ACRONYMS

|            |  |
|------------|--|
| ASTM       | American Society for Testing and Materials   |
| A2LA       | American Association for Laboratory Accreditation  |
| CARB       | California Air Resources Board   |
| CAS Number | Chemical Abstract Service registry Number  |
| CFC        | Chlorofluorocarbon   |
| CFU        | Colony-Forming Unit  |
| DEC        | Department of Environmental Conservation   |
| DEQ        | Department of Environmental Quality  |
| DHS        | Department of Health Services  |
| DOE        | Department of Ecology  |
| DOH        | Department of Health   |
| EPA        | U. S. Environmental Protection Agency  |
| ELAP       | Environmental Laboratory Accreditation Program   |
| GC         | Gas Chromatography   |
| GC/MS      | Gas Chromatography/Mass Spectrometry   |
| LUFT       | Leaking Underground Fuel Tank  |
| M          | Modified   |
| MCL        | Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA. |
| MDL        | Method Detection Limit   |
| MPN        | Most Probable Number   |
| MRL        | Method Reporting Limit   |
| NA         | Not Applicable   |
| NC         | Not Calculated   |
| NCASI      | National Council of the Paper Industry for Air and Stream Improvement  |
| ND         | Not Detected   |
| NIOSH      | National Institute for Occupational Safety and Health  |
| PQL        | Practical Quantitation Limit   |
| RCRA       | Resource Conservation and Recovery Act   |
| SIM        | Selected Ion Monitoring  |
| TPH        | Total Petroleum Hydrocarbons   |
| tr         | Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.                           |

ALS Group USA, Corp.  
dba ALS Environmental

Analyst Summary report

**Client:** Gainesville Regional Utilities  
**Project:** D18F069/D18F069

**Service Request:** J1805321

**Sample Name:** D18F069-01  
**Lab Code:** J1805321-001  
**Sample Matrix:** Water

**Date Collected:** 07/17/18  
**Date Received:** 07/24/18

**Analysis Method**  
200.7  
200.8

**Extracted/Digested By**  
EGARDNER  
CSULLIVAN

**Analyzed By**  
EGARDNER  
CSULLIVAN

**Sample Name:** D18F069-02  
**Lab Code:** J1805321-002  
**Sample Matrix:** Water

**Date Collected:** 07/18/18  
**Date Received:** 07/24/18

**Analysis Method**  
200.7  
200.8

**Extracted/Digested By**  
EGARDNER  
CSULLIVAN

**Analyzed By**  
EGARDNER  
CSULLIVAN

**Sample Name:** D18F069-03  
**Lab Code:** J1805321-003  
**Sample Matrix:** Water

**Date Collected:** 07/19/18  
**Date Received:** 07/24/18

**Analysis Method**  
200.7  
200.8

**Extracted/Digested By**  
EGARDNER  
CSULLIVAN

**Analyzed By**  
EGARDNER  
CSULLIVAN

**Sample Name:** D18F069-04  
**Lab Code:** J1805321-004  
**Sample Matrix:** Water

**Date Collected:** 07/18/18  
**Date Received:** 07/24/18

**Analysis Method**  
200.7  
200.8

**Extracted/Digested By**  
EGARDNER  
CSULLIVAN

**Analyzed By**  
EGARDNER  
CSULLIVAN



ALS Group USA, Corp.  
dba ALS Environmental

Analyst Summary report

**Client:** Gainesville Regional Utilities  
**Project:** D18F069/D18F069

**Service Request:** J1805321

**Sample Name:** D18F069-05  
**Lab Code:** J1805321-005  
**Sample Matrix:** Water

**Date Collected:** 07/17/18  
**Date Received:** 07/24/18

**Analysis Method**  
200.7  
200.8

**Extracted/Digested By**  
EGARDNER  
CSULLIVAN

**Analyzed By**  
EGARDNER  
CSULLIVAN

**Sample Name:** D18F069-06  
**Lab Code:** J1805321-006  
**Sample Matrix:** Water

**Date Collected:** 07/18/18  
**Date Received:** 07/24/18

**Analysis Method**  
200.7  
200.8

**Extracted/Digested By**  
EGARDNER  
CSULLIVAN

**Analyzed By**  
EGARDNER  
CSULLIVAN

**Sample Name:** D18F069-07  
**Lab Code:** J1805321-007  
**Sample Matrix:** Water

**Date Collected:** 07/18/18  
**Date Received:** 07/24/18

**Analysis Method**  
200.7  
200.8

**Extracted/Digested By**  
EGARDNER  
CSULLIVAN

**Analyzed By**  
EGARDNER  
CSULLIVAN

**Sample Name:** D18F069-08  
**Lab Code:** J1805321-008  
**Sample Matrix:** Water

**Date Collected:** 07/18/18  
**Date Received:** 07/24/18

**Analysis Method**  
200.7  
200.8

**Extracted/Digested By**  
EGARDNER  
CSULLIVAN

**Analyzed By**  
EGARDNER  
CSULLIVAN



# Sample Results

**ALS Environmental—Jacksonville Laboratory**  
9143 Philips Highway, Suite 200, Jacksonville, FL 32256  
Phone (904) 739-2277 Fax (904) 739-2011  
[www.alsglobal.com](http://www.alsglobal.com)



# Metals

**ALS Environmental—Jacksonville Laboratory**  
9143 Philips Highway, Suite 200, Jacksonville, FL 32256  
Phone (904)739-2277 Fax (904)739-2011  
[www.alsglobal.com](http://www.alsglobal.com)

ALS Group USA, Corp.  
dba ALS Environmental

Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** D18F069/D18F069  
**Sample Matrix:** Water  
**Sample Name:** D18F069-01  
**Lab Code:** J1805321-001

**Service Request:** J1805321  
**Date Collected:** 07/17/18 16:40  
**Date Received:** 07/24/18 09:50

**Basis:** NA

Inorganic Parameters

| Analyte Name      | Analysis Method | Result         | Units | PQL    | MDL    | Dil. | Date Analyzed  | Date Extracted | Q |
|-------------------|-----------------|----------------|-------|--------|--------|------|----------------|----------------|---|
| Antimony, Total   | 200.8           | <b>0.2 I</b>   | ug/L  | 1.0    | 0.04   | 1    | 07/27/18 14:17 | 07/26/18       |   |
| Arsenic, Total    | 200.8           | <b>3.5</b>     | ug/L  | 1.0    | 0.10   | 1    | 07/27/18 14:17 | 07/26/18       |   |
| Barium, Total     | 200.7           | <b>0.019</b>   | mg/L  | 0.010  | 0.001  | 1    | 07/27/18 02:37 | 07/25/18       |   |
| Boron, Total      | 200.7           | 0.025 U        | mg/L  | 0.050  | 0.025  | 1    | 07/27/18 02:37 | 07/25/18       |   |
| Cadmium, Total    | 200.7           | 0.0002 U       | mg/L  | 0.0050 | 0.0002 | 1    | 07/27/18 02:37 | 07/25/18       |   |
| Calcium, Total    | 200.7           | <b>75.1</b>    | mg/L  | 0.10   | 0.04   | 1    | 07/27/18 02:36 | 07/25/18       |   |
| Chromium, Total   | 200.7           | 0.0004 U       | mg/L  | 0.010  | 0.0004 | 1    | 07/27/18 02:37 | 07/25/18       |   |
| Cobalt, Total     | 200.8           | <b>0.3 I</b>   | ug/L  | 1.0    | 0.03   | 1    | 07/27/18 14:17 | 07/26/18       |   |
| Lead, Total       | 200.8           | <b>0.06 I</b>  | ug/L  | 0.50   | 0.03   | 1    | 07/27/18 14:17 | 07/26/18       |   |
| Lithium, Total    | 200.7           | 0.002 U        | mg/L  | 0.10   | 0.002  | 1    | 07/27/18 02:36 | 07/25/18       |   |
| Molybdenum, Total | 200.7           | <b>0.008 I</b> | mg/L  | 0.010  | 0.0003 | 1    | 07/27/18 02:37 | 07/25/18       |   |
| Selenium, Total   | 200.7           | <b>0.015 V</b> | mg/L  | 0.010  | 0.002  | 1    | 07/27/18 02:37 | 07/25/18       |   |
| Thallium, Total   | 200.8           | <b>0.03 I</b>  | ug/L  | 0.20   | 0.02   | 1    | 07/27/18 14:17 | 07/26/18       |   |

ALS Group USA, Corp.  
dba ALS Environmental

Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** D18F069/D18F069  
**Sample Matrix:** Water  
**Sample Name:** D18F069-02  
**Lab Code:** J1805321-002

**Service Request:** J1805321  
**Date Collected:** 07/18/18 10:03  
**Date Received:** 07/24/18 09:50

**Basis:** NA

Inorganic Parameters

| Analyte Name      | Analysis Method | Result         | Units | PQL    | MDL    | Dil. | Date Analyzed  | Date Extracted | Q |
|-------------------|-----------------|----------------|-------|--------|--------|------|----------------|----------------|---|
| Antimony, Total   | 200.8           | <b>0.2 I</b>   | ug/L  | 1.0    | 0.04   | 1    | 07/27/18 14:18 | 07/26/18       |   |
| Arsenic, Total    | 200.8           | <b>1.2</b>     | ug/L  | 1.0    | 0.10   | 1    | 07/27/18 14:18 | 07/26/18       |   |
| Barium, Total     | 200.7           | <b>0.008 I</b> | mg/L  | 0.010  | 0.001  | 1    | 07/27/18 02:43 | 07/25/18       |   |
| Boron, Total      | 200.7           | 0.025 U        | mg/L  | 0.050  | 0.025  | 1    | 07/27/18 02:43 | 07/25/18       |   |
| Cadmium, Total    | 200.7           | 0.0002 U       | mg/L  | 0.0050 | 0.0002 | 1    | 07/27/18 02:43 | 07/25/18       |   |
| Calcium, Total    | 200.7           | <b>91.7</b>    | mg/L  | 0.10   | 0.04   | 1    | 07/27/18 02:41 | 07/25/18       |   |
| Chromium, Total   | 200.7           | 0.0004 U       | mg/L  | 0.010  | 0.0004 | 1    | 07/27/18 02:43 | 07/25/18       |   |
| Cobalt, Total     | 200.8           | <b>0.1 I</b>   | ug/L  | 1.0    | 0.03   | 1    | 07/27/18 14:18 | 07/26/18       |   |
| Lead, Total       | 200.8           | <b>0.03 I</b>  | ug/L  | 0.50   | 0.03   | 1    | 07/27/18 14:18 | 07/26/18       |   |
| Lithium, Total    | 200.7           | 0.002 U        | mg/L  | 0.10   | 0.002  | 1    | 07/27/18 02:41 | 07/25/18       |   |
| Molybdenum, Total | 200.7           | <b>0.008 I</b> | mg/L  | 0.010  | 0.0003 | 1    | 07/27/18 02:43 | 07/25/18       |   |
| Selenium, Total   | 200.7           | <b>0.019 V</b> | mg/L  | 0.010  | 0.002  | 1    | 07/27/18 02:43 | 07/25/18       |   |
| Thallium, Total   | 200.8           | 0.02 U         | ug/L  | 0.20   | 0.02   | 1    | 07/27/18 14:18 | 07/26/18       |   |

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Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** D18F069/D18F069  
**Sample Matrix:** Water  
**Sample Name:** D18F069-03  
**Lab Code:** J1805321-003

**Service Request:** J1805321  
**Date Collected:** 07/19/18 07:35  
**Date Received:** 07/24/18 09:50

**Basis:** NA

Inorganic Parameters

| Analyte Name      | Analysis Method | Result          | Units | PQL    | MDL    | Dil. | Date Analyzed  | Date Extracted | Q |
|-------------------|-----------------|-----------------|-------|--------|--------|------|----------------|----------------|---|
| Antimony, Total   | 200.8           | <b>0.3 I</b>    | ug/L  | 1.0    | 0.04   | 1    | 07/27/18 14:23 | 07/26/18       |   |
| Arsenic, Total    | 200.8           | <b>2.8</b>      | ug/L  | 1.0    | 0.10   | 1    | 07/27/18 14:23 | 07/26/18       |   |
| Barium, Total     | 200.7           | <b>0.024</b>    | mg/L  | 0.010  | 0.001  | 1    | 07/27/18 02:48 | 07/25/18       |   |
| Boron, Total      | 200.7           | <b>0.025 IV</b> | mg/L  | 0.050  | 0.025  | 1    | 07/27/18 02:48 | 07/25/18       |   |
| Cadmium, Total    | 200.7           | 0.0002 U        | mg/L  | 0.0050 | 0.0002 | 1    | 07/27/18 02:48 | 07/25/18       |   |
| Calcium, Total    | 200.7           | <b>81.1</b>     | mg/L  | 0.10   | 0.04   | 1    | 07/27/18 02:46 | 07/25/18       |   |
| Chromium, Total   | 200.7           | 0.0004 U        | mg/L  | 0.010  | 0.0004 | 1    | 07/27/18 02:48 | 07/25/18       |   |
| Cobalt, Total     | 200.8           | <b>0.4 I</b>    | ug/L  | 1.0    | 0.03   | 1    | 07/27/18 14:23 | 07/26/18       |   |
| Lead, Total       | 200.8           | <b>0.06 I</b>   | ug/L  | 0.50   | 0.03   | 1    | 07/27/18 14:23 | 07/26/18       |   |
| Lithium, Total    | 200.7           | 0.002 U         | mg/L  | 0.10   | 0.002  | 1    | 07/27/18 02:46 | 07/25/18       |   |
| Molybdenum, Total | 200.7           | <b>0.009 I</b>  | mg/L  | 0.010  | 0.0003 | 1    | 07/27/18 02:48 | 07/25/18       |   |
| Selenium, Total   | 200.7           | <b>0.014 V</b>  | mg/L  | 0.010  | 0.002  | 1    | 07/27/18 02:48 | 07/25/18       |   |
| Thallium, Total   | 200.8           | <b>0.07 I</b>   | ug/L  | 0.20   | 0.02   | 1    | 07/27/18 14:23 | 07/26/18       |   |

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Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** D18F069/D18F069  
**Sample Matrix:** Water  
**Sample Name:** D18F069-04  
**Lab Code:** J1805321-004

**Service Request:** J1805321  
**Date Collected:** 07/18/18 11:34  
**Date Received:** 07/24/18 09:50

**Basis:** NA

Inorganic Parameters

| Analyte Name      | Analysis Method | Result         | Units | PQL    | MDL    | Dil. | Date Analyzed  | Date Extracted | Q |
|-------------------|-----------------|----------------|-------|--------|--------|------|----------------|----------------|---|
| Antimony, Total   | 200.8           | <b>0.2 I</b>   | ug/L  | 1.0    | 0.04   | 1    | 07/27/18 14:25 | 07/26/18       |   |
| Arsenic, Total    | 200.8           | <b>1.5</b>     | ug/L  | 1.0    | 0.10   | 1    | 07/27/18 14:25 | 07/26/18       |   |
| Barium, Total     | 200.7           | <b>0.041</b>   | mg/L  | 0.010  | 0.001  | 1    | 07/27/18 02:52 | 07/25/18       |   |
| Boron, Total      | 200.7           | 0.025 U        | mg/L  | 0.050  | 0.025  | 1    | 07/27/18 02:52 | 07/25/18       |   |
| Cadmium, Total    | 200.7           | 0.0002 U       | mg/L  | 0.0050 | 0.0002 | 1    | 07/27/18 02:52 | 07/25/18       |   |
| Calcium, Total    | 200.7           | <b>69.5</b>    | mg/L  | 0.10   | 0.04   | 1    | 07/27/18 02:51 | 07/25/18       |   |
| Chromium, Total   | 200.7           | 0.0004 U       | mg/L  | 0.010  | 0.0004 | 1    | 07/27/18 02:52 | 07/25/18       |   |
| Cobalt, Total     | 200.8           | <b>0.9 I</b>   | ug/L  | 1.0    | 0.03   | 1    | 07/27/18 14:25 | 07/26/18       |   |
| Lead, Total       | 200.8           | <b>0.04 I</b>  | ug/L  | 0.50   | 0.03   | 1    | 07/27/18 14:25 | 07/26/18       |   |
| Lithium, Total    | 200.7           | 0.002 U        | mg/L  | 0.10   | 0.002  | 1    | 07/27/18 02:51 | 07/25/18       |   |
| Molybdenum, Total | 200.7           | <b>0.006 I</b> | mg/L  | 0.010  | 0.0003 | 1    | 07/27/18 02:52 | 07/25/18       |   |
| Selenium, Total   | 200.7           | <b>0.015 V</b> | mg/L  | 0.010  | 0.002  | 1    | 07/27/18 02:52 | 07/25/18       |   |
| Thallium, Total   | 200.8           | <b>0.03 I</b>  | ug/L  | 0.20   | 0.02   | 1    | 07/27/18 14:25 | 07/26/18       |   |

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Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** D18F069/D18F069  
**Sample Matrix:** Water  
**Sample Name:** D18F069-05  
**Lab Code:** J1805321-005

**Service Request:** J1805321  
**Date Collected:** 07/17/18 14:27  
**Date Received:** 07/24/18 09:50

**Basis:** NA

**Inorganic Parameters**

| <b>Analyte Name</b> | <b>Analysis Method</b> | <b>Result</b>   | <b>Units</b> | <b>PQL</b> | <b>MDL</b> | <b>Dil.</b> | <b>Date Analyzed</b> | <b>Date Extracted</b> | <b>Q</b> |
|---------------------|------------------------|-----------------|--------------|------------|------------|-------------|----------------------|-----------------------|----------|
| Antimony, Total     | 200.8                  | <b>0.4 I</b>    | ug/L         | 1.0        | 0.04       | 1           | 07/27/18 14:30       | 07/26/18              |          |
| Arsenic, Total      | 200.8                  | <b>0.6 I</b>    | ug/L         | 1.0        | 0.10       | 1           | 07/27/18 14:30       | 07/26/18              |          |
| Barium, Total       | 200.7                  | <b>0.097</b>    | mg/L         | 0.010      | 0.001      | 1           | 07/27/18 02:57       | 07/25/18              |          |
| Beryllium, Total    | 200.7                  | 0.00006 U       | mg/L         | 0.0040     | 0.00006    | 1           | 07/27/18 02:57       | 07/25/18              |          |
| Boron, Total        | 200.7                  | <b>0.215 V</b>  | mg/L         | 0.050      | 0.025      | 1           | 07/27/18 02:57       | 07/25/18              |          |
| Calcium, Total      | 200.7                  | <b>19.9</b>     | mg/L         | 0.10       | 0.04       | 1           | 07/27/18 02:56       | 07/25/18              |          |
| Chromium, Total     | 200.7                  | 0.0004 U        | mg/L         | 0.010      | 0.0004     | 1           | 07/27/18 02:57       | 07/25/18              |          |
| Cobalt, Total       | 200.8                  | <b>0.4 I</b>    | ug/L         | 1.0        | 0.03       | 1           | 07/27/18 14:30       | 07/26/18              |          |
| Lead, Total         | 200.8                  | 0.03 U          | ug/L         | 0.50       | 0.03       | 1           | 07/27/18 14:30       | 07/26/18              |          |
| Lithium, Total      | 200.7                  | 0.002 U         | mg/L         | 0.10       | 0.002      | 1           | 07/27/18 02:56       | 07/25/18              |          |
| Molybdenum, Total   | 200.7                  | <b>0.007 I</b>  | mg/L         | 0.010      | 0.0003     | 1           | 07/27/18 02:57       | 07/25/18              |          |
| Selenium, Total     | 200.7                  | <b>0.008 IV</b> | mg/L         | 0.010      | 0.002      | 1           | 07/27/18 02:57       | 07/25/18              |          |
| Thallium, Total     | 200.8                  | <b>0.14 I</b>   | ug/L         | 0.20       | 0.02       | 1           | 07/27/18 14:30       | 07/26/18              |          |



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Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** D18F069/D18F069  
**Sample Matrix:** Water  
**Sample Name:** D18F069-06  
**Lab Code:** J1805321-006

**Service Request:** J1805321  
**Date Collected:** 07/18/18 15:40  
**Date Received:** 07/24/18 09:50

**Basis:** NA

Inorganic Parameters

| Analyte Name      | Analysis Method | Result         | Units | PQL    | MDL     | Dil. | Date Analyzed  | Date Extracted | Q |
|-------------------|-----------------|----------------|-------|--------|---------|------|----------------|----------------|---|
| Antimony, Total   | 200.8           | <b>1.3</b>     | ug/L  | 1.0    | 0.04    | 1    | 07/27/18 14:31 | 07/26/18       |   |
| Arsenic, Total    | 200.8           | <b>1.4</b>     | ug/L  | 1.0    | 0.10    | 1    | 07/27/18 14:31 | 07/26/18       |   |
| Barium, Total     | 200.7           | <b>0.133</b>   | mg/L  | 0.010  | 0.001   | 1    | 07/27/18 03:02 | 07/25/18       |   |
| Beryllium, Total  | 200.7           | 0.00006 U      | mg/L  | 0.0040 | 0.00006 | 1    | 07/27/18 03:02 | 07/25/18       |   |
| Boron, Total      | 200.7           | <b>0.356</b>   | mg/L  | 0.050  | 0.025   | 1    | 07/27/18 03:02 | 07/25/18       |   |
| Calcium, Total    | 200.7           | <b>114</b>     | mg/L  | 0.10   | 0.04    | 1    | 07/27/18 03:01 | 07/25/18       |   |
| Chromium, Total   | 200.7           | <b>0.001 I</b> | mg/L  | 0.010  | 0.0004  | 1    | 07/27/18 03:02 | 07/25/18       |   |
| Cobalt, Total     | 200.8           | <b>0.9 I</b>   | ug/L  | 1.0    | 0.03    | 1    | 07/27/18 14:31 | 07/26/18       |   |
| Lead, Total       | 200.8           | <b>0.13 I</b>  | ug/L  | 0.50   | 0.03    | 1    | 07/27/18 14:31 | 07/26/18       |   |
| Lithium, Total    | 200.7           | 0.002 U        | mg/L  | 0.10   | 0.002   | 1    | 07/27/18 03:01 | 07/25/18       |   |
| Molybdenum, Total | 200.7           | <b>0.043</b>   | mg/L  | 0.010  | 0.0003  | 1    | 07/27/18 03:02 | 07/25/18       |   |
| Selenium, Total   | 200.7           | <b>0.019 V</b> | mg/L  | 0.010  | 0.002   | 1    | 07/27/18 03:02 | 07/25/18       |   |
| Thallium, Total   | 200.8           | <b>0.14 I</b>  | ug/L  | 0.20   | 0.02    | 1    | 07/27/18 14:31 | 07/26/18       |   |

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Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** D18F069/D18F069  
**Sample Matrix:** Water  
**Sample Name:** D18F069-07  
**Lab Code:** J1805321-007

**Service Request:** J1805321  
**Date Collected:** 07/18/18 13:59  
**Date Received:** 07/24/18 09:50

**Basis:** NA

Inorganic Parameters

| Analyte Name      | Analysis Method | Result         | Units | PQL    | MDL     | Dil. | Date Analyzed  | Date Extracted | Q |
|-------------------|-----------------|----------------|-------|--------|---------|------|----------------|----------------|---|
| Antimony, Total   | 200.8           | <b>0.3 I</b>   | ug/L  | 1.0    | 0.04    | 1    | 07/27/18 14:33 | 07/26/18       |   |
| Arsenic, Total    | 200.8           | <b>6.9</b>     | ug/L  | 1.0    | 0.10    | 1    | 07/27/18 14:33 | 07/26/18       |   |
| Barium, Total     | 200.7           | <b>0.083</b>   | mg/L  | 0.010  | 0.001   | 1    | 07/27/18 03:07 | 07/25/18       |   |
| Beryllium, Total  | 200.7           | 0.00006 U      | mg/L  | 0.0040 | 0.00006 | 1    | 07/27/18 03:07 | 07/25/18       |   |
| Boron, Total      | 200.7           | <b>3.35</b>    | mg/L  | 0.050  | 0.025   | 1    | 07/27/18 03:07 | 07/25/18       |   |
| Calcium, Total    | 200.7           | <b>90.7</b>    | mg/L  | 0.10   | 0.04    | 1    | 07/27/18 03:06 | 07/25/18       |   |
| Chromium, Total   | 200.7           | <b>0.003 I</b> | mg/L  | 0.010  | 0.0004  | 1    | 07/27/18 03:07 | 07/25/18       |   |
| Cobalt, Total     | 200.8           | <b>0.8 I</b>   | ug/L  | 1.0    | 0.03    | 1    | 07/27/18 14:33 | 07/26/18       |   |
| Lead, Total       | 200.8           | <b>0.13 I</b>  | ug/L  | 0.50   | 0.03    | 1    | 07/27/18 14:33 | 07/26/18       |   |
| Lithium, Total    | 200.7           | <b>0.01 I</b>  | mg/L  | 0.10   | 0.002   | 1    | 07/27/18 03:06 | 07/25/18       |   |
| Molybdenum, Total | 200.7           | <b>0.123</b>   | mg/L  | 0.010  | 0.0003  | 1    | 07/27/18 03:07 | 07/25/18       |   |
| Selenium, Total   | 200.7           | <b>0.013 V</b> | mg/L  | 0.010  | 0.002   | 1    | 07/27/18 03:07 | 07/25/18       |   |
| Thallium, Total   | 200.8           | <b>0.04 I</b>  | ug/L  | 0.20   | 0.02    | 1    | 07/27/18 14:33 | 07/26/18       |   |

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Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** D18F069/D18F069  
**Sample Matrix:** Water  
**Sample Name:** D18F069-08  
**Lab Code:** J1805321-008

**Service Request:** J1805321  
**Date Collected:** 07/18/18 12:39  
**Date Received:** 07/24/18 09:50

**Basis:** NA

Inorganic Parameters

| Analyte Name      | Analysis Method | Result         | Units | PQL    | MDL     | Dil. | Date Analyzed  | Date Extracted | Q |
|-------------------|-----------------|----------------|-------|--------|---------|------|----------------|----------------|---|
| Antimony, Total   | 200.8           | <b>4.3</b>     | ug/L  | 1.0    | 0.04    | 1    | 07/27/18 14:35 | 07/26/18       |   |
| Arsenic, Total    | 200.8           | <b>3.8</b>     | ug/L  | 1.0    | 0.10    | 1    | 07/27/18 14:35 | 07/26/18       |   |
| Barium, Total     | 200.7           | <b>0.075</b>   | mg/L  | 0.010  | 0.001   | 1    | 07/27/18 03:34 | 07/25/18       |   |
| Beryllium, Total  | 200.7           | 0.00006 U      | mg/L  | 0.0040 | 0.00006 | 1    | 07/27/18 03:34 | 07/25/18       |   |
| Boron, Total      | 200.7           | <b>0.968</b>   | mg/L  | 0.050  | 0.025   | 1    | 07/27/18 03:34 | 07/25/18       |   |
| Calcium, Total    | 200.7           | <b>136</b>     | mg/L  | 0.10   | 0.04    | 1    | 07/27/18 03:33 | 07/25/18       |   |
| Chromium, Total   | 200.7           | <b>0.001 I</b> | mg/L  | 0.010  | 0.0004  | 1    | 07/27/18 03:34 | 07/25/18       |   |
| Cobalt, Total     | 200.8           | <b>1.2</b>     | ug/L  | 1.0    | 0.03    | 1    | 07/27/18 14:35 | 07/26/18       |   |
| Lead, Total       | 200.8           | 0.03 U         | ug/L  | 0.50   | 0.03    | 1    | 07/27/18 14:35 | 07/26/18       |   |
| Lithium, Total    | 200.7           | <b>0.22</b>    | mg/L  | 0.10   | 0.002   | 1    | 07/27/18 18:24 | 07/25/18       |   |
| Molybdenum, Total | 200.7           | <b>0.101</b>   | mg/L  | 0.010  | 0.0003  | 1    | 07/27/18 03:34 | 07/25/18       |   |
| Selenium, Total   | 200.7           | <b>0.016 V</b> | mg/L  | 0.010  | 0.002   | 1    | 07/27/18 03:34 | 07/25/18       |   |
| Thallium, Total   | 200.8           | <b>0.61</b>    | ug/L  | 0.20   | 0.02    | 1    | 07/27/18 14:35 | 07/26/18       |   |



## QC Summary Forms

**ALS Environmental - Jacksonville Laboratory**  
9143 Philips Highway, Suite 200, Jacksonville, FL 32256  
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[www.alsglobal.com](http://www.alsglobal.com)



# Metals

**ALS Environmental—Jacksonville Laboratory**  
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Phone (904)739-2277 Fax (904)739-2011  
[www.alsglobal.com](http://www.alsglobal.com)

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Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** D18F069/D18F069  
**Sample Matrix:** Water  
**Sample Name:** Method Blank  
**Lab Code:** J1805321-MB

**Service Request:** J1805321  
**Date Collected:** NA  
**Date Received:** NA  
**Basis:** NA

Inorganic Parameters

| Analyte Name      | Analysis Method | Result         | Units | PQL    | MDL     | Dil. | Date Analyzed  | Date Extracted | Q |
|-------------------|-----------------|----------------|-------|--------|---------|------|----------------|----------------|---|
| Antimony, Total   | 200.8           | 0.04 U         | ug/L  | 1.0    | 0.04    | 1    | 07/27/18 13:50 | 07/26/18       |   |
| Arsenic, Total    | 200.8           | 0.1 U          | ug/L  | 1.0    | 0.1     | 1    | 07/27/18 13:50 | 07/26/18       |   |
| Barium, Total     | 200.7           | 0.001 U        | mg/L  | 0.010  | 0.001   | 1    | 07/26/18 23:47 | 07/25/18       |   |
| Beryllium, Total  | 200.7           | 0.00006 U      | mg/L  | 0.0040 | 0.00006 | 1    | 07/26/18 23:47 | 07/25/18       |   |
| Boron, Total      | 200.7           | <b>0.035 I</b> | mg/L  | 0.050  | 0.025   | 1    | 07/26/18 23:47 | 07/25/18       |   |
| Cadmium, Total    | 200.7           | 0.0002 U       | mg/L  | 0.0050 | 0.0002  | 1    | 07/26/18 23:47 | 07/25/18       |   |
| Calcium, Total    | 200.7           | 0.04 U         | mg/L  | 0.10   | 0.04    | 1    | 07/26/18 23:46 | 07/25/18       |   |
| Chromium, Total   | 200.7           | 0.0004 U       | mg/L  | 0.010  | 0.0004  | 1    | 07/26/18 23:47 | 07/25/18       |   |
| Cobalt, Total     | 200.8           | 0.03 U         | ug/L  | 1.0    | 0.03    | 1    | 07/27/18 13:50 | 07/26/18       |   |
| Lead, Total       | 200.8           | 0.03 U         | ug/L  | 0.50   | 0.03    | 1    | 07/27/18 13:50 | 07/26/18       |   |
| Lithium, Total    | 200.7           | 0.002 U        | mg/L  | 0.10   | 0.002   | 1    | 07/26/18 23:45 | 07/25/18       |   |
| Molybdenum, Total | 200.7           | 0.0003 U       | mg/L  | 0.010  | 0.0003  | 1    | 07/26/18 23:47 | 07/25/18       |   |
| Selenium, Total   | 200.7           | <b>0.004 I</b> | mg/L  | 0.010  | 0.002   | 1    | 07/26/18 23:47 | 07/25/18       |   |
| Thallium, Total   | 200.8           | 0.02 U         | ug/L  | 0.20   | 0.02    | 1    | 07/27/18 13:50 | 07/26/18       |   |

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QA/QC Report

**Client:** Gainesville Regional Utilities  
**Project:** D18F069/D18F069  
**Sample Matrix:** Water

**Service Request:** J1805321  
**Date Collected:** 07/18/18  
**Date Received:** 07/24/18  
**Date Analyzed:** 07/27/18  
**Date Extracted:** 07/26/18

**Duplicate Matrix Spike Summary  
Inorganic Parameters**

**Sample Name:** D18F069-04  
**Lab Code:** J1805321-004  
**Analysis Method:** 200.8  
**Prep Method:** EPA 3005A

**Units:** ug/L  
**Basis:** NA

| Analyte Name    | Sample Result | Result | Matrix Spike<br>J1805321-004MS |       | Duplicate Matrix Spike<br>J1805321-004DMS |              | % Rec Limits | RPD    | RPD Limit |       |
|-----------------|---------------|--------|--------------------------------|-------|---|--------------|--------------|--------|-----------|-------|
|                 |               |        | Spike Amount                   | % Rec | Result                                    | Spike Amount |              |        |           | % Rec |
| Antimony, Total | 0.2 I         | 52.4   | 50.0                           | 104   | 52.0                                      | 50.0         | 104          | 70-130 | <1        | 20    |
| Arsenic, Total  | 1.5           | 53.3   | 50.0                           | 104   | 53.3                                      | 50.0         | 104          | 70-130 | <1        | 20    |
| Cobalt, Total   | 0.9 I         | 54.0   | 50.0                           | 106   | 53.0                                      | 50.0         | 104          | 70-130 | 2         | 20    |
| Lead, Total     | 0.04 I        | 25.9   | 25.0                           | 103   | 25.4                                      | 25.0         | 101          | 70-130 | 2         | 20    |
| Thallium, Total | 0.03 I        | 10.2   | 10.0                           | 102   | 10.1                                      | 10.0         | 100          | 70-130 | 2         | 20    |

Results flagged with an asterisk (\*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.  
dba ALS Environmental

QA/QC Report

**Client:** Gainesville Regional Utilities  
**Project:** D18F069/D18F069  
**Sample Matrix:** Water

**Service Request:** J1805321  
**Date Analyzed:** 07/27/18

**Lab Control Sample Summary**  
**Inorganic Parameters**

**Units:**ug/L  
**Basis:**NA

**Lab Control Sample**  
J1805321-LCS

| <b>Analyte Name</b> | <b>Analytical Method</b> | <b>Result</b> | <b>Spike Amount</b> | <b>% Rec</b> | <b>% Rec Limits</b> |
|---------------------|--------------------------|---------------|---------------------|--------------|---------------------|
| Antimony, Total     | 200.8                    | 51.5          | 50.0                | 103          | 85-115              |
| Arsenic, Total      | 200.8                    | 51.6          | 50.0                | 103          | 85-115              |
| Cobalt, Total       | 200.8                    | 52.7          | 50.0                | 105          | 85-115              |
| Lead, Total         | 200.8                    | 25.9          | 25.0                | 104          | 85-115              |
| Thallium, Total     | 200.8                    | 10.3          | 10.0                | 103          | 85-115              |



ALS Group USA, Corp.  
dba ALS Environmental

QA/QC Report

**Client:** Gainesville Regional Utilities  
**Project:** D18F069/D18F069  
**Sample Matrix:** Water

**Service Request:** J1805321  
**Date Analyzed:** 07/26/18

**Lab Control Sample Summary**  
**Inorganic Parameters**

**Units:**mg/L  
**Basis:**NA

**Lab Control Sample**  
J1805321-LCS

| <b>Analyte Name</b> | <b>Analytical Method</b> | <b>Result</b> | <b>Spike Amount</b> | <b>% Rec</b> | <b>% Rec Limits</b> |
|---------------------|--------------------------|---------------|---------------------|--------------|---------------------|
| Barium, Total       | 200.7                    | 0.507         | 0.500               | 101          | 85-115              |
| Beryllium, Total    | 200.7                    | 0.202         | 0.200               | 101          | 85-115              |
| Boron, Total        | 200.7                    | 2.62          | 2.50                | 105          | 85-115              |
| Cadmium, Total      | 200.7                    | 0.253         | 0.250               | 101          | 85-115              |
| Calcium, Total      | 200.7                    | 5.08          | 5.00                | 102          | 85-115              |
| Chromium, Total     | 200.7                    | 0.500         | 0.500               | 100          | 85-115              |
| Lithium, Total      | 200.7                    | 5.16          | 5.00                | 103          | 85-115              |
| Molybdenum, Total   | 200.7                    | 0.509         | 0.500               | 102          | 85-115              |
| Selenium, Total     | 200.7                    | 0.517         | 0.500               | 103          | 85-115              |

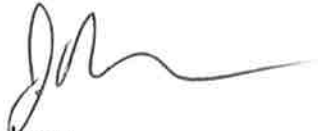
August 8, 2018

Justin L. Smith, PE  
Environmental Engineer  
Innovative Waste Consulting Services, LLC  
3720 NW 43<sup>rd</sup> St., Suite 103  
Gainesville, Florida 32606

Dear Mr. Smith:

Enclosed are the TSS and TDS analytical results for the 3Q18 Groundwater and July 2018 CCR samples. The results relate only to the samples included in these reports. Results reported herein conform to the most current, applicable TNI/NELAC Standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report. All data is subject to a degree of uncertainty. Deerhaven Laboratory uncertainty is based upon LCS quality control statistics.

Sincerely,



Jeffery Boudreau  
Laboratory Technical Director  
Deerhaven Generating Station  
10001 NW 13<sup>th</sup> Street  
Gainesville, Florida 32653  
352-393-6346  
[boudreaujp@gru.com](mailto:boudreaujp@gru.com)

Department of Health Certification E52876

JULY 2018 CCR TSS REPORT

Date: 8/8/2018

| Sample ID   | ID        | TSS, Final Result | MDL  | PQL  | Qual |
|-------------|-----------|-------------------|------|------|------|
|             |           | mg/L              | mg/L | mg/L |      |
| DG82003-BLK | Blank     | 1.0               | 1.0  | 4.0  | U    |
| DG82003-SRM | Blind QC  | 88.4              | 1.0  | 4.0  |      |
| DG82003-DUP | Duplicate | 1.0               | 1.0  | 4.0  | U    |
| D18F069-01  | SIS1      | 1.0               | 1.0  | 4.0  | U    |
| D18F069-02  | SIS2      | 1.0               | 1.0  | 4.0  | U    |
| D18F069-03  | SIS3      | 1.0               | 1.0  | 4.0  | U    |
| D18F069-04  | SIS4      | 1.0               | 1.0  | 4.0  | U    |
| D18F069-05  | LF1       | 1.0               | 1.0  | 4.0  | U    |
| D18F069-06  | LF2       | 3.2               | 1.0  | 4.0  | I    |
| D18F069-07  | LF3       | 1.0               | 1.0  | 4.0  | U    |
| D18F069-08  | LF4       | 1.0               | 1.0  | 4.0  | U    |
|             |           |                   |      |      |      |

|                  |       |         |
|------------------|-------|---------|
| SRM TV, mg/L     | 90.9  |         |
| SRM, mg/L        | 88.4  |         |
| % Recovery       | 97.25 | % Range |
| Low Range, mg/L  | 74.9  | 82.40   |
| High Range, mg/L | 101.0 | 111.11  |

|           |     |
|-----------|-----|
| Sample    | 1.0 |
| Duplicate | 1.0 |
| %RPD      | 0.0 |

3Q18 GROUNDWATER TSS REPORT

Date: 8/8/2018

| Sample ID    | ID        | TSS, Final Result | MDL  | PQL  | Qual |
|--------------|-----------|-------------------|------|------|------|
|              |           | mg/L              | mg/L | mg/L |      |
| 1830010-BLK1 | Blank     | 1.0               | 1.0  | 4.0  | U    |
| 1830010-SRM1 | Blind QC  | 91.6              | 1.0  | 4.0  |      |
| 1830010-DUP1 | Duplicate | 1.0               | 1.0  | 4.0  | U    |
| D18F068-01   | R1T6      | 5.2               | 1.0  | 4.0  |      |
| D18F068-02   | R2T1      | 1.0               | 1.0  | 4.0  | U    |
| D18F068-03   | R3T7      | 1.0               | 1.0  | 4.0  | U    |
| D18F068-04   | R4T5b     | 1.0               | 1.0  | 4.0  | U    |
| D18F068-05   | R6T1b     | 1.0               | 1.0  | 4.0  | U    |
| D18F068-06   | R6T4b     | 1.0               | 1.0  | 4.0  | U    |
| D18F068-07   | R6T8b     | 1.0               | 1.0  | 4.0  | U    |
| D18F068-08   | R6T12b    | 1.0               | 1.0  | 4.0  | U    |
| D18F068-09   | R8T10     | 1.0               | 1.0  | 4.0  | U    |
| D18F068-10   | R9T5b     | 1.0               | 1.0  | 4.0  | U    |
| D18F068-11   | R10T8     | 1.0               | 1.0  | 4.0  | U    |
| D18F068-12   | R11T4     | 1.0               | 1.0  | 4.0  | U    |
| D18F068-13   | DEEP WELL | 1.0               | 1.0  | 4.0  | U    |
| D18F068-14   | EBLANK    | 1.0               | 1.0  | 4.0  | U    |

|                  |        |         |
|------------------|--------|---------|
| SRM TV, mg/L     | 90.9   |         |
| SRM, mg/L        | 91.6   |         |
| % Recovery       | 100.77 | % Range |
| Low Range, mg/L  | 74.9   | 82.4    |
| High Range, mg/L | 101.0  | 111.1   |

|           |      |
|-----------|------|
| Sample    | 1.0  |
| Duplicate | 1.0  |
| %RPD      | 0.00 |

JULY 2018 CCR TDS REPORT

Date: 8/8/2018

| Sample ID   | ID        | TDS, Final Result | MDL  | PQL  | Qual |
|-------------|-----------|-------------------|------|------|------|
|             |           | mg/L              | mg/L | mg/L |      |
| DG82003-BLK | Blank     | 10                | 10   | 40   | U    |
| DG82003-SRM | Blind QC  | 512               | 10   | 40   |      |
| DG82003-DUP | Duplicate | 134               | 10   | 40   |      |
| D18F069-01  | SIS1      | 328               | 10   | 40   |      |
| D18F069-02  | SIS2      | 310               | 10   | 40   |      |
| D18F069-03  | SIS3      | 485               | 10   | 40   |      |
| D18F069-04  | SIS4      | 325               | 10   | 40   |      |
| D18F069-05  | LF1       | 140               | 10   | 40   |      |
| D18F069-06  | LF2       | 619               | 10   | 40   |      |
| D18F069-07  | LF3       | 930               | 10   | 40   |      |
| D18F069-08  | LF4       | 736               | 10   | 40   |      |
|             |           |                   |      |      |      |

|                  |       |         |
|------------------|-------|---------|
| SRM TV, mg/L     | 528   |         |
| SRM, mg/L        | 512   |         |
| % Recovery       | 96.97 | % Range |
| Low Range, mg/L  | 475   | 89.96   |
| High Range, mg/L | 580   | 109.85  |

|           |      |
|-----------|------|
| Sample    | 140  |
| Duplicate | 134  |
| %RPD      | 4.38 |

3Q18 GROUNDWATER TDS REPORT

Date: 8/8/2018

| Sample ID    | ID        | TDS, Final Result | MDL  | PQL  | Qual |
|--------------|-----------|-------------------|------|------|------|
|              |           | mg/L              | mg/L | mg/L |      |
| 1830010-BLK1 | Blank     | 10                | 10   | 40   | U    |
| 1830010-SRM1 | Blind QC  | 517               | 10   | 40   |      |
| 1830010-DUP1 | Duplicate | 59                | 10   | 40   |      |
| D18F068-01   | R1T6      | 289               | 10   | 40   |      |
| D18F068-02   | R2T1      | 14                | 10   | 40   | I    |
| D18F068-03   | R3T7      | 563               | 10   | 40   |      |
| D18F068-04   | R4T5b     | 472               | 10   | 40   |      |
| D18F068-05   | R6T1b     | 137               | 10   | 40   |      |
| D18F068-06   | R6T4b     | 234               | 10   | 40   |      |
| D18F068-07   | R6T8b     | 217               | 10   | 40   |      |
| D18F068-08   | R6T12b    | 126               | 10   | 40   |      |
| D18F068-09   | R8T10     | 376               | 10   | 40   |      |
| D18F068-10   | R9T5b     | 414               | 10   | 40   |      |
| D18F068-11   | R10T8     | 64                | 10   | 40   |      |
| D18F068-12   | R11T4     | 148               | 10   | 40   |      |
| D18F068-13   | DEEP WELL | 298               | 10   | 40   |      |
| D18F068-14   | EBLANK    | 10                | 10   | 40   | U    |

|                  |       |         |
|------------------|-------|---------|
| SRM TV, mg/L     | 528   |         |
| SRM, mg/L        | 517   |         |
| % Recovery       | 97.92 | % Range |
| Low Range, mg/L  | 475   | 90.0    |
| High Range, mg/L | 580   | 109.8   |

|           |      |
|-----------|------|
| Sample    | 64   |
| Duplicate | 59   |
| %RPD      | 8.13 |

**Qualifier Description**

U Compound was analyzed for but not detected

I The reported value is between the laboratory MDL and the laboratory PQL



# *Kanapaha Laboratory*

3901 South West 63rd Blvd  
Gainesville, FL 32608  
(352) 393-6777

Florida Department of Health Certification E52099

August 13, 2018

Jeff Boudreau  
Deerhaven Laboratory  
Station D-38  
Gainesville, FL/USA 32614-7117

RE: Environmental

Enclosed are the results of analyses for samples received by the laboratory on 7/23/2018. If you have any questions concerning this report, please feel free to contact me.

Please note that all results were determined in accordance with NELAP requirements. All data is subject to a degree of uncertainty. Kanapaha Lab uncertainty is based upon LCS quality control statistics.

Sincerely,

Jaclyn M Dlhos  
Laboratory Supervisor





Deerhaven Laboratory  
Station D-38  
Gainesville, FL/USA 32614-7117

Project: Environmental  
Project Number: D18F068  
Project Manager: Jeff Boudreau

**Reported:**  
08/13/2018 6:43

### ANALYTICAL REPORT FOR SAMPLES

| Laboratory ID | Sample ID                      | Matrix      | Date Sampled     | Date Received    |
|---------------|--------------------------------|-------------|------------------|------------------|
| K18G073-01    | D18F068-01 (MWD-1-6 (R1T6))    | Groundwater | 07/16/2018 17:10 | 07/23/2018 11:32 |
| K18G073-02    | D18F068-02 (MWB-2-1 (R2T1))    | Groundwater | 07/16/2018 13:40 | 07/23/2018 11:32 |
| K18G073-03    | D18F068-03 (MWI-3-7 (R3T7))    | Groundwater | 07/17/2018 07:56 | 07/23/2018 11:32 |
| K18G073-04    | D18F068-04 (MWI-4-5 (R4T5B))   | Groundwater | 07/18/2018 07:24 | 07/23/2018 11:32 |
| K18G073-05    | D18F068-05 (MWD-6-1 (R6T1B))   | Groundwater | 07/16/2018 10:19 | 07/23/2018 11:32 |
| K18G073-06    | D18F068-06 (MWI-6-4 (R6T4B))   | Groundwater | 07/17/2018 15:45 | 07/23/2018 11:32 |
| K18G073-07    | D18F068-07 (MWI-6-8 (R6T8B))   | Groundwater | 07/19/2018 11:17 | 07/23/2018 11:32 |
| K18G073-08    | D18F068-08 (MWD-6-12 (R6T12))  | Groundwater | 07/17/2018 09:18 | 07/23/2018 11:32 |
| K18G073-09    | D18F068-09 (MWC-8-10 (R8T10))  | Groundwater | 07/17/2018 11:46 | 07/23/2018 11:32 |
| K18G073-10    | D18F068-10 (MWI-9-5 (R9T5B))   | Groundwater | 07/17/2018 13:22 | 07/23/2018 11:32 |
| K18G073-11    | D18F068-11 (MWC-10-8 (R10T8))  | Groundwater | 07/19/2018 15:10 | 07/23/2018 11:32 |
| K18G073-12    | D18F068-12 (MWC-11-4 (R11T4B)) | Groundwater | 07/19/2018 13:49 | 07/23/2018 11:32 |
| K18G073-13    | D18F068-13 (MWC-DEEP (DEEP-1)) | Groundwater | 07/17/2018 08:30 | 07/23/2018 11:32 |
| K18G073-14    | D18F068-14 (EBLANK)            | Groundwater | 07/18/2018 08:25 | 07/23/2018 11:32 |



Deerhaven Laboratory  
Station D-38  
Gainesville, FL/USA 32614-7117

Project: Environmental  
Project Number: D18F068  
Project Manager: Jeff Boudreau

**Reported:**  
08/13/2018 6:43

**D18F068-01 (MWD-1-6 (R1T6))**  
**K18G073-01 (Groundwater, Grab)**  
Collected: 07/16/2018 5:10 pm

| Analyte | Result | Qual | MDL | PQL | Units | Dil | Prepared | Analyzed | Method |
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|

**Laboratory: Kanapaha Laboratory**

**Metals by EPA 200 Series Methods**

|         |       |   |       |       |      |   |            |            |           |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|
| Mercury | 0.100 | U | 0.100 | 0.400 | ug/L | 1 | 08/09/2018 | 08/09/2018 | EPA 245.1 |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|

**D18F068-02 (MWB-2-1 (R2T1))**  
**K18G073-02 (Groundwater, Grab)**  
Collected: 07/16/2018 1:40 pm

| Analyte | Result | Qual | MDL | PQL | Units | Dil | Prepared | Analyzed | Method |
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|

**Laboratory: Kanapaha Laboratory**

**Metals by EPA 200 Series Methods**

|         |       |   |       |       |      |   |            |            |           |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|
| Mercury | 0.100 | U | 0.100 | 0.400 | ug/L | 1 | 08/09/2018 | 08/09/2018 | EPA 245.1 |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|

**D18F068-03 (MWI-3-7 (R3T7))**  
**K18G073-03 (Groundwater, Grab)**  
Collected: 07/17/2018 7:56 am

| Analyte | Result | Qual | MDL | PQL | Units | Dil | Prepared | Analyzed | Method |
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|

**Laboratory: Kanapaha Laboratory**

**Metals by EPA 200 Series Methods**

|         |       |   |       |       |      |   |            |            |           |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|
| Mercury | 0.100 | U | 0.100 | 0.400 | ug/L | 1 | 08/09/2018 | 08/09/2018 | EPA 245.1 |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|

**D18F068-04 (MWI-4-5 (R4T5B))**  
**K18G073-04 (Groundwater, Grab)**  
Collected: 07/18/2018 7:24 am

| Analyte | Result | Qual | MDL | PQL | Units | Dil | Prepared | Analyzed | Method |
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|

**Laboratory: Kanapaha Laboratory**

**Metals by EPA 200 Series Methods**

|         |       |   |       |       |      |   |            |            |           |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|
| Mercury | 0.100 | U | 0.100 | 0.400 | ug/L | 1 | 08/09/2018 | 08/09/2018 | EPA 245.1 |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|



Deerhaven Laboratory  
Station D-38  
Gainesville, FL/USA 32614-7117

Project: Environmental  
Project Number: D18F068  
Project Manager: Jeff Boudreau

**Reported:**  
08/13/2018 6:43

**D18F068-05 (MWD-6-1 (R6T1B))**  
**K18G073-05 (Groundwater, Grab)**  
Collected: 07/16/2018 10:19 am

| Analyte | Result | Qual | MDL | PQL | Units | Dil | Prepared | Analyzed | Method |
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|

**Laboratory: Kanapaha Laboratory**

**Metals by EPA 200 Series Methods**

|         |       |   |       |       |      |   |            |            |           |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|
| Mercury | 0.100 | U | 0.100 | 0.400 | ug/L | 1 | 08/09/2018 | 08/09/2018 | EPA 245.1 |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|

**D18F068-06 (MWI-6-4 (R6T4B))**  
**K18G073-06 (Groundwater, Grab)**  
Collected: 07/17/2018 3:45 pm

| Analyte | Result | Qual | MDL | PQL | Units | Dil | Prepared | Analyzed | Method |
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|

**Laboratory: Kanapaha Laboratory**

**Metals by EPA 200 Series Methods**

|         |       |   |       |       |      |   |            |            |           |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|
| Mercury | 0.100 | U | 0.100 | 0.400 | ug/L | 1 | 08/09/2018 | 08/09/2018 | EPA 245.1 |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|

**D18F068-07 (MWI-6-8 (R6T8B))**  
**K18G073-07 (Groundwater, Grab)**  
Collected: 07/19/2018 11:17 am

| Analyte | Result | Qual | MDL | PQL | Units | Dil | Prepared | Analyzed | Method |
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|

**Laboratory: Kanapaha Laboratory**

**Metals by EPA 200 Series Methods**

|         |       |   |       |       |      |   |            |            |           |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|
| Mercury | 0.100 | U | 0.100 | 0.400 | ug/L | 1 | 08/09/2018 | 08/09/2018 | EPA 245.1 |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|

**D18F068-08 (MWD-6-12 (R6T12))**  
**K18G073-08 (Groundwater, Grab)**  
Collected: 07/17/2018 9:18 am

| Analyte | Result | Qual | MDL | PQL | Units | Dil | Prepared | Analyzed | Method |
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|

**Laboratory: Kanapaha Laboratory**

**Metals by EPA 200 Series Methods**

|         |       |   |       |       |      |   |            |            |           |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|
| Mercury | 0.100 | U | 0.100 | 0.400 | ug/L | 1 | 08/09/2018 | 08/09/2018 | EPA 245.1 |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|



Deerhaven Laboratory  
Station D-38  
Gainesville, FL/USA 32614-7117

Project: Environmental  
Project Number: D18F068  
Project Manager: Jeff Boudreau

**Reported:**  
08/13/2018 6:43

**D18F068-09 (MWC-8-10 (R8T10))**  
**K18G073-09 (Groundwater, Grab)**  
Collected: 07/17/2018 11:46 am

| Analyte | Result | Qual | MDL | PQL | Units | Dil | Prepared | Analyzed | Method |
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|

**Laboratory: Kanapaha Laboratory**

**Metals by EPA 200 Series Methods**

|         |       |   |       |       |      |   |            |            |           |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|
| Mercury | 0.100 | U | 0.100 | 0.400 | ug/L | 1 | 08/09/2018 | 08/09/2018 | EPA 245.1 |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|

**D18F068-10 (MWI-9-5 (R9T5B))**  
**K18G073-10 (Groundwater, Grab)**  
Collected: 07/17/2018 1:22 pm

| Analyte | Result | Qual | MDL | PQL | Units | Dil | Prepared | Analyzed | Method |
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|

**Laboratory: Kanapaha Laboratory**

**Metals by EPA 200 Series Methods**

|         |       |   |       |       |      |   |            |            |           |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|
| Mercury | 0.100 | U | 0.100 | 0.400 | ug/L | 1 | 08/09/2018 | 08/09/2018 | EPA 245.1 |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|

**D18F068-11 (MWC-10-8 (R10T8))**  
**K18G073-11 (Groundwater, Grab)**  
Collected: 07/19/2018 3:10 pm

| Analyte | Result | Qual | MDL | PQL | Units | Dil | Prepared | Analyzed | Method |
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|

**Laboratory: Kanapaha Laboratory**

**Metals by EPA 200 Series Methods**

|         |       |   |       |       |      |   |            |            |           |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|
| Mercury | 0.100 | U | 0.100 | 0.400 | ug/L | 1 | 08/09/2018 | 08/09/2018 | EPA 245.1 |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|

**D18F068-12 (MWC-11-4 (R11T4B))**  
**K18G073-12 (Groundwater, Grab)**  
Collected: 07/19/2018 1:49 pm

| Analyte | Result | Qual | MDL | PQL | Units | Dil | Prepared | Analyzed | Method |
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|

**Laboratory: Kanapaha Laboratory**

**Metals by EPA 200 Series Methods**

|         |       |   |       |       |      |   |            |            |           |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|
| Mercury | 0.100 | U | 0.100 | 0.400 | ug/L | 1 | 08/09/2018 | 08/09/2018 | EPA 245.1 |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|



Deerhaven Laboratory  
Station D-38  
Gainesville, FL/USA 32614-7117

Project: Environmental  
Project Number: D18F068  
Project Manager: Jeff Boudreau

**Reported:**  
08/13/2018 6:43

**D18F068-13 (MWC-DEEP (DEEP-1))**

**K18G073-13 (Groundwater, Grab)**

Collected: 07/17/2018 8:30 am

| Analyte | Result | Qual | MDL | PQL | Units | Dil | Prepared | Analyzed | Method |
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|

**Laboratory: Kanapaha Laboratory**

**Metals by EPA 200 Series Methods**

|         |       |   |       |       |      |   |            |            |           |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|
| Mercury | 0.100 | U | 0.100 | 0.400 | ug/L | 1 | 08/09/2018 | 08/09/2018 | EPA 245.1 |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|

**D18F068-14 (EBLANK)**

**K18G073-14 (Groundwater, Grab)**

Collected: 07/18/2018 8:25 am

| Analyte | Result | Qual | MDL | PQL | Units | Dil | Prepared | Analyzed | Method |
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|
|---------|--------|------|-----|-----|-------|-----|----------|----------|--------|

**Laboratory: Kanapaha Laboratory**

**Metals by EPA 200 Series Methods**

|         |       |   |       |       |      |   |            |            |           |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|
| Mercury | 0.100 | U | 0.100 | 0.400 | ug/L | 1 | 08/09/2018 | 08/09/2018 | EPA 245.1 |
|---------|-------|---|-------|-------|------|---|------------|------------|-----------|



Deerhaven Laboratory  
Station D-38  
Gainesville, FL/USA 32614-7117

Project: Environmental  
Project Number: D18F068  
Project Manager: Jeff Boudreau

**Reported:**  
08/13/2018 6:43

### Metals by EPA 200 Series Methods - Quality Control Laboratory: Kanapaha Laboratory

| Analyte                           | Result | Qual | MDL   | PQL   | Units | Spike Level                   | Source Result | %REC | % REC Limits                  | RSD   | RSD Limit |
|-----------------------------------|--------|------|-------|-------|-------|-------------------------------|---------------|------|-------------------------------|-------|-----------|
| <b>Batch B18G224 - MERCURY</b>    |        |      |       |       |       |                               |               |      |                               |       |           |
| <b>Blank (B18G224-BLK1)</b>       |        |      |       |       |       | Prepared & Analyzed: 8/9/2018 |               |      |                               |       |           |
| Mercury                           | 0.100  | U    | 0.100 | 0.400 | ug/L  |                               |               |      |                               |       | NR        |
| <b>Blank (B18G224-BLK2)</b>       |        |      |       |       |       | Prepared & Analyzed: 8/9/2018 |               |      |                               |       |           |
| Mercury                           | 0.100  | U    | 0.100 | 0.400 | ug/L  |                               |               |      |                               |       | NR        |
| <b>Blank (B18G224-BLK3)</b>       |        |      |       |       |       | Prepared & Analyzed: 8/9/2018 |               |      |                               |       |           |
| Mercury                           | 0.100  | U    | 0.100 | 0.400 | ug/L  |                               |               |      |                               |       | NR        |
| <b>LCS (B18G224-BS1)</b>          |        |      |       |       |       | Prepared & Analyzed: 8/9/2018 |               |      |                               |       |           |
| Mercury                           | 15.0   |      |       |       | ug/L  | 15.7                          |               | 95.6 | 90-110                        | 0.454 |           |
| <b>LCS (B18G224-BS2)</b>          |        |      |       |       |       | Prepared & Analyzed: 8/9/2018 |               |      |                               |       |           |
| Mercury                           | 15.1   |      |       |       | ug/L  | 15.7                          |               | 96.1 | 90-110                        | 0.454 |           |
| <b>LCS (B18G224-BS3)</b>          |        |      |       |       |       | Prepared & Analyzed: 8/9/2018 |               |      |                               |       |           |
| Mercury                           | 15.0   |      |       |       | ug/L  | 15.7                          |               | 95.3 | 90-110                        | 0.454 |           |
| <b>Duplicate (B18G224-DUP1)</b>   |        |      |       |       |       | Source: K18G073-06            |               |      | Prepared & Analyzed: 8/9/2018 |       |           |
| Mercury                           | 0.100  | U    | 0.100 | 0.400 | ug/L  |                               | ND            |      |                               | 78.6  |           |
| <b>Duplicate (B18G224-DUP2)</b>   |        |      |       |       |       | Source: K18G073-13            |               |      | Prepared & Analyzed: 8/9/2018 |       |           |
| Mercury                           | 0.100  | U    | 0.100 | 0.400 | ug/L  |                               | ND            |      |                               | NR    |           |
| <b>Matrix Spike (B18G224-MS1)</b> |        |      |       |       |       | Source: K18G073-06            |               |      | Prepared & Analyzed: 8/9/2018 |       |           |
| Mercury                           | 2.01   |      | 0.100 | 0.400 | ug/L  | 2.01                          | ND            | 100  | 90-110                        |       |           |
| <b>Matrix Spike (B18G224-MS2)</b> |        |      |       |       |       | Source: K18G073-13            |               |      | Prepared & Analyzed: 8/9/2018 |       |           |
| Mercury                           | 2.03   |      | 0.100 | 0.400 | ug/L  | 2.01                          | ND            | 101  | 90-110                        |       |           |



Deerhaven Laboratory  
Station D-38  
Gainesville, FL/USA 32614-7117

Project: Environmental  
Project Number: D18F068  
Project Manager: Jeff Boudreau

**Reported:**  
08/13/2018 6:43

### Notes and Definitions

| <u>Qualifier</u> | <u>Description</u>  |
|------------------|---|
| NR               | Not Reported  |
| RSD              | Relative Standard Deviation   |
| U                | Compound was analyzed for but not detected                              |
| N                | Presumptive evidence of presence of material                            |
| L                | Off-scale high. Actual value is known to be greater than value given    |
| I                | The reported value is between the laboratory MDL and the laboratory PQL |
| V                | Analyte was detected in both the sample and the associated method blank |



**SUBCONTRACT ORDER**  
**Deerhaven Generating Station**  
**D18F068**

**SENDING LABORATORY:**

Gainesville Regional Utilities  
 Deerhaven Generating Station  
 10001 NW 13th Street  
 Gainesville, FL 32653  
 Phone: 352-334-3434  
 Fax: 352-334-3149  
 Project Manager: Jeff Boudreau

**RECEIVING LABORATORY:**

Kanapaha Laboratory  
 3901 SW 63rd BLVD  
 Gainesville, FL/USA 32608  
 Phone :352-393-6777  
 Fax: 352-334-2732

| Analysis                            | Expires         | Laboratory ID                   | Comments          |
|-------------------------------------|-----------------|---------------------------------|-------------------|
| <b>Sample Name: MWD-1-6 (R1T6)</b>  |                 |                                 |                   |
| <b>Sample ID: D18F068-01</b>        | <b>Water</b>    | <b>Sampled: 16-Jul-18 17:10</b> | <b>K18G073-01</b> |
| K_Mercury, cold vapor               | 13-Aug-18 17:10 |                                 |                   |
| <i>Containers Supplied:</i>         |                 |                                 |                   |
| D_HDPE, HNO3 pH<2 - Hg - 500mL (E)  |                 |                                 |                   |
| <b>Sample Name: MWB-2-1 (R2T1)</b>  |                 |                                 |                   |
| <b>Sample ID: D18F068-02</b>        | <b>Water</b>    | <b>Sampled: 16-Jul-18 13:40</b> | <b>K18G073-02</b> |
| K_Mercury, cold vapor               | 13-Aug-18 13:40 |                                 |                   |
| <i>Containers Supplied:</i>         |                 |                                 |                   |
| D_HDPE, HNO3 pH<2 - Hg - 500mL (E)  |                 |                                 |                   |
| <b>Sample Name: MWI-3-7 (R3T7)</b>  |                 |                                 |                   |
| <b>Sample ID: D18F068-03</b>        | <b>Water</b>    | <b>Sampled: 17-Jul-18 07:56</b> | <b>K18G073-03</b> |
| K_Mercury, cold vapor               | 14-Aug-18 07:56 |                                 |                   |
| <i>Containers Supplied:</i>         |                 |                                 |                   |
| D_HDPE, HNO3 pH<2 - Hg - 500mL (E)  |                 |                                 |                   |
| <b>Sample Name: MWI-4-5 (R4T5B)</b> |                 |                                 |                   |
| <b>Sample ID: D18F068-04</b>        | <b>Water</b>    | <b>Sampled: 18-Jul-18 07:24</b> | <b>K18G073-04</b> |
| K_Mercury, cold vapor               | 15-Aug-18 07:24 |                                 |                   |
| <i>Containers Supplied:</i>         |                 |                                 |                   |
| D_HDPE, HNO3 pH<2 - Hg - 500mL (E)  |                 |                                 |                   |
| <b>Sample Name: MWD-6-1 (R6T1B)</b> |                 |                                 |                   |
| <b>Sample ID: D18F068-05</b>        | <b>Water</b>    | <b>Sampled: 16-Jul-18 10:19</b> | <b>K18G073-05</b> |
| K_Mercury, cold vapor               | 13-Aug-18 10:19 |                                 |                   |
| <i>Containers Supplied:</i>         |                 |                                 |                   |
| D_HDPE, HNO3 pH<2 - Hg - 500mL (E)  |                 |                                 |                   |
| <b>Sample Name: MWI-6-4 (R6T4B)</b> |                 |                                 |                   |
| <b>Sample ID: D18F068-06</b>        | <b>Water</b>    | <b>Sampled: 17-Jul-18 15:45</b> | <b>K18G073-06</b> |
| K_Mercury, cold vapor               | 14-Aug-18 15:45 |                                 |                   |
| <i>Containers Supplied:</i>         |                 |                                 |                   |
| D_HDPE, HNO3 pH<2 - Hg - 500mL (E)  |                 |                                 |                   |

Released By: *Shelley Phillips* Date: *7-23-18* via Inter-office mail  
 Received By: *John M. DeLo* Date: *07/23/18 @ 1132*

Released By \_\_\_\_\_ Date \_\_\_\_\_ Received By \_\_\_\_\_ Date \_\_\_\_\_





**SUBCONTRACT ORDER**  
**Deerhaven Generating Station**  
**D18F068**

| Analysis   | Expires         | Laboratory ID | Comments |
|--|-----------------|---------------|----------|
| Sample Name: MWI-6-8 (R6T8B)<br>Sample ID: D18F068-07    Water    Sampled: 19-Jul-18 11:17   |                 | K186073-07    |          |
| K_Mercury, cold vapor<br>Containers Supplied:<br>D_HDPE, HNO3 pH<2 - Hg - 500mL (E)          | 16-Aug-18 11:17 |               |          |
| Sample Name: MWD-6-12 (R6T12)<br>Sample ID: D18F068-08    Water    Sampled: 17-Jul-18 09:18  |                 | K186073-08    |          |
| K_Mercury, cold vapor<br>Containers Supplied:<br>D_HDPE, HNO3 pH<2 - Hg - 500mL (E)          | 14-Aug-18 09:18 |               |          |
| Sample Name: MWC-8-10 (R8T10)<br>Sample ID: D18F068-09    Water    Sampled: 17-Jul-18 11:46  |                 | K186073-09    |          |
| K_Mercury, cold vapor<br>Containers Supplied:<br>D_HDPE, HNO3 pH<2 - Hg - 500mL (E)          | 14-Aug-18 11:46 |               |          |
| Sample Name: MWI-9-5 (R9T5B)<br>Sample ID: D18F068-10    Water    Sampled: 17-Jul-18 13:22   |                 | K186073-10    |          |
| K_Mercury, cold vapor<br>Containers Supplied:<br>D_HDPE, HNO3 pH<2 - Hg - 500mL (E)          | 14-Aug-18 13:22 |               |          |
| Sample Name: MWC-10-8 (R10T8)<br>Sample ID: D18F068-11    Water    Sampled: 19-Jul-18 15:10  |                 | K186073-11    |          |
| K_Mercury, cold vapor<br>Containers Supplied:<br>D_HDPE, HNO3 pH<2 - Hg - 500mL (E)          | 16-Aug-18 15:10 |               |          |
| Sample Name: MWC-11-4 (R11T4B)<br>Sample ID: D18F068-12    Water    Sampled: 19-Jul-18 13:49 |                 | K186073-12    |          |
| K_Mercury, cold vapor<br>Containers Supplied:<br>D_HDPE, HNO3 pH<2 - Hg - 500mL (E)          | 16-Aug-18 13:49 |               |          |
| Sample Name: MWC-DEEP (DEEP-1)<br>Sample ID: D18F068-13    Water    Sampled: 17-Jul-18 08:30 |                 | K186073-13    |          |
| K_Mercury, cold vapor<br>Containers Supplied:<br>D_HDPE, HNO3 pH<2 - Hg - 500mL (E)          | 14-Aug-18 08:30 |               |          |
| Sample Name: EBLANK<br>Sample ID: D18F068-14    Water    Sampled: 18-Jul-18 08:25            |                 | K186073-14    |          |
| K_Mercury, cold vapor<br>Containers Supplied:<br>D_HDPE, HNO3 pH<2 - Hg - 500mL (E)          | 15-Aug-18 08:25 |               |          |

Released By: *Shelley Phillips*      Date: *7-23-18*      via Inter-office mail  
 Received By: *John M. DeB*      Date: *07/23/18 @ 1132*

Released By \_\_\_\_\_ Date \_\_\_\_\_ Received By \_\_\_\_\_ Date \_\_\_\_\_

February 14, 2018

*Chloride: Sulfates  
data  
wk #1 CCR  
K475  
K674  
EBlank*

Mr. Jeffery Boudreau  
Deerhaven Lab  
P.O. Box 147117, Station D38  
Gainesville, FL 32614

RE: Project: D18A024  
Pace Project No.: 35371016

Dear Mr. Boudreau:

Enclosed are the analytical results for sample(s) received by the laboratory on January 30, 2018. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,



Jeff Baylor  
jeff.baylor@pacelabs.com  
(386)672-5668  
Project Manager

Enclosures

cc: Kent Brakefield  
Shelley Phillips, Deerhaven Lab



### REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: D18A024  
Pace Project No.: 35371016

---

### Pennsylvania Certification IDs

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601  
L-A-B DOD-ELAP Accreditation #: L2417  
Alabama Certification #: 41590  
Arizona Certification #: AZ0734  
Arkansas Certification  
California Certification #: 04222CA  
Colorado Certification  
Connecticut Certification #: PH-0694  
Delaware Certification  
Florida/TNI Certification #: E87683  
Georgia Certification #: C040  
Guam Certification  
Hawaii Certification  
Idaho Certification  
Illinois Certification  
Indiana Certification  
Iowa Certification #: 391  
Kansas/TNI Certification #: E-10358  
Kentucky Certification #: 90133  
Louisiana DHH/TNI Certification #: LA140008  
Louisiana DEQ/TNI Certification #: 4086  
Maine Certification #: PA00091  
Maryland Certification #: 308  
Massachusetts Certification #: M-PA1457  
Michigan/PADEP Certification  
Missouri Certification #: 235

Montana Certification #: Cert 0082  
Nebraska Certification #: NE-05-29-14  
Nevada Certification #: PA014572015-1  
New Hampshire/TNI Certification #: 2976  
New Jersey/TNI Certification #: PA 051  
New Mexico Certification #: PA01457  
New York/TNI Certification #: 10888  
North Carolina Certification #: 42706  
North Dakota Certification #: R-190  
Oregon/TNI Certification #: PA200002  
Pennsylvania/TNI Certification #: 65-00282  
Puerto Rico Certification #: PA01457  
Rhode Island Certification #: 65-00282  
South Dakota Certification  
Tennessee Certification #: TN2867  
Texas/TNI Certification #: T104704188-14-8  
Utah/TNI Certification #: PA014572015-5  
USDA Soil Permit #: P330-14-00213  
Vermont Dept. of Health: ID# VT-0282  
Virgin Island/PADEP Certification  
Virginia/VELAP Certification #: 460198  
Washington Certification #: C868  
West Virginia DEP Certification #: 143  
West Virginia DHHR Certification #: 9964C  
Wisconsin Certification  
Wyoming Certification #: 8TMS-L

---

### Ormond Beach Certification IDs

8 East Tower Circle, Ormond Beach, FL 32174  
Alabama Certification #: 41320  
Connecticut Certification #: PH-0216  
Delaware Certification: FL NELAC Reciprocity  
Florida Certification #: E83079  
Georgia Certification #: 955  
Guam Certification: FL NELAC Reciprocity  
Hawaii Certification: FL NELAC Reciprocity  
Illinois Certification #: 200068  
Indiana Certification: FL NELAC Reciprocity  
Kansas Certification #: E-10383  
Louisiana Certification #: FL NELAC Reciprocity  
Louisiana Environmental Certificate #: 05007  
Maryland Certification: #346  
Michigan Certification #: 9911  
Mississippi Certification: FL NELAC Reciprocity  
Missouri Certification #: 236  
Montana Certification #: Cert 0074

Nebraska Certification: NE-OS-28-14  
Nevada Certification: FL NELAC Reciprocity  
New Jersey Certification #: FL022  
New York Certification #: 11608  
North Carolina Environmental Certificate #: 667  
North Carolina Certification #: 12710  
Oklahoma Certification #: D9947  
Pennsylvania Certification #: 68-00547  
Puerto Rico Certification #: FL01264  
South Carolina Certification: #96042001  
Tennessee Certification #: TN02974  
Texas Certification: FL NELAC Reciprocity  
US Virgin Islands Certification: FL NELAC Reciprocity  
Virginia Environmental Certification #: 460165  
Wyoming Certification: FL NELAC Reciprocity  
West Virginia Certification #: 9962C  
Wisconsin Certification #: 399079670  
Wyoming (EPA Region 8): FL NELAC Reciprocity

---

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE SUMMARY

Project: D18A024  
Pace Project No.: 35371016

| Lab ID      | Sample ID  | Matrix | Date Collected | Date Received  |
|-------------|------------|--------|----------------|----------------|
| 35371016001 | D18A024-01 | Water  | 01/21/18 16:42 | 01/30/18 10:15 |
| 35371016002 | D18A024-02 | Water  | 01/23/18 12:04 | 01/30/18 10:15 |
| 35371016003 | D18A024-03 | Water  | 01/26/18 15:38 | 01/30/18 10:15 |
| 35371016004 | D18A024-04 | Water  | 01/24/18 09:10 | 01/30/18 10:15 |
| 35371016005 | D18A024-05 | Water  | 01/21/18 10:52 | 01/30/18 10:15 |
| 35371016006 | D18A024-06 | Water  | 01/23/18 15:25 | 01/30/18 10:15 |
| 35371016007 | D18A024-07 | Water  | 01/26/18 13:30 | 01/30/18 10:15 |
| 35371016008 | D18A024-08 | Water  | 01/25/18 15:07 | 01/30/18 10:15 |
| 35371016009 | D18A024-09 | Water  | 01/27/18 10:00 | 01/30/18 10:15 |
| 35371016010 | D18A024-10 | Water  | 01/25/18 14:10 | 01/30/18 10:15 |
| 35371016011 | D18A024-11 | Water  | 01/26/18 10:14 | 01/30/18 10:15 |
| 35371016012 | D18A024-12 | Water  | 01/26/18 08:42 | 01/30/18 10:15 |
| 35371016013 | D18A024-13 | Water  | 01/25/18 16:47 | 01/30/18 10:15 |
| 35371016014 | D18A024-14 | Water  | 01/25/18 12:27 | 01/30/18 10:15 |

### REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: D18A024  
Pace Project No.: 35371016

| Lab ID      | Sample ID  | Method     | Analysts | Analytes Reported | Laboratory |
|-------------|------------|------------|----------|-------------------|------------|
| 35371016001 | D18A024-01 | EPA 900.0  | NJV      | 1                 | PASI-PA    |
|             |            | EPA 300.0  | CMD      | 2                 | PASI-O     |
|             |            | EPA 353.2  | JMD      | 1                 | PASI-O     |
|             |            | SM 5310B   | JMD      | 1                 | PASI-O     |
| 35371016002 | D18A024-02 | EPA 900.0  | NJV      | 1                 | PASI-PA    |
|             |            | EPA 300.0  | CMD      | 2                 | PASI-O     |
|             |            | EPA 353.2  | JMD      | 1                 | PASI-O     |
|             |            | SM 5310B   | JMD      | 1                 | PASI-O     |
| 35371016003 | D18A024-03 | SM7110C-11 | NEG      | 1                 | PASI-PA    |
|             |            | EPA 300.0  | CMD      | 2                 | PASI-O     |
|             |            | EPA 353.2  | JMD      | 1                 | PASI-O     |
|             |            | SM 5310B   | JMD      | 1                 | PASI-O     |
| 35371016004 | D18A024-04 | EPA 900.0  | NJV      | 1                 | PASI-PA    |
|             |            | EPA 300.0  | CMD      | 2                 | PASI-O     |
|             |            | EPA 353.2  | JMD      | 1                 | PASI-O     |
|             |            | SM 5310B   | JMD      | 1                 | PASI-O     |
| 35371016005 | D18A024-05 | EPA 900.0  | NJV      | 1                 | PASI-PA    |
|             |            | EPA 300.0  | CMD      | 2                 | PASI-O     |
|             |            | EPA 353.2  | JMD      | 1                 | PASI-O     |
|             |            | SM 5310B   | JMD      | 1                 | PASI-O     |
| 35371016006 | D18A024-06 | EPA 900.0  | NJV      | 1                 | PASI-PA    |
|             |            | EPA 300.0  | CMD      | 2                 | PASI-O     |
|             |            | EPA 353.2  | JMD      | 1                 | PASI-O     |
|             |            | SM 5310B   | JMD      | 1                 | PASI-O     |
| 35371016007 | D18A024-07 | EPA 900.0  | NJV      | 1                 | PASI-PA    |
|             |            | EPA 300.0  | CMD      | 2                 | PASI-O     |
|             |            | EPA 353.2  | JMD      | 1                 | PASI-O     |
|             |            | SM 5310B   | JMD      | 1                 | PASI-O     |
| 35371016008 | D18A024-08 | EPA 900.0  | NJV      | 1                 | PASI-PA    |
|             |            | EPA 300.0  | CMD      | 2                 | PASI-O     |
|             |            | EPA 353.2  | JMD      | 1                 | PASI-O     |
|             |            | SM 5310B   | JMD      | 1                 | PASI-O     |
| 35371016009 | D18A024-09 | EPA 900.0  | NJV      | 1                 | PASI-PA    |
|             |            | EPA 300.0  | CMD      | 2                 | PASI-O     |
|             |            | EPA 353.2  | JMD      | 1                 | PASI-O     |
|             |            | SM 5310B   | JMD      | 1                 | PASI-O     |
| 35371016010 | D18A024-10 | EPA 900.0  | NJV      | 1                 | PASI-PA    |

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**SAMPLE ANALYTE COUNT**

Project: D18A024  
 Pace Project No.: 35371016

| Lab ID      | Sample ID  | Method    | Analysts | Analytes Reported | Laboratory |
|-------------|------------|-----------|----------|-------------------|------------|
| 35371016011 | D18A024-11 | EPA 300.0 | CMD      | 2                 | PASI-O     |
|             |            | EPA 353.2 | JMD      | 1                 | PASI-O     |
|             |            | SM 5310B  | JMD      | 1                 | PASI-O     |
|             |            | EPA 900.0 | NJV      | 1                 | PASI-PA    |
|             |            | EPA 300.0 | CMD      | 2                 | PASI-O     |
| 35371016012 | D18A024-12 | EPA 353.2 | JMD      | 1                 | PASI-O     |
|             |            | SM 5310B  | JMD      | 1                 | PASI-O     |
|             |            | EPA 900.0 | NJV      | 1                 | PASI-PA    |
|             |            | EPA 300.0 | CMD      | 2                 | PASI-O     |
|             |            | EPA 353.2 | JMD      | 1                 | PASI-O     |
| 35371016013 | D18A024-13 | SM 5310B  | JMD      | 1                 | PASI-O     |
|             |            | EPA 900.0 | NJV      | 1                 | PASI-PA    |
|             |            | EPA 300.0 | CMD      | 2                 | PASI-O     |
|             |            | EPA 353.2 | JMD      | 1                 | PASI-O     |
|             |            | SM 5310B  | JMD      | 1                 | PASI-O     |
| 35371016014 | D18A024-14 | EPA 900.0 | NJV      | 1                 | PASI-PA    |
|             |            | EPA 300.0 | CMD      | 2                 | PASI-O     |
|             |            | EPA 353.2 | JMD      | 1                 | PASI-O     |
|             |            | SM 5310B  | JMD      | 1                 | PASI-O     |

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**ANALYTICAL RESULTS**

Project: D18A024  
Pace Project No.: 35371016

1475

**Sample: D18A024-04**      **Lab ID: 35371016004**      Collected: 01/24/18 09:10      Received: 01/30/18 10:15      Matrix: Water

| Parameters                           | Results | Units                        | PQL   | MDL   | DF | Prepared | Analyzed       | CAS No.    | Qual |
|--------------------------------------|---------|------------------------------|-------|-------|----|----------|----------------|------------|------|
| <b>300.0 IC Anions 28 Days</b>       |         | Analytical Method: EPA 300.0 |       |       |    |          |                |            |      |
| Chloride                             | 3.6 I   | mg/L                         | 5.0   | 2.5   | 1  |          | 02/01/18 15:35 | 16887-00-6 |      |
| Sulfate                              | 4.2 I   | mg/L                         | 5.0   | 2.5   | 1  |          | 02/01/18 15:35 | 14808-79-8 |      |
| <b>353.2 Nitrogen, NO2/NO3 pres.</b> |         | Analytical Method: EPA 353.2 |       |       |    |          |                |            |      |
| Nitrogen, NO2 plus NO3               | 0.025 U | mg/L                         | 0.050 | 0.025 | 1  |          | 01/31/18 15:49 |            |      |
| <b>5310B TOC</b>                     |         | Analytical Method: SM 5310B  |       |       |    |          |                |            |      |
| Total Organic Carbon                 | 20.8    | mg/L                         | 1.0   | 0.50  | 1  |          | 02/01/18 03:30 | 7440-44-0  |      |

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**ANALYTICAL RESULTS**

Project: D18A024  
Pace Project No.: 35371016

*ALTY*

**Sample: D18A024-06**      **Lab ID: 35371016006**      Collected: 01/23/18 15:25      Received: 01/30/18 10:15      Matrix: Water

| Parameters                           | Results                      | Units | PQL   | MDL   | DF | Prepared | Analyzed       | CAS No.    | Qual |
|--------------------------------------|------------------------------|-------|-------|-------|----|----------|----------------|------------|------|
| <b>300.0 IC Anions 28 Days</b>       | Analytical Method: EPA 300.0 |       |       |       |    |          |                |            |      |
| Chloride                             | <b>5.1</b>                   | mg/L  | 5.0   | 2.5   | 1  |          | 02/01/18 20:49 | 16887-00-6 |      |
| Sulfate                              | <b>25.3</b>                  | mg/L  | 5.0   | 2.5   | 1  |          | 02/01/18 20:49 | 14808-79-8 |      |
| <b>353.2 Nitrogen, NO2/NO3 pres.</b> | Analytical Method: EPA 353.2 |       |       |       |    |          |                |            |      |
| Nitrogen, NO2 plus NO3               | <b>0.30</b>                  | mg/L  | 0.050 | 0.025 | 1  |          | 01/31/18 15:51 |            |      |
| <b>5310B TOC</b>                     | Analytical Method: SM 5310B  |       |       |       |    |          |                |            |      |
| Total Organic Carbon                 | <b>6.9</b>                   | mg/L  | 1.0   | 0.50  | 1  |          | 02/01/18 04:02 | 7440-44-0  |      |

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**ANALYTICAL RESULTS**

Project: D18A024  
Pace Project No.: 35371016

| Parameters   | Results | Units | PQL   | MDL   | DF | Prepared | Analyzed       | CAS No.    | Qual |
|--|---------|-------|-------|-------|----|----------|----------------|------------|------|
| <b>Sample: D18A024-14      Lab ID: 35371016014      Collected: 01/25/18 12:27      Received: 01/30/18 10:15      Matrix: Water</b> |         |       |       |       |    |          |                |            |      |
| <b>300.0 IC Anions 28 Days</b> Analytical Method: EPA 300.0  |         |       |       |       |    |          |                |            |      |
| Chloride   | 2.5 U   | mg/L  | 5.0   | 2.5   | 1  |          | 02/01/18 20:26 | 16887-00-6 |      |
| Sulfate  | 2.5 U   | mg/L  | 5.0   | 2.5   | 1  |          | 02/01/18 20:26 | 14808-79-8 |      |
| <b>353.2 Nitrogen, NO2/NO3 pres.</b> Analytical Method: EPA 353.2  |         |       |       |       |    |          |                |            |      |
| Nitrogen, NO2 plus NO3   | 0.025 U | mg/L  | 0.050 | 0.025 | 1  |          | 01/31/18 16:06 |            |      |
| <b>5310B TOC</b> Analytical Method: SM 5310B   |         |       |       |       |    |          |                |            |      |
| Total Organic Carbon   | 0.50 U  | mg/L  | 1.0   | 0.50  | 1  |          | 02/01/18 08:04 | 7440-44-0  |      |

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**QUALITY CONTROL DATA**

Project: D18A024  
 Pace Project No.: 35371016

QC Batch: 422565 Analysis Method: EPA 353.2  
 QC Batch Method: EPA 353.2 Analysis Description: 353.2 Nitrate + Nitrite, preserved  
 Associated Lab Samples: 35371016001

METHOD BLANK: 2300313  
 Associated Lab Samples: 35371016001

Matrix: Water

| Parameter              | Units | Blank Result | Reporting Limit | MDL   | Analyzed       | Qualifiers |
|------------------------|-------|--------------|-----------------|-------|----------------|------------|
| Nitrogen, NO2 plus NO3 | mg/L  | 0.025 U      | 0.050           | 0.025 | 01/31/18 15:00 |            |

LABORATORY CONTROL SAMPLE: 2300314

| Parameter              | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|------------------------|-------|-------------|------------|-----------|--------------|------------|
| Nitrogen, NO2 plus NO3 | mg/L  | 2           | 2.1        | 106       | 90-110       |            |

MATRIX SPIKE SAMPLE: 2300316

| Parameter              | Units | 35370803001 Result | Spike Conc. | MS Result | MS % Rec | % Rec Limits | Qualifiers |
|------------------------|-------|--------------------|-------------|-----------|----------|--------------|------------|
| Nitrogen, NO2 plus NO3 | mg/L  | 0.15               | 2           | 2.2       | 102      | 90-110       |            |

MATRIX SPIKE SAMPLE: 2300318

| Parameter              | Units | 35370997001 Result | Spike Conc. | MS Result | MS % Rec | % Rec Limits | Qualifiers |
|------------------------|-------|--------------------|-------------|-----------|----------|--------------|------------|
| Nitrogen, NO2 plus NO3 | mg/L  | 0.35               | 2           | 2.4       | 100      | 90-110       |            |

SAMPLE DUPLICATE: 2300315

| Parameter              | Units | 35370803001 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|--------------------|------------|-----|---------|------------|
| Nitrogen, NO2 plus NO3 | mg/L  | 0.15               | 0.15       | 0   | 20      |            |

SAMPLE DUPLICATE: 2300317

| Parameter              | Units | 35370997001 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|--------------------|------------|-----|---------|------------|
| Nitrogen, NO2 plus NO3 | mg/L  | 0.35               | 0.35       | 1   | 20      |            |

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### QUALITY CONTROL DATA

Project: D18A024  
Pace Project No.: 35371016

QC Batch: 422566 Analysis Method: EPA 353.2  
QC Batch Method: EPA 353.2 Analysis Description: 353.2 Nitrate + Nitrite, preserved  
Associated Lab Samples: 35371016002, 35371016003, 35371016004, 35371016005, 35371016006, 35371016007, 35371016008, 35371016009, 35371016010, 35371016011, 35371016012, 35371016013, 35371016014

METHOD BLANK: 2300319 Matrix: Water  
Associated Lab Samples: 35371016002, 35371016003, 35371016004, 35371016005, 35371016006, 35371016007, 35371016008, 35371016009, 35371016010, 35371016011, 35371016012, 35371016013, 35371016014

| Parameter              | Units | Blank Result | Reporting Limit | MDL   | Analyzed       | Qualifiers |
|------------------------|-------|--------------|-----------------|-------|----------------|------------|
| Nitrogen, NO2 plus NO3 | mg/L  | 0.025 U      | 0.050           | 0.025 | 01/31/18 15:38 |            |

LABORATORY CONTROL SAMPLE: 2300320

| Parameter              | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|------------------------|-------|-------------|------------|-----------|--------------|------------|
| Nitrogen, NO2 plus NO3 | mg/L  | 2           | 2.1        | 104       | 90-110       |            |

MATRIX SPIKE SAMPLE: 2300322

| Parameter              | Units | 35371016002 Result | Spike Conc. | MS Result | MS % Rec | % Rec Limits | Qualifiers |
|------------------------|-------|--------------------|-------------|-----------|----------|--------------|------------|
| Nitrogen, NO2 plus NO3 | mg/L  | 0.056              | 2           | 2.1       | 103      | 90-110       |            |

MATRIX SPIKE SAMPLE: 2300324

| Parameter              | Units | 35371016012 Result | Spike Conc. | MS Result | MS % Rec | % Rec Limits | Qualifiers |
|------------------------|-------|--------------------|-------------|-----------|----------|--------------|------------|
| Nitrogen, NO2 plus NO3 | mg/L  | 0.025 U            | 2           | 1.4       | 70       | 90-110 J(M1) |            |

SAMPLE DUPLICATE: 2300321

| Parameter              | Units | 35371016002 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|--------------------|------------|-----|---------|------------|
| Nitrogen, NO2 plus NO3 | mg/L  | 0.056              | 0.058      | 3   | 20      |            |

SAMPLE DUPLICATE: 2300323

| Parameter              | Units | 35371016012 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|--------------------|------------|-----|---------|------------|
| Nitrogen, NO2 plus NO3 | mg/L  | 0.025 U            | 0.025 U    |     | 20      |            |

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**QUALITY CONTROL DATA**

Project: D18A024  
Pace Project No.: 35371016

QC Batch: 422567 Analysis Method: SM 5310B  
QC Batch Method: SM 5310B Analysis Description: 5310B TOC  
Associated Lab Samples: 35371016001, 35371016002, 35371016003, 35371016004, 35371016005, 35371016006, 35371016007

METHOD BLANK: 2300325 Matrix: Water  
Associated Lab Samples: 35371016001, 35371016002, 35371016003, 35371016004, 35371016005, 35371016006, 35371016007

| Parameter            | Units | Blank Result | Reporting Limit | MDL  | Analyzed       | Qualifiers |
|----------------------|-------|--------------|-----------------|------|----------------|------------|
| Total Organic Carbon | mg/L  | 0.50 U       | 1.0             | 0.50 | 01/31/18 21:14 |            |

LABORATORY CONTROL SAMPLE: 2300326

| Parameter            | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|----------------------|-------|-------------|------------|-----------|--------------|------------|
| Total Organic Carbon | mg/L  | 20          | 19.5       | 97        | 90-110       |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2300327 2300328

| Parameter            | Units | 261248001 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | Max RPD | Qual |
|----------------------|-------|------------------|----------------|-----------------|-----------|------------|----------|-----------|--------------|---------|------|
| Total Organic Carbon | mg/L  | 1.4              | 20             | 20              | 22.0      | 22.7       | 103      | 107       | 80-120       | 3       | 20   |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2300329 2300330

| Parameter            | Units | 35371016006 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | Max RPD | Qual |
|----------------------|-------|--------------------|----------------|-----------------|-----------|------------|----------|-----------|--------------|---------|------|
| Total Organic Carbon | mg/L  | 6.9                | 20             | 20              | 26.4      | 26.2       | 98       | 97        | 80-120       | 1       | 20   |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

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**QUALITY CONTROL DATA**

Project: D18A024  
Pace Project No.: 35371016

QC Batch: 422569 Analysis Method: SM 5310B  
QC Batch Method: SM 5310B Analysis Description: 5310B TOC  
Associated Lab Samples: 35371016008, 35371016009, 35371016010, 35371016011, 35371016012, 35371016013, 35371016014

METHOD BLANK: 2300337 Matrix: Water  
Associated Lab Samples: 35371016008, 35371016009, 35371016010, 35371016011, 35371016012, 35371016013, 35371016014

| Parameter            | Units | Blank Result | Reporting Limit | MDL  | Analyzed       | Qualifiers |
|----------------------|-------|--------------|-----------------|------|----------------|------------|
| Total Organic Carbon | mg/L  | 0.50 U       | 1.0             | 0.50 | 02/01/18 04:56 |            |

LABORATORY CONTROL SAMPLE: 2300338

| Parameter            | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|----------------------|-------|-------------|------------|-----------|--------------|------------|
| Total Organic Carbon | mg/L  | 20          | 19.5       | 97        | 90-110       |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2300339 2300340

| Parameter            | Units | 2300339            |                | 2300340         |           | MS % Rec | MSD % Rec | % Rec Limits | RPD    | Max RPD | Qual |            |
|----------------------|-------|--------------------|----------------|-----------------|-----------|----------|-----------|--------------|--------|---------|------|------------|
|                      |       | 35371016008 Result | MS Spike Conc. | MSD Spike Conc. | MS Result |          |           |              |        |         |      | MSD Result |
| Total Organic Carbon | mg/L  | 13.2               | 20             | 20              | 30.8      | 32.1     | 88        | 94           | 80-120 | 4       | 20   |            |

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## QUALIFIERS

Project: D18A024  
Pace Project No.: 35371016

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.  
ND - Not Detected at or above adjusted reporting limit.  
TNTC - Too Numerous To Count  
MDL - Adjusted Method Detection Limit.  
PQL - Practical Quantitation Limit.  
RL - Reporting Limit.  
S - Surrogate  
1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.  
Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.  
LCS(D) - Laboratory Control Sample (Duplicate)  
MS(D) - Matrix Spike (Duplicate)  
DUP - Sample Duplicate  
RPD - Relative Percent Difference  
NC - Not Calculable.  
SG - Silica Gel - Clean-Up  
U - Indicates the compound was analyzed for, but not detected.  
N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.  
Act - Activity  
Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval).  
Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)  
(MDC) - Minimum Detectable Concentration  
Trac - Tracer Recovery (%)  
Carr - Carrier Recovery (%)  
Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.  
TNI - The NELAC Institute.

### LABORATORIES

PASI-O Pace Analytical Services - Ormond Beach  
PASI-PA Pace Analytical Services - Greensburg

### ANALYTE QUALIFIERS

I The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.  
U Compound was analyzed for but not detected.  
J(M1) Estimated Value. Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.  
L Off-scale high. Actual value is known to be greater than value given.

## REPORT OF LABORATORY ANALYSIS

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**QUALITY CONTROL DATA CROSS REFERENCE TABLE**

Project: D18A024  
Pace Project No.: 35371016

| Lab ID      | Sample ID  | QC Batch Method | QC Batch | Analytical Method | Analytical Batch |
|-------------|------------|-----------------|----------|-------------------|------------------|
| 35371016003 | D18A024-03 | SM7110C-11      | 287625   |                   |                  |
| 35371016001 | D18A024-01 | EPA 900.0       | 287049   |                   |                  |
| 35371016002 | D18A024-02 | EPA 900.0       | 287049   |                   |                  |
| 35371016004 | D18A024-04 | EPA 900.0       | 287049   |                   |                  |
| 35371016005 | D18A024-05 | EPA 900.0       | 287049   |                   |                  |
| 35371016006 | D18A024-06 | EPA 900.0       | 287049   |                   |                  |
| 35371016007 | D18A024-07 | EPA 900.0       | 287049   |                   |                  |
| 35371016008 | D18A024-08 | EPA 900.0       | 287049   |                   |                  |
| 35371016009 | D18A024-09 | EPA 900.0       | 287049   |                   |                  |
| 35371016010 | D18A024-10 | EPA 900.0       | 287049   |                   |                  |
| 35371016011 | D18A024-11 | EPA 900.0       | 287049   |                   |                  |
| 35371016012 | D18A024-12 | EPA 900.0       | 287049   |                   |                  |
| 35371016013 | D18A024-13 | EPA 900.0       | 287049   |                   |                  |
| 35371016014 | D18A024-14 | EPA 900.0       | 287049   |                   |                  |
| 35371016001 | D18A024-01 | EPA 300.0       | 422814   |                   |                  |
| 35371016002 | D18A024-02 | EPA 300.0       | 422814   |                   |                  |
| 35371016003 | D18A024-03 | EPA 300.0       | 422814   |                   |                  |
| 35371016004 | D18A024-04 | EPA 300.0       | 422814   |                   |                  |
| 35371016005 | D18A024-05 | EPA 300.0       | 422814   |                   |                  |
| 35371016006 | D18A024-06 | EPA 300.0       | 422814   |                   |                  |
| 35371016007 | D18A024-07 | EPA 300.0       | 422814   |                   |                  |
| 35371016008 | D18A024-08 | EPA 300.0       | 422814   |                   |                  |
| 35371016009 | D18A024-09 | EPA 300.0       | 422814   |                   |                  |
| 35371016010 | D18A024-10 | EPA 300.0       | 422814   |                   |                  |
| 35371016011 | D18A024-11 | EPA 300.0       | 422814   |                   |                  |
| 35371016012 | D18A024-12 | EPA 300.0       | 422814   |                   |                  |
| 35371016013 | D18A024-13 | EPA 300.0       | 422814   |                   |                  |
| 35371016014 | D18A024-14 | EPA 300.0       | 422814   |                   |                  |
| 35371016001 | D18A024-01 | EPA 353.2       | 422565   |                   |                  |
| 35371016002 | D18A024-02 | EPA 353.2       | 422566   |                   |                  |
| 35371016003 | D18A024-03 | EPA 353.2       | 422566   |                   |                  |
| 35371016004 | D18A024-04 | EPA 353.2       | 422566   |                   |                  |
| 35371016005 | D18A024-05 | EPA 353.2       | 422566   |                   |                  |
| 35371016006 | D18A024-06 | EPA 353.2       | 422566   |                   |                  |
| 35371016007 | D18A024-07 | EPA 353.2       | 422566   |                   |                  |
| 35371016008 | D18A024-08 | EPA 353.2       | 422566   |                   |                  |
| 35371016009 | D18A024-09 | EPA 353.2       | 422566   |                   |                  |
| 35371016010 | D18A024-10 | EPA 353.2       | 422566   |                   |                  |
| 35371016011 | D18A024-11 | EPA 353.2       | 422566   |                   |                  |
| 35371016012 | D18A024-12 | EPA 353.2       | 422566   |                   |                  |
| 35371016013 | D18A024-13 | EPA 353.2       | 422566   |                   |                  |
| 35371016014 | D18A024-14 | EPA 353.2       | 422566   |                   |                  |
| 35371016001 | D18A024-01 | SM 5310B        | 422567   |                   |                  |
| 35371016002 | D18A024-02 | SM 5310B        | 422567   |                   |                  |
| 35371016003 | D18A024-03 | SM 5310B        | 422567   |                   |                  |
| 35371016004 | D18A024-04 | SM 5310B        | 422567   |                   |                  |

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: D18A024  
Pace Project No.: 35371016

| Lab ID      | Sample ID  | QC Batch Method | QC Batch | Analytical Method | Analytical Batch |
|-------------|------------|-----------------|----------|-------------------|------------------|
| 35371016005 | D18A024-05 | SM 5310B        | 422567   |                   |                  |
| 35371016006 | D18A024-06 | SM 5310B        | 422567   |                   |                  |
| 35371016007 | D18A024-07 | SM 5310B        | 422567   |                   |                  |
| 35371016008 | D18A024-08 | SM 5310B        | 422569   |                   |                  |
| 35371016009 | D18A024-09 | SM 5310B        | 422569   |                   |                  |
| 35371016010 | D18A024-10 | SM 5310B        | 422569   |                   |                  |
| 35371016011 | D18A024-11 | SM 5310B        | 422569   |                   |                  |
| 35371016012 | D18A024-12 | SM 5310B        | 422569   |                   |                  |
| 35371016013 | D18A024-13 | SM 5310B        | 422569   |                   |                  |
| 35371016014 | D18A024-14 | SM 5310B        | 422569   |                   |                  |

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SUBCONTRACT ORDER  
Deerhaven Generating Station  
D18A024

WO#: 35371016



35371016

SENDING LABORATORY:

Gainesville Regional Utilities  
Deerhaven Generating Station  
10001 NW 13th Street  
Gainesville, FL 32653  
Phone: 352-334-3434  
Fax: 352-334-3149  
Project Manager: Jeff Boudreau

RECEIVING LABORATORY:

Pace Analytical  
8 East Tower Circle  
Ormond Beach, FL 32174  
Phone :(386) 672-5668  
Fax: (386) 673-4001

| Analysis                                     | Expires         | Laboratory ID                   | Comments                     |
|--|-----------------|---------------------------------|------------------------------|
| <b>Sample Name: MWD-1-6 (R1T6)</b>           |                 |                                 |                              |
| <b>Sample ID: D18A024-01</b>                 | <b>Water</b>    | <b>Sampled: 21-Jan-18 16:42</b> | Conductivities in $\mu S/cm$ |
| D_Anions - Sulfates                          | 18-Feb-18 16:42 |                                 |                              |
| D_Gross Alpha                                | 16-Jul-18 16:42 |                                 | Cond = 544                   |
| D_NO3/NO2                                    | 18-Feb-18 16:42 |                                 |                              |
| D_TOC  | 18-Feb-18 16:42 |                                 |                              |
| D_Anions - Chlorides                         | 18-Feb-18 16:42 |                                 |                              |
| <i>Containers Supplied:</i>                  |                 |                                 |                              |
| D_HDPE, Chill @<6°C - 250mL (B)              |                 |                                 |                              |
| D_HDPE, H2SO4 Chill @<6°C - pH<2 - 250mL (C) |                 |                                 |                              |
| D_HDPE, HNO3 pH<2 - 1000mL (D)               |                 |                                 |                              |
| <b>Sample Name: MWB-2-1 (R2T1)</b>           |                 |                                 |                              |
| <b>Sample ID: D18A024-02</b>                 | <b>Water</b>    | <b>Sampled: 23-Jan-18 12:04</b> |                              |
| D_Gross Alpha                                | 18-Jul-18 12:04 |                                 | Cond = 55                    |
| D_NO3/NO2                                    | 20-Feb-18 12:04 |                                 |                              |
| D_Anions - Sulfates                          | 20-Feb-18 12:04 |                                 |                              |
| D_Anions - Chlorides                         | 20-Feb-18 12:04 |                                 |                              |
| D_TOC  | 20-Feb-18 12:04 |                                 |                              |
| <i>Containers Supplied:</i>                  |                 |                                 |                              |
| D_HDPE, Chill @<6°C - 250mL (B)              |                 |                                 |                              |
| D_HDPE, H2SO4 Chill @<6°C - pH<2 - 250mL (C) |                 |                                 |                              |
| D_HDPE, HNO3 pH<2 - 1000mL (D)               |                 |                                 |                              |

Released By: *Melby Phillips* Date: *1-29-18* via Fedex  
Received By: *DA PAE* Date: *1/30/18* 1015  
*17.9 T301*

Released By \_\_\_\_\_ Date \_\_\_\_\_ Received By \_\_\_\_\_ Date \_\_\_\_\_



**SUBCONTRACT ORDER**  
**Deerhaven Generating Station**  
**D18A024**

| Analysis                                     | Expires         | Laboratory ID                   | Comments                                  |
|--|-----------------|---------------------------------|---|
| <b>Sample Name: MWI-3-7 (R3T7)</b>           |                 |                                 | Conductivities in $\mu\text{S}/\text{cm}$ |
| <b>Sample ID: D18A024-03</b>                 | <b>Water</b>    | <b>Sampled: 26-Jan-18 15:38</b> |   |
| D_Anions - Chlorides                         | 23-Feb-18 15:38 |                                 |   |
| D_Anions - Sulfates                          | 23-Feb-18 15:38 |                                 |   |
| D_Gross Alpha                                | 21-Jul-18 15:38 |                                 | Cond = 3,065                              |
| D_NO3/NO2                                    | 23-Feb-18 15:38 |                                 |   |
| D_TOC  | 23-Feb-18 15:38 |                                 |   |
| <i>Containers Supplied:</i>                  |                 |                                 |   |
| D_HDPE, Chill @<6°C - 250mL (B)              |                 |                                 |   |
| D_HDPE, H2SO4 Chill @<6°C - pH<2 - 250mL (C) |                 |                                 |   |
| D_HDPE, HNO3 pH<2 - 1000mL (D)               |                 |                                 |   |
| <b>Sample Name: MWI-4-5 (R4T5B)</b>          |                 |                                 |   |
| <b>Sample ID: D18A024-04</b>                 | <b>Water</b>    | <b>Sampled: 24-Jan-18 09:10</b> |   |
| D_Anions - Sulfates                          | 21-Feb-18 09:10 |                                 |   |
| D_TOC  | 21-Feb-18 09:10 |                                 |   |
| D_Anions - Chlorides                         | 21-Feb-18 09:10 |                                 |   |
| D_Gross Alpha                                | 19-Jul-18 09:10 |                                 | Cond = 835                                |
| D_NO3/NO2                                    | 21-Feb-18 09:10 |                                 |   |
| <i>Containers Supplied:</i>                  |                 |                                 |   |
| D_HDPE, Chill @<6°C - 250mL (B)              |                 |                                 |   |
| D_HDPE, H2SO4 Chill @<6°C - pH<2 - 250mL (C) |                 |                                 |   |
| D_HDPE, HNO3 pH<2 - 1000mL (D)               |                 |                                 |   |
| <b>Sample Name: MWD-6-1 (R6T1B)</b>          |                 |                                 |   |
| <b>Sample ID: D18A024-05</b>                 | <b>Water</b>    | <b>Sampled: 21-Jan-18 10:52</b> |   |
| D_Anions - Chlorides                         | 18-Feb-18 10:52 |                                 |   |
| D_Anions - Sulfates                          | 18-Feb-18 10:52 |                                 |   |
| D_Gross Alpha                                | 16-Jul-18 10:52 |                                 | Cond = 342                                |
| D_NO3/NO2                                    | 18-Feb-18 10:52 |                                 |   |
| D_TOC  | 18-Feb-18 10:52 |                                 |   |
| <i>Containers Supplied:</i>                  |                 |                                 |   |
| D_HDPE, Chill @<6°C - 250mL (B)              |                 |                                 |   |
| D_HDPE, H2SO4 Chill @<6°C - pH<2 - 250mL (C) |                 |                                 |   |
| D_HDPE, HNO3 pH<2 - 1000mL (D)               |                 |                                 |   |

Released By: *Shelby Phillips* Date: *1-29-18* via FedEx

Received By: *Mr. DA PAVE* Date: *1/30/18 10:15*

Received By: *(79730)*



**SUBCONTRACT ORDER**  
**Deerhaven Generating Station**  
**D18A024**

| Analysis                                     | Expires         | Laboratory ID                   | Comments  |
|--|-----------------|---------------------------------|---|
| <b>Sample Name: MWC-11-4 (R11T4B)</b>        |                 |                                 | <i>Conductivities in <math>\mu\text{S}/\text{cm}</math></i> |
| <b>Sample ID: D18A024-12</b>                 | <b>Water</b>    | <b>Sampled: 26-Jan-18 08:42</b> |   |
| D_NO3/NO2                                    | 23-Feb-18 08:42 |                                 |   |
| D_Gross Alpha                                | 21-Jul-18 08:42 |                                 | Cond = 246  |
| D_TOC  | 23-Feb-18 08:42 |                                 |   |
| D_Anions - Sulfates                          | 23-Feb-18 08:42 |                                 |   |
| D_Anions - Chlorides                         | 23-Feb-18 08:42 |                                 |   |
| <i>Containers Supplied:</i>                  |                 |                                 |   |
| D_HDPE, Chill @<6°C - 250mL (B)              |                 |                                 |   |
| D_HDPE, H2SO4 Chill @<6°C - pH<2 - 250mL (C) |                 |                                 |   |
| D_HDPE, HNO3 pH<2 - 1000mL (D)               |                 |                                 |   |
| <b>Sample Name: MWC-DEEP (DEEP-1)</b>        |                 |                                 |   |
| <b>Sample ID: D18A024-13</b>                 | <b>Water</b>    | <b>Sampled: 25-Jan-18 16:47</b> |   |
| D_Anions - Sulfates                          | 22-Feb-18 16:47 |                                 |   |
| D_TOC  | 22-Feb-18 16:47 |                                 |   |
| D_Gross Alpha                                | 20-Jul-18 16:47 |                                 | Cond = 493  |
| D_Anions - Chlorides                         | 22-Feb-18 16:47 |                                 |   |
| D_NO3/NO2                                    | 22-Feb-18 16:47 |                                 |   |
| <i>Containers Supplied:</i>                  |                 |                                 |   |
| D_HDPE, Chill @<6°C - 250mL (B)              |                 |                                 |   |
| D_HDPE, H2SO4 Chill @<6°C - pH<2 - 250mL (C) |                 |                                 |   |
| D_HDPE, HNO3 pH<2 - 1000mL (D)               |                 |                                 |   |
| <b>Sample Name: EBLANK</b>                   |                 |                                 |   |
| <b>Sample ID: D18A024-14</b>                 | <b>Water</b>    | <b>Sampled: 25-Jan-18 12:27</b> |   |
| D_TOC  | 22-Feb-18 12:27 |                                 |   |
| D_Anions - Chlorides                         | 22-Feb-18 12:27 |                                 |   |
| D_Anions - Sulfates                          | 22-Feb-18 12:27 |                                 |   |
| D_Gross Alpha                                | 20-Jul-18 12:27 |                                 | Cond = <1   |
| D_NO3/NO2                                    | 22-Feb-18 12:27 |                                 |   |
| <i>Containers Supplied:</i>                  |                 |                                 |   |
| D_HDPE, Chill @<6°C - 250mL (B)              |                 |                                 |   |
| D_HDPE, H2SO4 Chill @<6°C - pH<2 - 250mL (C) |                 |                                 |   |
| D_HDPE, HNO3 pH<2 - 1000mL (D)               |                 |                                 |   |

Released By: *Shelly Phillips*      Date: *1-29-18*      via FedEx  
 Received By: *DA PACE*      Date: *1/30/18 1015*  
 Received By: \_\_\_\_\_      Date: *17.9 T301*

Released By \_\_\_\_\_ Date \_\_\_\_\_ Received By \_\_\_\_\_ Date \_\_\_\_\_



Document Name:  
Sample Condition Upon Receipt Form  
Document No.:  
F-FL-C-007 rev. 12

Document Revised:  
August 2, 2017  
Issuing Authority:  
Pace Florida Quality Office

Sample Condition Upon Receipt Form (SCUR)

WO#: 35371016

Project **W0# : 35371016**  
Project Manager: PM: JSB Due Date: 02/13/18  
Client: CLIENT: DEELAB

Date and Initials of person:

Examining contents: \_\_\_\_\_  
Label: \_\_\_\_\_  
Deliver: \_\_\_\_\_  
pH: \_\_\_\_\_

Thermometer Used: T301 Date: 11/30/18 Time: 1015 Initials: SS

State of Origin: \_\_\_\_\_

Cooler #1 Temp. °C 0.4 (Visual) 0 (Correction Factor) 0.4 (Actual)  
Cooler #2 Temp. °C 16.6 (Visual) 0 (Correction Factor) 16.6 (Actual)  
Cooler #3 Temp. °C 17.9 (Visual) 0 (Correction Factor) 17.9 (Actual)  
Cooler #4 Temp. °C 16.6 (Visual) 0 (Correction Factor) 16.6 (Actual)  
Cooler #5 Temp. °C \_\_\_\_\_ (Visual) \_\_\_\_\_ (Correction Factor) \_\_\_\_\_ (Actual)  
Cooler #6 Temp. °C \_\_\_\_\_ (Visual) \_\_\_\_\_ (Correction Factor) \_\_\_\_\_ (Actual)

- Samples on ice, cooling process has begun
- Samples on ice, cooling process has begun
- Samples on ice, cooling process has begun
- Samples on ice, cooling process has begun
- Samples on ice, cooling process has begun
- Samples on ice, cooling process has begun

Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace  Other \_\_\_\_\_  
Shipping Method:  First Overnight  Priority Overnight  Standard Overnight  Ground  International Priority  
 Other \_\_\_\_\_

Billing:  Recipient  Sender  Third Party  Credit Card  Unknown

Tracking # 8106 7903 2877 / 8106 7903 2899 / 8106 7903 2903 / 8106 7903 2888

Custody Seal on Cooler/Box Present:  Yes  No Seals Intact:  Yes  No Ice:  Wet  Blue  Dry  None

Packing Material:  Bubble Wrap  Bubble Bags  None  Other \_\_\_\_\_

Samples shorted to lab (If Yes, complete) Shorted Date: \_\_\_\_\_ Shorted Time: \_\_\_\_\_ Qty: \_\_\_\_\_

Comments:

|  |  |  |
|--|--|--|
| Chain of Custody Present   | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Preservation Information:<br>Preservative: _____<br>Lot #/Trace #: _____<br>Date: _____ Time: _____<br>Initials: _____ |
| Chain of Custody Filled Out  | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |  |
| Relinquished Signature & Sampler Name COC  | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |  |
| Samples Arrived within Hold Time   | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |  |
| Rush TAT requested on COC  | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A |  |
| Sufficient Volume  | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |  |
| Correct Containers Used  | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |  |
| Containers Intact  | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |  |
| Sample Labels match COC (sample IDs & date/time of collection)                             | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |  |
| All containers needing acid/base preservation have been checked.                           | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |  |
| All Containers needing preservation are found to be in compliance with EPA recommendation: | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |  |
| Exceptions: VOA, Coliform, TOC, O&G, Carbamates  |  |  |
| Headspace in VOA Vials? (>6mm):  | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A |  |
| Trip Blank Present:  | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A |  |

Client Notification/ Resolution: Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution (use back for additional comments):  
\_\_\_\_\_  
\_\_\_\_\_



Attachment B  
Sampling Field Calibration Logs

## CCR #1 Assessment 2018 Field and Analytical Narrative

### Field Narrative:

- The pH, conductivity, RDO and depth meter sensors were verified against the NIST reference thermometer/probe (CP 117152 & CP148863), and the depth meter was selected for the purpose of measuring temperature in the field; however, the conductivity temperature sensor was used for Deep Well and Equipment Blank since depth meter not used.
- CCR Well sampling was done in conjunction with the Quarterly Groundwater Well sampling and began on Sunday, January 21, 2018 and was completed on Thursday, January 25, 2018 by Kim Morrison and Shelley Phillips.  
In addition, we collected 3 GW wells (R1T6, R2T1, and R6T1), as requested by Justin Smith, for lithium and TSS analysis; they were collected on 1-21-18 to 1-23-2018.
- All the water elevations for all the Leachate and CCR wells were taken on the first day; these are not the depths to water reported on the field logs except for R1T6 and R6T1 which were sampled at the same time.
- All wells were found secured with a lock upon arrival and left locked upon departure.
- Weather: Sunday (1-21-18) temperature ranged from 62 F to 69 F, sunny with wind ENE at 6-7 mph. Monday (1-22-18) started out at 58 F, partly cloudy and winds SE at 3 mph. By the afternoon, it was 78 F, mostly cloudy and winds South at 9 mph. On Tuesday (1-23-18), there was rain between midnight and 8am with an accumulation of 0.98 inches. The temperature ranged from 66 F to 72 F, mostly cloudy all day except at end of day when the clouds disappeared, and with the wind WSW @ 11 -12 mph all day. Wednesday (1-24-18) temperature was 48 F to 58 F, sunny all day and winds NW 4-6 mph. On Thursday (1-25-18) temperature was 39 F to 63 F, sunny all day and winds NE 12-14 mph.
- Well R2T1: On 1/22/18, we started the purge and at a low purge rate (<100 mL/min), we were unable to stop the draw down. In addition, the DO was >20 % saturation and it never stabilized; therefore, with 8 hours, 44.5 liters purged and sundown approaching, we stopped the purge for the day. On 1/23/18, we began the purge of the well again and we were able to purge at 140 mL/min with no drawdown once the depth to water reached 6.20 ft. The well depth to water was less at the start of 1/23/18 purge (3.10ft) than the start of 1/22/18 purge (4.32ft); as a result of the 0.98 inches of rainfall during the night.
- For all the CCR Wells, except LF2, LF4, and R4T5, the DO was greater than 20% saturation but met the stabilization criteria (+/- 0.2mg/L or readings within 10%, whichever is greater). The tubing connections were tightened and there was no change in DO. For the three exceptions, the DO was less than 20%.
- SIS-3: At the lowest purge possible (70 mL/min), we were unable to stop the draw down. The area around this well was saturated.
- Equipment Blank: The Equipment Blank was collected at LF3 after that well was collected.
- Instruments: Calibration verifications were performed on all instruments and passed.

### Analytical Narrative: Internal Analysis

- TSS and TDS were performed by Deerhaven Laboratory and all results were satisfactory.

### Analytical Narrative: External Laboratories

**NOTE: Originally Kanapaha was to analyze some of the metal samples but they were having difficulty with getting their ICP repaired; therefore, on March 14<sup>th</sup>, we requested the analysis be completed by ALS Global since they still had our samples from metal samples they had analyzed already**

## CCR #1 Assessment 2018 Field and Analytical Narrative

- Kanapaha Laboratory analyzed samples for Mercury, cold vapor.
- ALS Global (Jacksonville) analyzed samples for the following metals: Antimony, Arsenic, Lead and Thallium by Method 200.8 and Boron, Barium, Beryllium, Cadmium, Chromium, Cobalt, Selenium, Molybdenum, Calcium and Lithium by 200.7
  - For CCR analysis, Lead and Selenium were detected in the method blank in the batches that included R4T5, R6T4 and the equipment blank. In the samples where the analytes were detected at equal to or less than ten times the method blank, they were qualified with a “V” as per FDEP.
- PACE Analytical Services analyzed samples for Chloride, Sulfate, Fluoride and Radium 226 +228 combined.



# Deerhaven Generating Station Water Elevations

Date: 1-21-18

| <u>Well</u> | <u>Time</u> | <u>TOC @MSL</u> | <u>Feet<br/>Depth to Water</u> | <u>Time Depth Mtr<br/>Cleaned</u> | <u>Locked<br/>Arrival</u> | <u>Locked<br/>Depart.</u> |
|-------------|-------------|-----------------|--------------------------------|-----------------------------------|---------------------------|---------------------------|
| R1T6        | 11:50       | 188.95          | 5.20                           | 11:49                             | ✓                         | ✓                         |
| R2T1        | 11:42       | 185.19          | 4.31                           | 11:42                             | ✓                         | ✓                         |
| R3T7        | 08:11       | 182.55          | 4.55                           | 08:09                             | ✓                         | ✓                         |
| R4T5        | 08:15       | 187.46          | 10.93                          | 08:17                             | ✓                         | ✓                         |
| R6T1        | 09:33       | 185.28          | 5.49                           | 09:32                             | ✓                         | ✓                         |
| R6T4        | 08:24       | 183.60          | 4.31                           | 08:23                             | ✓                         | ✓                         |
| R6T8        | 08:59       | 177.49          | 2.69                           | 08:58                             | ✓                         | ✓                         |
| R6T12       | 08:02       | 173.38          | 4.09                           | 08:00                             | ✓                         | ✓                         |
| R8T10       | 07:56       | 177.40          | 4.70                           | 07:55                             | ✓                         | ✓                         |
| R9T5        | 08:43       | 184.64          | 5.58                           | 08:42                             | ✓                         | ✓                         |
| R10T8       | 09:09       | 181.42          | 6.22                           | 09:08                             | ✓                         | ✓                         |
| R11T4       | 09:16       | 178.76          | 3.57                           | 09:14                             | ✓                         | ✓                         |
| SIS1        | 08:28       | 185.11          | 5.16                           | 08:27                             | ✓                         | ✓                         |
| SIS2        | 08:21       | 183.30          | 6.43                           | 08:19                             | ✓                         | ✓                         |
| SIS3        | 08:35       | 183.11          | 4.89                           | 08:34                             | ✓                         | ✓                         |
| SIS4        | 08:32       | 183.87          | 5.84                           | 08:31                             | ✓                         | ✓                         |
| LF1         | 08:40       | 185.76          | 5.85                           | 08:38                             | ✓                         | ✓                         |
| LF2         | 08:55       | 183.35          | 6.17                           | 08:54                             | ✓                         | ✓                         |
| LF3         | 08:51       | 185.05          | 5.88                           | 08:59                             | ✓                         | ✓                         |
| LF4         | 08:47       | 186.01          | 5.97                           | 08:46                             | ✓                         | ✓                         |

# DGS Groundwater Sampling Log



|                                     |                      |                                 |                                   |   |
|-------------------------------------|----------------------|---------------------------------|-----------------------------------|---|
| WELL ID: <b>SIS-1</b>               | Location:            | Latitude: <b>29°46'00.1308"</b> | Longitude: <b>-82°23'33.3204"</b> | MSL @ TOC Date In Service: <b>185.11 2017</b> |
| Quarter: <b>1Q18 wk#/assessment</b> | Date: <b>1-23-18</b> | Well Type: <b>U</b>             |                                   |   |

| Purging Data  |                   |                                   |                           |                                |         |  |             |                                  |                 |          |  |  |
|---|-------------------|-----------------------------------|---------------------------|--------------------------------|---------|--|-------------|----------------------------------|-----------------|----------|--|--|
| Diameter(in) <b>2</b>   |                   | Total well depth(ft) <b>13.92</b> |                           | Depth to water(ft) <b>4.17</b> |         | Well capacity(L/ft) <b>0.6</b>         |             |                                  |                 |          |  |  |
| Distance from TOC to top of screen <b>3.92</b> ft.                |                   |                                   | Purging Method: <b>PP</b> |                                |         | Equipment Volume = <b>750 mL</b>       |             |                                  |                 |          |  |  |
| 1 WELL VOLUME(L)=(Total Well Depth-Depth to water)X Well Capacity |                   |                                   |                           |                                |         | Time of Depth Meter Decon: <b>1318</b> |             |                                  |                 |          |  |  |
| <b>Well Vol = ( 13.92 - 4.17 ) X 0.6 = 5.9 L</b>                  |                   |                                   |                           |                                |         | 1/4 well vol. = <b>N/A</b>             |             |                                  |                 |          |  |  |
| Init Tubing Dpth(ft) <b>10'</b>                                   |                   | Final Tube Dept(ft): <b>10'</b>   |                           | Purge Start Time: <b>1321</b>  |         | Purge Stop time: <b>1407</b>           |             | Total Volume Purged <b>7.0 L</b> |                 |          |  |  |
| Time  | Volume Purged (L) | Cumul. Volume Purged (L)          | Purge rate mL/min         | Depth to water (ft)            | pH (SU) | Temp (°C)                              | Cond (µmho) | Diss O2 (mg/L)                   | Turbidity (ntu) | ORP (mv) | Observed odor or color                 |  |
|   |                   |                                   |                           |                                | ± 0.2§  | ± 0.2§                                 | ± 5%§       | 20% sat§                         | 20 max§         |          |  |  |
| 1400  | 6.0               | 6.0                               | 16.0                      | 4.35                           | 6.49    | 15.8                                   | 357.5       | 3.18                             | 4.06            | 242.8    | No Odor<br>Clean<br>light yellow color |  |
| 1403  | 0.5               | 6.5                               | 16.0                      | 4.35                           | 6.48    | 15.8                                   | 357.9       | 3.07                             | 3.98            | 244.1    |  |  |
| 1406  | 0.5               | 7.0                               | 16.0                      | 4.35                           | 6.48    | 15.8                                   | 357.3       | 3.08                             | 3.80            | 245.0    |  |  |
|   |                   |                                   |                           |                                |         |  |             |                                  |                 |          |  |  |
|   |                   |                                   |                           |                                |         |  |             |                                  |                 |          |  |  |
|   |                   |                                   |                           |                                |         |  |             |                                  |                 |          |  |  |
|   |                   |                                   |                           |                                |         |  |             |                                  |                 |          |  |  |
|   |                   |                                   |                           |                                |         |  |             |                                  |                 |          |  |  |
|   |                   |                                   |                           |                                |         |  |             |                                  |                 |          |  |  |
|   |                   |                                   |                           |                                |         |  |             |                                  |                 |          |  |  |

◆ FDEP SOP Section 2212.3

## Sampling Data

Decon Depth Mtr - rinse with analyte free water  
§Purge method FDEP-SOP 2212.3.1

| Sampled By(Print): <b>S. Phillips, K. Morrison</b> |           |                            |                        | Sampler(s) Signatures: <i>S. Phillips, K. Morrison</i>           |            |  |  |
|--|-----------|----------------------------|------------------------|--|------------|--|--|
| Sampling Method: <b>PP</b>                         |           | Tube Material: <b>PP/S</b> |                        | Sampling Started Tube Dpth(ft): <b>10'</b> Time: <b>1408</b>     |            | Sampling completed Tube Dpth(ft): <b>10'</b> Time: <b>1442</b> |  |
| Field Decon: <b>NO</b>                             |           | Field Filtered: <b>NO</b>  |                        | Duplicate: <b>YES</b> <input checked="" type="radio"/> <b>NO</b> |            | Acid ID# HNO3: <b>DJT0101</b> H2SO4: <b>NA</b>                 |  |
| Sample Container Specification                     |           |                            | Sample Preservation    |  |            | Intended Analysis or method                                    |  |
| ID:  | Material  | Volume(mL)                 | Preservative           | Volume added   | final pH   |  |  |
| <b>D18A07-01A</b>                                  | <b>PE</b> | <b>500</b>                 | <b>HNO3</b>            | <b>1.0 mL</b>  | <b>1.3</b> | <b>Metals: Ba, Be, Cd, Cr, Co, Mo, Se, Hg, Ca</b>              |  |
| <b>D18A07-01B</b>                                  | <b>PE</b> | <b>250</b>                 | <b>HNO3</b>            | <b>0.5 mL</b>  | <b>1.6</b> | <b>Metals: Sb, As, Pb, Ti, B, Li</b>                           |  |
| <b>D18A07-01C</b>                                  | <b>PE</b> | <b>250</b>                 | <b>Chill &lt;6 deg</b> | <b>n/a</b>   | <b>n/a</b> | <b>Anions: F, Cl, SO4</b>                                      |  |
| <b>D18A07-01D</b>                                  | <b>PE</b> | <b>2000</b>                | <b>HNO3</b>            | <b>4 mL</b>  | <b>1.3</b> | <b>Radium 226+228 Combined</b>                                 |  |
| <b>D18A07-01E</b>                                  | <b>PE</b> | <b>2000</b>                | <b>Chill &lt;6 deg</b> | <b>n/a</b>   | <b>n/a</b> | <b>Solids: TSS, TDS</b>  |  |

Remarks: Well found locked and left locked  
69°F Cloudy, light misty rain, wind wsw @ 11 mph

# DGS Groundwater Sampling Log



|                                      |                      |                                 |                                   |                        |                             |
|--------------------------------------|----------------------|---------------------------------|-----------------------------------|------------------------|-----------------------------|
| WELL ID: <b>SIS-2</b>                | Location:            | Latitude: <b>29°45'53.4672"</b> | Longitude: <b>-82°23'31.5096"</b> | MSL @ TOC <b>183.3</b> | Date In Service <b>2017</b> |
| Quarter: <b>1Q18 WK 1 Assessment</b> | Date: <b>1-24-18</b> | Well Type: <b>D</b>             |                                   |                        |                             |

### Purging Data

|   |                                   |   |                                  |
|---|-----------------------------------|---|----------------------------------|
| Diameter(in) <b>2</b>   | Total well depth(ft) <b>14.22</b> | Depth to water(ft) <b>5.74</b>            | Well capacity(L/ft) <b>0.6</b>   |
| Distance from TOC to top of screen <b>4.22</b> ft.                |                                   | Purging Method: <b>PP</b>                 | Equipment Volume = <b>750 mL</b> |
| 1 WELL VOLUME(L)=(Total Well Depth-Depth to water)X Well Capacity |                                   | Time of Depth Meter Decon: <b>07:37</b>   |                                  |
| <b>Well Vol = ( 14.22 - 5.74 ) X 0.6 = 5.09</b>                   |                                   | <b>10.78 L</b> 1/4 well vol. = <b>N/A</b> |                                  |
| Init Tubing Dpth(ft) <b>10</b>                                    | Final Tube Dept(ft): <b>10</b>    | Purge Start Time: <b>07:39</b>            | Purge Stop time: <b>08:07</b>    |
|   |                                   | Total Volume Purged <b>6.9 L</b>          |                                  |

| Time  | Volume Purged (L) | Cumul. Volume Purged (L) | Purge rate mL/min | Depth to water (ft) | pH (SU) | Temp (°C) | Cond (µmho) | Diss O2 (mg/L) | Turbidity (ntu) | ORP (mv) | Observed odor or color |
|-------|-------------------|--------------------------|-------------------|---------------------|---------|-----------|-------------|----------------|-----------------|----------|------------------------|
|       |                   |                          |                   |                     | ± 0.2§  | ± 0.2§    | ± 5%§       | 20% sat§       | 20 max§         |          |                        |
| 08:00 | 5.1               | 5.1                      | 260               | 5.89                | 7.14    | 17.4      | 411.8       | 3.60           | 2.52            | -200.5   | Clear                  |
| 08:03 | 0.8               | 6.1                      | 260               | 5.89                | 7.14    | 17.4      | 412.2       | 3.59           | 5.74            | -204.3   | Colorless              |
| 08:06 | 0.8               | 6.9                      | 260               | 5.89                | 7.14    | 17.5      | 412.4       | 3.60           | 2.74            | -202.2   |                        |
|       |                   |                          |                   |                     |         |           |             |                |                 |          |                        |
|       |                   |                          |                   |                     |         |           |             |                |                 |          |                        |
|       |                   |                          |                   |                     |         |           |             |                |                 |          |                        |
|       |                   |                          |                   |                     |         |           |             |                |                 |          |                        |
|       |                   |                          |                   |                     |         |           |             |                |                 |          |                        |
|       |                   |                          |                   |                     |         |           |             |                |                 |          |                        |
|       |                   |                          |                   |                     |         |           |             |                |                 |          |                        |
|       |                   |                          |                   |                     |         |           |             |                |                 |          |                        |
|       |                   |                          |                   |                     |         |           |             |                |                 |          |                        |

◆ FDEP SOP Section 2212.3

### Sampling Data

Decon Depth Mtr - rinse with analyte free water  
 §Purge method FDEP-SOP 2212.3.1

| Sampled By(Print): <b>K. Anderson, S. Phillips</b> |                            |   |                               | Sampler(s) Signatures: <i>K. Anderson, S. Phillips</i> |                    |  |  |
|--|----------------------------|---|-------------------------------|--|--------------------|--|--|
| Sampling Method: <b>PP</b>                         | Tube Material: <b>PP/S</b> | Sampling Started Tube Dpth(ft): <b>10</b>                 | Time: <b>08:08</b>            | Sampling completed Tube Dpth(ft): <b>10</b>            | Time: <b>08:28</b> |  |  |
| Field Decon: <b>NO</b>                             | Field Filtered: <b>NO</b>  | Duplicate: <b>YES</b> <input checked="" type="checkbox"/> | Acid ID# <b>HNO3: DJ70401</b> | <b>H2SO4: NA</b>                                       |                    |  |  |
| Sample Container Specification                     |                            |   | Sample Preservation           |  |                    | Intended Analysis or method                |  |
| ID:  | Material                   | Volume(mL)  | Preservative                  | Volume added   | final pH           |  |  |
| <b>D18A027-02A</b>                                 | PE                         | 500   | HNO3                          | 1.0 mL   | <b>1.6</b>         | Metals: Ba, Be, Cd, Cr, Co, Mo, Se, Hg, Ca |  |
| <b>D18A027-02B</b>                                 | PE                         | 250   | HNO3                          | 0.5 mL   | <b>1.6</b>         | Metals: Sb, As, Pb, Ti, B, Li              |  |
| <b>D18A027-02C</b>                                 | PE                         | 250   | Chill <6 deg                  | n/a  | n/a                | Anions: F, Cl, SO4                         |  |
| <b>D18A027-02D</b>                                 | PE                         | 2000  | HNO3                          | 4 mL   | <b>1.6</b>         | Radium 226+228 Combined                    |  |
| <b>D18A027-02E</b>                                 | PE                         | 2000  | Chill <6 deg                  | n/a  | n/a                | Solids: TSS, TDS                           |  |

Remarks: Well found secure, left secure.  
 Weather 49°F Winds WNW at 5mph Sunny  
 39°F

1-24-18

# DGS Groundwater Sampling Log



|                                      |                      |                                 |                                   |           |                 |
|--------------------------------------|----------------------|---------------------------------|-----------------------------------|-----------|-----------------|
| WELL ID: <b>SIS-3</b>                | Location:            | Latitude: <b>29°45'51.8472"</b> | Longitude: <b>-82°23'35.5632"</b> | MSL @ TOC | Date In Service |
| Quarter: <b>1018 wk 1 Assessment</b> | Date: <b>1-24-18</b> | Well Type: <b>D</b>             |                                   |           |                 |

### Purging Data

|   |                                   |   |                                  |
|---|-----------------------------------|---|----------------------------------|
| Diameter(in) <b>2</b>   | Total well depth(ft) <b>13.38</b> | Depth to water(ft) <b>3.62</b>          | Well capacity(L/ft) <b>0.6</b>   |
| Distance from TOC to top of screen <b>3.38</b> ft.                | Purging Method: <b>PP</b>         |   | Equipment Volume = <b>750 mL</b> |
| 1 WELL VOLUME(L)=(Total Well Depth-Depth to water)X Well Capacity |                                   | Time of Depth Meter Decon: <b>10:20</b> |                                  |
| <b>Well Vol = (13.38 - 3.62) X 0.6 = 5.86 L</b>                   |                                   | 1/4 well vol. = <b>NA</b>               |                                  |
| Init Tubing Dpth(ft) <b>10</b>                                    | Final Tube Dept(ft): <b>10</b>    | Purge Start Time: <b>10:22</b>          | Purge Stop time: <b>11:39</b>    |
|   |                                   | Total Volume Purged <b>6.32 L</b>       |                                  |

| Time  | Volume Purged (L) | Cumul. Volume Purged (L) | Purge rate mL/min | Depth to water (ft) | pH (SU)                   | Temp (°C) | Cond (µmho) | Diss O2 (mg/L) | Turbidity (ntu) | ORP (mv) | Observed odor or color                                |
|-------|-------------------|--------------------------|-------------------|---------------------|---------------------------|-----------|-------------|----------------|-----------------|----------|---|
|       |                   |                          |                   |                     | ± 0.2§                    | ± 0.2§    | ± 5%§       | 20% sat§       | 20 max§         |          |   |
| 11:31 | 5.9               | 5.9                      | 70                | 4.88                | 6.45                      | 15.6      | 431.5       | 5.87           | 2.58            | -199.1   | No Odor<br>some particles floating<br>yellowish color |
| 11:34 | 0.21              | 6.11                     | 70                | 4.91                | 6.44                      | 15.6      | 421.4       | 5.90           | 3.34            | -198.4   |   |
| 11:37 | 0.21              | 6.32                     | 70                | 4.95                | 6.43                      | 15.6      | 426.4       | 5.90           | 2.60            | -197.7   |   |
|       |                   |                          |                   |                     | corr to <b>15.3</b><br>pH |           |             |                |                 |          |   |

◆ FDEP SOP Section 2212.3

### Sampling Data

Decon Depth Mtr - rinse with analyte free water  
§Purge method FDEP-SOP 2212.3.1

|  |                            |  |   |
|--|----------------------------|--|---|
| Sampled By(Print): <b>K. Morrison, S. Phillips</b> |                            | Sampler(s) Signatures: <i>S. Phillips, K. Morrison</i>           |   |
| Sampling Method: <b>PP</b>                         | Tube Material: <b>PP/S</b> | Sampling Started<br>Tube Dpth(ft): <b>10</b> Time: <b>11:39</b>  | Sampling completed<br>Tube Dpth(ft): <b>10</b> Time: <b>12:54</b> |
| Field Decon: <b>NO</b>                             | Field Filtered: <b>NO</b>  | Duplicate: <b>YES</b> <input checked="" type="radio"/> <b>NO</b> | Acid ID# <b>HNO3: DJ70401</b> H2SO4: <b>NA</b>                    |

| Sample Container Specification |          |            | Sample Preservation |              |          | Intended Analysis or method                |
|--------------------------------|----------|------------|---------------------|--------------|----------|--|
| ID:                            | Material | Volume(mL) | Preservative        | Volume added | final pH |  |
| D18A007-03 A                   | PE       | 500        | HNO3                | 1.0 mL       | 1.6      | Metals: Ba, Be, Cd, Cr, Co, Mo, Se, Hg, Ca |
| D18A007-03 B                   | PE       | 250        | HNO3                | 0.5 mL       | 1.6      | Metals: Sb, As, Pb, Ti, B, Li              |
| D18A007-03 C                   | PE       | 250        | Chill <6 deg        | n/a          | n/a      | Anions: F, Cl, SO4                         |
| D18A007-03 D                   | DPE      | 2000       | HNO3                | 4 mL         | 1.3      | Radium 226+228 Combined                    |
| D18A007-03 E                   | PE       | 2000       | Chill <6 deg        | n/a          | n/a      | Solids: TSS, TDS                           |

Remarks: well found secure. well left locked & decontaminated  
53° F Mostly sunny wind 9mph NW  
unable to stop the drawdown purge ≈ 70 mL/min

after sampling  
extended Depth to water  
was 5.53'

# DGS Groundwater Sampling Log



|   |                      |                                |                                   |   |
|---|----------------------|--------------------------------|-----------------------------------|---|
| WELL ID: <b>SIS-4</b>                   | Location:            | Latitude: <b>29°45'54.144"</b> | Longitude: <b>-82°23'38.4108"</b> | MSL @ TOC Date In Service: <b>183.87 2017</b> |
| Quarter: <b>1Q/18 week #/assessment</b> | Date: <b>1-24-18</b> | Well Type: <b>D</b>            |                                   |   |

### Purging Data

|   |                                  |  |                                  |
|---|----------------------------------|--|----------------------------------|
| Diameter(in) <b>2</b>   | Total well depth(ft) <b>13.7</b> | Depth to water(ft) <b>4.65</b>         | Well capacity(L/ft) <b>0.6</b>   |
| Distance from TOC to top of screen <b>3.7</b> ft.                       | Purging Method: <b>PP</b>        |  | Equipment Volume = <b>750 mL</b> |
| 1 WELL VOLUME(L)=(Total Well Depth-Depth to water)X Well Capacity       |                                  | Time of Depth Meter Decon: <b>1259</b> |                                  |
| <b>Well Vol = ( 13.7 - 4.65 ) X <sup>9.05</sup> 0.6 = <b>5.43</b> L</b> |                                  | 1/4 well vol. = <b>NA</b>              |                                  |
| Init Tubing Dpth(ft) <b>10'</b>   | Final Tube Dept(ft): <b>10'</b>  | Purge Start Time: <b>13:01</b>         | Purge Stop time: <b>13:33</b>    |
|   |                                  | Total Volume Purged <b>6.94 L</b>      |                                  |

| Time | Volume Purged (L) | Cumul. Volume Purged (L) | Purge rate mL/min | Depth to water (ft) | pH (SU) | Temp (°C) | Cond (µmho) | Diss O2 (mg/L) | Turbidity (ntu) | ORP (mv) | Observed odor or color   |
|------|-------------------|--------------------------|-------------------|---------------------|---------|-----------|-------------|----------------|-----------------|----------|--|
|      |                   |                          |                   |                     | ± 0.2§  | ± 0.2§    | ± 5%§       | 20% sat§       | 20 max§         |          |  |
| 1327 | 5.5               | 5.5                      | 240               | 4.88                | 6.67    | 16.8      | 423.9       | 6.35           | 7.77            | -214.2   | No Odor<br>clear floating particles<br>No color<br>yellow color<br>5/1/24-18 |
| 1330 | 7.72              | 6.22                     | 240               | 4.88                | 6.62    | 16.8      | 429.7       | 6.15           | 7.24            | -218.9   |  |
| 1333 | 0.72              | 6.94                     | 240               | 4.88                | 6.58    | 16.8      | 438.5       | 5.93           | 7.82            | -224.2   |  |
|      |                   |                          |                   |                     |         |           |             |                |                 |          |  |

SP 13:01-13:33  
16.5  
CIT to NIST

◆ FDEP SOP Section 2212.3

### Sampling Data

Decon Depth Mtr - rinse with analyte free water  
§Purge method FDEP-SOP 2212.3.1

|  |                            |  |                                 |  |                   |  |  |
|--|----------------------------|--|---------------------------------|--|-------------------|--|--|
| Sampled By(Print): <b>K. Morrison, S. Phillips</b> |                            |  |                                 | Sampler(s) Signatures: <i>J. Phillips, K. Morrison</i> |                   |  |  |
| Sampling Method: <b>PP</b>                         | Tube Material: <b>PP/S</b> | Sampling Started Tube Dpth(ft): <b>10'</b>             | Time: <b>13:34</b>              | Sampling completed Tube Dpth(ft): <b>10'</b>           | Time: <b>1357</b> |  |  |
| Field Decon: <b>NO</b>                             | Field Filtered: <b>NO</b>  | Duplicate: <b>YES</b> <input checked="" type="radio"/> | <b>NO</b> <input type="radio"/> | Acid ID# <b>HNO3: DJ70401</b>                          | <b>H2SO4: NA</b>  |  |  |

| Sample Container Specification |          |            | Sample Preservation |              |            | Intended Analysis or method                |
|--------------------------------|----------|------------|---------------------|--------------|------------|--|
| ID:                            | Material | Volume(mL) | Preservative        | Volume added | final pH   |  |
| <b>D18A02704A</b>              | PE       | 500        | HNO3                | 1.0 mL       | <b>1.6</b> | Metals: Ba, Be, Cd, Cr, Co, Mo, Se, Hg, Ca |
| <b>D18A02704B</b>              | PE       | 250        | HNO3                | 0.5 mL       | <b>1.6</b> | Metals: Sb, As, Pb, Tl, B, Li              |
| <b>D18A02704C</b>              | PE       | 250        | Chill <6 deg        | n/a          | n/a        | Anions: F, Cl, SO4                         |
| <b>D18A02704D</b>              | PE       | 2000       | HNO3                | 4 mL         | <b>1.6</b> | Radium 226+228 Combined                    |
| <b>D18A02704E</b>              | PE       | 2000       | Chill <6 deg        | n/a          | n/a        | Solids: TSS, TDS                           |

Remarks: *Well found locked on arrival and left locked on departure  
62°F Sunny with wind NW @ 6mph*

# DGS Groundwater Sampling Log



|   |                      |                                 |                                   |                          |                              |
|---|----------------------|---------------------------------|-----------------------------------|--------------------------|------------------------------|
| WELL ID: <b>LF-1</b>                                    | Location:            | Latitude: <b>29°45'59.0544"</b> | Longitude: <b>-82°23'51.8244"</b> | MSL @ TOC: <b>185.76</b> | Date In Service: <b>2017</b> |
| Quarter: <b>1Q18</b> <small>NK #100R Assessment</small> | Date: <b>1-23-18</b> | Well Type: <b>U</b>             |                                   |                          |                              |

### Purging Data

|   |                                   |                                   |   |
|---|-----------------------------------|-----------------------------------|---|
| Diameter(in) <b>2</b>   | Total well depth(ft) <b>14.88</b> | Depth to water(ft) <b>5.02</b>    | Well capacity(L/ft) <b>0.6</b>          |
| Distance from TOC to top of screen <b>4.88</b> ft.                |                                   | Purging Method: <b>PP</b>         | Equipment Volume = <b>750 mL</b>        |
| 1 WELL VOLUME(L)=(Total Well Depth-Depth to water)X Well Capacity |                                   |                                   | Time of Depth Meter Decon: <b>15:50</b> |
| <b>Well Vol = ( 14.88 - 5.02 ) X 0.6 = 5.92 L</b>                 |                                   |                                   | 1/4 well vol. = <b>N/A</b>              |
| Init Tubing Dpth(ft) <b>10</b>                                    | Final Tube Dept(ft): <b>10</b>    | Purge Start Time: <b>15:53</b>    | Purge Stop time: <b>16:48</b>           |
|   |                                   | Total Volume Purged <b>13.2 L</b> |   |

| Time  | Volume Purged (L) | Cumul. Volume Purged (L) | Purge rate mL/min | Depth to water (ft) | pH (SU) | Temp (°C) | Cond (µmho) | Diss O2 (mg/L) | Turbidity (ntu) | ORP (mv) | Observed odor or color |
|-------|-------------------|--------------------------|-------------------|---------------------|---------|-----------|-------------|----------------|-----------------|----------|------------------------|
|       |                   |                          |                   |                     | ± 0.2§  | ± 0.2§    | ± 5%§       | 20% sat§       | 20 max§         |          |                        |
| 16:11 | 5.9               | 5.9                      | 270               | 5.15                | 6.29    | 16.7      | 500.6       | 5.29           | 0.19            | -224.3   | Clear                  |
| 16:20 | 0.8               | 6.7                      | 270               | 5.15                | 6.21    | 16.7      | 477.6       | 4.92           | 0.31            | -228.2   | NO odor                |
| 16:23 | 0.8               | 7.5                      | 270               | 5.15                | 6.14    | 16.8      | 454.3       | 4.32           | 0.38            | -234.1   | NO color               |
| 16:26 | 0.8               | 8.3                      | 270               | 5.15                | 6.09    | 16.8      | 431.0       | 4.04           | 0.36            | -239.6   |                        |
| 16:29 | 0.8               | 9.1                      | 270               | 5.15                | 6.04    | 16.8      | 416.6       | 3.63           | 0.29            | -244.7   |                        |
| 16:32 | 0.8               | 9.9                      | 270               | 5.15                | 6.00    | 16.8      | 401.2       | 3.32           | 0.29            | -248.5   |                        |
| 16:37 | 0.9               | 10.8                     | 270               | 5.15                | 5.90    | 16.8      | 376.6       | 2.97           | 0.26            | -251.6   |                        |
| 16:40 | 0.8               | 11.6                     | 270               | 5.15                | 5.90    | 16.8      | 369.8       | 2.75           | 0.24            | -254.9   |                        |
| 16:43 | 0.8               | 12.4                     | 270               | 5.15                | 5.90    | 16.8      | 362.5       | 2.59           | 0.25            | -256.6   |                        |
| 16:46 | 0.8               | 13.2                     | 270               | 5.15                | 5.88    | 16.8      | 357.1       | 2.50           | 0.23            | -257.8   |                        |

◆ FDEP SOP Section 2212.3

### Sampling Data

Decon Depth Mtr - rinse with analyte free water  
 §Purge method FDEP-SOP 2212.3.1

| Sampled By(Print): <b>K. Morrison, S. Phillips</b> |                            |  |                               | Sampler(s) Signatures: <i>K. Morrison, S. Phillips</i> |                    |   |  |
|--|----------------------------|--|-------------------------------|--|--------------------|---|--|
| Sampling Method: <b>PP</b>                         | Tube Material: <b>PP/S</b> | Sampling Started Tube Dpth(ft): <b>10</b>                        | Time: <b>16:50</b>            | Sampling completed Tube Dpth(ft): <b>10</b>            | Time: <b>17:10</b> |   |  |
| Field Decon: <b>NO</b>                             | Field Filtered: <b>NO</b>  | Duplicate: <b>YES</b> <input checked="" type="radio"/> <b>NO</b> | Acid ID# <b>HNO3: DJ70401</b> | H2SO4: <b>NA</b>                                       |                    |   |  |
| Sample Container Specification                     |                            |  | Sample Preservation           |  |                    | Intended Analysis or method                       |  |
| ID:  | Material                   | Volume(mL)   | Preservative                  | Volume added   | final pH           |   |  |
| <b>D18A027-15A</b>                                 | <b>PE</b>                  | <b>500</b>   | <b>HNO3</b>                   | <b>1.0 mL</b>  | <b>1.6</b>         | <b>Metals: Ba, Be, Cd, Cr, Co, Mo, Se, Hg, Ca</b> |  |
| <b>D18A027-05B</b>                                 | <b>PE</b>                  | <b>250</b>   | <b>HNO3</b>                   | <b>0.5 mL</b>  | <b>1.6</b>         | <b>Metals: Sb, As, Pb, Ti, B, Li</b>              |  |
| <b>D18A027-15C</b>                                 | <b>PE</b>                  | <b>250</b>   | <b>Chill &lt;6 deg</b>        | <b>n/a</b>   | <b>n/a</b>         | <b>Anions: F, Cl, SO4</b>                         |  |
| <b>D18A027-05D</b>                                 | <b>PE</b>                  | <b>2000</b>  | <b>HNO3</b>                   | <b>4 mL</b>  | <b>1.6</b>         | <b>Radium 226+228 Combined</b>                    |  |
| <b>D18A027-05E</b>                                 | <b>PE</b>                  | <b>2000</b>  | <b>Chill &lt;6 deg</b>        | <b>n/a</b>   | <b>n/a</b>         | <b>Solids: TSS, TDS</b>                           |  |

Remarks: **Sunny, partly cloudy, 72°F wind west at 12 mph**  
**Well found to be clear and left locked**

# DGS Groundwater Sampling Log



|                      |                            |                                 |                                   |                          |                              |
|----------------------|----------------------------|---------------------------------|-----------------------------------|--------------------------|------------------------------|
| WELL ID: <b>LF-2</b> | Location:                  | Latitude: <b>29°45'50.5296"</b> | Longitude: <b>-82°23'47.7492"</b> | MSL @ TOC: <b>183.35</b> | Date In Service: <b>2017</b> |
| Quarter: <b>1Q18</b> | <i>wk #1000 Assessment</i> | Date: <b>1-25-18</b>            | Well Type: <b>D</b>               |                          |                              |

### Purging Data

|   |                                   |                                |   |
|---|-----------------------------------|--------------------------------|---|
| Diameter(in) <b>2</b>   | Total well depth(ft) <b>14.35</b> | Depth to water(ft) <b>6.08</b> | Well capacity(L/ft) <b>0.6</b>          |
| Distance from TOC to top of screen <b>4.35</b> ft.                |                                   | Purging Method: <b>PP</b>      | Equipment Volume = <b>750</b> mL        |
| 1 WELL VOLUME(L)=(Total Well Depth-Depth to water)X Well Capacity |                                   |                                | Time of Depth Meter Decon: <b>08:06</b> |
| <b>Well Vol = ( 14.35 - 6.08 ) X 0.6 = 4.96</b> L                 |                                   |                                | 1/4 well vol. =                         |
| Init Tubing Dpth(ft) <b>10</b>                                    | Final Tube Dept(ft): <b>10</b>    | Purge Start Time: <b>08:08</b> | Purge Stop time: <b>09:21</b>           |
|   |                                   |                                | Total Volume Purged <b>5.47</b> L       |

| Time  | Volume Purged (L) | Cumul. Volume Purged (L) | Purge rate mL/min | Depth to water (ft) | pH (SU) | Temp (°C) | Cond (µmho) | Diss O2 (mg/L) | Turbidity (ntu) | ORP (mv) | Observed odor or color |
|-------|-------------------|--------------------------|-------------------|---------------------|---------|-----------|-------------|----------------|-----------------|----------|------------------------|
|       |                   |                          |                   |                     | ± 0.2§  | ± 0.2§    | ± 5%§       | 20% sat§       | 20 max§         |          |                        |
| 09:12 | 5.0               | 5.0                      | 65                | 6.49                | 6.58    | 17.1      | 1277        | 0.79           | 5.59            | -251.5   | Yellowish Color        |
| 09:15 | 0.2               | 5.2                      | 65                | 6.49                | 6.57    | 17.0      | 1263        | 0.80           | 5.40            | -251.0   |                        |
| 09:19 | 0.27              | 5.47                     | 65                | 6.49                | 6.56    | 17.0      | 1256        | 0.89           | 5.27            | -252.2   | No odor                |
|       |                   |                          |                   |                     |         |           |             |                |                 |          |                        |

◆ FDEP SOP Section 2212.3

### Sampling Data

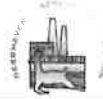
Decon Depth Mtr - rinse with analyte free water  
§Purge method FDEP-SOP 2212.3.1

|   |                            |   |                                    |   |                    |  |  |
|---|----------------------------|---|------------------------------------|---|--------------------|--|--|
| Sampled By(Print): <b>K. Morrison S. Phillips</b> |                            |   |                                    | Sampler(s) Signatures: <i>[Signatures]</i>  |                    |  |  |
| Sampling Method: <b>PP</b>                        | Tube Material: <b>PP/S</b> | Sampling Started Tube Dpth(ft): <b>10</b>                 | Time: <b>09:22</b>                 | Sampling completed Tube Dpth(ft): <b>10</b> | Time: <b>10:30</b> |  |  |
| Field Decon: <b>NO</b>                            | Field Filtered: <b>NO</b>  | Duplicate: <b>YES</b> <input checked="" type="checkbox"/> | <b>NO</b> <input type="checkbox"/> | Acid ID# <b>HNO3: D570401</b>               | <b>H2SO4: NA</b>   |  |  |

| Sample Container Specification |          |            | Sample Preservation |              |          | Intended Analysis or method                |
|--------------------------------|----------|------------|---------------------|--------------|----------|--|
| ID:                            | Material | Volume(mL) | Preservative        | Volume added | final pH |  |
| D18A027-02A                    | PE       | 500        | HNO3                | 1.0 mL       | 1.7      | Metals: Ba, Be, Cd, Cr, Co, Mo, Se, Hg, Ca |
| D18A027-02B                    | PE       | 250        | HNO3                | 0.5 mL       | 1.6      | Metals: Sb, As, Pb, Ti, B, Li              |
| D18A027-02C                    | PE       | 250        | Chill <6 deg        | n/a          | n/a      | Anions: F, Cl, SO4                         |
| D18A027-02D                    | PE       | 2000       | HNO3                | 4 mL         | 1.6      | Radium 226+228 Combined                    |
| D18A027-02E                    | PE       | 2000       | Chill <6 deg        | n/a          | n/a      | Solids: TSS, TDS                           |

Remarks: **48°F few clouds, wind NVC @ 12 mph well found locked and left locked @ departure.**

# DGS Groundwater Sampling Log



|                       |                       |                                 |                                   |           |                              |
|-----------------------|-----------------------|---------------------------------|-----------------------------------|-----------|------------------------------|
| WELL ID: <b>LF-3</b>  | Location:             | Latitude: <b>29°45'50.6376"</b> | Longitude: <b>-82°23'52.1592"</b> | MSL @ TOC | Date In Service: <b>2017</b> |
| Quarter: <b>1Q/18</b> | <i>WFL Assessment</i> | Date: <b>1-25/18</b>            | Well Type: <b>D</b>               |           |                              |

### Purging Data

|   |                                   |   |                                  |
|---|-----------------------------------|---|----------------------------------|
| Diameter(in) <b>2</b>   | Total well depth(ft) <b>14.43</b> | Depth to water(ft) <b>5.66</b>          | Well capacity(L/ft) <b>0.6</b>   |
| Distance from TOC to top of screen <b>4.43</b> ft.                | Purging Method: <b>PP</b>         |   | Equipment Volume = <b>750 mL</b> |
| 1 WELL VOLUME(L)=(Total Well Depth-Depth to water)X Well Capacity |                                   | Time of Depth Meter Decon: <b>10:44</b> |                                  |
| <b>Well Vol = (14.43 - 5.66) X 0.6 = 5.26 L</b>                   |                                   | 1/4 well vol. =                         |                                  |
| Init Tubing Dpth(ft) <b>10</b>                                    | Final Tube Dept(ft): <b>10</b>    | Purge Start Time: <b>10:46</b>          | Purge Stop time: <b>11:27</b>    |
|   |                                   | Total Volume Purged <b>6.8 L</b>        |                                  |

| Time  | Volume Purged (L) | Cumul. Volume Purged (L) | Purge rate mL/min | Depth to water (ft) | pH (SU) | Temp (°C) | Cond (µmho) | Diss O2 (mg/L) | Turbidity (ntu) | ORP (mv) | Observed odor or color |
|-------|-------------------|--------------------------|-------------------|---------------------|---------|-----------|-------------|----------------|-----------------|----------|------------------------|
|       |                   |                          |                   |                     | ± 0.2§  | ± 0.2§    | ± 5%§       | 20% sat§       | 20 max§         |          |                        |
| 11:17 | 5.3               | 5.3                      | 170               | 5.93                | 6.61    | 14.4      | 829.3       | 4.73           | 3.59            | -180.2   | Clear                  |
| 11:20 | 0.5               | 5.8                      | 170               | 5.93                | 6.51    | 14.4      | 858.2       | 4.20           | 3.62            | -185.0   | No odor                |
| 11:23 | 0.5               | 6.3                      | 170               | 5.93                | 6.46    | 14.5      | 868.5       | 3.99           | 3.49            | -186.3   |                        |
| 11:26 | 0.5               | 6.8                      | 170               | 5.93                | 6.43    | 14.5      | 878.6       | 3.78           | 3.65            | -189.1   |                        |
|       |                   |                          |                   |                     |         | (14.2)    |             |                |                 |          |                        |

◆ FDEP SOP Section 2212.3

### Sampling Data

Decon Depth Mtr - rinse with analyte free water  
 §Purge method FDEP-SOP 2212.3.1

|  |                            |  |  |
|--|----------------------------|--|--|
| Sampled By(Print): <i>K. Morrison, S. Phillips</i> |                            | Sampler(s) Signatures: <i>K. Morrison, S. Phillips</i>       |  |
| Sampling Method: <b>PP</b>                         | Tube Material: <b>PP/S</b> | Sampling Started Tube Dpth(ft): <b>10</b> Time: <b>11:28</b> | Sampling completed Tube Dpth(ft): <b>10</b> Time: <b>11:59</b> |
| Field Decon: <b>NO</b>                             | Field Filtered: <b>NO</b>  | Duplicate: <b>YES NO</b>                                     | Acid ID# <b>HNO3: DJ70401 H2SO4: NA</b>                        |

| Sample Container Specification |          |            | Sample Preservation |              |            | Intended Analysis or method                |
|--------------------------------|----------|------------|---------------------|--------------|------------|--|
| ID:                            | Material | Volume(mL) | Preservative        | Volume added | final pH   |  |
| <i>D18A027-07A</i>             | PE       | 500        | HNO3                | 1.0 mL       | <i>1.6</i> | Metals: Ba, Be, Cd, Cr, Co, Mo, Se, Hg, Ca |
| <i>D18A027-07B</i>             | PE       | 250        | HNO3                | 0.5 mL       | <i>1.6</i> | Metals: Sb, As, Pb, Ti, B, Li              |
| <i>D18A027-07C</i>             | PE       | 250        | Chill <6 deg        | n/a          | n/a        | Anions: F, Cl, SO4                         |
| <i>D18A027-07D</i>             | PE       | 2000       | HNO3                | 4 mL         | <i>1.6</i> | Radium 226+228 Combined                    |
| <i>D18A027-07E</i>             | PE       | 2000       | Chill <6 deg        | n/a          | n/a        | Solids: TSS, TDS                           |

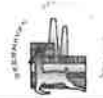
Remarks:

*53°F Sunny wind: NNE 14 mph*

*Well found locked upon arrival and left locked @ departure.*



# DGS Groundwater Sampling Log



|  |                      |                                 |                                   |           |                 |
|--|----------------------|---------------------------------|-----------------------------------|-----------|-----------------|
| WELL ID: <b>LF-4</b>                               | Location:            | Latitude: <b>29°45'50.5008"</b> | Longitude: <b>-82°23'58.6248"</b> | MSL @ TOC | Date In Service |
| Quarter: <b>1Q18</b> <i>week #1 cde assessment</i> | Date: <b>1-24-18</b> | Well Type: <b>D</b>             |                                   |           |                 |

### Purging Data

|   |                                   |                                   |  |
|---|-----------------------------------|-----------------------------------|--|
| Diameter(in) <b>2</b>   | Total well depth(ft) <b>13.95</b> | Depth to water(ft) <b>4.88</b>    | Well capacity(L/ft) <b>0.6</b>         |
| Distance from TOC to top of screen <b>3.95</b> ft.                |                                   | Purging Method: <b>PP</b>         | Equipment Volume = <b>750 mL</b>       |
| 1 WELL VOLUME(L)=(Total Well Depth-Depth to water)X Well Capacity |                                   |                                   | Time of Depth Meter Decon: <b>1404</b> |
| <b>Well Vol = ( 13.95 - 4.88 ) X 9.07 0.6 = 5.44 L</b>            |                                   |                                   | 1/4 well vol. = <b>NA</b>              |
| Init Tubing Dpth(ft) <b>10'</b>                                   | Final Tube Dept(ft): <b>10'</b>   | Purge Start Time: <b>1405</b>     | Purge Stop time: <b>1448</b>           |
|   |                                   | Total Volume Purged <b>6.46 L</b> |  |

| Time | Volume Purged (L) | Cumul. Volume Purged (L) | Purge rate mL/min | Depth to water (ft) | pH (SU)             | Temp (°C)   | Cond (µmho) | Diss O2 (mg/L) | Turbidity (ntu) | ORP (mv) | Observed odor or color                    |
|------|-------------------|--------------------------|-------------------|---------------------|---------------------|-------------|-------------|----------------|-----------------|----------|---|
|      |                   |                          |                   |                     | ± 0.2§              | ± 0.2§      | ± 5%§       | 20% sat§       | 20 max§         |          |   |
| 1441 | 5.5               | 5.5                      | 160               | 5.07                | 6.28                | 15.0        | 1527        | 0.54           | 2.72            | -276.5   | <i>NO odor from per tube yellow color</i> |
| 1444 | 0.48              | 5.98                     | 160               | 5.07                | 6.28                | 15.0        | 1545        | 0.57           | 2.83            | -277.2   |   |
| 1447 | 0.48              | 6.46                     | 160               | 5.07                | 6.28                | 15.0        | 1565        | 0.61           | 2.73            | -277.5   |   |
|      |                   |                          |                   |                     | <i>corr to NIST</i> | <b>14.7</b> |             |                |                 |          |   |

◆ FDEP SOP Section 2212.3

### Sampling Data

Decon Depth Mtr - rinse with analyte free water  
§Purge method FDEP-SOP 2212.3.1

|  |                            |   |   |
|--|----------------------------|---|---|
| Sampled By(Print): <i>K. Morrison, S. Phillips</i> |                            | Sampler(s) Signatures: <i>K. Morrison, S. Phillips</i>              |   |
| Sampling Method: <b>PP</b>                         | Tube Material: <b>PP/S</b> | Sampling Started Tube Dpth(ft): <b>10'</b> Time: <b>1449</b>        | Sampling completed Tube Dpth(ft): <b>10'</b> Time: <b>15:26</b> |
| Field Decon: <b>NO</b>                             | Field Filtered: <b>NO</b>  | Duplicate: <b>YES</b> <input checked="" type="checkbox"/> <b>NO</b> | Acid ID# HNO3: <b>DJ70401</b> H2SO4: <b>NA</b>                  |

| Sample Container Specification |          |            | Sample Preservation |              |            | Intended Analysis or method                |
|--------------------------------|----------|------------|---------------------|--------------|------------|--|
| ID:                            | Material | Volume(mL) | Preservative        | Volume added | final pH   |  |
| <i>D18A027-08A</i>             | PE       | 500        | HNO3                | 1.0 mL       | <b>1.6</b> | Metals: Ba, Be, Cd, Cr, Co, Mo, Se, Hg, Ca |
| <i>D18A027-08B</i>             | PE       | 250        | HNO3                | 0.5 mL       | <b>1.6</b> | Metals: Sb, As, Pb, Ti, B, Li              |
| <i>D18A027-08C</i>             | PE       | 250        | Chill <6 deg        | n/a          | n/a        | Anions: F, Cl, SO4                         |
| <i>D18A027-08D</i>             | PE       | 2000       | HNO3                | 4 mL         | <b>1.6</b> | Radium 226+228 Combined                    |
| <i>D18A027-08E</i>             | PE       | 2000       | Chill <6 deg        | n/a          | n/a        | Solids: TSS, TDS                           |

Remarks: *Well found locked and left locked on departure  
62°F Sunny, NNW @ 4 mph - wind*

# DGS Groundwater Sampling Log



|                                      |                      |                               |                                 |                          |                              |
|--------------------------------------|----------------------|-------------------------------|---------------------------------|--------------------------|------------------------------|
| WELL ID: <b>R4T5 (CCR)</b>           | Location:            | Latitude: <b>29°45'52.14"</b> | Longitude: <b>-82°23'33.18"</b> | MSL @ TOC: <b>187.46</b> | Date In Service: <b>7-93</b> |
| Quarter: <b>1Q18 wk 1 Assessment</b> | Date: <b>1-24-18</b> | Well Type: <b>D</b>           |                                 |                          |                              |

### Purging Data

|   |                                    |   |                                  |
|---|------------------------------------|---|----------------------------------|
| Diameter(in): <b>2</b>  | Total well depth(ft): <b>15.08</b> | Depth to water(ft): <b>10.54</b>        | Well capacity(L/ft): <b>0.6</b>  |
| Distance from TOC to top of screen: <b>5.08</b> ft.               | Purging Method: <b>PP</b>          |   | Equipment Volume = <b>750</b> mL |
| 1 WELL VOLUME(L)=(Total Well Depth-Depth to water)X Well Capacity |                                    | Time of Depth Meter Decon: <b>08:39</b> |                                  |
| <b>Well Vol = ( 15.08 - 10.54 ) X 0.6 = 2.7 L</b>                 |                                    | 1/4 well vol. = <b>0.7</b>              |                                  |
| Init Tubing Dpth(ft): <b>11.1</b>                                 | Final Tube Dept(ft): <b>11.4</b>   | Purge Start Time: <b>08:44</b>          | Purge Stop time: <b>09:09</b>    |
|   |                                    | Total Volume Purged: <b>4.1</b> L       |                                  |

| Time  | Volume Purged (L) | Cumul. Volume Purged (L) | Purge rate mL/min | Depth to water (ft) | pH (SU) | Temp (°C) | Cond (µmho) | Diss O2 (mg/L) | Turbidity (ntu) | ORP (mv) | Observed odor or color |
|---|-------------------|--------------------------|-------------------|---------------------|---------|-----------|-------------|----------------|-----------------|----------|------------------------|
|   |                   |                          |                   |                     | ± 0.2§  | ± 0.2§    | ± 5%§       | 20% sat§       | 20 max§         |          |                        |
| <i>See 1Q18 Leachate Field Sampling log</i> |                   |                          |                   |                     |         |           |             |                |                 |          |                        |
|   |                   |                          |                   |                     |         |           |             |                |                 |          |                        |
|   |                   |                          |                   |                     |         |           |             |                |                 |          |                        |
|   |                   |                          |                   |                     |         |           |             |                |                 |          |                        |
|   |                   |                          |                   |                     |         |           |             |                |                 |          |                        |
|   |                   |                          |                   |                     |         |           |             |                |                 |          |                        |
|   |                   |                          |                   |                     |         |           |             |                |                 |          |                        |
|   |                   |                          |                   |                     |         |           |             |                |                 |          |                        |
|   |                   |                          |                   |                     |         |           |             |                |                 |          |                        |
|   |                   |                          |                   |                     |         |           |             |                |                 |          |                        |
|   |                   |                          |                   |                     |         |           |             |                |                 |          |                        |
|   |                   |                          |                   |                     |         |           |             |                |                 |          |                        |
|   |                   |                          |                   |                     |         |           |             |                |                 |          |                        |
|   |                   |                          |                   |                     |         |           |             |                |                 |          |                        |

◆ FDEP SOP Section 2212.3

## Sampling Data

Decon Depth Mtr - rinse with analyte free water  
§Purge method FDEP-SOP 2212.3.1

| Sampled By(Print): <i>K. Morrison, S. Phillips</i> |                            |                                 | Sampler(s) Signatures: <i>Thomas J. Phillips</i> |                                   |                             |  |
|--|----------------------------|---------------------------------|--|-----------------------------------|-----------------------------|--|
| Sampling Method: <b>PP</b>                         | Tube Material: <b>PP/S</b> | Sampling Started Tube Dpth(ft): | Time: <b>0910</b>                                | Sampling completed Tube Dpth(ft): | Time: <b>1002</b>           |  |
| Field Decon: <b>NO</b>                             | Field Filtered: <b>NO</b>  | Duplicate: <b>YES</b>           | <input checked="" type="radio"/> <b>NO</b>       | Acid ID# HNO3: <b>DJ70401</b>     | H2SO4: <b>NA</b>            |  |
| Sample Container Specification                     |                            | Sample Preservation             |  |                                   | Intended Analysis or method |  |
| ID:  | Material                   | Volume(mL)                      | Preservative                                     | Volume added                      |                             | final pH                                   |
| <i>None</i>  | PE                         | 500                             | HNO3   | 1.0 mL                            | <i>See 1Q18 leachate</i>    | Metals: Ba, Be, Cd, Cr, Co, Mo, Se, Hg, Ca |
| <i>D18A027-12B</i>                                 | PE                         | 250                             | HNO3   | 0.5 mL                            | <i>1.6</i>                  | Metals: Sb, As, Pb, Ti, B, Li              |
| <i>D18A027-12C</i>                                 | PE                         | 250                             | Chill <6 deg                                     | n/a                               | n/a                         | Anions <b>FL</b> Cl, SO4                   |
| <i>D18A027-12D</i>                                 | DPE                        | 2000                            | HNO3   | 4 mL                              | <i>1.6</i>                  | Radium 226+228 Combined                    |
| <i>None</i>  | PE                         | 2000                            | Chill <6 deg                                     | n/a                               | n/a                         | Solids: TSS, TDS                           |
| <i>1-24-18 R</i>                                   |                            |                                 |  |                                   |                             |  |

Remarks: *See 1Q18 R4T5 for remarks*

# DGS Groundwater Sampling Log



|   |   |                               |                                 |   |
|---|---|-------------------------------|---------------------------------|---|
| WELL ID: <b>R4T5</b>  | Location:   | Latitude: <b>29°45'52.14"</b> | Longitude: <b>-82°23'33.18"</b> | MSL @ TOC Date In Service: <b>187.46 7-93</b> |
| Quarter: <span style="border: 1px solid black; padding: 2px;">1Q18</span> | Date: <span style="border: 1px solid black; padding: 2px;">1-24-18</span> | Well Type: <b>I</b>           |                                 |   |

### Purging Data

|   |                                   |   |                                  |
|---|-----------------------------------|---|----------------------------------|
| Diameter(in) <b>2</b>   | Total well depth(ft) <b>15.08</b> | Depth to water(ft) <b>10.54</b>         | Well capacity(L/ft) <b>0.6</b>   |
| Distance from TOC to top of screen <b>5.08</b> ft.                | Purging Method: <b>PP</b>         |   | Equipment Volume = <b>750 mL</b> |
| 1 WELL VOLUME(L)=(Total Well Depth-Depth to water)X Well Capacity |                                   | Time of Depth Meter Decon: <b>08:39</b> |                                  |
| <b>Well Vol = ( 15.08 - 10.54 ) X 0.6 = 2.7 L</b>                 |                                   | 1/4 well vol. = <b>0.7</b>              |                                  |
| Init Tubing Dpth(ft) <b>11.1</b>                                  | Final Tube Dept(ft): <b>11.4</b>  | Purge Start Time: <b>08:41</b>          | Purge Stop time: <b>09:09</b>    |
|   |                                   |   | Total Volume Purged <b>4.1 L</b> |

| Time             | Volume Purged (L) | Cumul. Volume Purged (L) | Purge rate mL/min | Depth to water (ft) | pH (SU) ± 0.2§  | Temp (°C) ± 0.2§ | Cond (µmho) ± 5%§ | Diss O2 (mg/L) 20% sat§ | Turbidity (ntu) 20 max§ | ORP (mv)          | Observed odor or color        |
|------------------|-------------------|--------------------------|-------------------|---------------------|-----------------|------------------|-------------------|-------------------------|-------------------------|-------------------|-------------------------------|
| <del>08:53</del> | <del>2.7</del>    | <del>2.7</del>           | <del>150</del>    | <del>10.82</del>    | <del>6.19</del> | <del>21.0</del>  | <del>831.1</del>  | <del>0.57</del>         | <del>0.99</del>         | <del>-208.5</del> | <del>Slight sulfur odor</del> |
| 09:58            | 2.7               | 2.7                      | 150               | 10.82               | 6.19            | 21.1             | 830.4             | 0.48                    | 0.44                    | -273.4            | Clear                         |
| 09:02            | 0.7               | 3.4                      | 150               | 10.82               | 6.19            | 21.1             | 833.0             | 0.49                    | 0.85                    | -277.0            | yellowish color               |
| 09:07            | 0.7               | 4.1                      | 150               | 10.82               | 6.18            | 21.1             | 835.1             | 0.43                    | 1.14                    | -280.8            |                               |
|                  |                   |                          |                   |                     |                 |                  |                   |                         |                         |                   |                               |

◆ FDEP SOP Section 2212.3

### Sampling Data

Decon Depth Mtr - rinse with analyte free water  
§Purge method FDEP-SOP 2212.3.1

|   |                            |  |                    |   |                       |  |  |
|---|----------------------------|--|--------------------|---|-----------------------|--|--|
| Sampled By(Print): <b>K. Morison, S. Phillips</b> |                            |  |                    | Sampler(s) Signatures: <i>K. Morison, S. Phillips</i> |                       |  |  |
| Sampling Method: <b>PP</b>                        | Tube Material: <b>PP/S</b> | Sampling Started Tube Dpth(ft): <b>11.4</b>                      | Time: <b>09:10</b> | Sampling completed Tube Dpth(ft): <b>11.4</b>         | Time: <b>10:02</b>    |  |  |
| Field Decon: <b>NO</b>                            | Field Filtered: <b>NO</b>  | Duplicate: <b>YES</b> <input checked="" type="radio"/> <b>NO</b> | Acid ID#           | HNO3: <b>DJ70401</b>                                  | H2SO4: <b>DL62802</b> |  |  |

| Sample Container Specification |          |            | Sample Preservation |              |          | Intended Analysis or method |
|--------------------------------|----------|------------|---------------------|--------------|----------|-----------------------------|
| ID:                            | Material | Volume(mL) | Preservative        | Volume added | final pH |                             |
| D18A024-04-A                   | PE       | 2000       | Chill <6 deg        | none         | n/a      | Physical Analysis           |
| D18A024-04-B                   | PE       | 250        | Chill 6 deg C       | none         | n/a      | Anions                      |
| D18A024-04-C                   | PE       | 250        | Chill + H2SO        | 0.5 mL       | 1.6      | Demand-NPDOC and NO3+NO2    |
| D18A024-04-D                   | PE       | 1000       | HNO3                | 2 mL         | 1.6      | Radiological-GA             |
| D18A024-04-E                   | PE       | 500        | HNO3                | 1 mL         | 1.6      | Metals                      |
| D18A024-04-F                   | PE       | 250        | HNO3                | 0.5 mL       | 1.6      | Metals: As, Pb              |

Tubing depth is **0.6** ft below depth to water for every instance.

Remarks: **349°F wind WNW at 5mph. Sunny**

*well found secure left secure.*

Field pH **7.8** Km 1-24-18

D18A027-12-D | 2000 mL / HNO3 | 1 | 1 | Ractram 226-728 combined

D18A027-12-B | 250 mL HNO3 | Metal CI, Km

Codes: PP/S + Polypropylene+Silicone tubing PP: Peristaltic Pump PE: Polyethylene B Baffle fell during sampling. Had to re acidify in field. Mouth of bottle was rinsed.

During sampling temperature increased to **48°F (09:26)** Still sunny

# DGS Groundwater Sampling Log



|                               |                      |                           |                             |                    |                         |
|-------------------------------|----------------------|---------------------------|-----------------------------|--------------------|-------------------------|
| WELL ID: <b>R6T4 (CCR)</b>    | Location:            | Latitude:<br>29°46'00.90" | Longitude:<br>-82°23'40.20" | MSL @ TOC<br>183.6 | Date In Service<br>7-93 |
| Quarter: <u>1Q18 week # 1</u> | Date: <u>1-23-18</u> | Well Type: <b>U</b>       |                             |                    |                         |

### Purging Data

|   |                                   |   |                                  |                                  |
|---|-----------------------------------|---|----------------------------------|----------------------------------|
| Diameter(in) <b>2</b>   | Total well depth(ft) <b>14.13</b> | Depth to water(ft) <b>2.80</b>          | Well capacity(L/ft) <b>0.6</b>   |                                  |
| Distance from TOC to top of screen <b>4.13</b> ft.                |                                   | Purging Method: <b>PP</b>               | Equipment Volume = <b>750 mL</b> |                                  |
| 1 WELL VOLUME(L)=(Total Well Depth-Depth to water)X Well Capacity |                                   | Time of Depth Meter Decon: <u>14:56</u> |                                  |                                  |
| <b>Well Vol = ( 14.13 - 2.80 ) X 0.6 = 6.80 L</b>                 |                                   | 1/4 well vol. = <u>1.70</u>             |                                  |                                  |
| Init Tubing Dpth(ft) <u>3.4</u>                                   | Final Tube Dept(ft):              | Purge Start Time: <u>14:58</u>          | Purge Stop time: <u>15:23</u>    | Total Volume Purged <u>10.2L</u> |

| Time  | Volume Purged (L) | Cumul. Volume Purged (L) | Purge rate mL/min | Depth to water (ft) | pH (SU) | Temp (°C) | Cond (µmho) | Diss O2 (mg/L) | Turbidity (ntu) | ORP (mv) | Observed odor or color |
|---|-------------------|--------------------------|-------------------|---------------------|---------|-----------|-------------|----------------|-----------------|----------|------------------------|
|   |                   |                          |                   |                     | ± 0.2§  | ± 0.2§    | ± 5%§       | 20% sat§       | 20 max§         |          |                        |
| <i>See 1Q18 Leachate field log for data</i> |                   |                          |                   |                     |         |           |             |                |                 |          |                        |
|   |                   |                          |                   |                     |         |           |             |                |                 |          |                        |
|   |                   |                          |                   |                     |         |           |             |                |                 |          |                        |
|   |                   |                          |                   |                     |         |           |             |                |                 |          |                        |
|   |                   |                          |                   |                     |         |           |             |                |                 |          |                        |
|   |                   |                          |                   |                     |         |           |             |                |                 |          |                        |
|   |                   |                          |                   |                     |         |           |             |                |                 |          |                        |
|   |                   |                          |                   |                     |         |           |             |                |                 |          |                        |
|   |                   |                          |                   |                     |         |           |             |                |                 |          |                        |
|   |                   |                          |                   |                     |         |           |             |                |                 |          |                        |
|   |                   |                          |                   |                     |         |           |             |                |                 |          |                        |
|   |                   |                          |                   |                     |         |           |             |                |                 |          |                        |

◆ FDEP SOP Section 2212.3

### Sampling Data

Decon Depth Mtr - rinse with analyte free water  
§Purge method FDEP-SOP 2212.3.1

|  |  |                            |  |   |  |   |  |
|--|--|----------------------------|--|---|--|---|--|
| Sampled By(Print): <u>K. Morrison, S. Phillips</u> |  |                            |  | Sampler(s) Signatures: <u>Khorin S. Phillips</u>                  |  |   |  |
| Sampling Method: <b>PP</b>                         |  | Tube Material: <b>PP/S</b> |  | Sampling Started<br>Tube Dpth(ft): <u>3.55</u> Time: <u>15:25</u> |  | Sampling completed<br>Tube Dpth(ft): <u>3.55</u> Time: <u>15:41</u> |  |
| Field Decon: <b>NO</b>                             |  | Field Filtered: <b>NO</b>  |  | Duplicate: <b>YES</b> <input checked="" type="checkbox"/>         |  | Acid ID# HNO3: <u>DJ70401</u> H2SO4: <u>NA</u>                      |  |

| Sample Container Specification |          |            | Sample Preservation |              |                           | Intended Analysis or method                |
|--------------------------------|----------|------------|---------------------|--------------|---------------------------|--|
| ID:                            | Material | Volume(mL) | Preservative        | Volume added | final pH                  |  |
| <u>None in Leachate group</u>  | PE       | 500        | HNO3                | 1.0 mL       | <u>set &amp; Leachate</u> | Metals: Ba, Be, Cd, Cr, Co, Mo, Se, Hg, Ca |
| <u>D18A027-3B</u>              | PE       | 250        | HNO3                | 0.5 mL       | <u>1.6</u>                | Metals: <u>Sb, As, Pb, Tl, Bi</u>          |
| <u>D18A027-3C</u>              | PE       | 250        | Chill <6 deg        | n/a          | <u>n/a</u>                | Anions: <u>Fl, Cl, SO4</u>                 |
| <u>D18A027-3D</u>              | PE       | 2000       | HNO3                | 4 mL         | <u>1.6</u>                | Radium 226+228 Combined                    |
| <u>None in Leachate group</u>  | PE       | 2000       | Chill <6 deg        | n/a          | <u>n/a</u>                | Solids: TSS, TDS                           |

Remarks: See 1Q18 Leachate field log for remarks

Codes: PP/S + Polypropylene+Silicone tubing PP: Peristaltic Pump PE: Polyethylene B

# DGS Groundwater Sampling Log



WELL ID: **R6T4** Location: Latitude: **29°46'00.90"** Longitude: **-82°23'40.20"** MSL @ TOC: **183.6** Date In Service: **7-93**

Quarter: **1Q18** Date: **1-23-18** Well Type: **I**

### Purging Data

Diameter(in) **2** Total well depth(ft) **14.13** Depth to water(ft) **2.80** Well capacity(L/ft) **0.6**

Distance from TOC to top of screen **4.13** ft. Purging Method: **PP** Equipment Volume = **750 mL**

1 WELL VOLUME(L)=(Total Well Depth-Depth to water)X Well Capacity Time of Depth Meter Decon: **14:56**

**Well Vol = ( 14.13 - 2.80 ) X 0.6 = 6.8 L** 1/4 well vol. = **1.7**

Init Tubing Dpth(ft) **3.4** Final Tube Dept(ft): **3.55** Purge Start Time: **14:58** Purge Stop time: **15:23** Total Volume Purged **10.2 L**

| Time | Volume Purged (L) | Cumul. Volume Purged (L) | Purge rate mL/min | Depth to water (ft) | pH (SU) | Temp (°C)             | Cond (µmho) | Diss O2 (mg/L) | Turbidity (ntu) | ORP (mv) | Observed odor or color       |
|------|-------------------|--------------------------|-------------------|---------------------|---------|-----------------------|-------------|----------------|-----------------|----------|------------------------------|
|      |                   |                          |                   |                     | ± 0.2§  | ± 0.2§                | ± 5%§       | 20% sat§       | 20 max§         |          |                              |
| 1515 | 6.8               | 6.8                      | 500               | 2.95                | 7.05    | 16.1                  | 311.6       | 3.83           | 1.34            | -248.9   | No odor<br>Clear<br>no color |
| 1519 | 1.7               | 8.5                      | 500               | 2.95                | 7.05    | 16.2                  | 312.1       | 3.70           | 1.18            | -253.0   |                              |
| 1523 | 1.7               | 10.2                     | 500               | 2.95                | 7.04    | 16.3                  | 311.9       | 3.69           | 1.12            | -256.5   |                              |
|      |                   |                          |                   |                     |         | Corr. to NIST<br>16.0 |             |                |                 |          |                              |

◆ FDEP SOP Section 2212.3

### Sampling Data

Decon Depth Mtr - rinse with analyte free water  
§Purge method FDEP-SOP 2212.3.1

Sampled By(Print): **S. Phillips, K. Morrison** Sampler(s) Signatures: *S. Phillips, K. Morrison*

Sampling Method: **PP** Tube Material: **PP/S** Sampling Started Tube Dpth(ft): **3.55** Time: **15:25** Sampling completed Tube Dpth(ft): **3.55** Time: **1541**

Field Decon: **NO** Field Filtered: **NO** Duplicate: **YES**  **NO** Acid ID# **HNO3: DJ70401** **H2SO4: DL62802**

| Sample Container Specification |          |            | Sample Preservation |              |          | Intended Analysis or method |
|--------------------------------|----------|------------|---------------------|--------------|----------|-----------------------------|
| ID:                            | Material | Volume(mL) | Preservative        | Volume added | final pH |                             |
| D18A024-06A                    | PE       | 2000       | Chill <6 deg        | none         | n/a      | Physical Analysis           |
| D18A024-06B                    | PE       | 250        | Chill 6 deg C       | none         | n/a      | Anions                      |
| D18A024-06C                    | PE       | 250        | Chill + H2SO        | 0.5 mL       | 1.3      | Demand-NPDOC and NO3+NO2    |
| D18A024-06D                    | PE       | 1000       | HNO3                | 2 mL         | 1.6      | Radiological-GA             |
| D18A024-06E                    | PE       | 500        | HNO3                | 1 mL         | 1.6      | Metals                      |
| D18A024-06F                    | PE       | 250        | HNO3                | 0.5 mL       | 1.3      | Metals: As, Pb              |

Tubing depth is **0.6** ft below depth to water for every instance.  
Remarks: *Well was locked at arrival and departure Sunny partly cloudy 72°F winds from west at 12 mph*

# DGS Groundwater Sampling Log



|  |                      |                      |                      |                     |                            |
|--|----------------------|----------------------|----------------------|---------------------|----------------------------|
| WELL ID: <b>EBLANK</b>                             | Location:            | Latitude: <b>na</b>  | Longitude: <b>na</b> | MSL @ TOC: <b>0</b> | Date In Service: <b>na</b> |
| Quarter: <b>1Q18</b> <i>week #1 CER assessment</i> | Date: <b>1-25-18</b> | Well Type: <b>na</b> |                      |                     |                            |

### Purging Data

|   |                                |  |                                  |
|---|--------------------------------|--|----------------------------------|
| Diameter(in): <b>na</b>   | Total well depth(ft): <b>0</b> | Depth to water(ft): <b>NA</b>          | Well capacity(L/ft): <b>0</b>    |
| Distance from TOC to top of screen: <b>0</b> ft.                  | Purging Method: <b>PP</b>      |  | Equipment Volume = <b>750</b> mL |
| 1 WELL VOLUME(L)=(Total Well Depth-Depth to water)X Well Capacity |                                | Time of Depth Meter Decon: <b>1206</b> |                                  |
| <b>Well Vol = ( 0 - ) X 0 = NA L</b>                              |                                | 1/4 well vol. = <b>NA</b>              |                                  |
| Init Tubing Dpth(ft): <b>NA</b>                                   | Final Tube Dept(ft): <b>NA</b> | Purge Start Time: <b>1209</b>          | Purge Stop time: <b>1226</b>     |
|   |                                |  | Total Volume Purged: <b>NA</b> L |

| Time  | Volume Purged (L) | Cumul. Volume Purged (L) | Purge rate mL/min | Depth to water (ft) | pH (SU) | Temp (°C) | Cond (µmho) | Diss O2 (mg/L) | Turbidity (ntu) | ORP (mv) | Observed odor or color |
|---|-------------------|--------------------------|-------------------|---------------------|---------|-----------|-------------|----------------|-----------------|----------|------------------------|
|   |                   |                          |                   |                     | ± 0.2§  | ± 0.2§    | ± 5%§       | 20% sat§       | 20 max§         |          |                        |
| <i>See 1Q18 Leachate Field Sampling Log</i> |                   |                          |                   |                     |         |           |             |                |                 |          |                        |
|   |                   |                          |                   |                     |         |           |             |                |                 |          |                        |
|   |                   |                          |                   |                     |         |           |             |                |                 |          |                        |
|   |                   |                          |                   |                     |         |           |             |                |                 |          |                        |
|   |                   |                          |                   |                     |         |           |             |                |                 |          |                        |
|   |                   |                          |                   |                     |         |           |             |                |                 |          |                        |
|   |                   |                          |                   |                     |         |           |             |                |                 |          |                        |
|   |                   |                          |                   |                     |         |           |             |                |                 |          |                        |
|   |                   |                          |                   |                     |         |           |             |                |                 |          |                        |
|   |                   |                          |                   |                     |         |           |             |                |                 |          |                        |
|   |                   |                          |                   |                     |         |           |             |                |                 |          |                        |

◆ FDEP SOP Section 2212.3

### Sampling Data

Decon Depth Mtr - rinse with analyte free water  
§Purge method FDEP-SOP 2212.3.1

| Sampled By(Print): <i>S. Phillips, K Morrison</i> |                            |  |  | Sampler(s) Signatures: <i>S. Phillips, K Morrison</i>            |            |  |  |
|---|----------------------------|--|--|--|------------|--|--|
| Sampling Method: <b>PP</b>                        | Tube Material: <b>PP/S</b> | Sampling Started<br>Tube Dpth(ft): <b>NA</b> Time: <b>1227</b> |  | Sampling completed<br>Tube Dpth(ft): <b>NA</b> Time: <b>1248</b> |            |  |  |
| Field Decon: <b>NO</b>                            | Field Filtered: <b>NO</b>  | Duplicate: <b>YES</b> <b>NO</b>                                | Acid ID# HNO3: <b>DJ70401</b> H2SO4: <b>NA</b> |  |            |  |  |
| Sample Container Specification                    |                            |  | Sample Preservation                            |  |            | Intended Analysis or method                |  |
| ID:   | Material                   | Volume(mL)   | Preservative                                   | Volume added   | final pH   |  |  |
| <i>NA</i>   | PE                         | 500  | HNO3   | 1.0 mL   | <i>1.6</i> | Metals: Ba, Be, Cd, Cr, Co, Mo, Se, Hg, Ca |  |
| <i>D18A027-15B</i>                                | PE                         | 250  | HNO3   | 0.5 mL   | <i>1.6</i> | Metals: Sb, As, Pb, Ti, B, Li              |  |
| <i>D18A027-15C</i>                                | PE                         | 250  | Chill <6 deg                                   | n/a  | n/a        | Anions: <b>F</b> , Cl, SO4                 |  |
| <i>D18A027-15D</i>                                | PE                         | 2000   | HNO3   | 4 mL   | <i>1.6</i> | Radium 226+228 Combined                    |  |
| <i>NA</i>   | PE                         | 2000   | Chill <6 deg                                   | n/a  | n/a        | Solids: TSS, TDS                           |  |

Remarks: *See 1Q18*

# DGS Groundwater Sampling Log



|                                 |                      |               |                                 |
|---------------------------------|----------------------|---------------|---------------------------------|
| WELL ID <b>EBLANK</b> Location: | Latitude: na         | Longitude: na | MSL @ TOC Date In Service: 0 na |
| Quarter: <u>1Q18</u>            | Date: <u>1-25-18</u> | Well Type: na |                                 |

### Purging Data

|   |                         |  |                              |
|---|-------------------------|--|------------------------------|
| Diameter(in) na   | Total well depth(ft) 0  | Depth to water(ft) NA                  | Well capacity(L/ft) 0        |
| Distance from TOC to top of screen 0 ft.                          |                         | Purging Method: PP                     | Equipment Volume = 750 mL    |
| 1 WELL VOLUME(L)=(Total Well Depth-Depth to water)X Well Capacity |                         | Time of Depth Meter Decon: <u>1206</u> |                              |
| <b>Well Vol = ( 0 - NA ) X 0 = NA L</b>                           |                         | 1/4 well vol. = NA                     |                              |
| Init Tubing Dpth(ft) NA   | Final Tube Dept(ft): NA | Purge Start Time: <u>1209</u>          | Purge Stop time: <u>1226</u> |
|   |                         | Total Volume Purged NA L               |                              |

| Time                                   | Volume Purged (L) | Cumul. Volume Purged (L) | Purge rate mL/min | Depth to water (ft) | pH (SU) | Temp (°C) | Cond (µmho) | Diss O2 (mg/L) | Turbidity (ntu) | ORP (mv) | Observed odor or color |
|--|-------------------|--------------------------|-------------------|---------------------|---------|-----------|-------------|----------------|-----------------|----------|------------------------|
|  |                   |                          |                   |                     | ± 0.2§  | ± 0.2§    | ± 5%§       | 20% sat§       | 20 max§         |          |                        |
| 1220                                   | NA                | NA                       | 400               | NA                  | 6.02    | 14.0      | 0.93        | 9.39           | 0.20            | -176.1   | NA                     |
| 1223                                   | NA                | NA                       | 400               | NA                  | 5.96    | 14.1      | 0.94        | 9.39           | 0.16            | -174.9   |                        |
| 1226                                   | NA                | NA                       | 400               | NA                  | 5.93    | 14.1      | 0.95        | 9.37           | 0.13            | -173.2   |                        |
| no temp corr used pH/cond mtr for temp |                   |                          |                   |                     |         |           |             |                |                 |          |                        |

◆ FDEP SOP Section 2212.3

## Sampling Data

Decon Depth Mtr - rinse with analyte free water  
§Purge method FDEP-SOP 2212.3.1

|   |                     |                                    |  |   |                       |  |  |
|---|---------------------|------------------------------------|--|---|-----------------------|--|--|
| Sampled By(Print): <u>S. Phillips, K Morrison</u> |                     |                                    |  | Sampler(s) Signatures: <u>J. Phillips, K Morrison</u> |                       |  |  |
| Sampling Method: PP                               | Tube Material: PP/S | Sampling Started Tube Dpth(ft): NA | Time: <u>1227</u>                      | Sampling completed Tube Dpth(ft): NA                  | Time: <u>12:48</u>    |  |  |
| Field Decon: NO                                   | Field Filtered: NO  | Duplicate: YES                     | <input checked="" type="checkbox"/> NO | Acid ID# HNO3: <u>DJ70401</u>                         | H2SO4: <u>DL62802</u> |  |  |

| Sample Container Specification |          |            | Sample Preservation |              |          | Intended Analysis or method |
|--------------------------------|----------|------------|---------------------|--------------|----------|-----------------------------|
| ID:                            | Material | Volume(mL) | Preservative        | Volume added | final pH |                             |
| D18A024-14A                    | PE       | 2000       | Chill <6 deg        | none         | n/a      | Physical Analysis           |
| D18A024-14B                    | PE       | 250        | Chill 6 deg C       | none         | n/a      | Anions                      |
| D18A024-14C                    | PE       | 250        | Chill + H2SO        | 0.5 mL       | 1.0      | Demand-NPDOC and NO3+NO2    |
| D18A024-14D                    | PE       | 1000       | HNO3                | 2 mL         | 1.0      | Radiological-GA             |
| D18A024-14E                    | PE       | 500        | HNO3                | 1 mL         | 1.0      | Metals                      |
| D18A024-14F                    | PE       | 250        | HNO3                | 0.5 mL       | 1.3      | Metals: As, Pb              |

Tubing depth is NA ft below depth to water for every instance.

Remarks: Dipped Depth meter into Eblank prior to drawing off water for sample  
59°F Sunny wind NE @ 13 mph  
used pH/cond meter for temp

Codes: PP/S + Polypropylene+Silicone tubing PP: Peristaltic Pump PE: Polyethylene B

# DGS Groundwater Sampling Log



|                      |                      |                               |                                 |   |
|----------------------|----------------------|-------------------------------|---------------------------------|---|
| WELL ID: <b>R1T6</b> | Location:            | Latitude: <b>29°45'48.57"</b> | Longitude: <b>-82°23'01.34"</b> | MSL @ TOC Date In Service: <b>188.95 C 1980</b> |
| Quarter: <b>1Q18</b> | Date: <b>1-21-13</b> | Well Type: <b>SB</b>          |                                 |   |

### Purging Data

|   |                                   |   |                                  |
|---|-----------------------------------|---|----------------------------------|
| Diameter(in) <b>4</b>   | Total well depth(ft) <b>23.25</b> | Depth to water(ft) <b>5.21</b>          | Well capacity(L/ft) <b>2.5</b>   |
| Distance from TOC to top of screen <b>19.45</b> ft.               |                                   | Purging Method: <b>PP</b>               | Equipment Volume = <b>750 mL</b> |
| 1 WELL VOLUME(L)=(Total Well Depth-Depth to water)X Well Capacity |                                   | Time of Depth Meter Decon: <b>11:49</b> |                                  |
| <b>Well Vol = ( 23.25 - 5.21 ) X 2.5 = 45.1 L</b>                 |                                   | 1/4 well vol. = <b>11.3</b>             |                                  |
| Init Tubing Dpth(ft) <b>6.2</b>                                   | Final Tube Dept(ft): <b>7.2</b>   | Purge Start Time: <b>11:54</b>          | Purge Stop time: <b>16:41</b>    |
|   |                                   | Total Volume Purged <b>112.9 L</b>      |                                  |

| Time  | Volume Purged (L) | Cumul. Volume Purged (L) | Purge rate mL/min | Depth to water (ft) | pH (SU)                       | Temp (°C) | Cond (µmho) | Diss O2 (mg/L) | Turbidity (ntu) | ORP (mv) | Observed odor or color                      |
|-------|-------------------|--------------------------|-------------------|---------------------|-------------------------------|-----------|-------------|----------------|-----------------|----------|---|
|       |                   |                          |                   |                     | ± 0.2§                        | ± 0.2§    | ± 5%§       | 20% sat§       | 20 max§         |          |   |
| 13:52 | 45.1              | 45.1                     | 400               | 7.45                | 6.47                          | 18.6      | 533.9       | 2.61           | 1.30            | -369.2   | No odor                                     |
| 14:20 | 11.3              | 56.4                     | 400               | 7.45                | 6.42                          | 18.9      | 536.3       | 1.61           | 2.04            | -370.7   | Yellowish                                   |
| 14:48 | 11.3              | 67.7                     | 400               | 7.45                | 6.39                          | 19.3      | 540.6       | 1.05           | 1.41            | -373.5   | Color                                       |
| 15:16 | 11.3              | 79                       | 400               | 7.45                | 6.70                          | 19.3      | 540.6       | 0.66           | 0.95            | -376.9   | Do less than 18% for 2nd set of parameters. |
| 15:44 | 11.3              | 90.3                     | 400               | 7.45                | 6.48                          | 19.4      | 543.6       | 0.46           | 0.67            | -378.4   |   |
| 16:12 | 11.3              | 101.6                    | 400               | 7.45                | 6.42                          | 19.4      | 544.4       | 0.28           | 0.59            | -377.9   |   |
| 16:40 | 11.3              | 112.9                    | 400               | 7.45                | 6.39                          | 19.5      | 545.5       | 0.20           | 0.62            | -381.6   |   |
|       |                   |                          |                   |                     | Corrected to Dist <b>19.2</b> |           |             |                |                 |          |   |

◆ FDEP SOP Section 2212.3

### Sampling Data

Decon Depth Mtr - rinse with analyte free water  
§Purge method FDEP-SOP 2212.3.1

|  |                            |  |                               |  |                    |  |  |
|--|----------------------------|--|-------------------------------|--|--------------------|--|--|
| Sampled By(Print): <b>K. Morrisaw, S. Phillips</b> |                            |  |                               | Sampler(s) Signatures: <i>K. Morrisaw, S. Phillips</i> |                    |  |  |
| Sampling Method: <b>PP</b>                         | Tube Material: <b>PP/S</b> | Sampling Started Tube Dpth(ft): <b>7.2</b> | Time: <b>16:42</b>            | Sampling completed Tube Dpth(ft): <b>7.2</b>           | Time: <b>16:58</b> |  |  |
| Field Decon: <b>NO</b>                             | Field Filtered: <b>NO</b>  | Duplicate: <b>YES (NO)</b>                 | Acid ID# <b>HNO3: DJ70401</b> | H2SO4: <b>DLC2802</b>                                  |                    |  |  |

| Sample Container Specification |          |            | Sample Preservation |              |          | Intended Analysis or method |
|--------------------------------|----------|------------|---------------------|--------------|----------|-----------------------------|
| ID:                            | Material | Volume(mL) | Preservative        | Volume added | final pH |                             |
| D18A024-01A                    | PE       | 2000       | Chill <6 deg        | none         | n/a      | Physical Analysis           |
| D18A024-01B                    | PE       | 250        | Chill 6 deg C       | none         | n/a      | Anions                      |
| D18A024-01C                    | PE       | 250        | Chill + H2SO        | 0.5 mL       | 1.6      | Demand-NPDOC and NO3+NO2    |
| D18A024-01D                    | PE       | 1000       | HNO3                | 2 mL         | 1.6      | Radiological-GA             |
| D18A024-01E                    | PE       | 500        | HNO3                | 1 mL         | 1.6      | Metals                      |
| D18A024-01F                    | PE       | 250        | HNO3                | 0.5 mL       | 1.6      | Metals: As, Pb              |

Tubing depth is 0.99 ft below depth to water for every instance. **60° F Winds NE 7mph Sunny**  
 Remarks: Well found locked on arrival; left locked and clear  
**D18A024-09B - lithium for CCP 250ml HNO3, 0.5mL, Final pH 1.6**  
 Mid sampling/purging became partly cloudy.

Codes: PP/S + Polypropylene+Silicone tubing PP: Peristaltic Pump PE: Polyethylene B



# DGS Groundwater Sampling Log



WELL ID: **R2T1** Location: Latitude: **29°46'13.23"** Longitude: **-82°23'11.71"** MSL @ TOC Date In Service: **185.19 C 1980**

Quarter: **1Q18** Date: **1-22-18** Well Type: **B**

### Purging Data

| Diameter(in)  | <b>4</b>          | Total well depth(ft)     | <b>13.94</b>      | Depth to water(ft)                        | <b>4.34</b>  | Well capacity(L/ft)               | <b>2.5</b>    |                |                 |          |   |
|---|-------------------|--------------------------|-------------------|---|--------------|-----------------------------------|---------------|----------------|-----------------|----------|---|
| Distance from TOC to top of screen  | <b>9.14</b>       | ft.                      |                   | Purging Method:                           | <b>PP</b>    | Equipment Volume =                | <b>750 mL</b> |                |                 |          |   |
| 1 WELL VOLUME(L)=(Total Well Depth-Depth to water)X Well Capacity                                       |                   |                          |                   | Time of Depth Meter Decon: <b>08:43</b>   |              |                                   |               |                |                 |          |   |
| <b>Well Vol = ( 13.94 - 4.32 ) X 2.5 =</b>  |                   |                          |                   | <b>24.05 L</b> 1/4 well vol. = <b>6.0</b> |              |                                   |               |                |                 |          |   |
| Init Tubing Dpth(ft)  | <b>5.0</b>        | Final Tube Dept(ft):     |                   | Purge Start Time:                         | <b>08:47</b> | Purge Stop time:                  | <b>16:46</b>  |                |                 |          |   |
|   |                   |                          |                   |   |              | Total Volume Purged <b>44.5 L</b> |               |                |                 |          |   |
| Time  | Volume Purged (L) | Cumul. Volume Purged (L) | Purge rate mL/min | Depth to water (ft)                       | pH (SU)      | Temp (°C)                         | Cond (µmho)   | Diss O2 (mg/L) | Turbidity (ntu) | ORP (mv) | Observed odor or color  |
|   |                   |                          |                   |   | ± 0.2§       | ± 0.2§                            | ± 5%§         | 20% sat§       | 20 max§         |          |   |
| 13:20   | 24                | 24                       | 100               | 7.02                                      | 5.72         | 16.4                              | 57.13         | 4.67           | 1.04            | -267.8   | No color  |
| 14:26   | 6                 | 30                       | 100               | 7.12                                      | 5.65         | 16.5                              | 56.20         | 4.21           | 0.98            | -268.2   | 2   |
| 15:00   | 4                 | 34                       | 100               | 7.21                                      | 5.63         | 16.5                              | 55.97         | 3.70           | 0.90            | -270.8   | no odor   |
| 15:35   | 3.4               | 37.4                     | 97                | 7.23                                      | 5.59         | 16.6                              | 55.45         | 3.28           | 0.88            | -272.9   |   |
| 16:35   | 6                 | 43.4                     | 100               | 7.07                                      | 5.58         | 16.5                              | 54.88         | 3.03           | 0.71            | -276.5   |   |
| 16:46*  | 1.1               | 44.5                     | 100               | 7.04                                      | 5.57         | 16.5                              | 54.79         | 2.94           | 0.71            | -276.3   | - stopped for today would have to start over and it would be past dark. |
| * Stopped purge because DO dropped below +/- 10% and we could not get parameters completed before dark. |                   |                          |                   |   |              |                                   |               |                |                 |          |   |

◆ FDEP SOP Section 2212.3

### Sampling Data

Decon Depth Mtr - rinse with analyte free water  
§Purge method FDEP-SOP 2212.3.1

Sampled By(Print): *see page 2* Sampler(s) Signatures: *[Signature]*

Sampling Method: PP Tube Material: PP/S Sampling Started Time: *Did not sample* Sampling completed Time: *[Signature]*

Field Decon: NO Field Filtered: NO Duplicate: YES (NO) Acid ID# HNO3: *DJ570401* H2SO4: *DL62802*

| Sample Container Specification |          |            | Sample Preservation |              |          | Intended Analysis or method |
|--------------------------------|----------|------------|---------------------|--------------|----------|-----------------------------|
| ID:                            | Material | Volume(mL) | Preservative        | Volume added | final pH |                             |
| <i>D18A024-02A</i>             | PE       | 2000       | Chill <6 deg        | none         | n/a      | Physical Analysis           |
| <i>D18A024-02B</i>             | PE       | 250        | Chill 6 deg C       | none         | n/a      | Anions                      |
| <i>D18A024-02C</i>             | PE       | 250        | Chill + H2SO4       | 0.5 mL       |          | Demand-NPDOC and NO3+NO2    |
| <i>D18A024-02D</i>             | PE       | 1000       | HNO3                | 2 mL         |          | Radiological-GA             |
| <i>D18A024-02E</i>             | PE       | 500        | HNO3                | 1 mL         |          | Metals                      |
| <i>D18A024-02F</i>             | FPE      | 250        | HNO3                | 0.5 mL       |          | (08:45) Metals: As, Pb      |

Tubing depth is 0.7 ft below depth to water for every instance.

Remarks: Well found locked on arrival; left locked @ depth

*D18A024-02B* PE 1 250mL 1 HNO3 1 0.5mL

Weather: *58°F Calm winds 3mph from South*  
*78°F Mostly Cloudy, 3mph from South*  
 Final pH: *[Blank]*  
 Metals: *Li (CCR)*

All D.O. readings are > 20% of saturation

Codes: PP/S + Polypropylene+Silicone tubing PP: Peristaltic Pump PE: Polyethylene B

# DGS Groundwater Sampling Log



WELL ID **R2T1** Location: \_\_\_\_\_ Latitude: **29°46'13.23"** Longitude: **-82°23'11.71"** MSL @ TOC Date In Service: **185.19** **1980**

Quarter: **1Q18** Date: **1-23-18** Well Type: **na**

| Purging Data   |                   |                          |                   |                     |         |  |             |                                   |                 |          |                        |  |
|--|-------------------|--------------------------|-------------------|---------------------|---------|--|-------------|-----------------------------------|-----------------|----------|------------------------|--|
| Diameter(in)   | na                | Total well depth(ft)     | 13.94             | Depth to water(ft)  | 3.10    | Well capacity(L/ft)                    | 0           |                                   |                 |          |                        |  |
| Distance from TOC to top of screen                                     |                   | 19.45 ft                 |                   | Purging Method: PP  |         | Equipment Volume = 750 mL              |             |                                   |                 |          |                        |  |
| 1 WELL VOLUME(L) = (Total Well Depth - Depth to water) X Well Capacity |                   |                          |                   |                     |         | Time of Depth Meter Decon: <b>0730</b> |             |                                   |                 |          |                        |  |
| <b>Well Vol = (13.94 - 3.10) X 0.84 = 27.1</b>                         |                   |                          |                   |                     |         | 14 well vol. = 6.8                     |             |                                   |                 |          |                        |  |
| Init Tubing Dpth(ft)   | 4'                | Final Tube Dept(ft):     |                   | Purge Start Time:   | 0733    | Purge Stop time:                       | 12:03       | Total Volume Purged <b>40.7 L</b> |                 |          |                        |  |
| Time   | Volume Purged (L) | Cumul. Volume Purged (L) | Purge rate mL/min | Depth to water (ft) | pH (SU) | Temp (°C)                              | Cond (µmho) | Diss O2 (mg/L)                    | Turbidity (ntu) | ORP (mv) | Observed odor or color |  |
| 10:22  | 27.1              | 27.1                     | 140               | 6.20                | 5.47    | 15.9                                   | 54.60       | 2.21                              | 0.57            | 269.2    | No Odor                |  |
| 11:12  | 6.4               | 33.9                     | 140               | 6.20                | 5.47    | 15.9                                   | 54.57       | 2.12                              | 0.54            | 269.7    | No Color               |  |
| 12:02  | 6.8               | 40.7*                    | 140               | 6.20                | 5.46    | 15.9                                   | 54.49       | 2.02                              | 0.60            | 268.9    | Clear                  |  |
|  |                   |                          |                   |                     |         |  |             |                                   |                 |          |                        |  |

\* Two day purge = 85.2 L

100% sat  
21.9% sat  
70% sat

FDEP SOP Section 2212.3

## Sampling Data

Decon Depth Mtr - rinse with analyte free water  
§Purge method FDEP-SOP 2212.3.1

Sampled By(Print): **S. Phillips, K. Morrison** Sampler(s) Signatures: *[Signatures]*

Sampling Method: PP Tube Material: PP/S Sampling Started Tube Dpth(ft): **6.29** Time: **12:04** Sampling completed Tube Dpth(ft): **6.29** Time: **12:40**

Field Decon: NO Field Filtered: NO Duplicate: YES  NO Acid ID# HNO3: **DJ7040** H2SO4: **DL62802**

| Sample Container Specification |          |            | Sample Preservation |              |          | Intended Analysis or method                    |
|--------------------------------|----------|------------|---------------------|--------------|----------|--|
| ID                             | Material | Volume(mL) | Preservative        | Volume added | final pH |  |
| D18A024-02A                    | PE       | 250-200    | HNO3 Chill          | none         | n/a      | Metals-Physical                                |
| D18A024-02B                    | PE       | 1700-250   | Chill 6 deg C       | none         | n/a      | Physical Analysis Anions                       |
| D18A024-02C                    | PE       | 250        | Chill + H2SO4       | 0.5 mL       | 1.3      | Demand-NPDOC and NO3+NO2                       |
| D18A024-02D                    | PE       | 250-1000   | HNO3 Chill 6 deg C  | 2 mL         | n/a      | Anions (chlorides, sulfates) Radiological (GA) |
| D18A024-02E                    | PE       | 1000-500   | HNO3                | 2 mL         | 1.3      | Radiological-Gross Alpha-Metals                |
| D18A024-02F                    | PE       | 250        | HNO3                | 0.5 mL       | 1.3      | Metals: As, Pb                                 |

Tubing depth is **0.9** ft below depth to water for every instance. Well found locked on arrival and left locked on departure.

D18A027-10B | PE | 250 | HNO3 | 0.5 mL | 1.3 | Lithium sample

66°F Cloudy wind WSW @ 11 mph purged 2 days 85.2 Liters total.

Codes: PP/S + Polypropylene-Silicone tubing PP: Peristaltic Pump PE: Polyethylene B

# DGS Groundwater Sampling Log



|   |   |                        |                          |  |
|---|---|------------------------|--------------------------|--|
| WELL ID: <b>R6T1</b>  | Location:   | Latitude: 29°46'13.04" | Longitude: -82°23'48.88" | MSL @ TOC Date In Service: 185.28 4-84 |
| Quarter: <span style="border: 1px solid black; padding: 2px;">1Q18</span> | Date: <span style="border: 1px solid black; padding: 2px;">1-21-18</span> | Well Type: <b>SB</b>   |                          |  |

### Purging Data

|   |                                   |   |                                   |
|---|-----------------------------------|---|-----------------------------------|
| Diameter(in) <b>2</b>   | Total well depth(ft) <b>17.57</b> | Depth to water(ft) <b>5.49</b>  | Well capacity(L/ft) <b>0.6</b>    |
| Distance from TOC to top of screen <b>12.57</b> ft.               |                                   | Purging Method: <b>PP</b>   | Equipment Volume = <b>750 mL</b>  |
| 1 WELL VOLUME(L)=(Total Well Depth-Depth to water)X Well Capacity |                                   | Time of Depth Meter Decon: <span style="border: 1px solid black; padding: 2px;">0932</span> |                                   |
| <b>Well Vol = ( 17.57 - 5.49 ) X 0.6 = 7.3 L</b>                  |                                   | 1/4 well vol. = <b>1.8</b>  |                                   |
| Init Tubing Dpth(ft) <b>6.4</b>                                   | Final Tube Dept(ft): <b>6.44</b>  | Purge Start Time: <b>10:07</b>  | Purge Stop time: <b>10:51</b>     |
|   |                                   |   | Total Volume Purged <b>12.7 L</b> |

| Time  | Volume Purged (L) | Cumul. Volume Purged (L) | Purge rate mL/min | Depth to water (ft) | pH (SU) | Temp (°C) | Cond (µmho) | Diss O2 (mg/L) | Turbidity (ntu) | ORP (mv) | Observed odor or color |
|-------|-------------------|--------------------------|-------------------|---------------------|---------|-----------|-------------|----------------|-----------------|----------|------------------------|
|       |                   |                          |                   |                     | ± 0.2§  | ± 0.2§    | ± 5%§       | 20% sat§       | 20 max§         |          |                        |
| 10:32 | 7.3               | 7.3                      | 300               | 5.53                | 6.67    | 18.7      | 346.0       | 0.23           | 0.60            | -368.9   | Sulfur odor            |
| 10:38 | 1.4               | 9.1                      | 300               | 5.53                | 6.66    | 19.0      | 343.9       | 0.22           | 0.43            | -370.8   | clear                  |
| 10:44 | 1.8               | 10.9                     | 300               | 5.53                | 6.68    | 19.1      | 341.7       | 0.21           | 0.40            | -373.2   | no color               |
| 10:51 | 1.8               | 12.7                     | 300               | 5.53                | 6.69    | 19.2      | 341.7       | 0.20           | 0.41            | -374.4   |                        |
|       |                   |                          |                   |                     |         |           |             |                |                 |          |                        |
|       |                   |                          |                   |                     |         |           |             |                |                 |          |                        |

corr to NIST  
18.9

◆ FDEP SOP Section 2212.3

### Sampling Data

Decon Depth Mtr - rinse with analyte free water  
\$Purge method FDEP-SOP 2212.3.1

|  |                            |  |  |
|--|----------------------------|--|--|
| Sampled By(Print): <i>S. Phillips K. Moerk</i> |                            | Sampler(s) Signatures: <i>Shelly Phillips K. Moerk</i>           |  |
| Sampling Method: <b>PP</b>                     | Tube Material: <b>PP/S</b> | Sampling Started Tube Dpth(ft): <b>6.44</b> Time: <b>10:52</b>   | Sampling completed Tube Dpth(ft): <b>6.44</b> Time: <b>11:09</b> |
| Field Decon: <b>NO</b>                         | Field Filtered: <b>NO</b>  | Duplicate: <b>YES</b> <input checked="" type="radio"/> <b>NO</b> | Acid ID# <b>HNO3: DJ70401</b> <b>H2SO4: DL62802</b>              |

| Sample Container Specification |          |            | Sample Preservation |              |          | Intended Analysis or method |
|--------------------------------|----------|------------|---------------------|--------------|----------|-----------------------------|
| ID:                            | Material | Volume(mL) | Preservative        | Volume added | final pH |                             |
| D18A024-05A                    | PE       | 2000       | Chill <6 deg        | none         | n/a      | Physical Analysis           |
| D18A024-05B                    | PE       | 250        | Chill 6 deg C       | none         | n/a      | Anions                      |
| D18A024-05C                    | PE       | 250        | Chill + H2SO        | 0.5 mL       | 1.3      | Demand-NPDOC and NO3+NO2    |
| D18A024-05D                    | PE       | 1000       | HNO3                | 2 mL         | 1.6      | Radiological-GA             |
| D18A024-05E                    | PE       | 500        | HNO3                | 1 mL         | 1.6      | Metals                      |
| D18A024-05F                    | PE       | 250        | HNO3                | 0.5 mL       | 1.3      | Metals: As, Pb              |

Remarks: Tubing depth is 0.91 ft below depth to water for every instance. Well found locked and left locked  
62°F wind ENE @ 6mph Sunny, Clear  
✓ D18A027-11B Lithium for our 250mL HNO3 0.5mL final pH 1.6



# Instrument Calibration Log

Model A329

Serial Number G09761

Manufacturer: Thermo Orion

Date Purchased 12-2017

Parameter: pH/ISE/COND/DO

GRU Prop Tag# none

QTR: 1Q18 :used manufacturer SOP for calibrations and FD2P 1100 SOP for verifications

|            | Standard Concentration, ID#, Expiration Date | Unit |
|------------|--|------|
| Standard A | 4.00 ; ID# DD72801 ; exp 12-31-2018          | su   |
| Standard B | 7.00 ; ID# DE70201 ; exp 2-28-2019           | su   |
| Standard C | 10.00 ; ID# G2701 ; exp 9-30-2018            | su   |

QC ID# DJ71702

TU= 5.96 Range: 5.76-6.16

+/- 0.2 su

| Date    | Time  | STD A,B,C         | STD Value                             | Instrument Response | Dev./ P or F | Calibrated (Yes/No) | Type (Int/Cont) | Sampler Initials |
|---------|-------|-------------------|---------------------------------------|---------------------|--------------|---------------------|-----------------|------------------|
| 1-11-18 | 09:19 | C                 | 10.00                                 | 10.04               | P            | yes                 | Int             | SP               |
| 1-11-18 | 09:23 | B                 | 7.00                                  | 7.01                | P            | yes                 | Int             | SP               |
| 1-11-18 | 09:25 | A                 | 4.00                                  | 4.01                | P            | yes                 | Int             | SP               |
| 1-11-18 | 1111  | QC                | 5.96                                  | 6.01                | P            | No                  | Cont            | SP               |
| 1-21-18 | 0949  | B                 | 7.00                                  | 7.02                | P/0.02       | No                  | Cont            | SP               |
| 1-21-18 | 1702  | B                 | <del>6.93</del><br>6.93<br>SP 1-21-18 | 6.93                | P/0.01       | No                  | Cont            | SP               |
| 1-22-18 | 0734  | Replaced pH probe |                                       |                     | SN TP1-13128 | to new SN VQ1-18542 |                 |                  |
| 1-22-18 | 0740  | C                 | 10.00                                 | 10.03               | 0.03/P       | yes                 | Int             | SP               |
| 1-22-18 | 0740  | B                 | 7.00                                  | 7.01                | 0.01/P       | yes                 | Int             | SP               |
| 1-22-18 | 0741  | A                 | 4.00                                  | 4.01                | 0.01/P       | yes                 | Int             | SP               |
| 1-22-18 | 0748  | QC                | 5.96                                  | 6.00                | Pass         | No                  | Cont            | SP               |
| 1-23-18 | 16:57 | B                 | 7.00                                  | 7.03                | +0.03/Pass   | No                  | Cont            | KL               |
| 1-24-18 | 14:54 | B                 | 7.00                                  | 7.07                | +0.07/P      | No                  | Cont            | SP               |
| 1-24-18 | 1456  | A                 | 4.00                                  | 4.05                | +0.05/P      | No                  | Cont            | SP               |
| 1-24-18 | 1654  | C                 | 10.00                                 | 10.09               | +0.09/P      | No                  | Cont            | SP               |
| 1-26-18 | 1543  | A                 | 4.00                                  | 4.07                | +0.07/P      | No                  | Cont            | SP               |
| 1-27-18 | 10:03 | B                 | 7.00                                  | 7.02                | +0.02/P      | No                  | Cont            | KL               |

Slope 99.1%

PASS JB

Slope 99.2%

# Instrument Calibration Log

Model A329

Serial Number G09761

Manufacturer: Thermo Orion

Date Purchased 12-2017

Parameter: pH/ISE/COND/DO

GRU Prop Tag# none

QTR: 1Q18 :used manufacturer SOP for calibrations and FDEP1200 SOP for verifications

|            | Standard Concentration, ID#, Expiration Date | Unit         |
|------------|--|--------------|
| Standard A | <u>73.9 ; ID# DA81101 ; exp</u>              | <u>uS/cm</u> |
| Standard B | <u>1412 ; ID# DG70602 ; exp 7-31-18</u>      | <u>uS/cm</u> |
| Standard C | <u>12,890 ; ID# DG70601 ; exp 7-31-18</u>    | <u>uS/cm</u> |

QC ID DJ71701

±5% TU=978 Range: 850-1080

| Date    | Time  | STD A,B,C | STD Value                             | Instrument Response | Dev./ P or F | Calibrated (Yes/No) | Type (Int/Cont) | Sampler Initials |
|---------|-------|-----------|---------------------------------------|---------------------|--------------|---------------------|-----------------|------------------|
| 1-11-18 | 0952  | A         | 73.9                                  | 74.5                | P/0.8%       | yes                 | Int             | SP               |
| 1-11-18 | 0953  | B         | 1412                                  | 1459                | P/3.3%       | yes                 | Int             | SP               |
| 1-11-18 | 0958  | C         | 12890                                 | 13190               | P/2.33       | yes                 | Int             | SP               |
| 1-11-18 | 1112  | QC        | 978                                   | 990                 | P            |                     |                 | SP               |
| 1-21-18 | 0948  | A         | 73.9                                  | 75.64               | +2.35%<br>P  | NO                  | Cont            | SP               |
| 1-21-18 | 1651  | B         | 1412                                  | 1477                | +4.60%<br>P  | NO                  | Cont            | SP               |
| 1-23-18 | 16:59 | B         | 1412                                  | 1475                | +4.46%<br>P  | NO                  | Cont            | Km               |
| 1-24-18 | 1453  | C         | 12890                                 | 13470               | +4.57%<br>P  | NO                  | Cont            | SP               |
| 1-25-18 | 1717  | B         | 1412                                  | 1476                | +4.53%<br>P  | NO                  | Cont            | SP               |
| 1-26-18 | 1542  | C         | 12890                                 | 13390               | +3.88%<br>P  | NO                  | Cont            | SP               |
| 1-27-18 | 10:05 | B         | <del>1412</del><br>73.9<br>Km 1-21-18 | 73.93               | 0/P          | NO                  | Cont            | Km               |
|         |       |           |                                       |                     |              |                     |                 |                  |
|         |       |           |                                       |                     |              |                     |                 |                  |
|         |       |           |                                       |                     |              |                     |                 |                  |
|         |       |           |                                       |                     |              |                     |                 |                  |
|         |       |           |                                       |                     |              |                     |                 |                  |
|         |       |           |                                       |                     |              |                     |                 |                  |
|         |       |           |                                       |                     |              |                     |                 |                  |
|         |       |           |                                       |                     |              |                     |                 |                  |
|         |       |           |                                       |                     |              |                     |                 |                  |
|         |       |           |                                       |                     |              |                     |                 |                  |
|         |       |           |                                       |                     |              |                     |                 |                  |
|         |       |           |                                       |                     |              |                     |                 |                  |
|         |       |           |                                       |                     |              |                     |                 |                  |
|         |       |           |                                       |                     |              |                     |                 |                  |
|         |       |           |                                       |                     |              |                     |                 |                  |

PASS JS



# Instrument Calibration Log

Model 2100Q

Serial Number 14100C035914

Manufacturer: Hach

Date Purchased 11-2014

Parameter: Turbidity

GRU Prop Tag# none

QTR: 1Q18 :used Manufacturer SOP for calibrations and FDZP/600 SOP for verifications

|            | Standard Concentration, ID#, Expiration Date | Unit       |
|------------|--|------------|
| Standard A | <u>2° Greley Std 6.11</u>                    | <u>NTU</u> |
| Standard B | <u>2° Greley Std 57.2</u>                    | <u>NTU</u> |
| Standard C | <u>2° Greley Std 525</u>                     | <u>NTU</u> |

D Calibration verification Std. 0.1 NTU, ID# DD71301, exp. 3-31-18      QC ID# DG71304

\*see below      TU=12.1      Range: 7.88-14.3

| Date    | Time  | STD A,B,C | STD Value                             | Instrument Response | Dev./ P or F   | Calibrated (Yes/No) | Type (Int/Cont) | Sampler Initials |
|---------|-------|-----------|---------------------------------------|---------------------|----------------|---------------------|-----------------|------------------|
| 1-11-18 | 1050  | D         | 0.1                                   | 0.11                | <u>10%</u> P   | yes                 | Int             | SP               |
| 1-11-18 | 1100  | QC        | 12.1                                  | 11.6                | P              | —                   | —               | SP               |
| 1-11-18 | 1120  | A         | 6.11                                  | 6.11                | <u>0%</u> P    | yes                 | Int             | SP               |
| 1-11-18 | 1121  | B         | 57.2                                  | 57.2                | <u>0%</u> P    | yes                 | Int             | SP               |
| 1-11-18 | 1122  | C         | 525                                   | 525                 | <u>0%</u> P    | yes                 | Int             | SP               |
| 1-21-18 | 1700  | A         | 6.11                                  | 6.11                | <u>0%</u> P    | NO                  | Cont            | SP               |
| 1-23-18 | 16:57 | A         | 6.11                                  | 6.11                | <u>0%</u> P    | NO                  | Cont            | km               |
| 1-24-18 | 14:58 | B         | 57.2                                  | 57.1                | <u>0.2%</u> P  | NO                  | Cont            | SP               |
| 1-25-18 | 17:19 | B         | 57.2                                  | 56.6                | <u>1.05%</u> P | NO                  | Cont            | SP               |
| 1-26-18 | 1550  | A         | 6.11                                  | 6.11                | <u>0%</u> P    | NO                  | Cont            | SP               |
| 1-27-18 | 10:04 | A         | <u>6.00</u><br><small>1-27-18</small> | 6.09                | <u>0.3%</u> P  | NO                  | Cont            | km               |

PASS JB

- Primary Standards**
- ck 10 NTU, ID# DD1302, exp. 6-30-18
  - 20 NTU, ID# DD1303, exp. 6-30-18
  - 100 NTU, ID# DD1304, exp. 6-30-18
  - 800 NTU, ID# DD1305, exp. 6-30-18

- \*Acceptance Criteria**
- 0.1 to 10.0 NTU = +/- 10%
  - 11 to 40 NTU = +/- 8%
  - 41 to 100 NTU = +/- 6.5%
  - >100 NTU = +/- 5%







# DGS Groundwater Sampling Log



|                                     |                      |                                 |                                   |                         |                              |
|-------------------------------------|----------------------|---------------------------------|-----------------------------------|-------------------------|------------------------------|
| WELL ID: <b>SIS-2</b>               | Location:            | Latitude: <b>29°45'53.4672"</b> | Longitude: <b>-82°23'31.5096"</b> | MSL @ TOC: <b>183.3</b> | Date In Service: <b>2017</b> |
| Quarter: <b>WK 2 CCR Assessment</b> | Date: <b>2/15/18</b> | Well Type: <b>D</b>             |                                   |                         |                              |

### Purging Data

|   |                                   |                                |   |
|---|-----------------------------------|--------------------------------|---|
| Diameter(in) <b>2</b>   | Total well depth(ft) <b>14.22</b> | Depth to water(ft) <b>5.38</b> | Well capacity(L/ft) <b>0.6</b>          |
| Distance from TOC to top of screen <b>4.22</b> ft.                |                                   | Purging Method: <b>PP</b>      | Equipment Volume = <b>750</b> mL        |
| 1 WELL VOLUME(L)=(Total Well Depth-Depth to water)X Well Capacity |                                   |                                | Time of Depth Meter Decon: <b>13:03</b> |
| <b>Well Vol = ( 14.22 - 5.38 ) X 0.6 = 5.3 L</b>                  |                                   |                                | 1/4 well vol. = <b>N/A</b>              |
| Init Tubing Dpth(ft) <b>10</b>                                    | Final Tube Dept(ft): <b>10</b>    | Purge Start Time: <b>13:00</b> | Purge Stop time: <b>13:42</b>           |
|   |                                   |                                | Total Volume Purged <b>6.5</b> L        |

| Time  | Volume Purged (L) | Cumul. Volume Purged (L) | Purge rate mL/min | Depth to water (ft) | pH (SU) | Temp (°C) | Cond (µmho) | Diss O2 (mg/L) | Turbidity (ntu) | ORP (mv) | Observed odor or color |
|-------|-------------------|--------------------------|-------------------|---------------------|---------|-----------|-------------|----------------|-----------------|----------|------------------------|
|       |                   |                          |                   |                     | ± 0.2§  | ± 0.2§    | ± 5%§       | 20% sat§       | 20 max§         |          |                        |
| 13:36 | 5.40              | 5.40                     | 190               | 5.49                | 7.16    | 18.9      | 433.3       | 4.74           | 2.88            | 165.3    | No odor                |
| 13:39 | 0.57              | 5.97                     | 190               | 5.49                | 7.16    | 18.9      | 433.7       | 4.77           | 2.55            | 164.8    | Clear                  |
| 13:42 | 0.57              | 6.54                     | 190               | 5.49                | 7.16    | 18.9      | 435.5       | 4.77           | 2.62            | 166.4    | Colorless              |
|       |                   |                          |                   |                     |         |           |             |                |                 |          |                        |

Dist. cont. 18.7

◆ FDEP SOP Section 2212.3

### Sampling Data

Decon Depth Mtr - rinse with analyte free water  
§Purge method FDEP-SOP 2212.3.1

|  |                            |   |                               |   |                    |  |  |
|--|----------------------------|---|-------------------------------|---|--------------------|--|--|
| Sampled By(Print): <b>K. Morrison, S. Phillips</b> |                            |   |                               | Sampler(s) Signature: <i>[Signature]</i>    |                    |  |  |
| Sampling Method: <b>PP</b>                         | Tube Material: <b>PP/S</b> | Sampling Started Tube Dpth(ft): <b>10</b> | Time: <b>13:43</b>            | Sampling completed Tube Dpth(ft): <b>10</b> | Time: <b>14:14</b> |  |  |
| Field Decon: <b>NO</b>                             | Field Filtered: <b>NO</b>  | Duplicate: <b>YES</b> <b>NO</b>           | Acid ID# <b>HNO3: DJ70401</b> | H2SO4: <b>---</b>                           |                    |  |  |

| Sample Container Specification |          |            | Sample Preservation |              |            | Intended Analysis or method                           |
|--------------------------------|----------|------------|---------------------|--------------|------------|---|
| ID:                            | Material | Volume(mL) | Preservative        | Volume added | final pH   |   |
| <b>D18A028-02 A</b>            | PE       | 500        | HNO3                | 1.0 mL       | <b>1.6</b> | Metals: Ba, Be, Cd, Cr, Co, Mo, Se, Hg, <del>Cu</del> |
| <b>D18A028-02 B</b>            | PE       | 250        | HNO3                | 0.5 mL       | <b>1.6</b> | Metals: Sb, As, Pb, Ti, <del>Bi</del> , Li            |
| <b>D18A028-02 C</b>            | PE       | 250        | Chill <6 deg        | n/a          | n/a        | Anions: F, Cl, <del>SO4</del>                         |
| <b>D18A028-02 D</b>            | OPE      | 2000       | HNO3                | 4 mL         | <b>1.6</b> | Radium 226+228 Combined                               |
| <b>D18A028-02 E</b>            | PE       | 2000       | Chill <6 deg        | n/a          | n/a        | Solids: TSS, <del>TDS</del>                           |

Remarks: **Sunny 77°F light winds 7 mph from SW  
Well found secure, Left secure**





# DGS Groundwater Sampling Log



|                                     |                      |                                 |                                   |   |
|-------------------------------------|----------------------|---------------------------------|-----------------------------------|---|
| WELL ID: <b>LF-1</b>                | Location:            | Latitude: <b>29°45'59.0544"</b> | Longitude: <b>-82°23'51.8244"</b> | MSL @ TOC Date In Service: <b>185.76 2017</b> |
| Quarter: <b>Wk#2 OCL assessment</b> | Date: <b>2-14-18</b> | Well Type: <b>U</b>             |                                   |   |

### Purging Data

|  |                                   |                                |                                  |
|--|-----------------------------------|--------------------------------|----------------------------------|
| Diameter(in) <b>2</b>                              | Total well depth(ft) <b>14.88</b> | Depth to water(ft) <b>5.10</b> | Well capacity(L/ft) <b>0.6</b>   |
| Distance from TOC to top of screen <b>4.88</b> ft. |                                   | Purging Method: <b>PP</b>      | Equipment Volume = <b>750 mL</b> |

1 WELL VOLUME(L)=(Total Well Depth-Depth to water)X Well Capacity      Time of Depth Meter Decon: **0933**

**Well Vol = ( 14.88 - 5.10 ) X <sup>9.7%</sup> 0.6 = 5.9 L**      1/4 well vol. = ~~1.5~~ **1.475**

|                                |                                 |                               |                               |                                  |
|--------------------------------|---------------------------------|-------------------------------|-------------------------------|----------------------------------|
| Init Tubing Dpth(ft) <b>10</b> | Final Tube Dept(ft): <b>10'</b> | Purge Start Time: <b>0937</b> | Purge Stop time: <b>10:15</b> | Total Volume Purged <b>10.94</b> |
|--------------------------------|---------------------------------|-------------------------------|-------------------------------|----------------------------------|

| Time | Volume Purged (L) | Cumul. Volume Purged (L) | Purge rate mL/min | Depth to water (ft) | pH (SU)       | Temp (°C) | Cond (µmho) | Diss O2 (mg/L) | Turbidity (ntu) | ORP (mv) | Observed odor or color |
|------|-------------------|--------------------------|-------------------|---------------------|---------------|-----------|-------------|----------------|-----------------|----------|------------------------|
|      |                   |                          |                   |                     | ± 0.2§        | ± 0.2§    | ± 5%§       | 20% sat§       | 20 max§         |          |                        |
| 0957 | 5.9               | 5.9                      | 240               | 5.22                | 6.18          | 18.3      | 475.1       | 3.45           | 0.38            | 148.9    | No Odor                |
| 1000 | 0.84              | 6.74                     | 280               | 5.22                | 6.12          | 18.3      | 448.6       | 3.27           | 0.39            | 150.8    | Clear                  |
| 1003 | 0.84              | 7.58                     | 280               | 5.22                | 6.08          | 18.3      | 434.9       | 3.02           | 0.40            | 152.3    | No Color               |
| 1006 | 0.84              | 8.42                     | 280               | 5.22                | 6.03          | 18.3      | 412.1       | 2.78           | 0.33            | 154.4    |                        |
| 1009 | 0.84              | 9.26                     | 280               | 5.22                | 5.99          | 18.3      | 399.3       | 2.48           | 0.37            | 155.9    |                        |
| 1012 | 0.84              | 10.10                    | 280               | 5.22                | 5.98          | 18.3      | 395.4       | 2.49           | 0.37            | 155.9    |                        |
| 1015 | 0.84              | 10.94                    | 280               | 5.22                | 5.95          | 18.3      | 381.1       | 2.40           | 0.22            | 156.8    |                        |
|      |                   |                          |                   |                     | N:st con 18.1 |           |             |                |                 |          |                        |

Decon Depth Mtr - rinse with analyte free water  
\$Purge method FDEP-SOP 2212.3.1

◆ FDEP SOP Section 2212.3

### Sampling Data

|  |  |
|--|--|
| Sampled By(Print): <b>S. Phillips, K. Morrison</b> | Sampler(s) Signatures: <i>[Signatures]</i> |
|--|--|

|                            |                            |   |  |
|----------------------------|----------------------------|---|--|
| Sampling Method: <b>PP</b> | Tube Material: <b>PP/S</b> | Sampling Started Tube Dpth(ft): <b>10'</b> Time: <b>10:16</b> | Sampling completed Tube Dpth(ft): <b>10'</b> Time: <b>1036</b> |
|----------------------------|----------------------------|---|--|

|                        |                           |                          |   |
|------------------------|---------------------------|--------------------------|---|
| Field Decon: <b>NO</b> | Field Filtered: <b>NO</b> | Duplicate: <b>YES NO</b> | Acid ID# <b>HNO3: D170401 H2SO4: NA</b> |
|------------------------|---------------------------|--------------------------|---|

| Sample Container Specification |          |            | Sample Preservation |              |          | Intended Analysis or method                |
|--------------------------------|----------|------------|---------------------|--------------|----------|--|
| ID:                            | Material | Volume(mL) | Preservative        | Volume added | final pH |  |
| D18A028-05A                    | PE       | 500        | HNO3                | 1.0 mL       | 1.3      | Metals: Ba, Be, Cd, Cr, Co, Mo, Se, Hg, Ca |
| D18A028-05B                    | PE       | 250        | HNO3                | 0.5 mL       | 1.3      | Metals: Sb, As, Pb, Ti, B, Li              |
| D18A028-05C                    | PE       | 250        | Chill <6 deg        | n/a          | n/a      | Anions: F, Cl, SO4                         |
| D18A028-05D                    | PE       | 2000       | HNO3                | 4 mL         | 1.3      | Radium 226+228 Combined                    |
| D18A028-05E                    | PE       | 2000       | Chill <6 deg        | n/a          | n/a      | Solids: TSS, TDS                           |

|  |
|--|
| Remarks: <b>Well found locked and left locked on departure @ 57°F Prog with @ 5mph</b> |
|--|

# DGS Groundwater Sampling Log



|                                    |                      |                                 |                                   |           |                 |
|------------------------------------|----------------------|---------------------------------|-----------------------------------|-----------|-----------------|
| WELL ID: <b>LF-2</b>               | Location:            | Latitude: <b>29°45'50.5296"</b> | Longitude: <b>-82°23'47.7492"</b> | MSL @ TOC | Date In Service |
| Quarter: <u>WLR CCR Assessment</u> | Date: <u>2-15-18</u> |                                 |                                   | 183.35    | 2017            |
|                                    |                      |                                 | Well Type: <b>D</b>               |           |                 |

### Purging Data

|   |                                   |                                  |   |
|---|-----------------------------------|----------------------------------|---|
| Diameter(in) <b>2</b>   | Total well depth(ft) <b>14.35</b> | Depth to water(ft) <b>5.40</b>   | Well capacity(L/ft) <b>0.6</b>          |
| Distance from TOC to top of screen <b>4.35</b> ft.                |                                   | Purging Method: <b>PP</b>        | Equipment Volume = <b>750 mL</b>        |
| 1 WELL VOLUME(L)=(Total Well Depth-Depth to water)X Well Capacity |                                   |                                  | Time of Depth Meter Decon: <u>11:00</u> |
| <b>Well Vol = ( 14.35 - 5.40 ) X 0.6 = 5.4 L</b>                  |                                   |                                  | 1/4 well vol. = <b>N/A</b>              |
| Init Tubing Dpth(ft) <u>10</u>                                    | Final Tube Dept(ft): <u>10</u>    | Purge Start Time: <u>11:02</u>   | Purge Stop time: <u>11:49</u>           |
|   |                                   | Total Volume Purged <u>6.0</u> L |   |

| Time  | Volume Purged (L) | Cumul. Volume Purged (L) | Purge rate mL/min | Depth to water (ft) | pH (SU) | Temp (°C) | Cond (µmho) | Diss O2 (mg/L) | Turbidity (ntu) | ORP (mv) | Observed odor or color |
|-------|-------------------|--------------------------|-------------------|---------------------|---------|-----------|-------------|----------------|-----------------|----------|------------------------|
|       |                   |                          |                   |                     | ± 0.2§  | ± 0.2§    | ± 5%§       | 20% sat§       | 20 max§         |          |                        |
| 11:42 | 5.40              | 5.40                     | 100               | 6.01                | 6.34    | 17.6      | 988.4       | 0.36           | 6.47            | 21.3     | Yellowish              |
| 11:45 | <del>5.40</del>   | 5.70                     | 100               | 6.01                | 6.30    | 17.6      | 969.6       | 0.35           | 6.32            | 14.1     | Clear                  |
| 11:48 | 0.3               | 6.00                     | 100               | 6.01                | 6.29    | 17.6      | 968.2       | 0.33           | 6.47            | 7.5      | Clear                  |
|       |                   |                          |                   |                     |         |           |             |                |                 |          |                        |
|       |                   |                          |                   |                     |         |           |             |                |                 |          |                        |
|       |                   |                          |                   |                     |         |           |             |                |                 |          |                        |
|       |                   |                          |                   |                     |         |           |             |                |                 |          |                        |
|       |                   |                          |                   |                     |         |           |             |                |                 |          |                        |
|       |                   |                          |                   |                     |         |           |             |                |                 |          |                        |

NIST  
CONF (17.4)

◆ FDEP SOP Section 2212.3

### Sampling Data

Decon Depth Mtr - rinse with analyte free water  
§Purge method FDEP-SOP 2212.3.1

|  |                            |   |   |   |                    |
|--|----------------------------|---|---|---|--------------------|
| Sampled By(Print): <u>K. Morrison, S. Phillips</u> |                            |   | Sampler(s) Signature: <u>[Signatures]</u> |   |                    |
| Sampling Method: <b>PP</b>                         | Tube Material: <b>PP/S</b> | Sampling Started Tube Dpth(ft): <u>10</u> | Time: <u>11:50</u>                        | Sampling completed Tube Dpth(ft): <u>10</u> | Time: <u>12:33</u> |
| Field Decon: <b>NO</b>                             | Field Filtered: <b>NO</b>  | Duplicate: <b>YES</b> <b>NO</b>           | Acid ID# <b>HNO3: DJ71401</b>             | <b>H2SO4: NA</b>                            |                    |

| Sample Container Specification |          |            | Sample Preservation |              |            | Intended Analysis or method                           |
|--------------------------------|----------|------------|---------------------|--------------|------------|---|
| ID:                            | Material | Volume(mL) | Preservative        | Volume added | final pH   |   |
| <u>D18A028-06A</u>             | PE       | 500        | HNO3                | 1.0 mL       | <u>1.3</u> | Metals: Ba, Be, Cd, Cr, Co, Mo, Se, Hg, <del>Cu</del> |
| <u>D18A028-06B</u>             | PE       | 250        | HNO3                | 0.5 mL       | <u>1.6</u> | Metals: Sb, As, Pb, Ti, B, Li                         |
| <u>D18A028-06C</u>             | PE       | 250        | Chill <6 deg        | n/a          | n/a        | Anions: F, Cl, SO4                                    |
| <u>D18A028-06D</u>             | PE       | 2000       | HNO3                | 4 mL         | <u>1.3</u> | Radium 226+228 Combined                               |
| <u>D18A028-06E</u>             | PE       | 2000       | Chill <6 deg        | n/a          | n/a        | Solids: TSS, TDS                                      |

Remarks: Sunny, well found secure, left secure 73°F

Codes: PP/S + Polypropylene+Silicone tubing PP: Peristaltic Pump PE: Polyethylene B

# DGS Groundwater Sampling Log



|                                     |   |                                 |                                   |   |
|-------------------------------------|---|---------------------------------|-----------------------------------|---|
| WELL ID: <b>LF-3</b>                | Location: <b>29°45'50.6376" -82°23'52.1592"</b> | Latitude: <b>29°45'50.6376"</b> | Longitude: <b>-82°23'52.1592"</b> | MSL @ TOC Date In Service: <b>185.05 2017</b> |
| Quarter: <b>WK 2 CCR Assessment</b> | Date: <b>2/15/18</b>                            | Well Type: <b>D</b>             |                                   |   |

### Purging Data

|   |                                   |                                |   |
|---|-----------------------------------|--------------------------------|---|
| Diameter(in) <b>2</b>   | Total well depth(ft) <b>14.43</b> | Depth to water(ft) <b>5.42</b> | Well capacity(L/ft) <b>0.6</b>          |
| Distance from TOC to top of screen <b>4.43</b> ft.                |                                   | Purging Method: <b>PP</b>      | Equipment Volume = <b>750 mL</b>        |
| 1 WELL VOLUME(L)=(Total Well Depth-Depth to water)X Well Capacity |                                   |                                | Time of Depth Meter Decon: <b>09:24</b> |
| <b>Well Vol = ( 14.43 - 5.42 ) X 0.6 = 5.4 L</b>                  |                                   |                                | 1/4 well vol. = <b>NA</b>               |
| Init Tubing Dpth(ft) <b>10</b>                                    | Final Tube Dept(ft): <b>10</b>    | Purge Start Time: <b>09:27</b> | Purge Stop time: <b>10:12</b>           |
|   |                                   |                                | Total Volume Purged <b>0.2 L</b>        |

| Time  | Volume Purged (L) | Cumul. Volume Purged (L) | Purge rate mL/min | Depth to water (ft) | pH (SU)           | Temp (°C) | Cond (µmho) | Diss O2 (mg/L) | Turbidity (ntu) | ORP (mv) | Observed odor or color |
|-------|-------------------|--------------------------|-------------------|---------------------|-------------------|-----------|-------------|----------------|-----------------|----------|------------------------|
|       |                   |                          |                   |                     | ± 0.2§            | ± 0.2§    | ± 5%§       | 20% sat§       | 20 max§         |          |                        |
| 10:05 | 5.40              | 5.40                     | 140               | 5.68                | 6.72              | 16.9      | 920.0       | 2.53           | 1.22            | 154.4    | Yellowish              |
| 10:08 | 0.42              | 5.82                     | 140               | 5.68                | 6.72              | 16.9      | 919.5       | 2.51           | 1.18            | 150.6    | No odor                |
| 10:11 | 0.42              | 6.24                     | 140               | 5.68                | 6.71              | 16.9      | 919.8       | 2.47           | 1.32            | 145.5    |                        |
|       |                   |                          |                   |                     | mist over<br>16.7 |           |             |                |                 |          |                        |

Decon Depth Mtr - rinse with analyte free water  
§Purge method FDEP-SOP 2212.3.1

◆ FDEP SOP Section 2212.3

### Sampling Data

|   |                            |   |  |  |                    |  |  |
|---|----------------------------|---|--|--|--------------------|--|--|
| Sampled By(Print): <b>S. Phillips, K Morrison</b> |                            |   |  | Sampler(s) Signatures: <i>S. Phillips, K. Morrison</i> |                    |  |  |
| Sampling Method: <b>PP</b>                        | Tube Material: <b>PP/S</b> | Sampling Started Tube Dpth(ft): <b>10</b> | Time: <b>10:13</b>                             | Sampling completed Tube Dpth(ft): <b>10</b>            | Time: <b>10:54</b> |  |  |
| Field Decon: <b>NO</b>                            | Field Filtered: <b>NO</b>  | Duplicate: <b>YES NO</b>                  | Acid ID# HNO3: <b>DJ7044</b> H2SO4: <b>N/A</b> |  |                    |  |  |

| Sample Container Specification |          |            | Sample Preservation |              |            | Intended Analysis or method                           |
|--------------------------------|----------|------------|---------------------|--------------|------------|---|
| ID:                            | Material | Volume(mL) | Preservative        | Volume added | final pH   |   |
| <b>D18A028-07A</b>             | PE       | 500        | HNO3                | 1.0 mL       | <b>1.6</b> | Metals: Ba, Be, Cd, Cr, Co, Mo, Se, Hg, <del>Cu</del> |
| <b>D18A028-07B</b>             | PE       | 250        | HNO3                | 0.5 mL       | <b>1.6</b> | Metals: Sb, As, Pb, Tl, <del>B</del> , Li             |
| <b>D18A028-07C</b>             | PE       | 250        | Chill <6 deg        | n/a          | n/a        | Anions: F, <del>Cl</del> , <del>SO4</del>             |
| <b>D18A028-07D</b>             | PE       | 2000       | HNO3                | 4 mL         | <b>1.6</b> | Radium 226+228 Combined                               |
| <b>D18A028-07E</b>             | PE       | 2000       | Chill <6 deg        | n/a          | n/a        | Solids: TSS, <del>IDS</del>                           |

Remarks: **Foggy, cloudy, calm, winds 1 mph from south 60°F well found secure, left secure**





# DGS Groundwater Sampling Log



|                                      |                      |                               |                                 |                          |                              |
|--------------------------------------|----------------------|-------------------------------|---------------------------------|--------------------------|------------------------------|
| WELL ID: <b>R4T5 (CCR)</b>           | Location:            | Latitude: <b>29°45'52.14"</b> | Longitude: <b>-82°23'33.18"</b> | MSL @ TOC                | Date In Service              |
| Quarter: <b>WK #2 CCR Assessment</b> | Date: <b>2/14/18</b> |                               |                                 | MSL @ TOC: <b>187.46</b> | Date In Service: <b>7-93</b> |
|                                      |                      |                               |                                 | Well Type: <b>D</b>      |                              |

### Purging Data

| Diameter(in)  | <b>2</b>          | Total well depth(ft)             | <b>15.08</b>      | Depth to water(ft)             | <b>9.98</b> | Well capacity(L/ft)                     | <b>0.6</b>   |                |                 |              |                        |
|---|-------------------|----------------------------------|-------------------|--------------------------------|-------------|---|--------------|----------------|-----------------|--------------|------------------------|
| Distance from TOC to top of screen                                |                   | <b>5.08</b> ft.                  |                   | Purging Method: <b>PP</b>      |             | Equipment Volume = <b>750 mL</b>        |              |                |                 |              |                        |
| 1 WELL VOLUME(L)=(Total Well Depth-Depth to water)X Well Capacity |                   |                                  |                   |                                |             | Time of Depth Meter Decon: <b>15:24</b> |              |                |                 |              |                        |
| <b>Well Vol = ( 15.08 - 9.98 ) x 0.6 = 3.1 L</b>                  |                   |                                  |                   |                                |             | 1/4 well vol. = <b>0.8</b>              |              |                |                 |              |                        |
| Init Tubing Dpth(ft) <b>10.5</b>                                  |                   | Final Tube Dept(ft): <b>10.9</b> |                   | Purge Start Time: <b>15:25</b> |             | Purge Stop time: <b>15:57</b>           |              |                |                 |              |                        |
| Total Volume Purged <b>4.7 L</b>                                  |                   |                                  |                   |                                |             |   |              |                |                 |              |                        |
| Time  | Volume Purged (L) | Cumul. Volume Purged (L)         | Purge rate mL/min | Depth to water (ft)            | pH (SU)     | Temp (°C)                               | Cond (µmho)  | Diss O2 (mg/L) | Turbidity (ntu) | ORP (mv)     | Observed odor or color |
|   |                   |                                  |                   |                                | ± 0.2§      | ± 0.2§                                  | ± 5%§        | 20% sat§       | 20 max§         |              |                        |
| <b>15:46</b>  | <b>3.1</b>        | <b>3.1</b>                       | <b>180</b>        | <b>10.36</b>                   | <b>6.18</b> | <b>20.5</b>                             | <b>817.0</b> | <b>0.37</b>    | <b>1.58</b>     | <b>-37.6</b> | <b>yellow color</b>    |
| <b>15:51</b>  | <b>0.8</b>        | <b>3.9</b>                       | <b>180</b>        | <b>10.36</b>                   | <b>6.19</b> | <b>20.5</b>                             | <b>818.7</b> | <b>0.29</b>    | <b>2.57</b>     | <b>-41.5</b> | <b>Clear</b>           |
| <b>15:56</b>  | <b>0.8</b>        | <b>4.7</b>                       | <b>180</b>        | <b>10.36</b>                   | <b>6.18</b> | <b>20.5</b>                             | <b>818.9</b> | <b>0.27</b>    | <b>1.43</b>     | <b>-44.3</b> | <b>NO odor</b>         |
|   |                   |                                  |                   |                                |             |   |              |                |                 |              |                        |
|   |                   |                                  |                   |                                |             |   |              |                |                 |              |                        |
|   |                   |                                  |                   |                                |             |   |              |                |                 |              |                        |
|   |                   |                                  |                   |                                |             |   |              |                |                 |              |                        |
|   |                   |                                  |                   |                                |             |   |              |                |                 |              |                        |
|   |                   |                                  |                   |                                |             |   |              |                |                 |              |                        |
|   |                   |                                  |                   |                                |             |   |              |                |                 |              |                        |

NIST  
CERT  
**(20.3)**

Decon Depth Mtr - rinse with analyte free water  
§Purge method FDEP-SOP 2212.3.1

◆ FDEP SOP Section 2212.3

### Sampling Data

| Sampled By(Print): <b>K. MORRISON, S. PHILLIPS</b> |                            | Sampler(s) Signatures: <i>K. Morrison, S. Phillips</i>         |  |               |                             |   |
|--|----------------------------|--|--|---------------|-----------------------------|---|
| Sampling Method: <b>PP</b>                         | Tube Material: <b>PP/S</b> | Sampling Started Tube Dpth(ft): <b>10.9</b> Time: <b>15:58</b> | Sampling completed Tube Dpth(ft): <b>10.9</b> Time: <b>16:27</b> |               |                             |   |
| Field Decon: <b>NO</b>                             | Field Filtered: <b>NO</b>  | Duplicate: <b>YES NO</b>                                       | Acid ID# HNO3: <b>DJ70401</b> H2SO4: <b>NA</b>                   |               |                             |   |
| Sample Container Specification                     |                            | Sample Preservation  |  |               | Intended Analysis or method |   |
| ID:  | Material                   | Volume(mL)   | Preservative   | Volume added  |                             | final pH  |
| <b>D18A028-12 A</b>                                | <b>PE</b>                  | <b>500</b>   | <b>HNO3</b>  | <b>1.0 mL</b> | <b>1.6</b>                  | <b>Metals: Ba, Be, Cd, Cr, Co, Mo, Se, Hg, Ca</b> |
| <b>D18A028-12 B</b>                                | <b>PE</b>                  | <b>250</b>   | <b>HNO3</b>  | <b>0.5 mL</b> | <b>1.6</b>                  | <b>Metals: Sb, As, Pb, Tl, Bi, Li</b>             |
| <b>D18A028-12 C</b>                                | <b>PE</b>                  | <b>250</b>   | <b>Chill &lt;6 deg</b>   | <b>n/a</b>    | <b>n/a</b>                  | <b>Anions: F, Cl, SO4</b>                         |
| <b>D18A028-12 D</b>                                | <b>PE</b>                  | <b>2000</b>  | <b>HNO3</b>  | <b>4 mL</b>   | <b>1.3</b>                  | <b>Radium 226+228 Combined</b>                    |
| <b>D18A028-12 E</b>                                | <b>EPE</b>                 | <b>2000</b>  | <b>Chill &lt;6 deg</b>   | <b>n/a</b>    | <b>n/a</b>                  | <b>Solids: TSS, TDS</b>                           |

Remarks: **Partly cloudy 70°F winds (E) mph well locked upon arrival well locked upon departure**

# DGS Groundwater Sampling Log



|                                      |                      |                               |                                 |                     |                 |
|--------------------------------------|----------------------|-------------------------------|---------------------------------|---------------------|-----------------|
| WELL ID: <b>R6T4 (CCR)</b>           | Location:            | Latitude: <b>29°46'00.90"</b> | Longitude: <b>-82°23'40.20"</b> | MSL @ TOC           | Date In Service |
| Quarter: <b>Wk #2 CCR Assessment</b> | Date: <b>2-14-18</b> |                               |                                 | <b>183.6</b>        | <b>7-93</b>     |
|                                      |                      |                               |                                 | Well Type: <b>U</b> |                 |

### Purging Data

|   |                                   |                                |   |
|---|-----------------------------------|--------------------------------|---|
| Diameter(in) <b>2</b>   | Total well depth(ft) <b>14.13</b> | Depth to water(ft) <b>3.01</b> | Well capacity(L/ft) <b>0.6</b>          |
| Distance from TOC to top of screen <b>4.13</b> ft.                |                                   | Purging Method: <b>PP</b>      | Equipment Volume = <b>750 mL</b>        |
| 1 WELL VOLUME(L)=(Total Well Depth-Depth to water)X Well Capacity |                                   |                                | Time of Depth Meter Decon: <b>10:43</b> |
| <b>Well Vol = ( 14.13 - 3.01 ) X 0.6 = 6.7 L</b>                  |                                   |                                | 1/4 well vol. = <b>1.7</b>              |
| Init Tubing Dpth(ft) <b>3.5</b>                                   | Final Tube Dept(ft): <b>3.6</b>   | Purge Start Time: <b>10:45</b> | Purge Stop time: <b>11:11</b>           |
|   |                                   |                                | Total Volume Purged <b>10.1L</b>        |

| Time | Volume Purged (L) | Cumul. Volume Purged (L) | Purge rate mL/min | Depth to water (ft) | pH (SU)            | Temp (°C) | Cond (µmho) | Diss O2 (mg/L) | Turbidity (ntu) | ORP (mv) | Observed odor or color       |
|------|-------------------|--------------------------|-------------------|---------------------|--------------------|-----------|-------------|----------------|-----------------|----------|------------------------------|
|      |                   |                          |                   |                     | ± 0.2§             | ± 0.2§    | ± 5%§       | 20% sat§       | 20 max§         |          |                              |
| 1103 | 6.7               | 6.7                      | 500               | 3.08                | 7.00               | 18.0      | 395.7       | 0.25           | 0.29            | 18.5     | No Odor<br>clear<br>No Color |
| 1106 | 1.7               | 8.4                      | 500               | 3.08                | 6.99               | 18.0      | 391.1       | 0.26           | 0.29            | -3.5     |                              |
| 1110 | 1.7               | 10.1                     | 500               | 3.08                | 7.00               | 18.1      | 385.5       | 0.25           | 0.26            | -25.4    |                              |
|      |                   |                          |                   |                     | mist cum<br>(17.9) |           |             |                |                 |          |                              |

◆ FDEP SOP Section 2212.3

### Sampling Data

Decon Depth Mtr - rinse with analyte free water  
\$Purge method FDEP-SOP 2212.3.1

| Sampled By(Print): <b>S. Phillips, K. Morrison</b> |                            |  |                               | Sampler(s) Signatures: <i>S. Phillips, K. Morrison</i>             |          |  |  |
|--|----------------------------|--|-------------------------------|--|----------|--|--|
| Sampling Method: <b>PP</b>                         | Tube Material: <b>PP/S</b> | Sampling Started<br>Tube Dpth(ft): <b>3.6</b> Time: <b>11:12</b> |                               | Sampling completed<br>Tube Dpth(ft): <b>3.6</b> Time: <b>11:24</b> |          |  |  |
| Field Decon: <b>NO</b>                             | Field Filtered: <b>NO</b>  | Duplicate: <b>YES</b> <input checked="" type="radio"/>           | Acid ID# <b>HNO3: DJ70401</b> | <b>H2SO4: NA</b>   |          |  |  |
| Sample Container Specification                     |                            |  | Sample Preservation           |  |          | Intended Analysis or method                |  |
| ID:  | Material                   | Volume(mL)   | Preservative                  | Volume added   | final pH |  |  |
| <b>D18A028-13A</b>                                 | PE                         | 500  | HNO3                          | 1.0 mL   | 1.3      | Metals: Ba, Be, Cd, Cr, Co, Mo, Se, Hg, Ca |  |
| <b>D18A028-13B</b>                                 | PE                         | 250  | HNO3                          | 0.5 mL   | 1.3      | Metals: Sb, As, Pb, Ti, B, Li              |  |
| <b>D18A028-13C</b>                                 | PE                         | 250  | Chill <6 deg                  | n/a  | n/a      | Anions: F, Cl, SO4                         |  |
| <b>D18A028-13D</b>                                 | PE                         | 2000   | HNO3                          | 4 mL   | 1.3      | Radium 226+228 Combined                    |  |
| <b>D18A028-13E</b>                                 | PE                         | 2000   | Chill <6 deg                  | n/a  | n/a      | Solids: TSS, FDS                           |  |

Remarks: well found locked and left locked on departure  
57°F fog with wind NNE @ 7 mph

# DGS Groundwater Sampling Log



|                                     |                      |                      |                      |                     |                            |
|-------------------------------------|----------------------|----------------------|----------------------|---------------------|----------------------------|
| WELL ID: <b>EBLANK</b>              | Location:            | Latitude: <b>na</b>  | Longitude: <b>na</b> | MSL @ TOC: <b>0</b> | Date In Service: <b>na</b> |
| Quarter: <b>WK 2 CCR Assessment</b> | Date: <b>2/14/18</b> | Well Type: <b>na</b> |                      |                     |                            |

### Purging Data

|   |                                 |   |                                   |
|---|---------------------------------|---|-----------------------------------|
| Diameter(in): <b>na</b>   | Total well depth(ft): <b>0</b>  | Depth to water(ft): <b>N/A</b>          | Well capacity(L/ft): <b>0</b>     |
| Distance from TOC to top of screen: <b>0</b> ft.                  | Purging Method: <b>PP</b>       |   | Equipment Volume = <b>750 mL</b>  |
| 1 WELL VOLUME(L)=(Total Well Depth-Depth to water)X Well Capacity |                                 | Time of Depth Meter Decon: <b>14:38</b> |                                   |
| <b>Well Vol = ( 0 - N/A ) X 0 = N/A L</b>                         |                                 | 1/4 well vol. = <b>N/A</b>              |                                   |
| Init Tubing Dpth(ft): <b>N/A</b>                                  | Final Tube Dept(ft): <b>N/A</b> | Purge Start Time: <b>14:39</b>          | Purge Stop time: <b>14:52</b>     |
|   |                                 |   | Total Volume Purged: <b>N/A L</b> |

| Time  | Volume Purged (L) | Cumul. Volume Purged (L) | Purge rate mL/min | Depth to water (ft) | pH (SU)                            | Temp (°C) | Cond (µmho) | Diss O2 (mg/L) | Turbidity (ntu) | ORP (mv) | Observed odor or color        |  |
|-------|-------------------|--------------------------|-------------------|---------------------|------------------------------------|-----------|-------------|----------------|-----------------|----------|-------------------------------|--|
|       |                   |                          |                   |                     | ± 0.2§                             | ± 0.2§    | ± 5%§       | 20% sat§       | 20 max§         |          |                               |  |
| 14:44 | N/A               | N/A                      | 500               | N/A                 | 6.15                               | 18.2      | 0.81        | 9.11           | 0.17            | 109.0    | Clear<br>Colorless<br>NO odor |  |
| 14:48 | N/A               | N/A                      | 500               | N/A                 | 6.04                               | 18.2      | 0.80        | 9.10           | 0.16            | 204.7    |                               |  |
| 14:52 | N/A               | N/A                      | 500               | N/A                 | 5.96                               | 18.3      | 0.81        | 9.13           | 0.13            | 217.9    |                               |  |
|       |                   |                          |                   |                     | ↓<br>no correct<br>used cond meter |           |             |                |                 |          |                               |  |

Decon Depth Mtr - rinse with analyte free water  
§Purge method FDEP-SOP 2212.3.1

◆ FDEP SOP Section 2212.3

### Sampling Data

|  |                            |  |  |  |                             |   |
|--|----------------------------|--|--|--|-----------------------------|---|
| Sampled By(Print): <b>K. Morrison, S. Phillips</b> |                            |  | Sampler(s) Signatures: <i>[Signatures]</i> |  |                             |   |
| Sampling Method: <b>PP</b>                         | Tube Material: <b>PP/S</b> | Sampling Started Tube Dpth(ft): <b>N/A</b> | Time: <b>14:52</b>                         | Sampling completed Tube Dpth(ft): <b>N/A</b> | Time: <b>15:11</b>          |   |
| Field Decon: <b>NO</b>                             | Field Filtered: <b>NO</b>  | Duplicate: <b>YES</b> (NO)                 | Acid ID# <b>HNO3: D J7040</b>              | H2SO4: <b>DL-6-2802</b>                      | <b>NA</b>                   |   |
| Sample Container Specification                     |                            | Sample Preservation                        |  |  | Intended Analysis or method |   |
| ID:  | Material                   | Volume(mL)                                 | Preservative                               | Volume added                                 |                             | final pH  |
| <b>D18A028-14A</b>                                 | PE                         | 500  | HNO3                                       | 1.0 mL                                       | <b>10.3</b>                 | Metals: Ba, Be, Cd, Cr, Co, Mo, Se, Hg, <del>Ca</del> |
| <b>D18A028-14B</b>                                 | PE                         | 250  | HNO3                                       | 0.5 mL                                       | <b>1.6</b>                  | Metals: Sb, As, Pb, Tl, Bi, Li                        |
| <b>D18A028-14C</b>                                 | PE                         | 250  | Chill <6 deg                               | n/a  | n/a                         | Anions: F, Cl, SO4                                    |
| <b>D18A028-14D</b>                                 | PE                         | 2000                                       | HNO3                                       | 4 mL   | <b>10.3</b>                 | Radium 226+228 Combined                               |
| <b>DA028-14E</b>                                   | PE                         | 2000                                       | Chill <6 deg                               | n/a  | n/a                         | Solids: TSS, TDS                                      |

Remarks: **Partly cloudy, 67°F Collected @ SIS-3**

# DGS Groundwater Sampling Log



WELL ID: **R1T6** *for CCR* Location: Latitude: **29°45'48.57"** Longitude: **-82°23'01.34"** MSL @ TOC Date In Service: **188.95 C 1980**  
 Quarter: **CCR wk#2 assessment** Date: **2-13-18** Well Type: **SB**

### Purging Data

| Diameter(in)  | <b>4</b>          | Total well depth(ft)     | <b>23.25</b>      | Depth to water(ft)                     | <b>3.90</b>          | Well capacity(L/ft) | <b>2.5</b>    |                |                 |          |                        |
|---|-------------------|--------------------------|-------------------|--|----------------------|---------------------|---------------|----------------|-----------------|----------|------------------------|
| Distance from TOC to top of screen                                | <b>19.45</b>      | ft.                      |                   | Purging Method:                        | <b>PP</b>            | Equipment Volume =  | <b>750 mL</b> |                |                 |          |                        |
| 1 WELL VOLUME(L)=(Total Well Depth-Depth to water)X Well Capacity |                   |                          |                   | Time of Depth Meter Decon: <b>0825</b> |                      |                     |               |                |                 |          |                        |
| <b>Well Vol = ( 23.25 - 3.90 ) X 2.5 = 48.4 L</b>                 |                   |                          |                   | 1/4 well vol. = <b>12.1</b>            |                      |                     |               |                |                 |          |                        |
| Init Tubing Dpth(ft)  | <b>4.5</b>        | Final Tube Dept(ft):     |                   | Purge Start Time:                      | <b>0933</b>          | Purge Stop time:    | <b>1111</b>   |                |                 |          |                        |
| Total Volume Purged <b>72.6</b>                                   |                   |                          |                   |  |                      |                     |               |                |                 |          |                        |
| Time  | Volume Purged (L) | Cumul. Volume Purged (L) | Purge rate mL/min | Depth to water (ft)                    | pH (SU)              | Temp (°C)           | Cond (µmho)   | Diss O2 (mg/L) | Turbidity (ntu) | ORP (mv) | Observed odor or color |
|   |                   |                          |                   |  | ± 0.2§               | ± 0.2§              | ± 5%§         | 20% sat§       | 20 max§         |          |                        |
| 10:16   | 48.4              | 48.4                     | 460               | 6.50                                   | 6.62                 | 18.7                | 529.8         | 0.24           | 0.59            | 10.0     | No Odor                |
| 10:43   | 12.1              | 60.5                     | 460               | 6.50                                   | 6.60                 | 18.8                | 532.7         | 0.23           | 0.49            | -0.8     | Clear                  |
| 11:09   | 12.1              | 72.6                     | 460               | 6.48                                   | 6.59                 | 18.9                | 535.3         | 0.22           | 0.87            | 72.7     | no color               |
|   |                   |                          |                   |  | Dist cam <b>18.7</b> |                     |               |                |                 |          |                        |

Decon Depth Mtr - rinse with analyte free water  
 §Purge method FDEP-SOP 2212.3.1

◆ FDEP SOP Section 2212.3

### Sampling Data

| Sampled By(Print): <b>S. Phillips</b> |               |                 |                          | Sampler(s) Signatures: <b>S. Phillips</b> |                |   |  |
|---------------------------------------|---------------|-----------------|--------------------------|---|----------------|---|--|
| Sampling Method:                      | <b>PP</b>     | Tube Material:  | <b>PP/S</b>              | Sampling Started Tube Dpth(ft):           | <b>7.08</b>    | Time:   | <b>11:12</b>                                   |
|                                       |               |                 |                          | Sampling completed Tube Dpth(ft):         | <b>7.08</b>    | Time:   | <b>11:19</b>                                   |
| Field Decon:                          | <b>NO</b>     | Field Filtered: | <b>NO</b>                | Duplicate:                                | <b>YES</b>     | <input checked="" type="checkbox"/> <b>NO</b> | Acid ID# HNO3: <b>DJ70401</b> H2SO4: <b>NA</b> |
| Sample Container Specification        |               |                 | Sample Preservation      |   |                | Intended Analysis or method                   |  |
| ID:                                   | Material      | Volume(mL)      | Preservative             | Volume added                              | final pH       |   |  |
| <b>D18A0280A</b>                      | <b>PE</b>     | <b>2000</b>     | <b>Chill &lt;6 deg</b>   | <b>none</b>                               | <b>n/a</b>     | <b>Physical Analysis - TSS</b>                |  |
| <del>_____</del>                      | <del>PE</del> | <del>250</del>  | <del>Chill 6 deg C</del> | <del>none</del>                           | <del>n/a</del> | <del>Anions</del>                             |  |
| <del>_____</del>                      | <del>PE</del> | <del>250</del>  | <del>Chill + H2SO</del>  | <del>0.5 mL</del>                         |                | <del>Demand-NPDOC and NO3+NO2</del>           |  |
| <del>_____</del>                      | <del>PE</del> | <del>1000</del> | <del>HNO3</del>          | <del>2 mL</del>                           |                | <del>Radiological-GA</del>                    |  |
| <del>_____</del>                      | <del>PE</del> | <del>500</del>  | <del>HNO3</del>          | <del>1 mL</del>                           |                | <del>Metals</del>                             |  |
| <b>D18A028-09B</b>                    | <b>PE</b>     | <b>250</b>      | <b>HNO3</b>              | <b>0.5 mL</b>                             | <b>1.6</b>     | <b>Metals: As, Pb and Lithium</b>             |  |

Tubing depth is 0.6 ft below depth to water for every instance

Remarks: *Well found locked and left/locked @ departure  
 66°F light rain - pourcast wind NE @ 9mph*

*SP  
2-9-18*

# DGS Groundwater Sampling Log



**WELL ID:** CCR **R2T1**      **Location:**      **Latitude:** 29°46'13.23"      **Longitude:** -82°23'11.71"      **MSL @ TOC Date In Service:** 185.19      **C 1980**  
**Quarter:** CCR wk #2      **Date:** 2-13-18      **Well Type:** **B**  
*assessment*

### Purging Data

|   |      |                      |       |  |      |                     |        |
|---|------|----------------------|-------|--|------|---------------------|--------|
| Diameter(in)  | 4    | Total well depth(ft) | 13.94 | Depth to water(ft)                     | 3.44 | Well capacity(L/ft) | 2.5    |
| Distance from TOC to top of screen                                | 9.14 | ft.                  |       | Purging Method:                        | PP   | Equipment Volume =  | 750 mL |
| 1 WELL VOLUME(L)=(Total Well Depth-Depth to water)X Well Capacity |      |                      |       | Time of Depth Meter Decon: <u>0800</u> |      |                     |        |
| <b>Well Vol = ( 13.94 - 3.44 ) X 2.5 = 26.25 L</b>                |      |                      |       | 1/4 well vol. = 6.6                    |      |                     |        |
| Init Tubing Dpth(ft)  | 4.04 | Final Tube Dept(ft)  | 5.94  | Purge Start Time:                      | 0804 | Purge Stop time:    | 16:39  |
|   |      |                      |       |  |      | Total Volume Purged | L      |

| Time  | Volume Purged (L) | Cumul. Volume Purged (L) | Purge rate mL/min | Depth to water (ft) | pH (SU)        | Temp (°C) | Cond (µmho) | Diss O2 (mg/L) | Turbidity (ntu) | ORP (mv) | Observed odor or color                        |
|-------|-------------------|--------------------------|-------------------|---------------------|----------------|-----------|-------------|----------------|-----------------|----------|---|
|       |                   |                          |                   |                     | ± 0.2§         | ± 0.2§    | ± 5%§       | 20% sat§       | 20 max§         |          |   |
| 12:08 | 26.5              | 26.5                     | 100               | 5.34                | 5.53           | 17.0      | 54.30       | 2.89           | 0.75            | 315.9    | No odor<br>Clear<br>No color<br><br>-DB 19.42 |
| 13:11 | 6.6               | 33.1                     | 100               | 5.34                | 5.49           | 17.0      | 53.12       | 2.89           | 0.71            | 260.7    |   |
| 14:19 | 6.6               | 39.7                     | 100               | 5.34                | 5.45           | 17.0      | 52.34       | 2.23           | 0.52            | 232.4    |   |
| 15:28 | 6.6               | 46.3                     | 100               | 5.34                | 5.44           | 17.0      | 52.16       | 2.11           | 0.67            | 204.9    |   |
| 16:38 | 6.6               | 52.9                     | 100               | 5.34                | 5.43           | 17.0      | 51.94       | 1.90           | 0.52            | 183.0    |   |
|       |                   |                          |                   |                     | NIST Comp 16.8 |           |             |                |                 |          |   |

◆ FDEP SOP Section 2212.3

### Sampling Data

Decon Depth Mtr - rinse with analyte free water  
 §Purge method FDEP-SOP 2212.3.1

**Sampled By(Print):** S. Phillips, C. Davis      **Sampler(s) Signatures:** [Signatures]

|                     |                     |  |  |
|---------------------|---------------------|--|--|
| Sampling Method: PP | Tube Material: PP/S | Sampling Started Tube Dpth(ft): <u>5.94</u> Time: <u>16:40</u>           | Sampling completed Tube Dpth(ft): <u>5.94</u> Time: <u>17:02</u> |
| Field Decon: NO     | Field Filtered: NO  | Duplicate: YES <input checked="" type="radio"/> NO <input type="radio"/> | Acid ID# HNO3: <u>DJ70401</u> H2SO4: <u>NA</u>                   |

| Sample Container Specification |               |                 | Sample Preservation      |                   |                | Intended Analysis or method         |
|--------------------------------|---------------|-----------------|--------------------------|-------------------|----------------|-------------------------------------|
| ID:                            | Material      | Volume(mL)      | Preservative             | Volume added      | final pH       |                                     |
| <u>D18A028-10</u>              | <u>PE</u>     | <u>2000</u>     | <u>Chill &lt;6 deg</u>   | <u>none</u>       | <u>n/a</u>     | <u>Physical Analysis - TSS</u>      |
| <del> </del>                   | <del>PE</del> | <del>250</del>  | <del>Chill 6 deg C</del> | <del>none</del>   | <del>n/a</del> | <del>Anions</del>                   |
| <del> </del>                   | <del>PE</del> | <del>250</del>  | <del>Chill + H2SO</del>  | <del>0.5 mL</del> | <del> </del>   | <del>Demand-NPDOC and NO3+NO2</del> |
| <del> </del>                   | <del>PE</del> | <del>1000</del> | <del>HNO3</del>          | <del>2 mL</del>   | <del> </del>   | <del>Radiological-GA</del>          |
| <del> </del>                   | <del>PE</del> | <del>500</del>  | <del>HNO3</del>          | <del>1 mL</del>   | <del> </del>   | <del>Metals</del>                   |
| <u>D18A028-10B</u>             | <u>PE</u>     | <u>250</u>      | <u>HNO3</u>              | <u>0.5 mL</u>     | <u> </u>       | <u>Metals: As, Pb Lithium</u>       |

Tubing depth is 0.6 ft below depth to water for every instance.

Remarks: Well found locked on arrival and left loaded on departure  
 63°F Cloudy wind NE @ 11 mph - overcast all day  
 16:06 changed battery on depth meter - low bat indication

# DGS Groundwater Sampling Log



|                                      |                      |                               |                                 |   |
|--------------------------------------|----------------------|-------------------------------|---------------------------------|---|
| WELL ID: <b>R6T1</b>                 | Location: <b>CCR</b> | Latitude: <b>29°46'13.04"</b> | Longitude: <b>-82°23'48.88"</b> | MSL @ TOC Date In Service: <b>185.28 4-84</b> |
| Quarter: <b>wk #2 CCR assessment</b> | Date: <b>2-14-18</b> | Well Type: <b>SB</b>          |                                 |   |

|   |                                   |  |                                  |
|---|-----------------------------------|--|----------------------------------|
| Diameter(in) <b>2</b>   | Total well depth(ft) <b>17.57</b> | Depth to water(ft) <b>4.36</b>         | Well capacity(L/ft) <b>0.6</b>   |
| Distance from TOC to top of screen <b>12.57</b> ft.                   |                                   | Purging Method: <b>PP</b>              | Equipment Volume = <b>750 mL</b> |
| 1 WELL VOLUME(L)=(Total Well Depth-Depth to water)X Well Capacity     |                                   | Time of Depth Meter Decon: <b>0829</b> |                                  |
| <b>Well Vol = ( 17.57 - 4.36 ) X <sup>13.21</sup> 0.6 = 7.93 = 8L</b> |                                   | <b>1/4 well vol. = 2</b>               |                                  |
| Init Tubing Dpth(ft) <b>4.96</b>                                      | Final Tube Dept(ft): <b>5.05</b>  | Purge Start Time: <b>0832</b>          | Purge Stop time: _____           |
|   |                                   |  | Total Volume Purged <b>L</b>     |

| Time | Volume Purged (L) | Cumul. Volume Purged (L) | Purge rate mL/min | Depth to water (ft) | pH (SU) | Temp (°C) | Cond (µmho) | Diss O2 (mg/L) | Turbidity (ntu) | ORP (mv) | Observed odor or color |
|------|-------------------|--------------------------|-------------------|---------------------|---------|-----------|-------------|----------------|-----------------|----------|------------------------|
|      |                   |                          |                   |                     | ± 0.2§  | ± 0.2§    | ± 5%§       | 20% sat§       | 20 max§         |          |                        |
| 0853 | 8.0               | 8.0                      | 400               | 4.45                | 5.06    | 19.2      | 317.6       | 0.23           | 0.44            | -160.8   | Sulfur Odor            |
| 0858 | 2.0               | 10.0                     | 400               | 4.45                | 5.06    | 19.2      | 318.2       | 0.20           | 0.40            | -165.0   | clear                  |
| 0903 | 2.0               | 12.0                     | 400               | 4.45                | 5.05    | 19.3      | 318.2       | 0.20           | 0.36            | -168.0   | no color               |
|      |                   |                          |                   |                     |         |           |             |                |                 |          |                        |
|      |                   |                          |                   |                     |         |           |             |                |                 |          |                        |
|      |                   |                          |                   |                     |         |           |             |                |                 |          |                        |
|      |                   |                          |                   |                     |         |           |             |                |                 |          |                        |
|      |                   |                          |                   |                     |         |           |             |                |                 |          |                        |
|      |                   |                          |                   |                     |         |           |             |                |                 |          |                        |
|      |                   |                          |                   |                     |         |           |             |                |                 |          |                        |

◆ FDEP SOP Section 2212.3

## Sampling Data

Decon Depth Mtr - rinse with analyte free water  
§Purge method FDEP-SOP 2212.3.1

| Sampled By(Print): <b>S. Phillips, K Morrison</b> |                            |   |                                    | Sampler(s) Signatures: <i>S. Phillips, K Morrison</i> |                   |                             |  |
|---|----------------------------|---|------------------------------------|---|-------------------|-----------------------------|--|
| Sampling Method: <b>PP</b>                        | Tube Material: <b>PP/S</b> | Sampling Started Tube Dpth(ft): <b>5.05</b>               | Time: <b>0905</b>                  | Sampling completed Tube Dpth(ft): <b>5.05</b>         | Time: <b>0911</b> |                             |  |
| Field Decon: <b>NO</b>                            | Field Filtered: <b>NO</b>  | Duplicate: <b>YES</b> <input checked="" type="checkbox"/> | <b>NO</b> <input type="checkbox"/> | Acid ID# <b>HNO3: DJ70401</b>                         | <b>H2SO4: NA</b>  |                             |  |
| Sample Container Specification                    |                            |   | Sample Preservation                |   |                   | Intended Analysis or method |  |
| ID:   | Material                   | Volume(mL)  | Preservative                       | Volume added  | final pH          |                             |  |
| <del>DISA028-11E</del>                            | PE                         | 2000  | Chill <6 deg                       | none  | n/a               | Physical Analysis - TSS     |  |
| <del>_____</del>                                  | PE                         | 250   | Chill 6 deg C                      | none  | n/a               | Anions                      |  |
| <del>_____</del>                                  | PE                         | 250   | Chill + H2SO                       | 0.5 mL  |                   | Demand-NPDOC and NO3+NO2    |  |
| <del>_____</del>                                  | PE                         | 1000  | HNO3                               | 2 mL  |                   | Radiological GA             |  |
| <del>_____</del>                                  | PE                         | 500   | HNO3                               | 1 mL  |                   | Metals                      |  |
| DISA028-11B                                       | PE                         | 250   | HNO3                               | 0.5 mL  | 1.6               | Metals: As, Pb Lithium only |  |

Tubing depth is 0.6 ft below depth to water for every instance.  
 Remarks: Well found locked on arrival and departure left locked  
 56°F fog wind NNE @ 5 mph















## CCR #2 2018 Assessment Field and Analytical Narrative

### Field Narrative:

- The pH, conductivity, RDO and depth meter sensors were verified against the NIST reference thermometer/probe (CP 117152 & CP148863), and the depth meter was selected for the purpose of measuring temperature in the field; however, the conductivity temperature sensor was used for Equipment Blank since depth meter not used.
- CCR Well sampling began on Tuesday, February 13, 2018 and was completed on Thursday, February 15, 2018 by Kim Morrison and Shelley Phillips.  
In addition to the normal CCR wells, we collected 3 Leachate wells (R1T6, R2T1, and R6T1), as requested by Justin Smith, for lithium and TSS analysis; they were collected on 2-13-18 to 2-14-2018.
- All wells were found secured with a lock upon arrival and left locked upon departure.
- Weather: On Monday, 2-12-18, the total rainfall was 0.47 inches. On Tuesday (2-13-18), there was rain between midnight and noon with an accumulation of 0.17 inches. The temperature ranged from 63 F to 66 F, overcast all day with the wind NE @ 9 -11 mph all day. Wednesday (2-14-18) temperature was 56 F to 59 F until noon with fog and NE wind at 5 mph. In the afternoon, it was overcast but became partly cloudy in late afternoon with temperature 64 to 70 F and wind east at 5 mph. On Thursday (2-15-18) temperature was 58 F to 60 F until 1100 with fog and a calm wind. Around noon temperatures became 73 F to 80 F, sunny all afternoon and winds SW around 6 mph.
- SIS-3: At the lowest purge possible (75 mL/min), we were unable to stop the draw down. The area around this well was saturated.
- Equipment Blank: The Equipment Blank was collected at SIS3 during the sampling of the well.
- Instruments: Calibration verifications were performed on all instruments and passed.

### Analytical Narrative: Internal Analysis

TSS analysis was performed and all results were satisfactory

### Analytical Narrative: External Laboratories

**Note:** Originally Kanapaha was to analyze some of the other metal samples but they were having difficulty with getting their ICP repaired; therefore, on March 14<sup>th</sup>, we requested the analysis be completed by ALS Global since they still had our samples from metal samples they had analyzed already.

- PACE Analytical Services analyzed samples for Fluoride and Radium 226 +228 combined.
- ALS Global (Jacksonville) analyzed samples for the following metals: Antimony, Arsenic, Lead and Thallium by Method 200.8 and Barium, Beryllium, Cadmium, Chromium, Cobalt, Selenium, Molybdenum and Lithium by 200.7.
  - Selenium was detected in the method blank. In the samples where selenium was detected at equal to or less than ten times the method blank, they were qualified with a “V” as per FDEP.
- Kanapaha Laboratory analyzed samples for Mercury, cold vapor.

# DGS Groundwater Sampling Log



**WELL ID:** SIS-1      **Location:**      **Latitude:** 29°46'00.1308"      **Longitude:** -82°23'33.3204"      **MSL @ TOC:** 185.11      **Date In Service:** 2017  
**Quarter:** WK# 3 COP Assessment      **Date:** 3-7-18      **Well Type:** U

### Purging Data

|   |      |                      |       |                                  |       |                     |        |
|---|------|----------------------|-------|----------------------------------|-------|---------------------|--------|
| Diameter(in)  | 2    | Total well depth(ft) | 13.92 | Depth to water(ft)               | 5.44  | Well capacity(L/ft) | 0.6    |
| Distance from TOC to top of screen                                | 3.92 | ft.                  |       | Purging Method:                  | PP    | Equipment Volume =  | 750 mL |
| 1 WELL VOLUME(L)=(Total Well Depth-Depth to water)X Well Capacity |      |                      |       | Time of Depth Meter Decon:       |       |                     |        |
| <b>Well Vol = ( 13.92 - 5.44 ) X 0.6 =</b>                        |      |                      |       | <b>5.08 L</b> 1/4 well vol. = NA |       |                     |        |
| Init Tubing Dpth(ft)  | 10   | Final Tube Dept(ft): | 10    | Purge Start Time:                | 10:47 | Purge Stop time:    | 11:17  |
|   |      |                      |       |                                  |       | Total Volume Purged | 6.7 L  |

| Time  | Volume Purged (L) | Cumul. Volume Purged (L) | Purge rate mL/min | Depth to water (ft) | pH (SU)            | Temp (°C) | Cond (µmho) | Diss O2 (mg/L) | Turbidity (ntu) | ORP (mv) | Observed odor or color                                    |
|-------|-------------------|--------------------------|-------------------|---------------------|--------------------|-----------|-------------|----------------|-----------------|----------|---|
|       |                   |                          |                   |                     | ± 0.2§             | ± 0.2§    | ± 5%§       | 20% sat§       | 20 max§         |          |   |
| 11:10 | 5.1               | 5.1                      | 270               | 5.72                | 6.44               | 19.5      | 471.5       | 2.09           | 4.49            | 39.4     | Clear<br>NO odor <sup>DS 20%</sup><br>Yellowish-<br>Color |
| 11:13 | 0.8               | 5.9                      | 270               | 5.72                | 6.44               | 19.5      | 467.8       | 1.75           | 5.82            | 39.1     |   |
| 11:16 | 0.8               | 6.7                      | 270               | 5.72                | 6.43               | 19.5      | 463.6       | 1.45           | 3.27            | 36.9     |   |
|       |                   |                          |                   |                     | Nist temp CON 19.2 |           |             |                |                 |          |   |

◆ FDEP SOP Section 2212.3

### Sampling Data

Decon Depth Mtr - rinse with analyte free water  
§Purge method FDEP-SOP 2212.3.1

**Sampled By(Print):** K. Monice S. Phillips      **Sampler(s) Signature:** *K. Monice S. Phillips*

**Sampling Method:** PP      **Tube Material:** PP/S      **Sampling Started Tube Dpth(ft):** 10      **Time:** 11:18      **Sampling completed Tube Dpth(ft):** 10      **Time:** 11:40

**Field Decon:** NO      **Field Filtered:** NO      **Duplicate:** YES  NO      **Acid ID# HNO3:** 0570401      **H2SO4:** NA  
 DL71301 - ALS sample

| Sample Container Specification |          |            | Sample Preservation |              |          | Intended Analysis or method                           |
|--------------------------------|----------|------------|---------------------|--------------|----------|---|
| ID:                            | Material | Volume(mL) | Preservative        | Volume added | final pH |   |
| D18A029-01                     | PE A     | 500        | HNO3                | 1.0 mL       | 1.6      | Metals: Ba, Be, Cd, Cr, Co, Mo, Se, Hg, <del>Cr</del> |
| D18A029-01                     | PE B     | 250        | HNO3                | 0.5 mL       | 1.6      | Metals: Sb, As, Pb, Ti, <del>B</del> , Li             |
| D18A029-01                     | PE C     | 250        | Chill <6 deg        | n/a          | n/a      | Anions: F, <del>Cl</del> , SO4                        |
| D18A029-01                     | PE D     | 2000       | HNO3                | 4 mL         | 1.6      | Radium 226+228 Combined                               |
| D18A029-01                     | PE E     | 2000       | Chill <6 deg        | n/a          | n/a      | Solids: TSS, <del>IDS</del>                           |

**Remarks:** 60° F Sunny. Winds: WNW <sup>10</sup> ~~strong~~ <sub>10m 3/7/18</sub>  
 Well found Secure, left secure.

# DGS Groundwater Sampling Log



|                                      |                     |                                 |                                   |  |
|--------------------------------------|---------------------|---------------------------------|-----------------------------------|--|
| WELL ID: <b>SIS-2</b>                | Location:           | Latitude: <b>29°45'53.4672"</b> | Longitude: <b>-82°23'31.5096"</b> | MSL @ TOC Date In Service: <b>183.3 2017</b> |
| Quarter: <b>WK # 3002 Assessment</b> | Date: <b>3/8/18</b> | Well Type: <b>D</b>             |                                   |  |

### Purging Data

|   |                                   |   |                                  |
|---|-----------------------------------|---|----------------------------------|
| Diameter(in) <b>2</b>   | Total well depth(ft) <b>14.22</b> | Depth to water(ft) <b>6.99</b>          | Well capacity(L/ft) <b>0.6</b>   |
| Distance from TOC to top of screen <b>4.22</b> ft.                |                                   | Purging Method: <b>PP</b>               | Equipment Volume = <b>750 mL</b> |
| 1 WELL VOLUME(L)=(Total Well Depth-Depth to water)X Well Capacity |                                   | Time of Depth Meter Decon: <b>08:56</b> |                                  |
| <b>Well Vol = ( 14.22 - 6.99 ) X 0.6 = 4.3 L</b>                  |                                   | 1/4 well vol. = <b>N/A</b>              |                                  |
| Init Tubing Dpth(ft) <b>10</b>                                    | Final Tube Dept(ft): <b>10</b>    | Purge Start Time: <b>08:58</b>          | Purge Stop time: <b>09:35</b>    |
|   |                                   | Total Volume Purged <b>6.1 L</b>        |                                  |

| Time  | Volume Purged (L) | Cumul. Volume Purged (L) | Purge rate mL/min | Depth to water (ft) | pH (SU)                    | Temp (°C) | Cond (µmho) | Diss O2 (mg/L) | Turbidity (ntu) | ORP (mv) | Observed odor or color                     |
|-------|-------------------|--------------------------|-------------------|---------------------|----------------------------|-----------|-------------|----------------|-----------------|----------|--|
|       |                   |                          |                   |                     | ± 0.2§                     | ± 0.2§    | ± 5%§       | 20% sat§       | 20 max§         |          |  |
| 09:25 | 4.3               | 4.3                      | 210               | 7.02                | 6.94                       | 20.7      | 716.4       | 2.42           | 3.76            | 57.1     | Clear<br>Slightly turbid<br>turbid 2/20/18 |
| 09:28 | 0.6               | 4.9                      | 210               | 7.02                | 6.93                       | 20.7      | 723.0       | 2.08           | 2.51            | 60.8     |  |
| 09:31 | 0.6               | 5.5                      | 210               | 7.02                | 6.93                       | 20.7      | 721.0       | 1.82           | 2.25            | 64.9     |  |
| 09:34 | 0.6               | 6.1                      | 210               | 7.02                | 6.92                       | 20.7      | 730.4       | 1.70           | 1.25            | 67.7     |  |
|       |                   |                          |                   |                     | Dist temp corr <b>20.4</b> |           |             |                |                 |          |  |

◆ FDEP SOP Section 2212.3

### Sampling Data

Decon Depth Mtr - rinse with analyte free water  
§Purge method FDEP-SOP 2212.3.1

|  |                            |   |                                      |  |                    |  |  |
|--|----------------------------|---|--------------------------------------|--|--------------------|--|--|
| Sampled By(Print): <b>K. Morris S Phillips</b> |                            |   |                                      | Sampler(s) Signatures: <b>K. Morris, S. Phillips</b> |                    |  |  |
| Sampling Method: <b>PP</b>                     | Tube Material: <b>PP/S</b> | Sampling Started Tube Dpth(ft): <b>10</b>                 | Time: <b>09:36</b>                   | Sampling completed Tube Dpth(ft): <b>10</b>          | Time: <b>10:05</b> |  |  |
| Field Decon: <b>NO</b>                         | Field Filtered: <b>NO</b>  | Duplicate: <b>YES</b> <input checked="" type="checkbox"/> | Acid ID# <b>HNO3: D576401 DL7136</b> | <b>H2SO4: (Anis. Metals) N/A</b>                     |                    |  |  |

| Sample Container Specification |          |            | Sample Preservation |              |            | Intended Analysis or method                           |
|--------------------------------|----------|------------|---------------------|--------------|------------|---|
| ID:                            | Material | Volume(mL) | Preservative        | Volume added | final pH   |   |
| <b>D18AC29-02A</b>             | PE       | 500        | HNO3                | 1.0 mL       | <b>1.6</b> | Metals: Ba, Be, Cd, Cr, Co, Mo, Se, Hg, <del>Cd</del> |
| <b>D18AC29-02B</b>             | PE       | 250        | HNO3                | 0.5 mL       | <b>1.6</b> | Metals: Sb, As, Pb, Ti, <del>P</del> , Li             |
| <b>D18AC29-02C</b>             | PE       | 250        | Chill <6 deg        | n/a          | n/a        | Anions: F, <del>Cl</del> , <del>SO4</del>             |
| <b>D18AC29-02D</b>             | PE       | 2000       | HNO3                | 4 mL         | <b>1.6</b> | Radium 226+228 Combined                               |
| <b>D18AC29-02E</b>             | PE       | 2000       | Chill <6 deg        | n/a          | n/a        | Solids: TSS, <del>IDS</del>                           |

Remarks: **Sunny; winds 9 from NW 45°F Observed floaters**  
**Well found secured and left secured**





# DGS Groundwater Sampling Log



**WELL ID:** **SIS-4**      **Location:**      **Latitude:** **29°45'54.144"**      **Longitude:** **-82°23'38.4108"**      **MSL @ TOC** **183.87**      **Date In Service** **2017**  
**Quarter:** WK # 3 CCP Assessment      **Date:** 3/7/17      **Well Type:** **D**

### Purging Data

| Diameter(in)  | 2                 | Total well depth(ft)     | 13.7              | Depth to water(ft)                      | 10.27         | Well capacity(L/ft) | 0.6         |                |                 |          |                            |
|---|-------------------|--------------------------|-------------------|---|---------------|---------------------|-------------|----------------|-----------------|----------|----------------------------|
| Distance from TOC to top of screen                                | 3.7               | ft.                      |                   | Purging Method:                         | PP            | Equipment Volume =  | 750 mL      |                |                 |          |                            |
| 1 WELL VOLUME(L)=(Total Well Depth-Depth to water)X Well Capacity |                   |                          |                   | Time of Depth Meter Decon:              |               |                     |             |                |                 |          |                            |
| <b>Well Vol = ( 13.7 - 10.27 ) X 0.6 =</b>                        |                   |                          |                   | <b>4.5 L</b> 1/4 well vol. = <b>N/A</b> |               |                     |             |                |                 |          |                            |
| Init Tubing Dpth(ft)  | 10                | Final Tube Dept(ft):     | 10                | Purge Start Time:                       | 14:54         | Purge Stop time:    | 15:30       |                |                 |          |                            |
|   |                   |                          |                   | Total Volume Purged <b>7.2 L</b>        |               |                     |             |                |                 |          |                            |
| Time  | Volume Purged (L) | Cumul. Volume Purged (L) | Purge rate mL/min | Depth to water (ft)                     | pH (SU)       | Temp (°C)           | Cond (µmho) | Diss O2 (mg/L) | Turbidity (ntu) | ORP (mv) | Observed odor or color     |
|   |                   |                          |                   |   | ± 0.2§        | ± 0.2§              | ± 5%§       | 20% sat§       | 20 max§         |          |                            |
| 15:16   | 4.50              | 4.50                     | 225               | 6.42                                    | 6.31          | 19.5                | 649.0       | 0.74           | 7.99            | 3.7      | Yellowish Color<br>No odor |
| 15:19   | 0.68              | 5.18                     | 225               | 6.42                                    | 6.02          | 19.5                | 783.2       | 0.46           | 6.39            | -1.3     |                            |
| 15:22   | 0.68              | 5.86                     | 225               | 6.42                                    | 5.96          | 19.5                | 816.3       | 0.71           | 4.98            | -4.9     |                            |
| 15:25   | 0.68              | 6.54                     | 225               | 6.42                                    | 5.89          | 19.5                | 834.5       | 0.57           | 3.90            | -7.0     |                            |
| 15:28   | 0.68              | 7.22                     | 225               | 6.42                                    | 5.85          | 19.5                | 858.6       | 0.48           | 3.22            | -8.9     |                            |
|   |                   |                          |                   |   | Nist Temp Com | (19.2)              |             |                |                 |          |                            |

◆ FDEP SOP Section 2212.3

### Sampling Data

Decon Depth Mtr - rinse with analyte free water  
§Purge method FDEP-SOP 2212.3.1

|  |                     |   |                    |   |                       |   |  |
|--|---------------------|---|--------------------|---|-----------------------|---|--|
| Sampled By(Print): <u>Kim Morrison S. Phillips</u> |                     |   |                    | Sampler(s) Signatures: <u>K. Morrison S. Phillips</u> |                       |   |  |
| Sampling Method: PP                                | Tube Material: PP/S | Sampling Started Tube Dpth(ft): <u>10</u> | Time: <u>15:31</u> | Sampling completed Tube Dpth(ft): <u>10</u>           | Time: <u>15:55</u>    |   |  |
| Field Decon: NO                                    | Field Filtered: NO  | Duplicate: YES                            | NO                 | Acid ID#  | HNO3: <u>DS 70401</u> | H2SO4: <u>N/A</u>                                     |  |
| Sample Container Specification                     |                     | Sample Preservation                       |                    |   |                       | Intended Analysis or method                           |  |
| ID:  | Material            | Volume(mL)                                | Preservative       | Volume added  | final pH              |   |  |
| <u>D18A029-04A</u>                                 | PE                  | 500                                       | HNO3               | 1.0 mL  | <u>1.6</u>            | Metals: Ba, Be, Cd, Cr, Co, Mo, Se, Hg, <del>Cd</del> |  |
| <u>D18A029-04B</u>                                 | PE                  | 250                                       | HNO3               | 0.5 mL  | <u>1.6</u>            | Metals: Sb, As, Pb, Ti, <del>B</del> , Li             |  |
| <u>D18A029-04C</u>                                 | PE                  | 250                                       | Chill <6 deg       | n/a   | n/a                   | Anions: F, <del>Cl</del> , <del>SO4</del>             |  |
| <u>D18A029-04D</u>                                 | PE                  | 2000                                      | HNO3               | 4 mL  | <u>1.6</u>            | Radium 226+228 Combined                               |  |
| <u>D18A029-04E</u>                                 | PE                  | 2000                                      | Chill <6 deg       | n/a   | n/a                   | Solids: TSS, <del>IDS</del>                           |  |

Remarks: Well found secure and left secure. 69°F 17mph wind from west  
Orangeish floaters observed

# DGS Groundwater Sampling Log



**WELL ID:** LF-1      **Location:**      **Latitude:** 29°45'59.0544"      **Longitude:** -82°23'51.8244"      **MSL @ TOC Date In Service:** 185.76      2017  
**Quarter:** WK# 30CR Assessment      **Date:** 3/7/18      **Well Type:** U

### Purging Data

| Diameter(in)  | 2                 | Total well depth(ft)     | 14.88             | Depth to water(ft)         | 5.80    | Well capacity(L/ft) | 0.6         |                |                 |          |                               |
|---|-------------------|--------------------------|-------------------|----------------------------|---------|---------------------|-------------|----------------|-----------------|----------|-------------------------------|
| Distance from TOC to top of screen                                | 4.88              | ft.                      |                   | Purging Method:            | PP      | Equipment Volume =  | 750 mL      |                |                 |          |                               |
| 1 WELL VOLUME(L)=(Total Well Depth-Depth to water)X Well Capacity |                   |                          |                   | Time of Depth Meter Decon: |         |                     |             |                |                 |          |                               |
| <b>Well Vol = ( 14.88 - 5.80 ) x 0.6 = 5.4 L</b>                  |                   |                          |                   | 1/4 well vol. = N/A        |         |                     |             |                |                 |          |                               |
| Init Tubing Dpth(ft)  | 10                | Final Tube Dept(ft):     | 10                | Purge Start Time:          | 09:04   | Purge Stop time:    | 08:28       |                |                 |          |                               |
|   |                   |                          |                   | Total Volume Purged 7.32 L |         |                     |             |                |                 |          |                               |
| Time  | Volume Purged (L) | Cumul. Volume Purged (L) | Purge rate mL/min | Depth to water (ft)        | pH (SU) | Temp (°C)           | Cond (µmho) | Diss O2 (mg/L) | Turbidity (ntu) | ORP (mv) | Observed odor or color        |
|   |                   |                          |                   |                            | ± 0.2§  | ± 0.2§              | ± 5%§       | 20% sat§       | 20 max§         |          |                               |
| 09:21   | 5.40              | 5.40                     | 320               | 5.91                       | 5.52    | 19.7                | 232.3       | 0.93           | 0.66            | 140.0    | Clear<br>Colorless<br>NO odor |
| 09:24   | 0.96              | 6.36                     | 320               | 5.91                       | 5.50    | 19.7                | 226.1       | 0.81           | 0.26            | 139.8    |                               |
| 09:27   | 0.96              | 7.32                     | 320               | 5.91                       | 5.49    | 19.7                | 222.4       | 0.69           | 0.21            | 138.9    |                               |
|   |                   |                          |                   |                            |         |                     |             |                |                 |          |                               |
|   |                   |                          |                   |                            |         |                     |             |                |                 |          |                               |
|   |                   |                          |                   |                            |         |                     |             |                |                 |          |                               |
|   |                   |                          |                   |                            |         |                     |             |                |                 |          |                               |
|   |                   |                          |                   |                            |         |                     |             |                |                 |          |                               |
|   |                   |                          |                   |                            |         |                     |             |                |                 |          |                               |
|   |                   |                          |                   |                            |         |                     |             |                |                 |          |                               |

Mist Pump Conn. (19.4)

◆ FDEP SOP Section 2212.3

### Sampling Data

Decon Depth Mtr - rinse with analyte free water  
§Purge method FDEP-SOP 2212.3.1

**Sampled By(Print):** Kim Morrison S. Phillips      **Sampler(s) Signatures:** *Kim Morrison S. Phillips*

**Sampling Method:** PP      **Tube Material:** PP/S      **Sampling Started Tube Dpth(ft):** 10      **Time:** 09:29      **Sampling completed Tube Dpth(ft):** 10      **Time:** 09:46

**Field Decon:** NO      **Field Filtered:** NO      **Duplicate:** YES (NO)      **Acid ID# HNO3:** DJ570401 H2SO4: NA DL71301 ALS notes

| Sample Container Specification |          |            | Sample Preservation |              |          | Intended Analysis or method                |
|--------------------------------|----------|------------|---------------------|--------------|----------|--|
| ID:                            | Material | Volume(mL) | Preservative        | Volume added | final pH |  |
| D18A029-05PE A                 | PE A     | 500        | HNO3                | 1.0 mL       | 1.3      | Metals: Ba, Be, Cd, Cr, Co, Mo, Se, Hg, Ca |
| D18A029-05PE B                 | PE B     | 250        | HNO3                | 0.5 mL       | 1.6      | Metals: Sb, As, Pb, Ti, Bi, Li             |
| D18A029-05PE C                 | PE C     | 250        | Chill <6 deg        | n/a          | n/a      | Anions: F, Cl, SO4                         |
| D18A029-05PE D                 | PE D     | 2000       | HNO3                | 4 mL         | 1.6      | Radium 226+228 Combined                    |
| D18A029-05PE E                 | PE E     | 2000       | Chill <6 deg        | n/a          | n/a      | Solids: TSS, FDS                           |

**Remarks:** 60°F Sunny Winds NW 11 mph, Well found locked, left wood trucks passing by at OTR. Saw debris in sample caps, but rinsed prior to capping sample.      *Secure*

# DGS Groundwater Sampling Log



|                            |  |                                 |                                   |                          |                              |
|----------------------------|--|---------------------------------|-----------------------------------|--------------------------|------------------------------|
| WELL ID: <b>LF-2</b>       | Location: <b>WK # 3 CGK Assessment</b> | Latitude: <b>29°45'50.5296"</b> | Longitude: <b>-82°23'47.7492"</b> | MSL @ TOC: <b>183.35</b> | Date In Service: <b>2017</b> |
| Quarter: <b>Assessment</b> | Date: <b>3/8/18</b>                    | Well Type: <b>D</b>             |                                   |                          |                              |

### Purging Data

|   |                                    |   |                                  |
|---|------------------------------------|---|----------------------------------|
| Diameter(in): <b>2</b>  | Total well depth(ft): <b>14.35</b> | Depth to water(ft): <b>5.93</b>         | Well capacity(L/ft): <b>0.6</b>  |
| Distance from TOC to top of screen: <b>4.35</b> ft.               | Purging Method: <b>PP</b>          |   | Equipment Volume = <b>750 mL</b> |
| 1 WELL VOLUME(L)=(Total Well Depth-Depth to water)X Well Capacity |                                    | Time of Depth Meter Decon: <b>10:27</b> |                                  |
| <b>Well Vol = ( 14.35 - 5.93 ) X 0.6 = 5.05 L</b>                 |                                    | 1/4 well vol. =                         |                                  |
| Init Tubing Dpth(ft): <b>10</b>                                   | Final Tube Dept(ft): <b>10</b>     | Purge Start Time: <b>10:28</b>          | Purge Stop time: <b>11:12</b>    |
| Total Volume Purged <b>5.7 L</b>                                  |                                    |   |                                  |

| Time  | Volume Purged (L) | Cumul. Volume Purged (L) | Purge rate mL/min | Depth to water (ft) | pH (SU) | Temp (°C) | Cond (µmho) | Diss O2 (mg/L) | Turbidity (ntu) | ORP (mv) | Observed odor or color |
|-------|-------------------|--------------------------|-------------------|---------------------|---------|-----------|-------------|----------------|-----------------|----------|------------------------|
|       |                   |                          |                   |                     | ± 0.2§  | ± 0.2§    | ± 5%§       | 20% sat§       | 20 max§         |          |                        |
| 11:06 | 5.20              | 5.2                      | 120               | 6.46                | 5.47    | 19.0      | 708         | 0.18           | 10.8            | 4.2      | yellowish              |
| 11:09 | 5.44              | 5.44                     | 130               | 6.46                | 5.46    | 19.1      | 705         | 0.16           | 10.6            | 3.0      | clear                  |
| 11:11 | 0.24              | 5.68                     | 60                | 6.46                | 5.46    | 19.1      | 705         | 0.16           | 11.4            | 1.3      | clear                  |
|       |                   |                          |                   |                     |         |           |             |                |                 |          | slight odor            |

◆ FDEP SOP Section 2212.3

### Sampling Data

Decon Depth Mtr - rinse with analyte free water  
§Purge method FDEP-SOP 2212.3.1

| Sampled By(Print): <b>K. Morais, S. Phillips</b> |                            |  |                               | Sampler(s) Signatures: <i>[Signatures]</i>   |                             |   |  |
|--|----------------------------|--|-------------------------------|--|-----------------------------|---|--|
| Sampling Method: <b>PP</b>                       | Tube Material: <b>PP/S</b> | Sampling Started Tube Dpth(ft): <b>10'</b>             | Time: <b>11:13</b>            | Sampling completed Tube Dpth(ft): <b>10'</b> | Time: <b>12:02</b>          |   |  |
| Field Decon: <b>NO</b>                           | Field Filtered: <b>NO</b>  | Duplicate: <b>YES</b> <input checked="" type="radio"/> | Acid ID# <b>HNO3: DJ70461</b> | <b>H2SO4: NA</b>                             |                             |   |  |
| Sample Container Specification                   |                            | Sample Preservation                                    |                               |  | Intended Analysis or method |   |  |
| ID:  | Material                   | Volume(mL)   | Preservative                  | Volume added                                 | final pH                    |   |  |
| <b>D18A029-06A</b>                               | PE                         | 500  | HNO3                          | 1.0 mL                                       | <b>1.6</b>                  | Metals: Ba, Be, Cd, Cr, Co, Mo, Se, Hg, <del>Cd</del> |  |
| <b>D18A029-06B</b>                               | PE                         | 250  | HNO3                          | 0.5 mL                                       | <b>1.6</b>                  | Metals: Sb, As, Pb, Ti, <del>B</del> , Li             |  |
| <b>D18A029-06C</b>                               | PE                         | 250  | Chill <6 deg                  | n/a  | n/a                         | Anions: <del>Cl</del> , <del>SO4</del>                |  |
| <b>D18A029-06D</b>                               | PE                         | 2000   | HNO3                          | 4 mL   | <b>1.6</b>                  | Radium 226+228 Combined                               |  |
| <b>D18A029-06E</b>                               | PE                         | 2000   | Chill <6 deg                  | n/a  | n/a                         | Solids: TSS, <del>TDS</del>                           |  |

Remarks: **Sunny 52°F Wind 15mph from NW to WNW**  
Well found blocked and left locked @ departure  
By-product sand/dirt blowing off land fill toward up periodically.  
like a cloud. Aerial Equip on pile smoking

# DGS Groundwater Sampling Log



|                            |                                       |                                 |                                   |           |                 |
|----------------------------|---------------------------------------|---------------------------------|-----------------------------------|-----------|-----------------|
| WELL ID: <b>LF-3</b>       | Location: <b>WK #3 CCK Assessment</b> | Latitude: <b>29°45'50.6376"</b> | Longitude: <b>-82°23'52.1592"</b> | MSL @ TOC | Date In Service |
| Quarter: <b>Assessment</b> | Date: <b>3-8-18</b>                   | Well Type: <b>D</b>             |                                   |           |                 |

### Purging Data

|   |                                   |                                 |   |
|---|-----------------------------------|---------------------------------|---|
| Diameter(in) <b>2</b>   | Total well depth(ft) <b>14.43</b> | Depth to water(ft) <b>10.10</b> | Well capacity(L/ft) <b>0.6</b>          |
| Distance from TOC to top of screen <b>4.43</b> ft.                |                                   | Purging Method: <b>PP</b>       | Equipment Volume = <b>750 L</b>         |
| 1 WELL VOLUME(L)=(Total Well Depth-Depth to water)X Well Capacity |                                   |                                 | Time of Depth Meter Decon: <b>12:08</b> |
| <b>Well Vol = (14.43 - 10.10) X 0.6 = 5.10 L</b>                  |                                   |                                 | 1/4 well vol. = <b>N/A</b>              |
| Init Tubing Dpth(ft) <b>10'</b>                                   | Final Tube Dept(ft): <b>10'</b>   | Purge Start Time: <b>12:11</b>  | Purge Stop time: <b>12:55</b>           |
|   |                                   |                                 | Total Volume Purged <b>5.84 L</b>       |

| Time | Volume Purged (L) | Cumul. Volume Purged (L) | Purge rate mL/min | Depth to water (ft) | pH (SU) | Temp (°C)                          | Cond (µmho) | Diss O2 (mg/L) | Turbidity (ntu) | ORP (mv) | Observed odor or color           |
|------|-------------------|--------------------------|-------------------|---------------------|---------|------------------------------------|-------------|----------------|-----------------|----------|----------------------------------|
|      |                   |                          |                   |                     | ± 0.2§  | ± 0.2§                             | ± 5%§       | 20% sat§       | 20 max§         |          |                                  |
| 1248 | 5.0               | 5.0                      | 140               | 6.31                | 6.31    | 17.8                               | 1156        | 0.38           | 0.34            | 46.9     | No odor<br>Yellow color<br>Clear |
| 1251 | 0.420             | 5.420                    | 140               | 6.31                | 6.31    | 17.8                               | 1163        | 0.34           | 1.70            | 39.8     |                                  |
| 1254 | 0.420             | 5.84                     | 140               | 6.31                | 6.29    | 17.8                               | 1168        | 0.32           | 1.37            | 31.4     |                                  |
|      |                   |                          |                   |                     |         | N/A<br>Temp<br>Calc<br><b>17.5</b> |             |                |                 |          |                                  |

◆ FDEP SOP Section 2212.3

### Sampling Data

Decon Depth Mtr - rinse with analyte free water  
§Purge method FDEP-SOP 2212.3.1

|   |                            |   |                               |   |            |   |  |
|---|----------------------------|---|-------------------------------|---|------------|---|--|
| Sampled By(Print): <b>S. Phillips K. Morrison</b> |                            |   |                               | Sampler(s) Signatures: <i>S. Phillips K. Morrison</i>             |            |   |  |
| Sampling Method: <b>PP</b>                        | Tube Material: <b>PP/S</b> | Sampling Started<br>Tube Dpth(ft): <b>10'</b> Time: <b>1256</b> |                               | Sampling completed<br>Tube Dpth(ft): <b>10'</b> Time: <b>1338</b> |            |   |  |
| Field Decon: <b>NO</b>                            | Field Filtered: <b>NO</b>  | Duplicate: <b>YES</b> <input checked="" type="radio"/>          | Acid ID# <b>HNO3: DJ70401</b> | <b>H2SO4: N/A</b>   |            | <b>DL71301 ALS mlab</b>                           |  |
| Sample Container Specification                    |                            |   | Sample Preservation           |   |            | Intended Analysis or method                       |  |
| ID:   | Material                   | Volume(mL)  | Preservative                  | Volume added  | final pH   |   |  |
| <b>D18A029-07A</b>                                | <b>PE</b>                  | <b>500</b>  | <b>HNO3</b>                   | <b>1.0 mL</b>   | <b>1.0</b> | <b>Metals: Ba, Be, Cd, Cr, Co, Mo, Se, Hg, Ga</b> |  |
| <b>D18A029-07B</b>                                | <b>PE</b>                  | <b>250</b>  | <b>HNO3</b>                   | <b>0.5 mL</b>   | <b>1.0</b> | <b>Metals: Sb, As, Pb, Ti, B, Li</b>              |  |
| <b>D18A029-07C</b>                                | <b>PE</b>                  | <b>250</b>  | <b>Chill &lt;6 deg</b>        | <b>n/a</b>  | <b>n/a</b> | <b>Anions: F, Cl, SO4</b>                         |  |
| <b>D18A029-07D</b>                                | <b>PE</b>                  | <b>2000</b>   | <b>HNO3</b>                   | <b>4 mL</b>   | <b>1.0</b> | <b>Radium 226+228 Combined</b>                    |  |
| <b>D18A029-07E</b>                                | <b>PE</b>                  | <b>2000</b>   | <b>Chill &lt;6 deg</b>        | <b>n/a</b>  | <b>n/a</b> | <b>Solids: TSS, TDS</b>                           |  |

Remarks: Well found locked and left locked @ departure  
56°F West wind @ 13mph, Sunny  
excessively and and dust blowing off land fill toward us periodically  
like a cloud. Heavy equipment on pile smoothing; sometimes in a cloud of it

# DGS Groundwater Sampling Log



|                                     |                     |                                 |                                   |                          |                              |
|-------------------------------------|---------------------|---------------------------------|-----------------------------------|--------------------------|------------------------------|
| WELL ID: <b>LF-4</b>                | Location:           | Latitude: <b>29°45'50.5008"</b> | Longitude: <b>-82°23'58.6248"</b> | MSL @ TOC: <b>186.01</b> | Date In Service: <b>2017</b> |
| Quarter: <u>CCR wk#3 assessment</u> | Date: <u>3-8-18</u> | Well Type: <b>D</b>             |                                   |                          |                              |

### Purging Data

|   |                                   |                                  |  |
|---|-----------------------------------|----------------------------------|--|
| Diameter(in) <b>2</b>   | Total well depth(ft) <b>13.95</b> | Depth to water(ft) <u>6.23</u>   | Well capacity(L/ft) <b>0.6</b>                         |
| Distance from TOC to top of screen <b>3.95</b> ft.                |                                   | Purging Method: <b>PP</b>        | Equipment Volume = <b>750 mL</b>                       |
| 1 WELL VOLUME(L)=(Total Well Depth-Depth to water)X Well Capacity |                                   |                                  | Time of Depth Meter Decon: <u>1400</u> <u>53.58-18</u> |
| <b>Well Vol = ( 13.95 - 6.23 ) X 0.6 = 4.63 L</b>                 |                                   |                                  | 1/4 well vol. =  |
| Init Tubing Dpth(ft) <u>10'</u>                                   | Final Tube Dept(ft): <u>10'</u>   | Purge Start Time: <u>1403</u>    | Purge Stop time: <u>1449</u>                           |
|   |                                   | Total Volume Purged <u>5.4 L</u> |  |

| Time | Volume Purged (L) | Cumul. Volume Purged (L) | Purge rate mL/min | Depth to water (ft) | pH (SU)       | Temp (°C) | Cond (µmho) | Diss O2 (mg/L) | Turbidity (ntu) | ORP (mv) | Observed odor or color                             |
|------|-------------------|--------------------------|-------------------|---------------------|---------------|-----------|-------------|----------------|-----------------|----------|--|
|      |                   |                          |                   |                     | ± 0.2§        | ± 0.2§    | ± 5%§       | 20% sat§       | 20 max§         |          |  |
| 1442 | 4.65              | 4.65                     | 125               | 6.37                | 6.31          | 19.0      | 1555        | 0.24           | 10.4            | 96.0     | No Odor<br>yellow color<br>some floating particles |
| 1445 | 0.325             | 5.025                    | 125               | 6.37                | 6.30          | 19.0      | 1548        | 0.23           | 9.44            | 91.4     |  |
| 1448 | 0.375             | 5.400                    | 125               | 6.37                | 6.29          | 19.0      | 1548        | 0.23           | 9.27            | 86.4     |  |
|      |                   |                          |                   |                     | NIST temp can | (18.7)    |             |                |                 |          |  |

◆ FDEP SOP Section 2212.3

### Sampling Data

Decon Depth Mtr - rinse with analyte free water  
§Purge method FDEP-SOP 2212.3.1

|                                       |                            |  |                                      |  |                             |  |  |
|---------------------------------------|----------------------------|--|--------------------------------------|--|-----------------------------|--|--|
| Sampled By(Print): <u>S. Phillips</u> |                            |  |                                      | Sampler(s) Signatures: <u>S. Phillips</u>    |                             |  |  |
| Sampling Method: <b>PP</b>            | Tube Material: <b>PP/S</b> | Sampling Started Tube Dpth(ft): <u>10'</u>   | Time: <u>1450</u>                    | Sampling completed Tube Dpth(ft): <u>10'</u> | Time: <u>1534</u>           |  |  |
| Field Decon: <b>NO</b>                | Field Filtered: <b>NO</b>  | Duplicate: <b>YES</b> <input checked="" type="radio"/> <b>NO</b> <input type="radio"/> | Acid ID# <b>HNO3:</b> <u>D770401</u> | <b>H2SO4:</b> <u>NA</u>                      | <u>D671301 - All metals</u> |  |  |

| Sample Container Specification |          |            | Sample Preservation |              |            | Intended Analysis or method                |
|--------------------------------|----------|------------|---------------------|--------------|------------|--|
| ID:                            | Material | Volume(mL) | Preservative        | Volume added | final pH   |  |
| <u>D15A029-08A</u>             | PE       | 500        | HNO3                | 1.0 mL       | <u>1.6</u> | Metals: Ba, Be, Cd, Cr, Co, Mo, Se, Hg, Ca |
| <u>D15A029-08B</u>             | PE       | 250        | HNO3                | 0.5 mL       | <u>1.6</u> | Metals: Sb, As, Pb, Tl, Bi                 |
| <u>D15A029-08C</u>             | PE       | 250        | Chill <6 deg        | n/a          | n/a        | Anions: F, Cl, SO4                         |
| <u>D15A029-08D</u>             | PE       | 2000       | HNO3                | 4 mL         | <u>1.6</u> | Radium 226+228 Combined                    |
| <u>D15A029-08E</u>             | PE       | 2000       | Chill <6 deg        | n/a          | n/a        | Solids: TSS, TDS                           |

Remarks: Well found loaded and left locked on departure  
61°F Sunny Wind West @ 12 mph

# DGS Groundwater Sampling Log



|                                      |                     |                               |                                 |                          |                              |
|--------------------------------------|---------------------|-------------------------------|---------------------------------|--------------------------|------------------------------|
| WELL ID: <b>R4T5 (CCR)</b>           | Location:           | Latitude: <b>29°45'52.14"</b> | Longitude: <b>-82°23'33.18"</b> | MSL @ TOC: <b>187.46</b> | Date In Service: <b>7-93</b> |
| Quarter: <b>WK #3 CCR Assessment</b> | Date: <b>3-8-18</b> | Well Type: <b>D</b>           |                                 |                          |                              |

### Purging Data

|   |                                    |   |                                  |
|---|------------------------------------|---|----------------------------------|
| Diameter(in): <b>2</b>  | Total well depth(ft): <b>15.08</b> | Depth to water(ft): <b>11.29</b>        | Well capacity(L/ft): <b>0.6</b>  |
| Distance from TOC to top of screen: <b>5.08</b> ft.               | Purging Method: <b>PP</b>          |   | Equipment Volume = <b>750 mL</b> |
| 1 WELL VOLUME(L)=(Total Well Depth-Depth to water)X Well Capacity |                                    | Time of Depth Meter Decon: <b>07:49</b> |                                  |
| <b>Well Vol = ( 15.08 - 11.29 ) X 0.6 = 2.3 L</b>                 |                                    | 1/4 well vol. = <b>0.6</b>              |                                  |
| Init Tubing Dpth(ft): <b>11.9</b>                                 | Final Tube Dept(ft): <b>12.2</b>   | Purge Start Time: <b>07:50</b>          | Purge Stop time: <b>08:17</b>    |
|   |                                    |   | Total Volume Purged <b>3.6 L</b> |

| Time  | Volume Purged (L) | Cumul. Volume Purged (L) | Purge rate mL/min | Depth to water (ft) | pH (SU) | Temp (°C) | Cond (µmho) | Diss O2 (mg/L) | Turbidity (ntu) | ORP (mv) | Observed odor or color |
|-------|-------------------|--------------------------|-------------------|---------------------|---------|-----------|-------------|----------------|-----------------|----------|------------------------|
|       |                   |                          |                   |                     | ± 0.2§  | ± 0.2§    | ± 5%§       | 20% sat§       | 20 max§         |          |                        |
| 08:07 | 2.4               | 2.4                      | 160               | 11.62               | 6.11    | 21.2      | 788.3       | 0.26           | 0.31            | -32.6    | Clear yellowish color  |
| 08:11 | 0.6               | 3.0                      | 160               | 11.62               | 6.11    | 21.2      | 784.1       | 0.24           | 0.58            | -36.1    |                        |
| 08:16 | 0.6               | 3.6                      | 160               | 11.62               | 6.11    | 21.2      | 783.7       | 0.18           | 0.98            | -38.5    |                        |
|       |                   |                          |                   |                     |         |           |             |                |                 |          |                        |
|       |                   |                          |                   |                     |         |           |             |                |                 |          |                        |
|       |                   |                          |                   |                     |         |           |             |                |                 |          |                        |
|       |                   |                          |                   |                     |         |           |             |                |                 |          |                        |
|       |                   |                          |                   |                     |         |           |             |                |                 |          |                        |
|       |                   |                          |                   |                     |         |           |             |                |                 |          |                        |
|       |                   |                          |                   |                     |         |           |             |                |                 |          |                        |

Nisk Temp Cont  
**50.9**

◆ FDEP SOP Section 2212.3

### Sampling Data

Decon Depth Mtr - rinse with analyte free water  
§Purge method FDEP-SOP 2212.3.1

|  |                            |   |                        |  |                        |   |                               |
|--|----------------------------|---|------------------------|--|------------------------|---|-------------------------------|
| Sampled By(Print): <b>K. Hanson, S. Phillips</b> |                            |   |                        | Sampler(s) Signatures: <b>K. Hanson, S. Phillips</b> |                        |   |                               |
| Sampling Method: <b>PP</b>                       | Tube Material: <b>PP/S</b> | Sampling Started Tube Dpth(ft): <b>12.2</b> | Time: <b>08:18</b>     | Sampling completed Tube Dpth(ft): <b>12.2</b>        | Time: <b>08:49</b>     |   |                               |
| Field Decon: <b>NO</b>                           | Field Filtered: <b>NO</b>  | Duplicate: <b>YES</b>                       | <b>NO</b>              | Acid ID#   | <b>HNO3: D-J 70401</b> | <b>H2SO4: NA</b>                                  | <b>DL 7136 (ALS - Metals)</b> |
| Sample Container Specification                   |                            |   | Sample Preservation    |  |                        | Intended Analysis or method                       |                               |
| ID:  | Material                   | Volume(mL)                                  | Preservative           | Volume added   | final pH               |   |                               |
| <b>D18A024-12 A</b>                              | <b>PE</b>                  | <b>500</b>                                  | <b>HNO3</b>            | <b>1.0 mL</b>  | <b>1.6</b>             | <b>Metals: Ba, Be, Cd, Cr, Co, Mo, Se, Hg, Ca</b> |                               |
| <b>D18A024-12 B</b>                              | <b>PE</b>                  | <b>250</b>                                  | <b>HNO3</b>            | <b>0.5 mL</b>  | <b>1.7</b>             | <b>Metals: Sb, As, Pb, Ti, Bi, Li</b>             |                               |
| <b>D18A024-12 C</b>                              | <b>PE</b>                  | <b>250</b>                                  | <b>Chill &lt;6 deg</b> | <b>n/a</b>   | <b>n/a</b>             | <b>Anions: F, Cl, SO4</b>                         |                               |
| <b>D18A024-12 D</b>                              | <b>DPE</b>                 | <b>2000</b>                                 | <b>HNO3</b>            | <b>4 mL</b>  | <b>1.6</b>             | <b>Radium 226+228 Combined</b>                    |                               |
| <b>D18A024-12 E</b>                              | <b>PE</b>                  | <b>2000</b>                                 | <b>Chill &lt;6 deg</b> | <b>n/a</b>   | <b>n/a</b>             | <b>Solids: TSS, TDS</b>                           |                               |

Remarks: **Sunny 40° F light winds 6mph from NW**  
**Well locked upon arrival. Secured upon departure**

# DGS Groundwater Sampling Log



|                                      |                     |                               |                                 |                     |                 |
|--------------------------------------|---------------------|-------------------------------|---------------------------------|---------------------|-----------------|
| WELL ID: <b>R6T4 (CCR)</b>           | Location:           | Latitude: <b>29°46'00.90"</b> | Longitude: <b>-82°23'40.20"</b> | MSL @ TOC           | Date In Service |
| Quarter: <b>Wk #3 CCR Assessment</b> | Date: <b>3-7-18</b> | <b>183.6</b>                  | <b>7-93</b>                     | Well Type: <b>U</b> |                 |

### Purging Data

|   |             |                      |              |   |              |                     |               |
|---|-------------|----------------------|--------------|---|--------------|---------------------|---------------|
| Diameter(in)  | <b>2</b>    | Total well depth(ft) | <b>14.13</b> | Depth to water(ft)                      | <b>4.65</b>  | Well capacity(L/ft) | <b>0.6</b>    |
| Distance from TOC to top of screen                                | <b>4.13</b> | ft.                  |              | Purging Method:                         | <b>PP</b>    | Equipment Volume =  | <b>750 mL</b> |
| 1 WELL VOLUME(L)=(Total Well Depth-Depth to water)X Well Capacity |             |                      |              | Time of Depth Meter Decon: <b>09:55</b> |              |                     |               |
| <b>Well Vol = ( 14.13 - 4.65 ) X 0.6 = 5.7 L</b>                  |             |                      |              | 1/4 well vol. = <b>1.4</b>              |              |                     |               |
| Init Tubing Dpth(ft)  | <b>5.45</b> | Final Tube Dept(ft)  | <b>6.55</b>  | Purge Start Time:                       | <b>09:58</b> | Purge Stop time:    | <b>10:30</b>  |
|   |             |                      |              |   |              | Total Volume Purged | <b>129L</b>   |

| Time  | Volume Purged (L) | Cumul. Volume Purged (L) | Purge rate mL/min | Depth to water (ft) | pH (SU) | Temp (°C) | Cond (µmho) | Diss O2 (mg/L) | Turbidity (ntu) | ORP (mv) | Observed odor or color |
|-------|-------------------|--------------------------|-------------------|---------------------|---------|-----------|-------------|----------------|-----------------|----------|------------------------|
|       |                   |                          |                   |                     | ± 0.2§  | ± 0.2§    | ± 5%§       | 20% sat§       | 20 max§         |          |                        |
| 10:14 | 5.7               | 5.4                      | 480               | 5.72                | 6.71    | 19.4      | 336.8       | 2.18           | 0.68            | -83.5    | Clear                  |
| 10:16 | 1.4               | 7.1                      | 480               | 5.72                | 6.63    | 19.4      | 360.7       | 0.27           | 0.65            | -85.6    | No odor                |
| 10:18 | 1.4               | 8.5                      | 480               | 5.72                | 6.54    | 19.4      | 378.3       | 0.96           | 0.81            | -87.2    | Colorless 1cr          |
| 10:23 | 1.6               | 10.1                     | 480               | 5.72                | 6.43    | 19.4      | 402.1       | 1.19           | 0.43            | -85.9    | Slight 3-8-1           |
| 10:26 | 1.4               | 11.5                     | 480               | 5.72                | 6.41    | 19.4      | 405.8       | 0.89           | 0.42            | -86.8    | Yellow color           |
| 10:29 | 1.4               | 12.9                     | 480               | 5.75                | 6.39    | 19.4      | 404.8       | 1.45           | 0.51            | -88.1    |                        |
|       |                   |                          |                   |                     | 19.1    |           |             |                |                 |          |                        |

◆ FDEP SOP Section 2212.3

### Sampling Data

Decon Depth Mtr - rinse with analyte free water  
 §Purge method FDEP-SOP 2212.3.1

|  |                            |  |                               |   |                    |  |  |
|--|----------------------------|--|-------------------------------|---|--------------------|--|--|
| Sampled By(Print): <b>K. Williams, S. Phillips</b> |                            |  |                               | Sampler(s) Signatures: <i>[Signatures]</i>    |                    |  |  |
| Sampling Method: <b>PP</b>                         | Tube Material: <b>PP/S</b> | Sampling Started Tube Dpth(ft): <b>6.55</b>            | Time: <b>10:31</b>            | Sampling completed Tube Dpth(ft): <b>6.55</b> | Time: <b>10:49</b> |  |  |
| Field Decon: <b>NO</b>                             | Field Filtered: <b>NO</b>  | Duplicate: <b>YES</b> <input checked="" type="radio"/> | Acid ID# <b>HNO3: DJ70401</b> | <b>H2SO4: NA</b>                              | <b>DL 71301</b>    |  |  |

| Sample Container Specification |           |             | Sample Preservation    |               |            | Intended Analysis or method                |
|--------------------------------|-----------|-------------|------------------------|---------------|------------|--|
| ID:                            | Material  | Volume(mL)  | Preservative           | Volume added  | final pH   |  |
| <b>D18A029-13A</b>             | <b>PE</b> | <b>500</b>  | <b>HNO3</b>            | <b>1.0 mL</b> | <b>1.3</b> | Metals: Ba, Be, Cd, Cr, Co, Mo, Se, Hg, Ca |
| <b>D18A029-13B</b>             | <b>PE</b> | <b>250</b>  | <b>HNO3</b>            | <b>0.5 mL</b> | <b>1.6</b> | Metals: Sb, As, Pb, Ti, Fe, Li             |
| <b>D18A029-13C</b>             | <b>PE</b> | <b>250</b>  | <b>Chill &lt;6 deg</b> | <b>n/a</b>    | <b>n/a</b> | Anions: F, Cl, SO4                         |
| <b>D18A029-13D</b>             | <b>PE</b> | <b>2000</b> | <b>HNO3</b>            | <b>4 mL</b>   | <b>1.6</b> | Radium 226+228 Combined                    |
| <b>D18A029-13E</b>             | <b>PE</b> | <b>2000</b> | <b>Chill &lt;6 deg</b> | <b>n/a</b>    | <b>n/a</b> | Solids: TSS, TDS                           |

Remarks: **Well found secure, left secure**  
**630 F winds 17 mph from NW**



# DGS Groundwater Sampling Log



|                                      |                     |                     |                      |  |
|--------------------------------------|---------------------|---------------------|----------------------|--|
| WELL ID: <b>EBLANK</b>               | Location: <b>na</b> | Latitude: <b>na</b> | Longitude: <b>na</b> | MSL @ TOC Date In Service: <b>0 na</b> |
| Quarter: <b>Wk #3 CCR Assessment</b> |                     | Date: <b>3-7-18</b> |                      | Well Type: <b>na</b>                   |

### Purging Data

|   |                               |                                 |   |
|---|-------------------------------|---------------------------------|---|
| Diameter(in) <b>na</b>  | Total well depth(ft) <b>0</b> | Depth to water(ft) <b>NA</b>    | Well capacity(L/ft) <b>0</b>            |
| Distance from TOC to top of screen <b>0</b> ft.                   |                               | Purging Method: <b>PP</b>       | Equipment Volume = <b>750 mL</b>        |
| 1 WELL VOLUME(L)=(Total Well Depth-Depth to water)X Well Capacity |                               |                                 | Time of Depth Meter Decon: <b>15:59</b> |
| <b>Well Vol = ( 0 - NA ) X 0 = NA L</b>                           |                               |                                 | 1/4 well vol. = <b>NA</b>               |
| Init Tubing Dpth(ft)  | Final Tube Dept(ft):          | Purge Start Time:               | Purge Stop time: <b>16:13</b>           |
|   |                               | Total Volume Purged <b>NA</b> L |   |

| Time  | Volume Purged (L) | Cumul. Volume Purged (L) | Purge rate mL/min | Depth to water (ft) | pH (SU) | Temp (°C) | Cond (µmho) | Diss O2 (mg/L) | Turbidity (ntu) | ORP (mv) | Observed odor or color |
|-------|-------------------|--------------------------|-------------------|---------------------|---------|-----------|-------------|----------------|-----------------|----------|------------------------|
|       |                   |                          |                   |                     | ± 0.2§  | ± 0.2§    | ± 5%§       | 20% sat§       | 20 max§         |          |                        |
| 16:08 | NA                | NA                       | 440               | NA                  | 6.03    | 20.0      | 0.74        | 8.63           | 0.15            | 133.7    | Clear                  |
| 16:10 | NA                | NA                       | 440               | NA                  | 5.97    | 19.9      | 0.71        | 8.62           | 0.17            | 139.9    | Colorless              |
| 16:12 | NA                | NA                       | 440               | NA                  | 5.98    | 20.0      | 0.70        | 8.62           | 0.12            | 150.7    | No odor                |
|       |                   |                          |                   | NA                  |         |           |             |                |                 |          |                        |

km  
3-7-18

No. NIST temp needed for EDMA

Decon Depth Mtr - rinse with analyte free water  
§Purge method FDEP-SOP 2212.3.1

◆ FDEP SOP Section 2212.3

### Sampling Data

|  |                            |  |                                |  |                    |  |  |
|--|----------------------------|--|--------------------------------|--|--------------------|--|--|
| Sampled By(Print): <b>K. Morrison, S. Phillips</b> |                            |  |                                | Sampler(s) Signatures: <i>K. Morrison, S. Phillips</i> |                    |  |  |
| Sampling Method: <b>PP</b>                         | Tube Material: <b>PP/S</b> | Sampling Started Tube Dpth(ft): <b>N/A</b> | Time: <b>16:14</b>             | Sampling completed Tube Dpth(ft): <b>NA</b>            | Time: <b>16:27</b> |  |  |
| Field Decon: <b>NO</b>                             | Field Filtered: <b>NO</b>  | Duplicate: <b>YES</b> (NO)                 | Acid ID# <b>HNO3: PJ 70401</b> | <b>H2SO4: DL T1301-AIS sample</b>                      | <b>NA</b>          |  |  |

| Sample Container Specification |          |            | Sample Preservation |              |          | Intended Analysis or method                |
|--------------------------------|----------|------------|---------------------|--------------|----------|--|
| ID:                            | Material | Volume(mL) | Preservative        | Volume added | final pH |  |
| D18A029-14A                    | PE       | 500        | HNO3                | 1.0 mL       | 1.3      | Metals: Ba, Be, Cd, Cr, Co, Mo, Se, Hg, Ca |
| D18A029-14B                    | PE       | 250        | HNO3                | 0.5 mL       | 1.6      | Metals: Sb, As, Pb, Ti, Li                 |
| D18A029-14C                    | PE       | 250        | Chill <6 deg        | n/a          | n/a      | Anions: F, Cl, SO4                         |
| D18A029-14D                    | PE       | 2000       | HNO3                | 4 mL         | 1.3      | Radium 226+228 Combined                    |
| D18A029-14E                    | PE       | 2000       | Chill <6 deg        | n/a          | n/a      | Solids: TSS, DS                            |

Remarks: **Collected at SIS 4**

# DGS Groundwater Sampling Log



WELL ID: **R1T6** Location: Latitude: **29°45'48.57"** Longitude: **-82°23'01.34"** MSL @ TOC Date In Service: **188.95 C 1980**

Quarter: **wk #3 CCR** Date: **3-6-18** Well Type: **SB**

## Purging Data

| Diameter(in)  | <b>4</b>          | Total well depth(ft)     | <b>23.25</b>      | Depth to water(ft)                     | <b>5.25</b>   | Well capacity(L/ft) | <b>2.5</b>    |                |                 |          |                        |
|---|-------------------|--------------------------|-------------------|--|---------------|---------------------|---------------|----------------|-----------------|----------|------------------------|
| Distance from TOC to top of screen                                | <b>19.45</b>      | ft.                      |                   | Purging Method:                        | <b>PP</b>     | Equipment Volume =  | <b>750 mL</b> |                |                 |          |                        |
| 1 WELL VOLUME(L)=(Total Well Depth-Depth to water)X Well Capacity |                   |                          |                   | Time of Depth Meter Decon: <b>0815</b> |               |                     |               |                |                 |          |                        |
| <b>Well Vol = ( 23.25 - 5.25 ) X 2.5 = 45.6 L</b>                 |                   |                          |                   | 1/4 well vol. = <b>11.4</b>            |               |                     |               |                |                 |          |                        |
| Init Tubing Dpth(ft)  | <b>6.15</b>       | Final Tube Dept(ft):     | <b>8.3</b>        | Purge Start Time:                      | <b>0819</b>   | Purge Stop time:    | <b>1113</b>   |                |                 |          |                        |
|   |                   |                          |                   |  |               | Total Volume Purged | <b>68.4 L</b> |                |                 |          |                        |
| Time  | Volume Purged (L) | Cumul. Volume Purged (L) | Purge rate mL/min | Depth to water (ft)                    | pH (SU)       | Temp (°C)           | Cond (µmho)   | Diss O2 (mg/L) | Turbidity (ntu) | ORP (mv) | Observed odor or color |
|   |                   |                          |                   |  | ± 0.2§        | ± 0.2§              | ± 5%§         | 20% sat§       | 20 max§         |          |                        |
| 10:12   | 45.6              | 45.6                     | 3.90              | 7.39                                   | 6.78          | 19.4                | 534.3         | 0.12           | 1.17            | 75.2     | No Odor                |
| 10:42   | 11.4              | 57.0                     | 390               | 7.39                                   | 6.64          | 19.4                | 535.0         | 0.65           | 0.82            | 20.6     | Clear                  |
| 11:12   | 11.4              | 68.4                     | 390               | 7.39                                   | 6.62          | 19.4                | 535.8         | 0.21           | 0.41            | 24.8     | No Color               |
|   |                   |                          |                   |  | NIST Temp Cal | (19.1)              |               |                |                 |          |                        |

◆ FDEP SOP Section 2212.3

## Sampling Data

Decon Depth Mtr - rinse with analyte free water  
\$Purge method FDEP-SOP 2212.3.1

Sampled By(Print): **S. Phillips** Sampler(s) Signatures: **J. Phillips**

Sampling Method: PP Tube Material: PP/S Sampling Started Tube Dpth(ft): **8.3** Time: **1114** Sampling completed Tube Dpth(ft): **8.3** Time: **1121**

Field Decon: NO Field Filtered: NO Duplicate: YES **(NO)** Acid ID# HNO3: **DL71301** H2SO4: **NA**

| Sample Container Specification |          |            | Sample Preservation |              |            | Intended Analysis or method       |
|--------------------------------|----------|------------|---------------------|--------------|------------|-----------------------------------|
| ID:                            | Material | Volume(mL) | Preservative        | Volume added | final pH   |                                   |
| <del>D18A029-01</del>          | PE       | 2000       | Chill <6 deg        | none         | n/a        | Physical Analysis - TSS           |
| <del>SP3-618</del>             | PE       | 250        | Chill 6 deg C       | none         | n/a        | Anions                            |
| <del>_____</del>               | PE       | 250        | Chill + H2SO        | 0.5 mL       |            | Demand-NPDOC and NO3+NO2          |
| <del>_____</del>               | PE       | 1000       | HNO3                | 2 mL         |            | Radiological-GA                   |
| <del>_____</del>               | PE       | 500        | HNO3                | 1 mL         |            | Metals                            |
| D18A024-01                     | PE       | 250        | HNO3                | 0.5 mL       | <b>1.3</b> | Metals: <del>As, Pb</del> Lithium |

Tubing depth is **0.9** ft below depth to water for every instance.

Remarks: **well found locked upon arrival and left locked @ departure  
Temp. 71°F, wind SSW @ 10mph, mostly clouds**

# DGS Groundwater Sampling Log



WELL ID: **R2T1** Location: Latitude: **29°46'13.23"** Longitude: **-82°23'11.71"** MSL @ TOC Date In Service: **185.19 C 1980**

Quarter: **CCR wk# 3** Date: **3/6/18** Well Type: **B**

## Purging Data

| Diameter(in)  | <b>4</b>          | Total well depth(ft)     | <b>13.94</b>      | Depth to water(ft)                      | <b>4.58</b> | Well capacity(L/ft) | <b>2.5</b>    |                |                 |          |                        |
|---|-------------------|--------------------------|-------------------|---|-------------|---------------------|---------------|----------------|-----------------|----------|------------------------|
| Distance from TOC to top of screen                                | <b>9.14</b>       | ft.                      |                   | Purging Method:                         | <b>PP</b>   | Equipment Volume =  | <b>750 mL</b> |                |                 |          |                        |
| 1 WELL VOLUME(L)=(Total Well Depth-Depth to water)X Well Capacity |                   |                          |                   | Time of Depth Meter Decon: <b>07.55</b> |             |                     |               |                |                 |          |                        |
| <b>Well Vol = ( 13.94 - 4.58 ) X 2.5 = 23.4 L</b>                 |                   |                          |                   | 1/4 well vol. = <b>5.8</b>              |             |                     |               |                |                 |          |                        |
| Init Tubing Dpth(ft)  | <b>5.5</b>        | Final Tube Dept(ft)      | <b>8.16</b>       | Purge Start Time:                       | <b>803</b>  | Purge Stop time:    | <b>1526</b>   |                |                 |          |                        |
|   |                   |                          |                   | Total Volume Purged <b>35.0 L</b>       |             |                     |               |                |                 |          |                        |
| Time  | Volume Purged (L) | Cumul. Volume Purged (L) | Purge rate mL/min | Depth to water (ft)                     | pH (SU)     | Temp (°C)           | Cond (µmho)   | Diss O2 (mg/L) | Turbidity (ntu) | ORP (mv) | Observed odor or color |
|   |                   |                          |                   |   | ± 0.2§      | ± 0.2§              | ± 5%§         | 20% sat§       | 20 max§         |          |                        |
| 1330  | 23.4              | 23.4                     | 90 <sup>95</sup>  | 6.81                                    | 5.41        | 18.4                | 49.92         | 1.67           | 0.43            | 212.6    | No Odn                 |
| 1431  | 5.8               | 29.2                     | 95                | 6.99                                    | 5.40        | 18.4                | 48.90         | 1.75           | 0.36            | 179.4    | No Odn                 |
| 1525  | 5.8               | 35.0                     | 95*               | 7.26                                    | 5.41        | 18.4                | 49.77         | 1.75           | 0.44            | 186.3    | Clear                  |
|   |                   |                          |                   |   |             |                     |               |                |                 |          |                        |
|   |                   |                          |                   |   |             |                     |               |                |                 |          |                        |
|   |                   |                          |                   |   |             |                     |               |                |                 |          |                        |
|   |                   |                          |                   |   |             |                     |               |                |                 |          |                        |
|   |                   |                          |                   |   |             |                     |               |                |                 |          |                        |
|   |                   |                          |                   |   |             |                     |               |                |                 |          |                        |
|   |                   |                          |                   |   |             |                     |               |                |                 |          |                        |
|   |                   |                          |                   |   |             |                     |               |                |                 |          |                        |

P. 2023

18.1  
NIST  
Temp  
Carr.

FDEP SOP Section 2212.3

## Sampling Data

Decon Depth Mtr - rinse with analyte free water  
§Purge method FDEP-SOP 2212.3.1

Sampled By(Print): **S. Phillips, K. Morrison** Sampler(s) Signatures: *S. Phillips, Kimberly Morrison*

Sampling Method: **PP** Tube Material: **PP/S** Sampling Started Tube Dpth(ft): **8.16** Time: **1526** Sampling completed Tube Dpth(ft): **8.16** Time: **1551**

Field Decon: **NO** Field Filtered: **NO** Duplicate: **YES**  **NO** Acid ID# **HNO3: DL71301 H2SO4: NA**

| Sample Container Specification |               |                 | Sample Preservation      |                   |                | Intended Analysis or method         |
|--------------------------------|---------------|-----------------|--------------------------|-------------------|----------------|-------------------------------------|
| ID:                            | Material      | Volume(mL)      | Preservative             | Volume added      | final pH       |                                     |
| <b>D18A029-10A</b>             | <b>PE</b>     | <b>2000</b>     | <b>Chill &lt;6 deg</b>   | <b>none</b>       | <b>n/a</b>     | <b>Physical Analysis - TSS</b>      |
| <del>PE</del>                  | <del>PE</del> | <del>250</del>  | <del>Chill 6 deg C</del> | <del>none</del>   | <del>n/a</del> | <del>Anions</del>                   |
| <del>PE</del>                  | <del>PE</del> | <del>250</del>  | <del>Chill + H2SO</del>  | <del>0.5 mL</del> | <del></del>    | <del>Demand-NPDOC and NO3+NO2</del> |
| <del>PE</del>                  | <del>PE</del> | <del>1000</del> | <del>HNO3</del>          | <del>2 mL</del>   | <del></del>    | <del>Radiological-GA</del>          |
| <del>PE</del>                  | <del>PE</del> | <del>500</del>  | <del>HNO3</del>          | <del>1 mL</del>   | <del></del>    | <del>Metals</del>                   |
| <b>D18A029-10B</b>             | <b>PE</b>     | <b>250</b>      | <b>HNO3</b>              | <b>0.5 mL</b>     | <b>1.6</b>     | <b>Metals: As, Pb, Li</b>           |

Tubing depth is 0.9 ft below depth to water for every instance. 75°F Mostly Cloudy, wind WSW @ 14 mph  
 Remarks: well found locked upon arrival and left locked @ departure  
 \*noticed drawdown going fast so checked purge rate and it had speed up to on its own to 115 mL/min so turned back to 95 mL/min This was from during purge from 1431 to 1525  
 Unable to stop drawdown completely with pump set @ < 100 mL (95).  
 Codes: PP/S + Polypropylene+Silicone tubing PP: Peristaltic Pump PE: Polyethylene B













# Instrument Calibration Log

Model 2100Q

Serial Number 14100C035914

Manufacturer: Hach

Date Purchased 11-2014

Parameter: Turbidity

GRU Prop Tag# none

QTR: CCRW# 2:3: used manuf SOP for calibrations and FDEP 1600 SOP for verifications

|            | Standard Concentration, ID#, Expiration Date | Unit |
|------------|--|------|
| Standard A | 2° Greley Std, 6.11                          | NTU  |
| Standard B | 2° Greley Std, 57.2                          | NTU  |
| Standard C | 2° Greley Std, 525                           | NTU  |

D Calibration verification Std. 0.1 NTU, ID# DD71301, exp. 3-31-18

*see below*

| Date    | Time  | STD A,B,C | STD Value | Instrument Response | Dev./ P or F | Calibrated (Yes/No) | Type (Int/Cont) | Sampler Initials |
|---------|-------|-----------|-----------|---------------------|--------------|---------------------|-----------------|------------------|
| 2-8-18  | 14:00 | A         | 6.11      | 6.07                | 0.5% P       | NO                  | Cont            | SP               |
| 2-8-18  | 14:01 | B         | 57.2      | 57.1                | 0.2% P       | NO                  | Cont            | SP               |
| 2-8-18  | 14:02 | C         | 525       | 526                 | 0.2% P       | NO                  | Cont            | SP               |
| 2-8-18  | 14:06 | D         | 0.10      | 0.11                | 10% P        | NO                  | Cont            | SP               |
| 2-13-18 | 16:58 | A         | 6.11      | 6.10                | 0.16% P      | NO                  | Cont            | SP               |
| 2-14-18 | 16:04 | A         | 6.11      | 6.11                | 0% P         | NO                  | Cont            | KM               |
| 2-15-18 | 15:06 | A         | 6.11      | 6.11                | 0% P         | NO                  | Cont            | KM               |
| 2-16-18 | 0944  | A         | 6.11      | 6.10                | 0.16% P      | NO                  | Cont            | SP               |
| 3-5-18  | 1340  | A         | 6.11      | 6.09                | 0.33% P      | NO                  | Cont            | SP               |
| 3-5-18  | 1342  | D         | 0.10      | 0.11                | 10% P        | NO                  | Cont            | SP               |
| 3-7-18  | 1536  | A         | 6.11      | 6.11                | 0% P         | NO                  | Cont            | SP               |
| 3-7-18  | 16:22 | B         | 57.2      | 56.8                | 0.70% P      | NO                  | Cont            | KM               |
| 3-8-18  | 15:03 | B         | 57.2      | 56.6                | 1.05% P      | NO                  | Cont            | SP               |

**\*Acceptance Criteria**

- 0.1 to 10.0 NTU = +/- 10%
- 11 to 40 NTU = +/- 8%
- 41 to 100 NTU = +/- 6.5%
- >100 NTU = +/- 5%

**Primary Standards**

- 10 NTU, ID# DD1302, exp. 6-30-18
- 20 NTU, ID# DD1303, exp. 6-30-18
- 100 NTU, ID# DD1304, exp. 6-30-18
- 800 NTU, ID# DD1305, exp. 6-30-18



## #3 CCR 2018 Assessment Field and Analytical Narrative

### Field Narrative:

- The pH, conductivity, RDO and depth meter sensors were verified against the NIST reference thermometer/probe (CP 117152 & CP148863), and the depth meter was selected for the purpose of measuring temperature in the field; however, the conductivity temperature sensor was used for Equipment Blank since depth meter not used.
- CCR Well sampling began on Tuesday, March 6, 2018 and was completed on Thursday, March 8, 2018 by Kim Morrison and Shelley Phillips.  
In addition to the normal CCR wells, we collected 3 Leachate wells (R1T6, R2T1, and R6T1), as requested by Justin Smith, for lithium and TSS analysis; they were collected on 3-6-18 to 3-7-2018.
- All wells were found secured with a lock upon arrival and left locked upon departure.
- Weather: On Tuesday (3-6-18), the temperature ranged from 71 F to 75 F, mostly cloudy all day with the wind SW @ 10 -14 mph all day. Wednesday (3-7-18) temperature was 56 F to 69 F with sunny and clear skies until about 1315 when the sky became mostly cloudy. The wind WNW at 4 mph in morning and increasing to 11 to 17 mph by 10 am and continuing all day. On Thursday (3-8-18) temperature was 40 F to 61 F with mostly clear skies. The wind started out the morning around 6 mph out of the NW and began increasing by 9 am to NW at 9 -15 mph. In the afternoon the wind was from the west at 12 to 13 mph.
- R2T1: Unable to stop the drawdown with pump set at 95 mL/min. During the purge, we found the pump had sped up to 115 mL/in on its own so we returned it to 95 mL/in (sometime between 1431 and 1525).
- SIS-3: At the lowest purge possible (75 mL/min), we were unable to stop the draw down. The area around this well was saturated.
- LF1: Wind blowing wood particles from DHR toward as we were purging and sampling. Some debris ended in the caps while we were sampling but we were sure to rinse with sample water to clean it out prior to capping the bottles.
- LF2 and LF3: The wind was blowing by-product, sand and dirt from the pile and at times we were in a cloud of it. This continued during the entire purging and sampling of both these wells. The heavy equipment on the pile adding dirt and smoothing it.
- Equipment Blank: The Equipment Blank was collected at SIS3 following the sampling of the well.
- Instruments: Calibration verifications were performed on all instruments and passed.

### Analytical Narrative: Internal Analysis

TSS analysis was performed and all results were satisfactory.

### Analytical Narrative: External Laboratories

- PACE Analytical Services analyzed samples for Fluoride and Radium 226 +228 combined.
- ALS Global (Jacksonville) analyzed samples for the following metals: Antimony, Arsenic, Lead and Thallium by Method 200.8 and Barium, Beryllium, Cadmium, Chromium, Cobalt, Selenium, Molybdenum and Lithium by 200.7.
  - Selenium was detected in the method blank. In the samples where selenium was detected at equal to or less than ten times the method blank, they were qualified with a "V" as per FDEP.
  - Chromium was detected in the Equipment Blank, however it was less than the PQL.
- Kanapaha Laboratory analyzed samples for Mercury, cold vapor.

# DGS Groundwater Sampling Log



|                                 |   |                                 |                                   |   |
|---------------------------------|---|---------------------------------|-----------------------------------|---|
| WELL ID: <b>SIS-1</b>           | Location: <b>29°46'00.1308" -82°23'33.3204"</b> | Latitude: <b>29°46'00.1308"</b> | Longitude: <b>-82°23'33.3204"</b> | MSL @ TOC Date In Service: <b>185.11 2017</b> |
| Quarter: <b>Wk#4CCR assess.</b> | Date: <b>4/3/18</b>                             | Well Type: <b>U</b>             |                                   |   |

### Purging Data

|  |                                   |                                |                                  |
|--|-----------------------------------|--------------------------------|----------------------------------|
| Diameter(in) <b>2</b>                              | Total well depth(ft) <b>13.92</b> | Depth to water(ft) <b>5.02</b> | Well capacity(L/ft) <b>0.6</b>   |
| Distance from TOC to top of screen <b>3.92</b> ft. |                                   | Purging Method: <b>PP</b>      | Equipment Volume = <b>750 mL</b> |

1 WELL VOLUME(L)=(Total Well Depth-Depth to water)X Well Capacity      Time of Depth Meter Decon: **13:00**

**Well Vol = ( 13.92 - 5.02 ) X 0.6 = 5.3 L**      1/4 well vol. = **N/A**

|                                |                                |                               |                              |                                  |
|--------------------------------|--------------------------------|-------------------------------|------------------------------|----------------------------------|
| Init Tubing Dpth(ft) <b>10</b> | Final Tube Dept(ft): <b>10</b> | Purge Start Time: <b>1310</b> | Purge Stop time: <b>1335</b> | Total Volume Purged <b>7.1 L</b> |
|--------------------------------|--------------------------------|-------------------------------|------------------------------|----------------------------------|

| Time | Volume Purged (L) | Cumul. Volume Purged (L) | Purge rate mL/min | Depth to water (ft) | pH (SU)      | Temp (°C) | Cond (µmho) | Diss O2 (mg/L) | Turbidity (ntu) | ORP (mv) | Observed odor or color              |
|------|-------------------|--------------------------|-------------------|---------------------|--------------|-----------|-------------|----------------|-----------------|----------|-------------------------------------|
|      |                   |                          |                   |                     | ± 0.2§       | ± 0.2§    | ± 5%§       | 20% sat§       | 20 max§         |          |                                     |
| 1328 | 5.30              | 5.30                     | 300               | 5.35                | 6.35         | 20.0      | 408.9       | 0.47           | 1.79            | 66.1     | Clear<br>No odor<br>Yellowish color |
| 1331 | 0.90              | 6.20                     | 300               | 5.35                | 6.34         | 20.0      | 408.7       | 0.50           | 1.81            | 58.1     |                                     |
| 1334 | 0.90              | 7.10                     | 300               | 5.35                | 6.35         | 19.9      | 409.0       | 0.51           | 1.65            | 48.4     |                                     |
|      |                   |                          |                   |                     | dist<br>corr | 19.6      |             |                |                 |          |                                     |

Decon Depth Mtr - rinse with analyte free water  
\$Purge method FDEP-SOP 2212.3.1

◆ FDEP SOP Section 2212.3

### Sampling Data

|  |  |
|--|--|
| Sampled By(Print): <b>K. Morrison, K. Brakefield</b> | Sampler(s) Signatures: <i>K. Morrison, K. Brakefield</i> |
|--|--|

|                            |                            |   |   |
|----------------------------|----------------------------|---|---|
| Sampling Method: <b>PP</b> | Tube Material: <b>PP/S</b> | Sampling Started Tube Dpth(ft): <b>10</b> Time: <b>1337</b> | Sampling completed Tube Dpth(ft): <b>10</b> Time: <b>1356</b> |
|----------------------------|----------------------------|---|---|

|                        |                           |  |  |
|------------------------|---------------------------|--|--|
| Field Decon: <b>NO</b> | Field Filtered: <b>NO</b> | Duplicate: <b>YES</b> <input checked="" type="radio"/> | Acid ID# <b>HNO3: DL71301</b> <b>H2SO4: NA</b> |
|------------------------|---------------------------|--|--|

| Sample Container Specification |          |            | Sample Preservation |              |          | Intended Analysis or method |
|--------------------------------|----------|------------|---------------------|--------------|----------|-----------------------------|
| ID:                            | Material | Volume(mL) | Preservative        | Volume added | final pH |                             |

|             |    |      |              |        |     |   |
|-------------|----|------|--------------|--------|-----|---|
| D18A031-01A | PE | 500  | HNO3         | 1.0 mL | 1.6 | Metals: <del>Ba, Be, Cd, Cr, Co, Mo, Se, Hg, Ga</del>                 |
| D18A031-01B | PE | 250  | HNO3         | 0.5 mL | 1.6 | Metals: <del>Sb, As, Pb, Ti, B, Li</del> All <sup>(w)</sup> except Hg |
| D18A031-01C | PE | 250  | Chill <6 deg | n/a    | n/a | Anions: <del>Fl, Cl, SO4</del>  |
| D18A031-01D | PE | 2000 | HNO3         | 4 mL   | 1.6 | Radium 226+228 Combined   |
| D18A031-01E | PE | 2000 | Chill <6 deg | n/a    | n/a | Solids: TSS, IDS  |

Remarks: Well verified locked on arrival and departure  
81°F, partly cloudy, Wind SE @ 4 mph

# DGS Groundwater Sampling Log



|                                   |                     |                                 |                                   |  |
|-----------------------------------|---------------------|---------------------------------|-----------------------------------|--|
| WELL ID: <b>SIS-2</b>             | Location:           | Latitude: <b>29°45'53.4672"</b> | Longitude: <b>-82°23'31.5096"</b> | MSL @ TOC Date In Service: <b>183.3 2017</b> |
| Quarter: <b>wk #4 CCR assess.</b> | Date: <b>4/3/18</b> | Well Type: <b>D</b>             |                                   |  |

### Purging Data

|   |                                   |  |                                   |
|---|-----------------------------------|--|-----------------------------------|
| Diameter(in) <b>2</b>   | Total well depth(ft) <b>14.22</b> | Depth to water(ft) <b>6.34</b>         | Well capacity(L/ft) <b>0.6</b>    |
| Distance from TOC to top of screen <b>4.22</b> ft.                |                                   | Purging Method: <b>PP</b>              | Equipment Volume = <b>750 L</b>   |
| 1 WELL VOLUME(L)=(Total Well Depth-Depth to water)X Well Capacity |                                   | Time of Depth Meter Decon: <b>1407</b> |                                   |
| <b>Well Vol = ( 14.22 - 6.34 ) X 0.6 = 4.7 L</b>                  |                                   | 1/4 well vol. = <b>N/A</b>             |                                   |
| Init Tubing Dpth(ft) <b>10</b>                                    | Final Tube Dept(ft): <b>10</b>    | Purge Start Time: <b>1410</b>          | Purge Stop time: <b>1442</b>      |
|   |                                   |  | Total Volume Purged <b>6.95 L</b> |

| Time | Volume Purged (L) | Cumul. Volume Purged (L) | Purge rate mL/min | Depth to water (ft) | pH (SU) | Temp (°C) | Cond (µmho) | Diss O2 (mg/L) | Turbidity (ntu) | ORP (mv) | Observed odor or color              |
|------|-------------------|--------------------------|-------------------|---------------------|---------|-----------|-------------|----------------|-----------------|----------|-------------------------------------|
|      |                   |                          |                   |                     | ± 0.2§  | ± 0.2§    | ± 5%§       | 20% sat§       | 20 max§         |          |                                     |
| 1431 | 4.7               | 4.7                      | 250               | 6.51                | 7.01    | 21.0      | 536.9       | 2.69           | 1.54            | 56.7     | no odor very slight yellowish color |
| 1434 | 0.75              | 5.45                     | 250               | 6.51                | 6.97    | 21.0      | 613.7       | 2.47           | 1.44            | 54.7     |                                     |
| 1438 | 0.75              | 6.20                     | 250               | 6.51                | 6.97    | 21.0      | 624.8       | 2.39           | 1.18            | 54.2     |                                     |
| 1441 | 0.75              | 6.95                     | 250               | 6.51                | 6.96    | 21.0      | 633.5       | 2.28           | 1.78            | 53.4     |                                     |
|      |                   |                          |                   |                     | N/S off | 20.7      |             |                |                 |          |                                     |

### Sampling Data

Decon Depth Mtr - rinse with analyte free water  
§Purge method FDEP-SOP 2212.3.1

◆ FDEP SOP Section 2212.3

| Sampled By(Print): <b>K. Morrison, K. Brakefield</b> |                            |  |                          | Sampler(s) Signatures: <i>K. Morrison, K. Brakefield</i> |                   |   |  |
|--|----------------------------|--|--------------------------|--|-------------------|---|--|
| Sampling Method: <b>PP</b>                           | Tube Material: <b>PP/S</b> | Sampling Started Tube Dpth(ft): <b>10</b>              | Time: <b>1445</b>        | Sampling completed Tube Dpth(ft): <b>10</b>              | Time: <b>1510</b> |   |  |
| Field Decon: <b>NO</b>                               | Field Filtered: <b>NO</b>  | Duplicate: <b>YES</b> <input checked="" type="radio"/> | NO <input type="radio"/> | Acid ID# HNO3: <b>DL71301</b>                            | H2SO4: <b>NA</b>  |   |  |
| Sample Container Specification                       |                            |  | Sample Preservation      |  |                   | Intended Analysis or method   |  |
| ID:  | Material                   | Volume(mL)   | Preservative             | Volume added   | final pH          |   |  |
| <b>D18A03102A</b>                                    | <b>PE</b>                  | <b>500</b>   | <b>HNO3</b>              | <b>1.0 mL</b>  | <b>1.6</b>        | <b>Metals: Ba, Be, Cd, Cr, Co, Mo, Se, Hg, Cu</b>                   |  |
| <b>D18A03102B</b>                                    | <b>BPE</b>                 | <b>250</b>   | <b>HNO3</b>              | <b>0.5 mL</b>  | <b>1.6</b>        | <b>Metals: Sb, As, Pb, Tl, B, Li</b><br><i>All App IV except Hg</i> |  |
| <b>D18A03102C</b>                                    | <b>CPE</b>                 | <b>250</b>   | <b>Chill &lt;6 deg</b>   | <b>n/a</b>   | <b>n/a</b>        | <b>Anions: F, Cl, SO4</b>   |  |
| <b>D18A03102D</b>                                    | <b>DPE</b>                 | <b>2000</b>  | <b>HNO3</b>              | <b>4 mL</b>  | <b>1.6</b>        | <b>Radium 226+228 Combined</b>                                      |  |
| <b>D18A03102E</b>                                    | <b>EPE</b>                 | <b>2000</b>  | <b>Chill &lt;6 deg</b>   | <b>n/a</b>   | <b>n/a</b>        | <b>Solids: TSS, TDS</b>   |  |

Remarks: *Well verified locked upon arrival and departure 82° F, partly cloudy, wind calm.*

# DGS Groundwater Sampling Log



**WELL ID:** SIS-3      **Location:**      **Latitude:** 29°45'51.8472"      **Longitude:** -82°23'35.5632"      **MSL @ TOC Date In Service:** 183.11      2017  
**Quarter:** wk#4 CCR assess      **Date:** 4/4/18      **Well Type:** D

**Purging Data**

|   |      |                      |       |                            |      |                     |        |       |
|---|------|----------------------|-------|----------------------------|------|---------------------|--------|-------|
| Diameter(in)  | 2    | Total well depth(ft) | 13.38 | Depth to water(ft)         | 4.44 | Well capacity(L/ft) | 0.6    |       |
| Distance from TOC to top of screen                                | 3.38 | ft.                  |       | Purging Method:            | PP   | Equipment Volume =  | 750 mL |       |
| 1 WELL VOLUME(L)=(Total Well Depth-Depth to water)X Well Capacity |      |                      |       | Time of Depth Meter Decon: |      |                     |        | 1438  |
| <b>Well Vol = ( 13.38 - 4.44 ) X 0.6 = 5.4 L</b>                  |      |                      |       | 1/4 well vol. =            |      |                     |        | N/A   |
| Init Tubing Dpth(ft)  | 10   | Final Tube Dept(ft): | 10    | Purge Start Time:          | 1440 | Purge Stop time:    | 1536   |       |
|   |      |                      |       |                            |      | Total Volume Purged |        | 6.2 L |

| Time | Volume Purged (L) | Cumul. Volume Purged (L) | Purge rate mL/min | Depth to water (ft) | pH (SU) | Temp (°C) | Cond (µmho) | Diss O2 (mg/L) | Turbidity (ntu) | ORP (mv) | Observed odor or color              |
|------|-------------------|--------------------------|-------------------|---------------------|---------|-----------|-------------|----------------|-----------------|----------|-------------------------------------|
|      |                   |                          |                   |                     | ± 0.2§  | ± 0.2§    | ± 5%§       | 20% sat§       | 20 max§         |          |                                     |
| 1526 | 5.4               | 5.4                      | 95                | 5.66                | 6.39    | 20.1      | 502.3       | 1.79           | 3.52            | 48.9     | Clear<br>No odor<br>Yellowish color |
| 1530 | 0.4               | 5.8                      | 95                | 5.75                | 6.40    | 20.0      | 502.8       | 1.74           | 2.90            | 47.1     |                                     |
| 1534 | 0.4               | 6.2                      | 95                | 5.85                | 6.39    | 20.0      | 506.0       | 1.60           | 2.57            | 46.1     |                                     |
|      |                   |                          |                   |                     |         |           |             |                |                 |          |                                     |
|      |                   |                          |                   |                     |         |           |             |                |                 |          |                                     |

pH corr (19.7)

◆ FDEP SOP Section 2212.3

## Sampling Data

Decon Depth Mtr - rinse with analyte free water  
 §Purge method FDEP-SOP 2212.3.1

**Sampled By(Print):** K. Morrison, K. Brakefield      **Sampler(s) Signatures:** *K. Morrison, K. Brakefield*

|                     |                     |                                     |                        |                                       |             |
|---------------------|---------------------|-------------------------------------|------------------------|---------------------------------------|-------------|
| Sampling Method: PP | Tube Material: PP/S | Sampling Started Tube Dpth(ft): 10' | Time: 1540             | Sampling completed Tube Dpth(ft): 10' | Time: 16:27 |
| Field Decon: NO     | Field Filtered: NO  | Duplicate: YES (NO)                 | Acid ID# HNO3: DL71301 | H2SO4: NA                             |             |

| Sample Container Specification |          |            | Sample Preservation |              |          | Intended Analysis or method                                       |
|--------------------------------|----------|------------|---------------------|--------------|----------|---|
| ID:                            | Material | Volume(mL) | Preservative        | Volume added | final pH |   |
| D18A031-03A                    | PE       | 500        | HNO3                | 1.0 mL       | 1.3      | Metals: Ba, Be, Cd, Cr, Co, Mo, Se, (Hg) Ca                       |
| D18A031-03B                    | PE       | 250        | HNO3                | 0.5 mL       | 1.3      | Metals: Sb, As, Pb, Tl, B, Li <small>All App IV except Hg</small> |
| D18A031-03C                    | PE       | 250        | Chill <6 deg        | n/a          | n/a      | Anions: F, Cl, SO4  |
| D18A031-03D                    | PE       | 2000       | HNO3                | 4 mL         | 1.6      | Radium 226+228 Combined   |
| D18A031-03E                    | PE       | 2000       | Chill <6 deg        | n/a          | n/a      | Solids: TSS, TDS  |

**Remarks:** Mixed weather during sampling. Rain during purge. Sun during samples.  
 Well verified locked upon arrival and departure.  
 Depth to water 6.38 after sampling

Codes: PP/S + Polypropylene+Silicone tubing    PP: Peristaltic Pump    PE: Polyethylene B

# DGS Groundwater Sampling Log



|                                   |                     |                                |                                   |           |                              |
|-----------------------------------|---------------------|--------------------------------|-----------------------------------|-----------|------------------------------|
| WELL ID: <b>SIS-4</b>             | Location:           | Latitude: <b>29°45'54.144"</b> | Longitude: <b>-82°23'38.4108"</b> | MSL @ TOC | Date In Service: <b>2017</b> |
| Quarter: <u>wk #4 CCR assess.</u> | Date: <u>4/4/18</u> | Well Type: <b>D</b>            |                                   |           |                              |

### Purging Data

|   |                                  |                                |                                  |
|---|----------------------------------|--------------------------------|----------------------------------|
| Diameter(in) <b>2</b>                             | Total well depth(ft) <b>13.7</b> | Depth to water(ft) <b>5.40</b> | Well capacity(L/ft) <b>0.6</b>   |
| Distance from TOC to top of screen <b>3.7</b> ft. |                                  | Purging Method: <b>PP</b>      | Equipment Volume = <b>750 mL</b> |

1 WELL VOLUME(L)=(Total Well Depth-Depth to water)X Well Capacity      Time of Depth Meter Decon: 13:01

**Well Vol = ( 13.7 - 5.40 ) X 0.6 = 5.0 L**      1/4 well vol. = N/A

|                                |                                |                                |                               |                                   |
|--------------------------------|--------------------------------|--------------------------------|-------------------------------|-----------------------------------|
| Init Tubing Dpth(ft) <u>10</u> | Final Tube Dept(ft): <u>10</u> | Purge Start Time: <u>13:02</u> | Purge Stop time: <u>14:08</u> | Total Volume Purged <u>13.2</u> L |
|--------------------------------|--------------------------------|--------------------------------|-------------------------------|-----------------------------------|

| Time  | Volume Purged (L) | Cumul. Volume Purged (L) | Purge rate mL/min | Depth to water (ft) | pH (SU) | Temp (°C) | Cond (µmho) | Diss O2 (mg/L)      | Turbidity (ntu) | ORP (mv) | Observed odor or color |
|-------|-------------------|--------------------------|-------------------|---------------------|---------|-----------|-------------|---------------------|-----------------|----------|------------------------|
|       |                   |                          |                   |                     | ± 0.2§  | ± 0.2§    | ± 5%§       | 20% sat§            | 20 max§         |          |                        |
| 13:31 | 5                 | 5                        | 240               | 5.70                | 6.52    | 20.1      | 530.6       | 2.01 <sup>20%</sup> | 6.28            | 101.0    | yellowish              |
| 13:34 | 0.7               | 5.7                      | 240               | 5.70                | 6.48    | 20.0      | 547.0       | 1.84 <sup>20%</sup> | 5.46            | 88.6     | clear                  |
| 13:37 | 0.7               | 6.4                      | 240               | 5.70                | 6.43    | 20.1      | 565.6       | 1.63 <sup>20%</sup> | 4.26            | 47.4     | NO odor                |
| 13:40 | 0.7               | 7.1                      | 240               | 5.70                | 6.34    | 20.0      | 608.4       | 1.31                | 3.68            | -24.8    |                        |
| 13:43 | 0.7               | 7.8                      | 240               | 5.70                | 6.28    | 20.0      | 636.4       | 1.21                | 3.32            | -46.4    |                        |
| 13:46 | 0.7               | 8.5                      | 240               | 5.70                | 6.22    | 20.0      | 671.2       | 1.13                | 3.04            | -55.8    |                        |
| 13:49 | 0.7               | 9.2                      | 240               | 5.70                | 6.19    | 20.0      | 688.9       | 1.15                | 2.90            | -61.8    |                        |
| 14:00 | <u>0.26</u>       | 11.8                     | 240               | 5.70                | 6.07    | 20.1      | 762.2       | 0.72                | 3.09            | -87.5    | ✶                      |
| 14:03 | <u>0.7</u>        | 12.5                     | 240               | 5.70                | 6.06    | 20.0      | 770.3       | 0.71                | 2.76            | -90.9    |                        |
| 14:06 | 0.7               | 13.2                     | 240               | 5.70                | 6.04    | 20.0      | 780.8       | 0.70                | 2.40            | -94.6    |                        |

◆ FDEP SOP Section 2212.3

### Sampling Data

Decon Depth Mtr - rinse with analyte free water  
§Purge method FDEP-SOP 2212.3.1

|  |  |
|--|--|
| Sampled By(Print): <u>K. Morrison, K. Brakefield</u> | Sampler(s) Signatures: <u>K. Morrison, K. Brakefield</u> |
|--|--|

|                            |                            |  |  |
|----------------------------|----------------------------|--|--|
| Sampling Method: <b>PP</b> | Tube Material: <b>PP/S</b> | Sampling Started Tube Dpth(ft): <u>10'</u> Time: <u>1410</u> | Sampling completed Tube Dpth(ft): <u>10'</u> Time: <u>1432</u> |
|----------------------------|----------------------------|--|--|

|                        |                           |  |  |
|------------------------|---------------------------|--|--|
| Field Decon: <b>NO</b> | Field Filtered: <b>NO</b> | Duplicate: <b>YES</b> <input type="radio"/> <b>NO</b> <input checked="" type="radio"/> | Acid ID# HNO3: <u>DL71301</u> H2SO4: <u>NA</u> |
|------------------------|---------------------------|--|--|

| Sample Container Specification |          |            | Sample Preservation |              |          | Intended Analysis or method                                   |
|--------------------------------|----------|------------|---------------------|--------------|----------|---|
| ID:                            | Material | Volume(mL) | Preservative        | Volume added | final pH |   |
| D18A031-04 A                   | PE       | 500        | HNO3                | 1.0 mL       | 1.6      | Metals: Ba, Be, Cd, Cr, Co, Mo, Se, Hg, Ga                    |
| D18A031-04 B                   | PE       | 250        | HNO3                | 0.5 mL       | 1.6      | Metals: Sb, As, Pb, Tl, Bi, Li <sup>All App'v except Hg</sup> |
| D18A031-04 C                   | PE       | 250        | Chill <6 deg        | n/a          | n/a      | Anions: F, Cl, SO4  |
| D18A031-04 D                   | PE       | 2000       | HNO3                | 4 mL         | 1.6      | Radium 226+228 Combined                                       |
| D18A031-04 E                   | PE       | 2000       | Chill <6 deg        | n/a          | n/a      | Solids: TSS, TDS  |
| D18A031-04 F                   | PE       | 250        | HNO3                | 0.5 mL       | 1.6      |   |

Remarks: Well found secure. Sprouts of rain during parameters. Towards the end of taking parameters sprouts of heavy rain. Allowed to purge during heavy rainfall and then resumed taking parameters.

# DGS Groundwater Sampling Log



|                                  |   |                                 |                                   |           |                              |
|----------------------------------|---|---------------------------------|-----------------------------------|-----------|------------------------------|
| WELL ID: <b>LF-1</b>             | Location: <b>29°45'59.0544" -82°23'51.8244"</b> | Latitude: <b>29°45'59.0544"</b> | Longitude: <b>-82°23'51.8244"</b> | MSL @ TOC | Date In Service: <b>2017</b> |
| Quarter: <b>WQ #4 CCR assess</b> | Date: <b>4-3-18</b>                             | Well Type: <b>U</b>             |                                   |           |                              |

### Purging Data

|  |                                   |                                |                                  |
|--|-----------------------------------|--------------------------------|----------------------------------|
| Diameter(in) <b>2</b>                              | Total well depth(ft) <b>14.88</b> | Depth to water(ft) <b>5.72</b> | Well capacity(L/ft) <b>0.6</b>   |
| Distance from TOC to top of screen <b>4.88</b> ft. |                                   | Purging Method: <b>PP</b>      | Equipment Volume = <b>750 mL</b> |

1 WELL VOLUME(L)=(Total Well Depth-Depth to water)X Well Capacity      Time of Depth Meter Decon: **11:18**

**Well Vol = ( 14.88 - 5.72 ) X 0.6 = 5.5 L**      1/4 well vol. = **N/A**

|                                |                                |                                |                               |                                  |
|--------------------------------|--------------------------------|--------------------------------|-------------------------------|----------------------------------|
| Init Tubing Dpth(ft) <b>10</b> | Final Tube Dept(ft): <b>10</b> | Purge Start Time: <b>11:20</b> | Purge Stop time: <b>11:49</b> | Total Volume Purged <b>8.0</b> L |
|--------------------------------|--------------------------------|--------------------------------|-------------------------------|----------------------------------|

| Time | Volume Purged (L) | Cumul. Volume Purged (L) | Purge rate mL/min | Depth to water (ft) | pH (SU)        | Temp (°C)   | Cond (µmho) | Diss O2 (mg/L) | Turbidity (ntu) | ORP (mv) | Observed odor or color |
|------|-------------------|--------------------------|-------------------|---------------------|----------------|-------------|-------------|----------------|-----------------|----------|------------------------|
|      |                   |                          |                   |                     | ± 0.2§         | ± 0.2§      | ± 5%§       | 20% sat§       | 20 max§         |          |                        |
| 1142 | 6.0               | 6.0                      | 340               | 5.82                | 5.66           | 19.4        | 257.2       | 0.60           | 0.56            | 148.1    | Clear                  |
| 1145 | 1.0               | 7.0                      | 340               | 5.82                | 5.66           | 19.4        | 254.1       | 0.58           | 0.53            | 147.4    | Slight yellowish color |
| 1148 | 1.0               | 8.0                      | 340               | 5.82                | 5.67           | 19.4        | 253.1       | 0.59           | 0.36            | 146.7    | No odor                |
|      |                   |                          |                   |                     | <i>Not Cor</i> | <b>19.1</b> |             |                |                 |          |                        |

Decon Depth Mtr - rinse with analyte free water  
 §Purge method FDEP-SOP 2212.3.1

◆ FDEP SOP Section 2212.3

### Sampling Data

| Sampled By(Print): <b>K. Morrison, K. Brakelield</b> |                            |   |                               | Sampler(s) Signatures: <i>K. Morrison, K. Brakelield</i> |                   |   |  |
|--|----------------------------|---|-------------------------------|--|-------------------|---|--|
| Sampling Method: <b>PP</b>                           | Tube Material: <b>PP/S</b> | Sampling Started Tube Dpth(ft): <b>10</b>                 | Time: <b>1152</b>             | Sampling completed Tube Dpth(ft): <b>10</b>              | Time: <b>1205</b> |   |  |
| Field Decon: <b>NO</b>                               | Field Filtered: <b>NO</b>  | Duplicate: <b>YES</b> <input checked="" type="checkbox"/> | Acid ID# <b>HNO3: DL71301</b> | <b>H2SO4: NA</b>   |                   |   |  |
| Sample Container Specification                       |                            |   | Sample Preservation           |  |                   | Intended Analysis or method                               |  |
| ID:  | Material                   | Volume(mL)  | Preservative                  | Volume added   | final pH          |   |  |
| <b>D18A031-05 A</b>                                  | PE                         | 500   | HNO3                          | 1.0 mL   | 1.6               | Metals: Ba, Be, Cd, Cr, Co, Mo, Se, Hg, Cu                |  |
| <b>D18A031-05 B</b>                                  | PE                         | 250   | HNO3                          | 0.5 mL   | 1.6               | Metals: Sb, As, Pb, Ti, B, Li <i>All App IV except Hg</i> |  |
| <b>D18A031-05 C</b>                                  | PE                         | 250   | Chill <6 deg                  | n/a  | n/a               | Anions: F, Cl, SO4  |  |
| <b>D18A031-05 D</b>                                  | PE                         | 2000  | HNO3                          | 4 mL   | 1.6               | Radium 226+228 Combined                                   |  |
| <b>D18A031-05 E</b>                                  | PE                         | 2000  | Chill <6 deg                  | n/a  | n/a               | Solids: TSS, TDS  |  |

Remarks: **77°F, Slight cloud cover, wind S@ 5mph**  
**Well verified locked upon arrival and departure.**



# DGS Groundwater Sampling Log



|                                 |   |                                 |                                   |   |
|---------------------------------|---|---------------------------------|-----------------------------------|---|
| WELL ID: <b>LF-2</b>            | Location: <b>29°45'50.5296" -82°23'47.7492"</b> | Latitude: <b>29°45'50.5296"</b> | Longitude: <b>-82°23'47.7492"</b> | MSL @ TOC Date In Service: <b>183.35 2017</b> |
| Quarter: <b>Wk#4CCR Assess.</b> | Date: <b>4-4-18</b>                             | Well Type: <b>D</b>             |                                   |   |

### Purging Data

|   |                                   |   |                                  |
|---|-----------------------------------|---|----------------------------------|
| Diameter(in) <b>2</b>   | Total well depth(ft) <b>14.35</b> | Depth to water(ft) <b>5.70</b>          | Well capacity(L/ft) <b>0.6</b>   |
| Distance from TOC to top of screen <b>4.35</b> ft.                |                                   | Purging Method: <b>PP</b>               | Equipment Volume = <b>750 mL</b> |
| 1 WELL VOLUME(L)=(Total Well Depth-Depth to water)X Well Capacity |                                   | Time of Depth Meter Decon: <b>11:08</b> |                                  |
| <b>Well Vol = (14.35 - 5.70) X 0.6 = 5.2 L</b>                    |                                   | 1/4 well vol. = <b>N/A</b>              |                                  |
| Init Tubing Dpth(ft) <b>10</b>                                    | Final Tube Dept(ft): <b>10</b>    | Purge Start Time: <b>11:09</b>          | Purge Stop time: <b>12:11</b>    |
|   |                                   |   | Total Volume Purged <b>6.2 L</b> |

| Time | Volume Purged (L) | Cumul. Volume Purged (L) | Purge rate mL/min | Depth to water (ft) | pH (SU) | Temp (°C) | Cond (µmho) | Diss O2 (mg/L) | Turbidity (ntu) | ORP (mv) | Observed odor or color |
|------|-------------------|--------------------------|-------------------|---------------------|---------|-----------|-------------|----------------|-----------------|----------|------------------------|
|      |                   |                          |                   |                     | ± 0.2§  | ± 0.2§    | ± 5%§       | 20% sat§       | 20 max§         |          |                        |
| 1202 | 5.2               | 5.2                      | 110               | 6.32                | 5.54    | 18.8      | 686.9       | 0.23           | 8.58            | -102.8   | Clear                  |
| 1106 | 0.5               | 5.7                      | 110               | 6.32                | 5.55    | 18.8      | 682.7       | 0.25           | 8.37            | -108.1   | Yellowish color        |
| 1210 | 0.5               | 6.2                      | 110               | 6.32                | 5.51    | 18.8      | 683.1       | 0.22           | 8.61            | -109.4   | Strong sulfur odor     |
|      |                   |                          |                   |                     | N/A     | 18.5      |             |                |                 |          |                        |

◆ FDEP SOP Section 2212.3

### Sampling Data

Decon Depth Mtr - rinse with analyte free water  
§Purge method FDEP-SOP 2212.3.1

|  |                            |  |  |
|--|----------------------------|--|--|
| Sampled By(Print): <b>K. Morris, K. Brakefield</b> |                            | Sampler(s) Signatures: <i>K. Morris, K. Brakefield</i>       |  |
| Sampling Method: <b>PP</b>                         | Tube Material: <b>PP/S</b> | Sampling Started Tube Dpth(ft): <b>10</b> Time: <b>12:13</b> | Sampling completed Tube Dpth(ft): <b>10</b> Time: <b>12:50</b> |
| Field Decon: <b>NO</b>                             | Field Filtered: <b>NO</b>  | Duplicate: <b>YES</b> (NO)                                   | Acid ID# HNO3: <b>DL71301</b> H2SO4: <b>NA</b>                 |

| Sample Container Specification |               |                 | Sample Preservation |                 |                | Intended Analysis or method                                |
|--------------------------------|---------------|-----------------|---------------------|-----------------|----------------|--|
| ID:                            | Material      | Volume(mL)      | Preservative        | Volume added    | final pH       |  |
| <b>D18A031-06A</b>             | PE            | 500             | HNO3                | 1.0 mL          | 1.6            | Metals: Ba, Be, Cd, Cr, Co, Mo, Se, (Hg) Ca                |
| <b>D18A031-06B</b>             | PE            | 250             | HNO3                | 0.5 mL          | 1.6            | Metals: Sb, As, Pb, Tl, Bi, Li <i>All App IV except Hg</i> |
| <b>D18A031-06C</b>             | PE            | 250             | Chill <6 deg        | n/a             | n/a            | Anions: F, Cl, SO4   |
| <b>D18A031-06D</b>             | PE            | 2000            | HNO3                | 4 mL            | 1.6            | Radium 226+228 Combined                                    |
| <b>D18A031-06E</b>             | PE            | 2000            | Chill <6 deg        | n/a             | n/a            | Solids: TSS, IDS   |
| <del>D18A031-06F</del>         | <del>PE</del> | <del>2000</del> | <del>HNO3</del>     | <del>4 mL</del> | <del>1.6</del> | <del>Radium 226+228 Combined</del>                         |

Remarks: **77°F, Overcast, Wind W@10 mph**  
Well verified locked upon arrival and departure.

# DGS Groundwater Sampling Log



|                                  |                      |                                 |                                   |   |
|----------------------------------|----------------------|---------------------------------|-----------------------------------|---|
| WELL ID: <b>LF-3</b>             | Location:            | Latitude: <b>29°45'50.6376"</b> | Longitude: <b>-82°23'52.1592"</b> | MSL @ TOC Date In Service: <b>185.05 2017</b> |
| Quarter: <u>wk #4 CCR assess</u> | Date: <u>4/14/18</u> | Well Type: <b>D</b>             |                                   |   |

### Purging Data

|   |                                   |   |                                  |
|---|-----------------------------------|---|----------------------------------|
| Diameter(in) <b>2</b>   | Total well depth(ft) <b>14.43</b> | Depth to water(ft) <u>5.80</u>          | Well capacity(L/ft) <b>0.6</b>   |
| Distance from TOC to top of screen <b>4.43</b> ft.                |                                   | Purging Method: <b>PP</b>               | Equipment Volume = <b>750 mL</b> |
| 1 WELL VOLUME(L)=(Total Well Depth-Depth to water)X Well Capacity |                                   | Time of Depth Meter Decon: <u>09:39</u> |                                  |
| <b>Well Vol = ( 14.43 - 5.80 ) X 0.6 = 5.2 L</b>                  |                                   | 1/4 well vol. = <u>NA</u>               |                                  |
| Init Tubing Dpth(ft) <u>10'</u>                                   | Final Tube Dept(ft): <u>10'</u>   | Purge Start Time: <u>09:41</u>          | Purge Stop time: <u>10:29</u>    |
|   |                                   | Total Volume Purged <b>7.1 L</b>        |                                  |

| Time | Volume Purged (L) | Cumul. Volume Purged (L) | Purge rate mL/min | Depth to water (ft) | pH (SU)         | Temp (°C)   | Cond (µmho) | Diss O2 (mg/L) | Turbidity (ntu) | ORP (mv) | Observed odor or color |
|------|-------------------|--------------------------|-------------------|---------------------|-----------------|-------------|-------------|----------------|-----------------|----------|------------------------|
|      |                   |                          |                   |                     | ± 0.2§          | ± 0.2§      | ± 5%§       | 20% sat§       | 20 max§         |          |                        |
| 1017 | 5.5               | 5.5                      | 160               | 6.09                | 6.04            | 18.7        | 1274        | 0.27           | 3.81            | -54.7    | Clear                  |
| 1023 | 0.8               | 6.3                      | 160               | 6.09                | 6.00            | 18.7        | 1285        | 0.25           | 1.59            | -71.1    | Yellowish color        |
| 1028 | 0.8               | 7.1                      | 160               | 6.09                | 5.97            | 18.7        | 1289        | 0.25           | 1.57            | -81.9    | Slight odor            |
|      |                   |                          |                   |                     | <u>Not corr</u> | <u>18.4</u> |             |                |                 |          |                        |

◆ FDEP SOP Section 2212.3

### Sampling Data

Decon Depth Mtr - rinse with analyte free water  
§Purge method FDEP-SOP 2212.3.1

|  |                            |  |                                 |  |                    |  |  |
|--|----------------------------|--|---------------------------------|--|--------------------|--|--|
| Sampled By(Print): <u>K. Morrison, K. Brackett</u> |                            |  |                                 | Sampler(s) Signatures: <u>[Signatures]</u>   |                    |  |  |
| Sampling Method: <b>PP</b>                         | Tube Material: <b>PP/S</b> | Sampling Started Tube Dpth(ft): <u>10'</u>             | Time: <u>10:32</u>              | Sampling completed Tube Dpth(ft): <u>10'</u> | Time: <u>11:00</u> |  |  |
| Field Decon: <b>NO</b>                             | Field Filtered: <b>NO</b>  | Duplicate: <b>YES</b> <input checked="" type="radio"/> | <b>NO</b> <input type="radio"/> | Acid ID# <b>HNO3: DL71301</b>                | <b>H2SO4: NA</b>   |  |  |

| Sample Container Specification |          |            | Sample Preservation |              |            | Intended Analysis or method  |
|--------------------------------|----------|------------|---------------------|--------------|------------|--|
| ID:                            | Material | Volume(mL) | Preservative        | Volume added | final pH   |  |
| <u>D18A031-07A</u>             | PE       | 500        | HNO3                | 1.0 mL       | <u>1.6</u> | Metals: <u>Ba, Be, Cd, Cr, Co, Mo, Se, (Hg), Ca</u>                    |
| <u>D18A031-07B</u>             | PE       | 250        | HNO3                | 0.5 mL       | <u>1.6</u> | Metals: <u>Sb, As, Pb, Tl, B, Li</u><br><i>All of App IV except Hg</i> |
| <u>D18A031-07C</u>             | PE       | 250        | Chill <6 deg        | n/a          | n/a        | Anions: <u>Fl, Cl, SO4</u>   |
| <u>D18A031-07D</u>             | PE       | 2000       | HNO3                | 4 mL         | <u>1.6</u> | Radium 226+228 Combined  |
| <u>D18A031-07E</u>             | PE       | 2000       | Chill <6 deg        | n/a          | n/a        | Solids: <u>TSS, TDS</u>  |

Remarks: 70° F, Partly cloudy, Wind WSW @ 7 mph  
Well verified locked upon arrival and departure.

# DGS Groundwater Sampling Log



|                                   |   |                                 |                                   |                          |                              |
|-----------------------------------|---|---------------------------------|-----------------------------------|--------------------------|------------------------------|
| WELL ID: <b>LF-4</b>              | Location: <b>29°45'50.5008" -82°23'58.6248"</b> | Latitude: <b>29°45'50.5008"</b> | Longitude: <b>-82°23'58.6248"</b> | MSL @ TOC: <b>186.01</b> | Date In Service: <b>2017</b> |
| Quarter: <b>Wk #4 OCIL Assess</b> | Date: <b>4/4/18</b>                             | Well Type: <b>D</b>             |                                   |                          |                              |

### Purging Data

|   |                                    |                                 |  |
|---|------------------------------------|---------------------------------|--|
| Diameter(in): <b>2</b>  | Total well depth(ft): <b>13.95</b> | Depth to water(ft): <b>5.92</b> | Well capacity(L/ft): <b>0.6</b>        |
| Distance from TOC to top of screen: <b>3.95</b> ft.               |                                    | Purging Method: <b>PP</b>       | Equipment Volume = <b>750 mL</b>       |
| 1 WELL VOLUME(L)=(Total Well Depth-Depth to water)X Well Capacity |                                    |                                 | Time of Depth Meter Decon: <b>0757</b> |
| <b>Well Vol = ( 13.95 - 5.92 ) X 0.6 = 4.82 L</b>                 |                                    |                                 | 1/4 well vol. = <b>N/A</b>             |
| Init Tubing Dpth(ft): <b>10'</b>                                  | Final Tube Dept(ft): <b>10'</b>    | Purge Start Time: <b>0800</b>   | Purge Stop time: <b>0838</b>           |
|   |                                    |                                 | Total Volume Purged <b>6.2 L</b>       |

| Time | Volume Purged (L) | Cumul. Volume Purged (L) | Purge rate mL/min | Depth to water (ft) | pH (SU)   | Temp (°C) | Cond (µmho) | Diss O2 (mg/L) | Turbidity (ntu) | ORP (mv) | Observed odor or color |
|------|-------------------|--------------------------|-------------------|---------------------|-----------|-----------|-------------|----------------|-----------------|----------|------------------------|
|      |                   |                          |                   |                     | ± 0.2§    | ± 0.2§    | ± 5%§       | 20% sat§       | 20 max§         |          |                        |
| 0830 | 5.0               | 5.0                      | 180               | 6.18                | 6.38      | 19.1      | 1374        | 0.67           | 5.36            | 120.4    | Clear                  |
| 0834 | 0.6               | 5.6                      | 180               | 6.18                | 6.37      | 19.1      | 1382        | 0.68           | 4.12            | 113.5    | No odor                |
| 0837 | 0.6               | 6.2                      | 180               | 6.18                | 6.37      | 19.1      | 1386        | 0.59           | 4.65            | 109.4    | Yellowish color        |
|      |                   |                          |                   |                     | NIST cert | (18.8)    |             |                |                 |          |                        |

◆ FDEP SOP Section 2212.3

### Sampling Data

Decon Depth Mtr - rinse with analyte free water  
§Purge method FDEP-SOP 2212.3.1

|  |                            |  |                               |  |                   |  |  |
|--|----------------------------|--|-------------------------------|--|-------------------|--|--|
| Sampled By(Print): <b>K. Morrison, K. Brakefield</b> |                            |  |                               | Sampler(s) Signatures: <i>K. Morrison, K. Brakefield</i> |                   |  |  |
| Sampling Method: <b>PP</b>                           | Tube Material: <b>PP/S</b> | Sampling Started Tube Dpth(ft): <b>10'</b> | Time: <b>0840</b>             | Sampling completed Tube Dpth(ft): <b>10'</b>             | Time: <b>0909</b> |  |  |
| Field Decon: <b>NO</b>                               | Field Filtered: <b>NO</b>  | Duplicate: <b>YES</b> (NO)                 | Acid ID# <b>HNO3: DL71301</b> | <b>H2SO4: N/A</b>  |                   |  |  |

| Sample Container Specification |          |            | Sample Preservation |              |          | Intended Analysis or method                           |
|--------------------------------|----------|------------|---------------------|--------------|----------|---|
| ID:                            | Material | Volume(mL) | Preservative        | Volume added | final pH |   |
| D18A031-08A                    | PE       | 500        | HNO3                | 1.0 mL       | 1.6      | Metals: <del>Ba, Be, Cd, Cr, Co, Mo, Se, Hg, Ca</del> |
| D18A031-08B                    | PE       | 250        | HNO3                | 0.5 mL       | 1.6      | Metals: <del>Sb, As, Pb, Ti, B, Li</del>              |
| D18A031-08C                    | PE       | 250        | Chill <6 deg        | n/a          | n/a      | Anions: <del>Fl, Cl, SO4</del>                        |
| D18A031-08D                    | PE       | 2000       | HNO3                | 4 mL         | 1.6      | Radium 226+228 Combined                               |
| D18A031-08E                    | PE       | 2000       | Chill <6 deg        | n/a          | n/a      | Solids: TSS, TDS                                      |

Remarks: **65°F, Partly cloudy, No wind.**  
**Well verified locked upon arrival and departure.**

# DGS Groundwater Sampling Log



|                                  |                     |                               |                                 |             |                 |
|----------------------------------|---------------------|-------------------------------|---------------------------------|-------------|-----------------|
| WELL ID: <b>R4T5 (CCR)</b>       | Location:           | Latitude: <b>29°45'52.14"</b> | Longitude: <b>-82°23'33.18"</b> | MSL @ TOC   | Date In Service |
| Quarter: <u>wk #4 CCR assess</u> | Date: <u>4/3/18</u> | Well Type: <b>D</b>           | <b>187.46</b>                   | <b>7-93</b> |                 |

### Purging Data

| Diameter(in) <b>2</b>   | Total well depth(ft) <b>15.08</b> | Depth to water(ft)        | Well capacity(L/ft) <b>0.6</b>                  |                     |         |           |             |                |                 |          |                        |
|---|-----------------------------------|---------------------------|---|---------------------|---------|-----------|-------------|----------------|-----------------|----------|------------------------|
| Distance from TOC to top of screen <b>5.08</b> ft.                |                                   | Purging Method: <b>PP</b> | Equipment Volume = <b>750 mL</b>                |                     |         |           |             |                |                 |          |                        |
| 1 WELL VOLUME(L)=(Total Well Depth-Depth to water)X Well Capacity |                                   |                           | Time of Depth Meter Decon: <input type="text"/> |                     |         |           |             |                |                 |          |                        |
| <b>Well Vol = ( 15.08 - ) X 0.6 =</b>                             |                                   |                           | <b>L</b> 1/4 well vol.=                         |                     |         |           |             |                |                 |          |                        |
| Init Tubing Dpth(ft)  | Final Tube Dept(ft):              | Purge Start Time:         | Purge Stop time:                                | Total Volume Purged | L       |           |             |                |                 |          |                        |
| Time  | Volume Purged (L)                 | Cumul. Volume Purged (L)  | Purge rate mL/min                               | Depth to water (ft) | pH (SU) | Temp (°C) | Cond (µmho) | Diss O2 (mg/L) | Turbidity (ntu) | ORP (mv) | Observed odor or color |
|   |                                   |                           |   |                     | ± 0.2§  | ± 0.2§    | ± 5%§       | 20% sat§       | 20 max§         |          |                        |
|   |                                   |                           |   |                     |         |           |             |                |                 |          |                        |
|   |                                   |                           |   |                     |         |           |             |                |                 |          |                        |
|   |                                   |                           |   |                     |         |           |             |                |                 |          |                        |
|   |                                   |                           |   |                     |         |           |             |                |                 |          |                        |
|   |                                   |                           |   |                     |         |           |             |                |                 |          |                        |
|   |                                   |                           |   |                     |         |           |             |                |                 |          |                        |
|   |                                   |                           |   |                     |         |           |             |                |                 |          |                        |
|   |                                   |                           |   |                     |         |           |             |                |                 |          |                        |
|   |                                   |                           |   |                     |         |           |             |                |                 |          |                        |
|   |                                   |                           |   |                     |         |           |             |                |                 |          |                        |
|   |                                   |                           |   |                     |         |           |             |                |                 |          |                        |
|   |                                   |                           |   |                     |         |           |             |                |                 |          |                        |
|   |                                   |                           |   |                     |         |           |             |                |                 |          |                        |
|   |                                   |                           |   |                     |         |           |             |                |                 |          |                        |

See groundwater sampling log R4T5 for Data

◆ FDEP SOP Section 2212.3

### Sampling Data

Decon Depth Mtr - rinse with analyte free water  
§Purge method FDEP-SOP 2212.3.1

| Sampled By(Print): <u>K. Morrison, K. Brakefield</u> |                            | Sampler(s) Signatures: <u>K. Morrison, K. Brakefield</u>                               |  |                             |              |   |
|--|----------------------------|--|--|-----------------------------|--------------|---|
| Sampling Method: <b>PP</b>                           | Tube Material: <b>PP/S</b> | Sampling Started Tube Dpth(ft):  | Sampling completed Tube Dpth(ft):              |                             |              |   |
| Field Decon: <b>NO</b>                               | Field Filtered: <b>NO</b>  | Duplicate: <b>YES</b> <input checked="" type="radio"/> <b>NO</b> <input type="radio"/> | Acid ID# HNO3: <u>DL713ol</u> H2SO4: <u>NA</u> |                             |              |   |
| Sample Container Specification                       |                            | Sample Preservation  |  | Intended Analysis or method |              |   |
| ID:  | Material                   | Volume(mL)   | Preservative                                   |                             | Volume added | final pH  |
| <del> </del>   | PE                         | 500  | HNO3   | 1.0 mL                      |              | <del>Metals: Ba, Be, Cd, Cr, Co, Mo, Se, Hg, Ca</del> |
| <del> </del>   | PE                         | 250  | HNO3   | 0.5 mL                      |              | <del>Metals: Sb, As, Pb, Ti, B, Li</del>              |
| <del> </del>   | PE                         | 250  | Chill <6 deg                                   | n/a                         | n/a          | <del>Anions: F, Cl, SO4</del>                         |
| <u>D18A031-09D</u>                                   | PE                         | 2000   | HNO3   | 4 mL                        | <u>1.6</u>   | Radium 226+228 Combined                               |
| <del> </del>   | PE                         | 2000   | Chill <6 deg                                   | n/a                         | n/a          | <del>Solids: TSS, TDS</del>                           |

SP 3-2018 all analytes obtained in 2018 Qtrly GW samples except radium

Remarks:



# DGS Groundwater Sampling Log



|                                  |                     |                               |                                 |             |                 |
|----------------------------------|---------------------|-------------------------------|---------------------------------|-------------|-----------------|
| WELL ID: <b>R6T4 (CCR)</b>       | Location:           | Latitude: <b>29°46'00.90"</b> | Longitude: <b>-82°23'40.20"</b> | MSL @ TOC   | Date In Service |
| Quarter: <b>Wk#4 CCR assess.</b> | Date: <b>4-3-18</b> | Well Type: <b>U</b>           | <b>183.6</b>                    | <b>7-93</b> |                 |

### Purging Data

| Diameter(in) <b>2</b>   | Total well depth(ft) <b>14.13</b> | Depth to water(ft)        | Well capacity(L/ft) <b>0.6</b>                  |                     |         |           |             |                |                 |          |                        |
|---|-----------------------------------|---------------------------|---|---------------------|---------|-----------|-------------|----------------|-----------------|----------|------------------------|
| Distance from TOC to top of screen <b>4.13</b> ft.                |                                   | Purging Method: <b>PP</b> | Equipment Volume = <b>750 mL</b>                |                     |         |           |             |                |                 |          |                        |
| 1 WELL VOLUME(L)=(Total Well Depth-Depth to water)X Well Capacity |                                   |                           | Time of Depth Meter Decon: <input type="text"/> |                     |         |           |             |                |                 |          |                        |
| <b>Well Vol = ( 14.13 - ) X 0.6 = L</b>                           |                                   |                           | 1/4 well vol. =                                 |                     |         |           |             |                |                 |          |                        |
| Init Tubing Dpth(ft)  | Final Tube Dept(ft):              | Purge Start Time:         | Purge Stop time:                                | Total Volume Purged | L       |           |             |                |                 |          |                        |
| Time  | Volume Purged (L)                 | Cumul. Volume Purged (L)  | Purge rate mL/min                               | Depth to water (ft) | pH (SU) | Temp (°C) | Cond (µmho) | Diss O2 (mg/L) | Turbidity (ntu) | ORP (mv) | Observed odor or color |
|   |                                   |                           |   |                     | ± 0.2§  | ± 0.2§    | ± 5%§       | 20% sat§       | 20 max§         |          |                        |
| <i>See groundwater sampling log - R6T4 for data</i>               |                                   |                           |   |                     |         |           |             |                |                 |          |                        |

Decon Depth Mtr - rinse with analyte free water  
§Purge method FDEP-SOP 2212.3.1

◆ FDEP SOP Section 2212.3

### Sampling Data

| Sampled By(Print): <b>K. MORRISON, K. Brakefield</b> |               |                            |                            |  |                | Sampler(s) Signatures: <b>K. Morrison, K. Brakefield</b> |  |                                   |  |       |  |
|--|---------------|----------------------------|----------------------------|--|----------------|--|--|-----------------------------------|--|-------|--|
| Sampling Method: <b>PP</b>                           |               | Tube Material: <b>PP/S</b> |                            | Sampling Started Tube Dpth(ft):                        |                | Time:  |  | Sampling completed Tube Dpth(ft): |  | Time: |  |
| Field Decon: <b>NO</b>                               |               | Field Filtered: <b>NO</b>  |                            | Duplicate: <b>YES</b> <input checked="" type="radio"/> |                | Acid ID# <b>HNO3: DL71301</b>                            |  | <b>H2SO4: NA</b>                  |  |       |  |
| Sample Container Specification                       |               |                            | Sample Preservation        |  |                | Intended Analysis or method                              |  |                                   |  |       |  |
| ID:  | Material      | Volume(mL)                 | Preservative               | Volume added   | final pH       |  |  |                                   |  |       |  |
| <del>_____</del>                                     | <del>PE</del> | <del>500</del>             | <del>HNO3</del>            | <del>1.0 mL</del>                                      | <del>n/a</del> | <del>Metals: Ba, Be, Cd, Cr, Co, Mo, Se, Hg, Ca</del>    |  |                                   |  |       |  |
| <del>_____</del>                                     | <del>PE</del> | <del>250</del>             | <del>HNO3</del>            | <del>0.5 mL</del>                                      | <del>n/a</del> | <del>Metals: Sb, As, Pb, Ti, B, Li</del>                 |  |                                   |  |       |  |
| <del>_____</del>                                     | <del>PE</del> | <del>250</del>             | <del>Chill &lt;6 deg</del> | <del>n/a</del>   | <del>n/a</del> | <del>Anions: F, Cl, SO4</del>                            |  |                                   |  |       |  |
| <b>DISA031-08D</b>                                   | <b>PE</b>     | <b>2000</b>                | <b>HNO3</b>                | <b>4 mL</b>  | <b>1.3</b>     | <b>Radium 226+228 Combined</b>                           |  |                                   |  |       |  |
| <del>_____</del>                                     | <del>PE</del> | <del>2000</del>            | <del>Chill &lt;6 deg</del> | <del>n/a</del>   | <del>n/a</del> | <del>Solids: TSS, TDS</del>                              |  |                                   |  |       |  |
| Remarks:   |               |                            |                            |  |                |  |  |                                   |  |       |  |

3-20-18  
all analytes run from Qtr 2018 C.W. Samples except radium

# DGS Groundwater Sampling Log



|                      |                            |                        |                          |   |
|----------------------|----------------------------|------------------------|--------------------------|---|
| WELL ID: <b>R6T4</b> | Location:                  | Latitude: 29°46'00.90" | Longitude: -82°23'40.20" | MSL @ TOC Date In Service<br>183.6 7-93 |
| Quarter: 2Q18        | <i>and with CCR access</i> | Date: 4-3-18           | Well Type: I             |   |

### Purging Data

|   |                                   |                                  |                                |
|---|-----------------------------------|----------------------------------|--------------------------------|
| Diameter(in) <b>2</b>   | Total well depth(ft) <b>14.13</b> | Depth to water(ft) <b>4.13</b>   | Well capacity(L/ft) <b>0.6</b> |
| Distance from TOC to top of screen <b>4.13</b> ft.                |                                   | Purging Method: PP               | Equipment Volume = 750 mL      |
| 1 WELL VOLUME(L)=(Total Well Depth-Depth to water)X Well Capacity |                                   | Time of Depth Meter Decon: 12:18 |                                |
| <b>Well Vol = ( 14.13 - 4.13 ) X 0.6 = 6 L</b>                    |                                   | 1/4 well vol. = 1.5              |                                |
| Init Tubing Dpth(ft) <b>4.6</b>                                   | Final Tube Dept(ft): <b>4.8</b>   | Purge Start Time: <b>12:19</b>   | Purge Stop time: <b>12:40</b>  |
|   |                                   | Total Volume Purged <b>9.0</b> L |                                |

| Time  | Volume Purged (L) | Cumul. Volume Purged (L) | Purge rate mL/min | Depth to water (ft) | pH (SU) | Temp (°C) | Cond (µmho) | Diss O2 (mg/L) | Turbidity (ntu) | ORP (mv) | Observed odor or color |
|-------|-------------------|--------------------------|-------------------|---------------------|---------|-----------|-------------|----------------|-----------------|----------|------------------------|
|       |                   |                          |                   |                     | ± 0.2§  | ± 0.2§    | ± 5%§       | 20% sat§       | 20 max§         |          |                        |
| 12:33 | 6.00              | 6.00                     | 500               | 4.34                | 7.00    | 19.6      | 332.5       | 0.26           | 0.45            | -100.6   | Slightly yellow        |
| 12:36 | 1.50              | 7.50                     | 500               | 4.34                | 6.99    | 19.6      | 330.4       | 0.26           | 0.65            | -110.5   |                        |
| 12:39 | 1.50              | 9.00                     | 500               | 4.34                | 6.99    | 19.6      | 328.0       | 0.22           | 0.77            | -112.7   |                        |
|       |                   |                          |                   |                     |         | (19.3)    |             |                |                 |          |                        |

◆ FDEP SOP Section 2212.3

### Sampling Data

Decon Depth Mtr - rinse with analyte free water  
§Purge method FDEP-SOP 2212.3.1

|  |                     |  |   |
|--|---------------------|--|---|
| Sampled By(Print): <i>K. Morrison, K. Brakefield</i> |                     | Sampler(s) Signatures: <i>K. Morrison, K. Brakefield</i>                 |   |
| Sampling Method: PP                                  | Tube Material: PP/S | Sampling Started Tube Dpth(ft): <b>4.8</b> Time: <b>12:41</b>            | Sampling completed Tube Dpth(ft): <b>4.8</b> Time: <b>12:56</b> |
| Field Decon: NO                                      | Field Filtered: NO  | Duplicate: YES <input checked="" type="radio"/> NO <input type="radio"/> | Acid ID# HNO3: DL71301 H2SO4: DL62802                           |

| Sample Container Specification |          |            | Sample Preservation |              |          | Intended Analysis or method  |
|--------------------------------|----------|------------|---------------------|--------------|----------|------------------------------|
| ID:                            | Material | Volume(mL) | Preservative        | Volume added | final pH |                              |
| D8A03-06A                      | APE      | 2000       | Chill <6 deg        | none         | n/a      | Physical Analysis            |
| D8A03-06B                      | PE       | 250        | Chill 6 deg C       | none         | n/a      | Anions                       |
| D8A03-06C                      | PE       | 250        | Chill + H2SO        | 0.5 mL       | 1.6      | Demand-NPDOC and NO3+NO2     |
| D8A03-06D                      | PE       | 1000       | HNO3                | 2 mL         | 1.6      | Radiological-GA              |
| D8A03-06E                      | PE       | 500        | HNO3                | 1 mL         | 1.3      | Metals: Hg                   |
| D8A03-06F                      | FPE      | 250        | HNO3                | 0.5 mL       | 1.3      | Metals: As, Pb All except Hg |

Tubing depth is 0.5 ft below depth to water for every instance. *Partly cloudy 83°F ; winds SSE 8mph*  
 Remarks:  
*Well found secure, left secure*





# DGS Groundwater Sampling Log



|  |                     |                      |                    |                           |
|--|---------------------|----------------------|--------------------|---------------------------|
| WELL ID <b>EBLANK</b> Location:              | Latitude: <b>na</b> | Longitude: <b>na</b> | MSL @ TOC <b>0</b> | Date In Service <b>na</b> |
| Quarter: <b>2Q18</b> (and w/ #4 cck assess.) | Date: <b>4/5/18</b> | Well Type: <b>na</b> |                    |                           |

### Purging Data

|   |                               |   |                                  |
|---|-------------------------------|---|----------------------------------|
| Diameter(in) <b>na</b>  | Total well depth(ft) <b>0</b> | Depth to water(ft)                      | Well capacity(L/ft) <b>0</b>     |
| Distance from TOC to top of screen <b>0</b> ft.                   |                               | Purging Method: <b>PP</b>               | Equipment Volume = <b>750 mL</b> |
| 1 WELL VOLUME(L)=(Total Well Depth-Depth to water)X Well Capacity |                               | Time of Depth Meter Decon: <b>12:34</b> |                                  |
| <b>Well Vol = ( 0 - ) X 0 = N/A L</b>                             |                               | 1/4 well vol.= <b>N/A</b>               |                                  |
| Init Tubing Dpth(ft)  | Final Tube Dept(ft):          | Purge Start Time: <b>12:35</b>          | Purge Stop time: <b>12:45</b>    |
|   |                               | Total Volume Purged <b>N/A</b> L        |                                  |

| Time | Volume Purged (L) | Cumul. Volume Purged (L) | Purge rate mL/min | Depth to water (ft) | pH (SU) | Temp (°C) | Cond (µmho) | Diss O2 (mg/L) | Turbidity (ntu) | ORP (mv) | Observed odor or color |
|------|-------------------|--------------------------|-------------------|---------------------|---------|-----------|-------------|----------------|-----------------|----------|------------------------|
|      |                   |                          |                   |                     | ± 0.2§  | ± 0.2§    | ± 5%§       | 20% sat§       | 20 max§         |          |                        |
| 1238 | N/A               | N/A                      | 460               | N/A                 | 5.87    | 19.1      | 0.825       | 8.89           | 0.27            | 202.5    |                        |
| 1241 | N/A               | N/A                      | 460               | N/A                 | 5.85    | 19.1      | 0.813       | 8.89           | 0.22            | 208.2    |                        |
| 1244 | N/A               | N/A                      | 460               | N/A                 | 5.82    | 19.1      | 0.812       | 8.90           | 0.18            | 220.9    |                        |
|      |                   |                          |                   |                     |         |           |             |                |                 |          |                        |
|      |                   |                          |                   |                     |         |           |             |                |                 |          |                        |

NIST corr 19.8 SP 4/9/18  
19.0 used Cond. meter

Decon Depth Mtr - rinse with analyte free water  
§Purge method FDEP-SOP 2212.3.1

◆ FDEP SOP Section 2212.3

### Sampling Data

|  |                            |   |                               |  |                   |  |  |
|--|----------------------------|---|-------------------------------|--|-------------------|--|--|
| Sampled By(Print): <b>K. Morrison, K. Brakefield</b> |                            |   |                               | Sampler(s) Signatures: <i>K. Morrison, K. Brakefield</i> |                   |  |  |
| Sampling Method: <b>PP</b>                           | Tube Material: <b>PP/S</b> | Sampling Started Tube Dpth(ft): <b>N/A</b>                | Time: <b>1247</b>             | Sampling completed Tube Dpth(ft): <b>N/A</b>             | Time: <b>1308</b> |  |  |
| Field Decon: <b>NO</b>                               | Field Filtered: <b>NO</b>  | Duplicate: <b>YES</b> <input checked="" type="checkbox"/> | Acid ID# <b>HNO3: DL71301</b> | <b>H2SO4: DL62802</b>                                    |                   |  |  |

| Sample Container Specification |          |            | Sample Preservation |              |          | Intended Analysis or method         |
|--------------------------------|----------|------------|---------------------|--------------|----------|-------------------------------------|
| ID:                            | Material | Volume(mL) | Preservative        | Volume added | final pH |                                     |
| D18A030-14                     | PE       | 2000       | Chill <6 deg        | none         | n/a      | Physical Analysis                   |
| D18A030-14                     | PE       | 250        | Chill 6 deg C       | none         | n/a      | Anions                              |
| D18A030-14                     | PE       | 250        | Chill + H2SO        | 0.5 mL       | 1.6      | Demand-NPDOC and NO3+NO2            |
| D18A030-14                     | PE       | 1000       | HNO3                | 2 mL         | 1.6      | Radiological-GA                     |
| D18A030-14                     | PE       | 500        | HNO3                | 1 mL         | 1.3      | Metals: Hg                          |
| D18A030-14                     | PE       | 250        | HNO3                | 0.5 mL       | 1.6      | Metals: <b>As, Pb</b> All except Hg |

Tubing depth is 0.5 ft below depth to water for every instance.  
Remarks: **EQ BLK collected at R6T8**

# DGS Groundwater Sampling Log



WELL ID: **R1T6** Location: Latitude: **29°45'48.57"** Longitude: **-82°23'01.34"** MSL @ TOC Date In Service: **188.95 C 1980**

Quarter: **2Q18** (and #4 CCK G-55855) Date: **4-2-18** Well Type: **SB**

**Purging Data**

Diameter(in) **4** Total well depth(ft) **23.25** Depth to water(ft) **5.16** Well capacity(L/ft) **2.5**

Distance from TOC to top of screen **19.45** ft. Purging Method: **PP** Equipment Volume = **750 mL**

1 WELL VOLUME(L)=(Total Well Depth-Depth to water)X Well Capacity  
**Well Vol = ( 23.25 - 5.16 ) X 2.5 = 45.2 L** 1/4 well vol. = **11.3** L

Time of Depth Meter Decon: **08:23** / **4:48** initial  
**16:48**  
**4/2/18**  
**km**

Init Tubing Dpth(ft) **5.8** Final Tube Dept(ft): **7.10** Purge Start Time: **08:25** Purge Stop time: **18:26** Total Volume Purged **74.8 L**

| Time             | Volume Purged (L) | Cumul. Volume Purged (L) | Purge rate mL/min | Depth to water (ft) | pH (SU) | Temp (°C) | Cond (µmho) | Diss O2 (mg/L) | Turbidity (ntu) | ORP (mv)         | Observed odor or color |
|------------------|-------------------|--------------------------|-------------------|---------------------|---------|-----------|-------------|----------------|-----------------|------------------|------------------------|
|                  |                   |                          |                   |                     | ± 0.2§  | ± 0.2§    | ± 5%§       | 20% sat§       | 20 max§         |                  |                        |
| <del>12:00</del> | <del>45.2</del>   | <del>45.2</del>          | <del>150</del>    | <del>5.90</del>     |         |           |             |                |                 | <del>-26.3</del> | <del>km 4/2/18</del>   |
| 17:08            | 7                 | 50.2                     | 380               | 6.65                | 6.65    | 19.2      | 528.8       | 0.17           | 2.42            | -26.3            |                        |
| 17:45            | 11.3              | 63.5                     | 380               | 6.64                | 6.64    | 19.0      | 529.4       | 0.12           | 1.15            | -31.6            |                        |
| 18:25            | 11.3              | 74.8                     | 380               | 7.10                | 6.63    | 19.2      | 527.9       | 0.14           | 4.24            | -32.8            | Turbid                 |

11:57  
18:25

Decon Depth Mtr - rinse with analyte free water  
 §Purge method FDEP-SOP 2212.3.1

## Sampling Data

◆ FDEP SOP Section 2212.3

Sampled By(Print): **Kim Manson** Sampler(s) Signatures: *Kimberly K. Manson*

Sampling Method: **PP** Tube Material: **PP/S** Sampling Started Tube Dpth(ft): **7.10** Time: **18:27** Sampling completed Tube Dpth(ft): **7.10** Time: **18:46**

Field Decon: **NO** Field Filtered: **NO** Duplicate: **YES (NO)** Acid ID# **HNO3: DL-71301 H2SO4: DL-61800**

| Sample Container Specification |          |            | Sample Preservation |              |          | Intended Analysis or method         |
|--------------------------------|----------|------------|---------------------|--------------|----------|-------------------------------------|
| ID:                            | Material | Volume(mL) | Preservative        | Volume added | final pH |                                     |
| D18A030-01 A                   | PE       | 2000       | Chill <6 deg        | none         | n/a      | Physical Analysis                   |
| D18A030-01 B                   | PE       | 250        | Chill 6 deg C       | none         | n/a      | Anions                              |
| D18A030-01 C                   | PE       | 250        | Chill + H2SO        | 0.5 mL       | 1.6      | Demand-NPDOC and NO3+NO2            |
| D18A030-01 D                   | PE       | 1000       | HNO3                | 2 mL         | 1.0      | Radiological-GA                     |
| D18A030-01 E                   | PE       | 500        | HNO3                | 1 mL         | 1.3      | Metals: Hg mls                      |
| D18A030-01 F                   | PE       | 250        | HNO3                | 0.5 mL       | 1.6      | Metals: As, Pb All metals except Hg |

Tubing depth is **0.6** ft below depth to water for every instance. **Partly cloudy, Breezy**

Remarks: **85°F Winds Comply W**  
**Well found secure left secure** / Original start time 08:25 for initial well purge, began to start parameters, but decided to stop and salvage RT2 and come back later if we had time - was purging well to low and the new pump was continuingly working intermittently - **km 4/2/18**

Codes: PP/S + Polypropylene+Silicone tubing PP: Peristaltic Pump PE: Polyethylene B







# Instrument Calibration Log

Model Star A329

Serial Number G09761

Manufacturer: Thermo Orion

Date Purchased 12-2017

Parameter: pH/ISE/Cond/DO

GRU Prop Tag# none

QTR: 2Q18 :used manif SOP for calibrations and FDEP 100 SOP for verifications  
CCR WK#4

|            | Standard Concentration, ID#, Expiration Date | Unit  |
|------------|--|-------|
| Standard A | 100, DB 82101, exp 12-31-19                  | µS/cm |
| Standard B | 1413, DB 80701, exp 1-31-20                  | µS/cm |
| Standard C | 10000, DB 80702, exp 9-30-19                 | µS/cm |

CCR ID# DA81810

$\pm 5\%$  TU = 718 range: 646-790

| Date    | Time  | STD A,B,C | STD Value | Instrument Response | Dev./ P or F  | Calibrated (Yes/No) | Type (Int/Cont) | Sampler Initials |
|---------|-------|-----------|-----------|---------------------|---------------|---------------------|-----------------|------------------|
| 3-26-18 | 1417  | A         | 100       | 101                 | +1.0%<br>P    | No                  | Cont            | SP               |
| 3-26-18 | 1418  | B         | 1413      | 1411                | -0.14%<br>P   | No                  | Cont            | SP               |
| 3-26-18 | 1419  | C         | 10000     | 10,140              | +1.4%<br>P    | No                  | Cont            | SP               |
| 3-26-18 | 1444  | CC        | 718       | 712.0               | Pass          | —                   | —               | SP               |
| 4-2-18  | 18:36 | B         | 1413      | 1389                | P -1.70%<br>P | NO                  | Cont            | Ke               |
| 4-3-18  | 15:50 | B         | 1413      | 1383                | P -2.12%<br>P | NO                  | Cont            | Ke               |
| 4-4-18  | 16:18 | B         | 1413      | 1362                | P -3.49%<br>P | NO                  | Cont            | Ke               |
| 4-5-18  | 16:30 | B         | 1413      | 1381                | P -2.26%<br>P | NO                  | Cont            | Ke               |
| 4-6-18  | 11:38 | B         | 1413      | 1395<br>1380        | P -1.27%<br>P | NO                  | Cont            | Ke               |

Pass JB

# Instrument Calibration Log

Model 2100Q

Serial Number 14100C035914

Manufacturer: Hach

Date Purchased 11-2014

Parameter: Turbidity

GRU Prop Tag# none

QTR: 2Q18 :used manuf SOP for calibrations and FDEP 1600 SOP for verifications  
*we #4 cc/r*

|            | Standard Concentration, ID#, Expiration Date | Unit       |
|------------|--|------------|
| Standard A | <u>2° Grelex Std 5.99</u>                    | <u>NTU</u> |
| Standard B | <u>2° Grelex Std 56.9</u>                    | <u>NTU</u> |
| Standard C | <u>2° Grelex Std 530</u>                     | <u>NTU</u> |

D Calibration verification Std. 0.1 NTU, ID# DD71301 exp. 3-31-18      QC ID # DA81914

\*see acceptance criteria below      TU = 23.6 Range: 19.8 - 27.5

| Date    | Time         | STD A,B,C | STD Value   | Instrument Response | Dev./ P or F    | Calibrated (Yes/No) | Type (Int/Cont) | Sampler Initials          |
|---------|--------------|-----------|-------------|---------------------|-----------------|---------------------|-----------------|---------------------------|
| 3-26-18 | <u>13:35</u> | <u>D</u>  | <u>0.1</u>  | <u>0.11</u>         | <u>10% P</u>    | <u>yes</u>          | <u>Int</u>      | <u>SP</u>                 |
| 3-26-18 | <u>13:37</u> | <u>A</u>  | <u>5.99</u> | <u>5.99</u>         | <u>0% P</u>     | <u>yes</u>          | <u>Int</u>      | <u>SP</u>                 |
| 3-26-18 | <u>13:37</u> | <u>B</u>  | <u>56.9</u> | <u>57.0</u>         | <u>0.17% P</u>  | <u>yes</u>          | <u>Int</u>      | <u>SP</u>                 |
| 3-26-18 | <u>13:37</u> | <u>C</u>  | <u>530</u>  | <u>530</u>          | <u>0 P</u>      | <u>yes</u>          | <u>Int</u>      | <u>SP</u>                 |
| 3-26-18 | <u>14:09</u> | <u>QC</u> | <u>23.6</u> | <u>23.4</u>         | <u>Pass</u>     | <u>—</u>            | <u>—</u>        | <u>SP</u> <b>PASS (S)</b> |
| 4-2-18  | <u>18:40</u> | <u>A</u>  | <u>5.99</u> | <u>6.01</u>         | <u>+0.0 P</u>   | <u>NO</u>           | <u>Cont</u>     | <u>Km</u>                 |
| 4-3-18  | <u>15:54</u> | <u>A</u>  | <u>5.99</u> | <u>5.97</u>         | <u>-0.33% P</u> | <u>NO</u>           | <u>Cont</u>     | <u>Km</u>                 |
| 4-4-18  | <u>16:18</u> | <u>B</u>  | <u>56.9</u> | <u>56.8</u>         | <u>-0.18% P</u> | <u>NO</u>           | <u>Cont</u>     | <u>Km</u>                 |
| 4-5-18  | <u>16:18</u> | <u>A</u>  | <u>5.99</u> | <u>5.99</u>         | <u>0 P</u>      | <u>NO</u>           | <u>Cont</u>     | <u>Km</u>                 |
| 4-6-18  | <u>11:39</u> | <u>A</u>  | <u>5.99</u> | <u>6.03</u>         | <u>+0.67% P</u> | <u>NO</u>           | <u>Cont</u>     | <u>Km</u>                 |

**\*Acceptance Criteria\***

- 0.1 to 10.0 NTU = +/- 10%
- 11 to 40 NTU = +/- 8%
- 41 to 100 NTU = +/- 6.5%
- >100 NTU = +/- 5%

**Primary Standards**

- 10 NTU, ID# DD1302, exp. 10-30-18
- 20 NTU, ID# DD1303, exp. 10-30-18
- 100 NTU, ID# DD1304, exp. 10-30-18
- 800 NTU, ID# DD1305, exp. 10-30-18







## Week #4 Field and Analytical Narrative

### Field Narrative:

- The pH, conductivity, RDO, and depth meter sensors were verified against the NIST reference thermometer/probe (CP 117152 & CP148863), and the depth meter was selected for the purpose of measuring temperature in the field; however, the conductivity temperature sensor was used for the Equipment Blank parameter.
- CCR Well sampling was done in conjunction with the Quarterly Groundwater Well sampling and began on Monday, April 2, 2018 and was completed on Wednesday, April 6, 2018 by Kent Brakefield and Kim Morrison.
- In addition, we collected 3 GW wells (R1T6, R2T1, and R6T1), as requested by Justin Smith, for lithium and TSS analysis; they were collected on 4-2-18 to 4-3-2018.
- All wells were found secured with a lock upon arrival and left locked upon departure.
- Weather: Monday (4-2-18) temperatures started in the low 70s rising up to the mid 80's. Throughout the day the weather was partly cloudy with light WSW winds around 6 mph. Tuesday (4-3-18) started out at 64 F, sunny and winds SE at 1 mph. The majority of the day was partly cloudy with calm winds. The temperatures peaked at 82 °F. On Wednesday (4-4-18), the last day of sampling for CCR started with temperatures at 65 °F with no wind. During the late morning temperatures progressed towards the low 70s with WSW winds at 7 mph. Towards the end of the afternoon came spurts of rain followed by a brief heavy down pour.
- R1T6: R1T6 and R2T1 were simultaneously purged with the intentions of completing R1T6 before returning to R2T1. Kent purged R2T1, while I purged R1T6. A new pump was purchased and it was used to purge R1T6. The pump intermittently stopped working and troubleshooting the pump caused a delay, as well as purging the well too slow. According to historical data, R1T6 can be purged close to 400 ml/min. After consulting with the project leader, we agreed to complete R2T1 and then return later to continue to purge the well at an appropriate purge rate. The initial purge was 08:25 to 12:00 and then resumed purging at 16:49.
- Well R4T5: It rained during sampling, but samples were kept covered.
- SIS-3: It rained during well purge, but had stopped once sampling began.
- SIS-4: While taking parameters we began to experience spurts of rain. Towards the ending of taking parameters we received heavy rain. The well continued to purge during the heavy rainfall and we resumed taking parameters when the rain calmed down.
- Equipment Blank: The Equipment Blank was collected at R6T8 after that well was collected.
- Instruments: Calibration verifications were performed on all instruments and passed.

### ANALYTICAL NARRATIVE:

#### Analytical Narrative: Internal Analysis

TSS analysis was performed and all results were satisfactory.

#### Analytical Narrative: External Laboratories

- PACE Analytical Services analyzed samples for Fluoride and Radium 226 +228 combined.

## Week #4 Field and Analytical Narrative

- ALS Global (Jacksonville) analyzed samples for the following metals: Antimony, Arsenic, Lead and Thallium by Method 200.8 and Barium, Beryllium, Cadmium, Chromium, Cobalt, Selenium, Molybdenum and Lithium by 200.7.
  - Lead was detected in the method blank. In the samples where lead was detected at equal to or less than ten times the method blank, they were qualified with a “V” as per FDEP.
- Kanapaha Laboratory analyzed samples for Mercury, cold vapor.

# DGS Groundwater Sampling Log



**WELL ID:** SIS-1      **Location:** Latitude: 29°46'00.1308" Longitude: -82°23'33.3204"      **MSL @ TOC Date In Service:** 185.11 2017  
**Quarter:** July-CCR      **Date:** 7-17-18      **Well Type:** U

### Purging Data

**Diameter(in):** 2      **Total well depth(ft):** 13.92      **Depth to water(ft):** 5.40 <sup>3.90</sup>      **Well capacity(L/ft):** 0.6  
**Distance from TOC to top of screen:** 3.92 ft      **Purging Method:** PP      **Equipment Volume =** 750 mL

**1 WELL VOLUME(L)=(Total Well Depth-Depth to water)X Well Capacity**  
**Well Vol = ( 13.92 - 5.40 ) X 0.6 = 4.9 L**      **Time of Depth Meter Decon:** 1606  
 1/4 well vol. = 1.23 L

**Init Tubing Dpth(ft):** 10.0      **Final Tube Dept(ft):** 10.0      **Purge Start Time:** 1610      **Purge Stop time:** 1638      **Total Volume Purged:** 7.8 L

| Time | Volume Purged (L) | Cumul. Volume Purged (L) | Purge rate mL/min | Depth to water (ft) | pH (SU) | Temp (°C) | Cond (µmho) | Diss O2 (mg/L) | Turbidity (ntu) | ORP (mv) | Observed odor or color           |
|------|-------------------|--------------------------|-------------------|---------------------|---------|-----------|-------------|----------------|-----------------|----------|----------------------------------|
|      |                   |                          |                   |                     | ± 0.2§  | ± 0.2§    | ± 5%§       | 20% sat§       | 20 max§         |          |                                  |
| 1629 | 4.9               | 4.9                      |                   | 4.39                |         |           |             |                |                 |          |                                  |
| 1637 | 6.0               | 6.0                      | 280               | 4.39                | 6.56    | 28.4      | 439         | 1.08           | 1.83            | -11.5    | Clear<br>No odor<br>Slight color |
| 1635 | 0.9               | 0.9                      | 280               | 4.39                | 6.55    | 28.4      | 439         | 0.99           | 1.24            | -12.9    |                                  |
| 1638 | 0.9               | 7.8                      | 280               | 4.39                | 6.55    | 28.4      | 442         | 0.97           | 1.31            | -13.6    |                                  |
|      |                   |                          |                   |                     |         |           |             |                |                 |          |                                  |

### Sampling Data

Decon Depth Mtr - rinse with analyte free water  
 §Purge method FDEP-SOP 2212.3.1

◆ FDEP SOP Section 2212.3

**Sampled By(Print):** Shelley Phillips, Kent Brakefield      **Sampler(s) Signatures:** *S. Phillips, K. Brakefield*

**Sampling Method:** PP      **Tube Material:** PP/S      **Sampling Started Tube Dpth(ft):** 10.0      **Time:** 1640      **Sampling completed Tube Dpth(ft):** 10.0      **Time:** 1656

**Field Decon:** NO      **Field Filtered:** NO      **Duplicate:** YES (NO)      **Acid ID# HNO3:** DL7190      **H2SO4:** NA

| Sample Container Specification |          |            | Sample Preservation |              |          | Intended Analysis or method |
|--------------------------------|----------|------------|---------------------|--------------|----------|-----------------------------|
| ID:                            | Material | Volume(mL) | Preservative        | Volume added | final pH |                             |

|             |    |      |              |                     |     |                         |
|-------------|----|------|--------------|---------------------|-----|-------------------------|
| D18F069-01A | PE | 60   | HNO3         | preacidified bottle | 1.3 | Metals                  |
| D18F069-01B | PE | 250  | Chill <6 deg | n/a                 | n/a | Anions: F1, Cl, SO4     |
| D18F069-01C | PE | 2000 | HNO3         | 4 mL                | 1.3 | Radium 226+228 Combined |
| D18F069-01D | PE | 2000 | Chill <6 deg | n/a                 | n/a | Solids: TSS, TDS        |

Well found locked on arrival       Well left locked on departure  
**Temperature:** 15°C      **Winds:** WSW @ 5 mph      **Cloud Cover:** Overcast      **Precip:** Light Rain  
**Remarks:**

# DGS Groundwater Sampling Log



|                               |                      |                                 |                                   |  |
|-------------------------------|----------------------|---------------------------------|-----------------------------------|--|
| WELL ID: <b>SIS-2</b>         | Location:            | Latitude: <b>29°45'53.4672"</b> | Longitude: <b>-82°23'31.5096"</b> | MSL @ TOC Date In Service: <b>183.3 2017</b> |
| Quarter: <u>COR July 2018</u> | Date: <u>7-18-18</u> | Well Type: <b>D</b>             |                                   |  |

### Purging Data

|   |                                   |  |                                  |
|---|-----------------------------------|--|----------------------------------|
| Diameter(in) <b>2</b>   | Total well depth(ft) <b>14.22</b> | Depth to water(ft) <b>5.40</b>         | Well capacity(L/ft) <b>0.6</b>   |
| Distance from TOC to top of screen <b>4.22</b> ft.                | Purging Method: <b>PP</b>         |  | Equipment Volume = <b>750 mL</b> |
| 1 WELL VOLUME(L)=(Total Well Depth-Depth to water)X Well Capacity |                                   | Time of Depth Meter Decon: <u>0926</u> |                                  |
| <b>Well Vol = ( 14.22 - ) X 0.6 = 5.3 L</b>                       |                                   | 1/4 well vol. = <b>NA</b>              |                                  |
| Init Tubing Dpth(ft) <u>9'</u>                                    | Final Tube Dept(ft): <u>9'</u>    | Purge Start Time: <u>0928</u>          | Purge Stop time: <u>10:01</u>    |
|   |                                   | Total Volume Purged <b>6.7 L</b>       |                                  |

| Time  | Volume Purged (L) | Cumul. Volume Purged (L) | Purge rate mL/min | Depth to water (ft) | pH (SU) | Temp (°C) | Cond (µmho) | Diss O2 (mg/L) | Turbidity (ntu) | ORP (mv) | Observed odor or color |
|-------|-------------------|--------------------------|-------------------|---------------------|---------|-----------|-------------|----------------|-----------------|----------|------------------------|
|       |                   |                          |                   |                     | ± 0.2§  | ± 0.2§    | ± 5%§       | 20% sat§       | 20 max§         |          |                        |
| 09:54 | 5.3               | 5.3                      | 230               | 5.49                | 6.94    | 29.6      | 548         | 3.73           | 1.87            | 72.6     | No Odor                |
| 09:59 | 0.7               | 6.0                      | 230               | 5.49                | 6.94    | 29.6      | 548         | 3.72           | 1.62            | 76.6     | yellowish color        |
| 10:00 | 0.7               | 6.7                      | 230               | 5.49                | 6.94    | 29.6      | 548         | 3.73           | 1.64            | 79.4     | Clear                  |
|       |                   |                          |                   |                     |         |           |             |                |                 |          |                        |

5P 7-18-18  
 NIST can to 10C  
 30.1  
 29.7

◆ FDEP SOP Section 2212.3

### Sampling Data

Decon Depth Mtr - rinse with analyte free water  
 §Purge method FDEP-SOP 2212.3.1

|  |                            |  |                                |  |                               |                             |  |
|--|----------------------------|--|--------------------------------|--|-------------------------------|-----------------------------|--|
| Sampled By(Print): <u>S. Phillips, K. Brakefield</u> |                            |  |                                | Sampler(s) Signatures: <u>S. Phillips, K. Brakefield</u> |                               |                             |  |
| Sampling Method: <b>PP</b>                           | Tube Material: <b>PP/S</b> | Sampling Started Tube Dpth(ft): <u>9'</u>              | Time: <u>10:03</u>             | Sampling completed Tube Dpth(ft): <u>9'</u>              | Time: <u>10:24</u>            |                             |  |
| Field Decon: <b>NO</b>                               | Field Filtered: <b>NO</b>  | Duplicate: <b>YES</b> <input checked="" type="radio"/> | Acid ID# <b>HNO3: ALS Acid</b> | <b>H2SO4: NA</b>   | DL71301 For Radium SP 7-16-18 |                             |  |
| Sample Container Specification                       |                            |  | Sample Preservation            |  |                               | Intended Analysis or method |  |
| ID:  | Material                   | Volume(mL)   | Preservative                   | Volume added   | final pH                      |                             |  |
| <u>D18F069-02A</u>                                   | PE                         | 60   | HNO3                           | preacidified bottle                                      | 1.3                           | Metals                      |  |
| <u>D18F069-02B</u>                                   | PE                         | 250  | Chill <6 deg                   | n/a  | n/a                           | Anions: FI, Cl, SO4         |  |
| <u>D18F069-02C</u>                                   | PE                         | 2000   | HNO3                           | 4 mL   | 1.3                           | Radium 226+228 Combined     |  |
| <u>D18F069-02D</u>                                   | PE                         | 2000   | Chill <6 deg                   | n/a  | n/a                           | Solids: TSS, TDS            |  |

Well found locked on arrival     Well left locked on departure  
 Temperature: 83°F Winds: SW @ 7mph Cloud Cover: partly cloudy Precip: none  
 Remarks: Tried to reduce DU by tightening tubing and taping but no change.

# DGS Groundwater Sampling Log



|                                 |   |                                 |                                   |   |
|---------------------------------|---|---------------------------------|-----------------------------------|---|
| WELL ID: <b>SIS-3</b>           | Location: <b>29°45'51.8472" -82°23'35.5632"</b> | Latitude: <b>29°45'51.8472"</b> | Longitude: <b>-82°23'35.5632"</b> | MSL @ TOC Date In Service: <b>183.11 2017</b> |
| Quarter: <b>CCR - July 2018</b> | Date: <b>7-19-18</b>                            | Well Type: <b>D</b>             |                                   |   |

### Purging Data

|   |                                   |                                |  |
|---|-----------------------------------|--------------------------------|--|
| Diameter(in) <b>2</b>   | Total well depth(ft) <b>13.38</b> | Depth to water(ft) <b>2.60</b> | Well capacity(L/ft) <b>0.6</b>         |
| Distance from TOC to top of screen <b>3.38</b> ft.                          |                                   | Purging Method: <b>PP</b>      | Equipment Volume = <b>750 mL</b>       |
| 1 WELL VOLUME(L)=(Total Well Depth-Depth to water)X Well Capacity           |                                   |                                | Time of Depth Meter Decon: <b>0622</b> |
| <b>Well Vol = ( 13.38 - 2.60 ) X 0.6 = 6.5 L</b> 1/4 well vol. = <b>N/A</b> |                                   |                                |  |
| Init Tubing Dpth(ft) (0')   | Final Tube Dept(ft): (0')         | Purge Start Time: <b>0627</b>  | Purge Stop time: <b>0733</b>           |
|   |                                   |                                | Total Volume Purged <b>7.1 L</b>       |

| Time | Volume Purged (L) | Cumul. Volume Purged (L) | Purge rate mL/min | Depth to water (ft) | pH (SU)                | Temp (°C)        | Cond (µmho) | Diss O2 (mg/L) | Turbidity (ntu) | ORP (mv) | Observed odor or color                  |
|------|-------------------|--------------------------|-------------------|---------------------|------------------------|------------------|-------------|----------------|-----------------|----------|---|
|      |                   |                          |                   |                     | ± 0.2§                 | ± 0.2§           | ± 5%§       | 20% sat§       | 20 max§         |          |   |
| 0727 | 6.5               | 6.5                      | 95                | 4.25                | 6.80                   | 27.6             | 432         | 0.38           | 4.26            | 24.4     | Clear<br>Yellowish color<br>Sulfur odor |
| 0730 | 0.3               | 6.8                      | 95                | 4.26                | 6.80                   | 27.6             | 433         | 0.43           | 4.57            | 22.4     |   |
| 0733 | 0.3               | 7.1                      | 95                | 4.30                | 6.80                   | 27.6             | 435         | 0.46           | 4.13            | 20.2     |   |
|      |                   |                          |                   |                     | N.S.T<br>Cam<br>+0.1°C | ↓<br><b>27.7</b> |             |                |                 |          |   |

◆ FDEP SOP Section 2212.3

### Sampling Data

Decon Depth Mtr - rinse with analyte free water  
§Purge method FDEP-SOP 2212.3.1

|   |                            |  |   |  |                             |                                |  |
|---|----------------------------|--|---|--|-----------------------------|--------------------------------|--|
| Sampled By(Print): <i>Shelley Phillips, Kent Brakefield</i> |                            |  |   | Sampler(s) Signatures: <i>J. Phillips, K. Brakefield</i> |                             |                                |  |
| Sampling Method: <b>PP</b>                                  | Tube Material: <b>PP/S</b> | Sampling Started Tube Dpth(ft): <b>10.0'</b>           | Time: <b>0735</b>                         | Sampling completed Tube Dpth(ft): <b>10.0'</b>           | Time: <b>0826</b>           |                                |  |
| Field Decon: <b>NO</b>                                      | Field Filtered: <b>NO</b>  | Duplicate: <b>YES</b> <input checked="" type="radio"/> | Acid ID# <b>HNO3: AFS Acid for metals</b> | <b>H2SO4: NA</b>   |                             |                                |  |
| Sample Container Specification                              |                            | Sample Preservation                                    |   |  | Intended Analysis or method |                                |  |
| ID:   | Material                   | Volume(mL)   | Preservative                              | Volume added   |                             | final pH                       |  |
| <b>D18069-03A</b>   | <b>PE</b>                  | <b>60</b>  | <b>HNO3</b>                               | <b>preacidified bottle</b>                               | <b>1.3</b>                  | <b>Metals</b>                  |  |
| <b>D18069-03B</b>   | <b>PE</b>                  | <b>250</b>   | <b>Chill &lt;6 deg</b>                    | <b>n/a</b>   | <b>n/a</b>                  | <b>Anions: F1, Cl, SO4</b>     |  |
| <b>D18069-03C</b>   | <b>PE</b>                  | <b>2000</b>  | <b>HNO3</b>                               | <b>4 mL</b>  | <b>1.3</b>                  | <b>Radium 226+228 Combined</b> |  |
| <b>D18069-03D</b>   | <b>PE</b>                  | <b>2000</b>  | <b>Chill &lt;6 deg</b>                    | <b>n/a</b>   | <b>n/a</b>                  | <b>Solids: TSS, TDS</b>        |  |

Well found locked on arrival     Well left locked on departure  
 Temperature: **76°F** Winds: **SE 2 mph** Cloud Cover: **Partly cloudy** Precip: **-0-**  
 Remarks: **Depth to water after sample collection = 4.67'**

# DGS Groundwater Sampling Log



|                                 |                      |                                |                                   |   |
|---------------------------------|----------------------|--------------------------------|-----------------------------------|---|
| WELL ID: <b>SIS-4</b>           | Location:            | Latitude: <b>29°45'54.144"</b> | Longitude: <b>-82°23'38.4108"</b> | MSL @ TOC Date In Service: <b>183.87 2017</b> |
| Quarter: <b>CCR - July 2018</b> | Date: <b>7-18-18</b> | Well Type: <b>D</b>            |                                   |   |

### Purging Data

|   |                                  |                                |  |
|---|----------------------------------|--------------------------------|--|
| Diameter(in) <b>2</b>   | Total well depth(ft) <b>13.7</b> | Depth to water(ft) <b>3.96</b> | Well capacity(L/ft) <b>0.6</b>         |
| Distance from TOC to top of screen <b>3.7</b> ft.                 |                                  | Purging Method: <b>PP</b>      | Equipment Volume = <b>750 mL</b>       |
| 1 WELL VOLUME(L)=(Total Well Depth-Depth to water)X Well Capacity |                                  |                                | Time of Depth Meter Decon: <b>1030</b> |
| <b>Well Vol = ( 13.7 - 3.96 ) X 0.6 = 5.9 L</b>                   |                                  |                                | 1/4 well vol. = <b>N/A</b>             |
| Init Tubing Dpth(ft) <b>10'</b>                                   | Final Tube Dept(ft): <b>10'</b>  | Purge Start Time: <b>1034</b>  | Purge Stop time: <b>1132</b>           |
|   |                                  |                                | Total Volume Purged <b>12.2 L</b>      |

| Time | Volume Purged (L) | Cumul. Volume Purged (L) | Purge rate mL/min | Depth to water (ft) | pH (SU) | Temp (°C)                                  | Cond (µmho) | Diss O2 (mg/L) | Turbidity (ntu) | ORP (mv) | Observed odor or color                  |
|------|-------------------|--------------------------|-------------------|---------------------|---------|--|-------------|----------------|-----------------|----------|---|
|      |                   |                          |                   |                     | ± 0.2§  | ± 0.2§                                     | ± 5%§       | 20% sat§       | 20 max§         |          |   |
| 1110 | 7.2               | 7.2                      | 225               | 4.49                | 6.44    | 27.6                                       | 532*        | 2.13           | 1.70            | 9.2      | Clear<br>Yellowish color<br>Slight odor |
| 1127 | 4.0               | 11.2                     | 225               | 4.49                | 6.14    | 27.5                                       | 658         | 1.81           | 1.40            | -2.0     |   |
| 1129 | 0.5               | 11.7                     | 225               | 4.49                | 6.12    | 27.5                                       | 665         | 1.76           | 1.29            | -2.9     |   |
| 1132 | 0.5               | 12.2                     | 225               | 4.49                | 6.11    | 27.5                                       | 671         | 1.77           | 1.19            | -3.4     |   |
|      |                   |                          |                   |                     |         | ↓<br>NIST<br>Cert<br>70.1°C<br><b>27.6</b> |             |                |                 |          |   |

Decon Depth Mtr - rinse with analyte free water  
§Purge method FDEP-SOP 2212.3.1

◆ FDEP SOP Section 2212.3

### Sampling Data

|   |                            |  |                     |  |                   |                                 |  |
|---|----------------------------|--|---------------------|--|-------------------|---------------------------------|--|
| Sampled By(Print): <i>Shelley Phillips, Kent Brakefield</i> |                            |  |                     | Sampler(s) Signatures: <i>S. Phillips, K. Brakefield</i> |                   |                                 |  |
| Sampling Method: <b>PP</b>                                  | Tube Material: <b>PP/S</b> | Sampling Started Tube Dpth(ft): <b>10.0'</b> | Time: <b>1134</b>   | Sampling completed Tube Dpth(ft): <b>10.0'</b>           | Time: <b>1152</b> |                                 |  |
| Field Decon: <b>NO</b>                                      | Field Filtered: <b>NO</b>  | Duplicate: <b>YES</b>                        | <b>NO</b>           | Acid ID# <b>HNO3: D171301</b>                            | <b>H2SO4: N/A</b> |                                 |  |
| Sample Container Specification                              |                            |  | Sample Preservation |  |                   | ALS metals pre-preserved by ALS |  |
| ID:   | Material                   | Volume(mL)                                   | Preservative        | Volume added   | final pH          | Intended Analysis or method     |  |
| D18F069-04A   | PE                         | 60   | HNO3                | preacidified bottle                                      | 1.3               | Metals                          |  |
| D18F069-04B   | PE                         | 250  | Chill <6 deg        | n/a  | n/a               | Anions: F, Cl, SO4              |  |
| D18F069-04C   | PE                         | 2000   | HNO3                | 4 mL   | 1.3               | Radium 226+228 Combined         |  |
| D18F069-04D   | PE                         | 2000   | Chill <6 deg        | n/a  | n/a               | Solids: TSS, TDS                |  |

|  |   |                                   |
|--|---|-----------------------------------|
| <input checked="" type="checkbox"/> Well found locked on arrival                                   | <input checked="" type="checkbox"/> Well left locked on departure | Periods of Rain                   |
| Temperature: <b>84°F</b>   | Winds: <b>WSW @ 1 mph</b>   | Cloud Cover: <b>Mostly Cloudy</b> |
| Remarks: <b>Rain event during initial purge. Covered well and extended purge until after rain.</b> |   | Precip: <b>traces</b>             |
| <b>* Allowing conductivity to stabilize before collecting parameters.</b>                          |   |                                   |

# DGS Groundwater Sampling Log



|                            |                      |                                 |                                   |           |                              |
|----------------------------|----------------------|---------------------------------|-----------------------------------|-----------|------------------------------|
| WELL ID: <b>LF-1</b>       | Location:            | Latitude: <b>29°45'59.0544"</b> | Longitude: <b>-82°23'51.8244"</b> | MSL @ TOC | Date In Service: <b>2017</b> |
| Quarter: <b>July - CCR</b> | Date: <b>7-17-18</b> | Well Type: <b>U</b>             |                                   |           |                              |

### Purging Data

|   |                                   |                                |  |
|---|-----------------------------------|--------------------------------|--|
| Diameter(in) <b>2</b>   | Total well depth(ft) <b>14.88</b> | Depth to water(ft) <b>4.87</b> | Well capacity(L/ft) <b>0.6</b>         |
| Distance from TOC to top of screen <b>4.88</b> ft.                |                                   | Purging Method: <b>PP</b>      | Equipment Volume = <b>750 mL</b>       |
| 1 WELL VOLUME(L)=(Total Well Depth-Depth to water)X Well Capacity |                                   |                                | Time of Depth Meter Decon: <b>1348</b> |
| <b>Well Vol = ( 14.88 - 4.87 ) X 0.6 = 6.0 L</b>                  |                                   |                                | 1/4 well vol.= <b>N/A</b>              |
| Init Tubing Dpth(ft) <b>10.0</b>                                  | Final Tube Dept(ft): <b>10.0</b>  | Purge Start Time: <b>1352</b>  | Purge Stop time: <b>1425</b>           |
|   |                                   |                                | Total Volume Purged <b>11.5 L</b>      |

| Time | Volume Purged (L) | Cumul. Volume Purged (L) | Purge rate mL/min | Depth to water (ft) | pH (SU)   | Temp (°C) | Cond (µmho) | Diss O2 (mg/L) | Turbidity (ntu) | ORP (mv) | Observed odor or color           |
|------|-------------------|--------------------------|-------------------|---------------------|-----------|-----------|-------------|----------------|-----------------|----------|----------------------------------|
|      |                   |                          |                   |                     | ± 0.2§    | ± 0.2§    | ± 5%§       | 20% sat§       | 20 max§         |          |                                  |
| 1410 | 6.0               | 6.0                      | 360               | 4.95                | 5.77      | 27.3      | 281         | 0.40           | 0.37            | 136.8    | Clear<br>Slight color<br>No odor |
| 1413 | 1.1               | 7.1                      | 360               | 4.95                | 5.75      | 27.3      | 271         | 0.46           | 0.45            | 138.2    |                                  |
| 1416 | 1.1               | 8.2                      | 360               | 4.95                | 5.71      | 27.3      | 256         | 0.29           | 0.59            | 139.9    |                                  |
| 1419 | 1.1               | 9.3                      | 360               | 4.95                | 5.69      | 27.3      | 249         | 0.31           | 0.26            | 140.5    |                                  |
| 1422 | 1.1               | 10.4                     | 360               | 4.95                | 5.67      | 27.2      | 243         | 0.34           | 0.20            | 140.1    |                                  |
| 1425 | 1.1               | 11.5                     | 360               | 4.95                | 5.66      | 27.2      | 240         | 0.33           | 0.23            | 139.6    |                                  |
|      |                   |                          |                   |                     | ↓<br>27.3 |           |             |                |                 |          |                                  |

◆ FDEP SOP Section 2212.3

### Sampling Data

Decon Depth Mtr - rinse with analyte free water  
§Purge method FDEP-SOP 2212.3.1

|   |          |                            |              |  |          |  |  |
|---|----------|----------------------------|--------------|--|----------|--|--|
| Sampled By(Print): <i>Shelley Phillips, Kent Brakefield</i> |          |                            |              | Sampler(s) Signatures: <i>[Signatures]</i>                       |          |  |  |
| Sampling Method: <b>PP</b>                                  |          | Tube Material: <b>PP/S</b> |              | Sampling Started<br>Tube Dpth(ft): <b>10.0</b> Time: <b>1427</b> |          | Sampling completed<br>Tube Dpth(ft): <b>10.0</b> Time: <b>1440</b> |  |
| Field Decon: <b>NO</b>                                      |          | Field Filtered: <b>NO</b>  |              | Duplicate: <b>YES NO</b>   |          | Acid ID# <b>HNO3: DL71301 H2SO4: N/A</b>                           |  |
| Sample Container Specification                              |          |                            |              | Sample Preservation  |          |  |  |
| ID:   | Material | Volume(mL)                 | Preservative | Volume added   | final pH | Intended Analysis or method  |  |
| <b>D18F069-05A</b>  | PE       | 60                         | HNO3         | preacidified bottle  | 1.3      | Metals   |  |
| <b>D18F069-05B</b>  | PE       | 250                        | Chill <6 deg | n/a  | n/a      | Anions: F1, Cl, SO4  |  |
| <b>D18F069-05C</b>  | PE       | 2000                       | HNO3         | 4 mL   | 1.3      | Radium 226+228 Combined  |  |
| <b>D18F069-05D</b>  | PE       | 2000                       | Chill <6 deg | n/a  | n/a      | Solids: TSS, TDS   |  |

Well found locked on arrival     Well left locked on departure  
 Temperature: **79° F**    Winds: **ESE @ 2 mph**    Cloud Cover: **Overcast**    Precip: **Rain**  
 Remarks:



# DGS Groundwater Sampling Log



|                               |                      |                                 |                                   |           |                              |
|-------------------------------|----------------------|---------------------------------|-----------------------------------|-----------|------------------------------|
| WELL ID: <b>LF-2</b>          | Location:            | Latitude: <b>29°45'50.5296"</b> | Longitude: <b>-82°23'47.7492"</b> | MSL @ TOC | Date In Service: <b>2017</b> |
| Quarter: <b>CCR July 2018</b> | Date: <b>7-18-18</b> | Well Type: <b>D</b>             |                                   |           |                              |

### Purging Data

|   |                                   |                                |  |
|---|-----------------------------------|--------------------------------|--|
| Diameter(in) <b>2</b>   | Total well depth(ft) <b>14.35</b> | Depth to water(ft) <b>4.37</b> | Well capacity(L/ft) <b>0.6</b>         |
| Distance from TOC to top of screen <b>4.35</b> ft.                |                                   | Purging Method: <b>PP</b>      | Equipment Volume = <b>750 mL</b>       |
| 1 WELL VOLUME(L)=(Total Well Depth-Depth to water)X Well Capacity |                                   |                                | Time of Depth Meter Decon: <b>1441</b> |
| <b>Well Vol = ( 14.35 - 4.37 ) X 0.6 = 6.0 L</b>                  |                                   |                                | 1/4 well vol. = <b>NA</b>              |
| Init Tubing Dpth(ft) <b>10'</b>                                   | Final Tube Dept(ft): <b>10'</b>   | Purge Start Time: <b>1443</b>  | Purge Stop time: <b>1538</b>           |
|   |                                   |                                | Total Volume Purged <b>6.76 L</b>      |

| Time | Volume Purged (L) | Cumul. Volume Purged (L) | Purge rate mL/min | Depth to water (ft) | pH (SU)          | Temp (°C)        | Cond (µmho) | Diss O2 (mg/L) | Turbidity (ntu) | ORP (mv) | Observed odor or color                       |
|------|-------------------|--------------------------|-------------------|---------------------|------------------|------------------|-------------|----------------|-----------------|----------|--|
|      |                   |                          |                   |                     | ± 0.2§           | ± 0.2§           | ± 5%§       | 20% sat§       | 20 max§         |          |  |
| 1531 | 6.0               | 6.0                      | 125               | 5.12                | 6.07             | 26.8             | 874         | 0.18           | 10.1            | 58.9     | Slight odor<br>few particles<br>yellow color |
| 1534 | 0.38              | 6.38                     | 125               | 5.12                | 6.04             | 26.8             | 868         | 0.18           | 9.85            | 49.7     |  |
| 1537 | 0.38              | 6.76                     | 125               | 5.13                | 6.03             | 26.8             | 861         | 0.18           | 10.3            | 44.8     |  |
|      |                   |                          |                   |                     | Nist corr +0.1°C | ↓<br><b>26.9</b> |             |                |                 |          |  |

◆ FDEP SOP Section 2212.3

### Sampling Data

Decon Depth Mtr - rinse with analyte free water  
§Purge method FDEP-SOP 2212.3.1

| Sampled By(Print): <b>S. Phillips, K. Brakefield</b> |                            |  |                               | Sampler(s) Signatures: <i>S. Phillips, K. Brakefield</i> |                             |                         |  |
|--|----------------------------|--|-------------------------------|--|-----------------------------|-------------------------|--|
| Sampling Method: <b>PP</b>                           | Tube Material: <b>PP/S</b> | Sampling Started Tube Dpth(ft): <b>10'</b>   | Time: <b>1540</b>             | Sampling completed Tube Dpth(ft): <b>10'</b>             | Time: <b>1613</b>           |                         |  |
| Field Decon: <b>NO</b>                               | Field Filtered: <b>NO</b>  | Duplicate: <b>YES</b> <input type="radio"/> <b>NO</b> <input checked="" type="radio"/> | Acid ID# <b>HNO3: DL71301</b> | H2SO4: <b>NA</b>   | Metals preacidified by ALS  |                         |  |
| Sample Container Specification                       |                            | Sample Preservation  |                               |  | Intended Analysis or method |                         |  |
| ID:  | Material                   | Volume(mL)   | Preservative                  | Volume added   | final pH                    |                         |  |
| D18F069-06A  | PE                         | 60   | HNO3                          | preacidified bottle                                      | 1.3                         | Metals                  |  |
| D18F069-06B  | PE                         | 250  | Chill <6 deg                  | n/a  | n/a                         | Anions: F, Cl, SO4      |  |
| D18F069-06C  | PE                         | 2000   | HNO3                          | 4 mL   | 1.0                         | Radium 226+228 Combined |  |
| D18F069-06D  | PE                         | 2000   | Chill <6 deg                  | n/a  | n/a                         | Solids: TSS, TDS        |  |

|   |   |
|---|---|
| <input checked="" type="checkbox"/> Well found locked on arrival                  | <input checked="" type="checkbox"/> Well left locked on departure |
| Temperature: <b>87°F</b>  | Winds: <b>55W @ 9mph</b>  |
| Cloud Cover: <b>Mostly Cloudy</b>   | Precip: <b>0</b>  |
| Remarks: <b>light drizzle during purge but covered well; none during sampling</b> |   |

# DGS Groundwater Sampling Log



|                               |                      |                                 |                                   |                     |                 |
|-------------------------------|----------------------|---------------------------------|-----------------------------------|---------------------|-----------------|
| WELL ID: <b>LF-3</b>          | Location:            | Latitude: <b>29°45'50.6376"</b> | Longitude: <b>-82°23'52.1592"</b> | MSL @ TOC           | Date In Service |
| Quarter: <b>CER July 2018</b> | Date: <b>7-18-18</b> |                                 |                                   | 185.05              | 2017            |
|                               |                      |                                 |                                   | Well Type: <b>D</b> |                 |

### Purging Data

|   |                                   |                                |                                |  |  |  |  |
|---|-----------------------------------|--------------------------------|--------------------------------|--|--|--|--|
| Diameter(in) <b>2</b>   | Total well depth(ft) <b>14.43</b> | Depth to water(ft) <b>5.33</b> | Well capacity(L/ft) <b>0.6</b> |  |  |  |  |
| Distance from TOC to top of screen <b>4.43</b> ft.                |                                   | Purging Method: <b>PP</b>      |                                | Equipment Volume = <b>750 mL</b>       |  |  |  |
| 1 WELL VOLUME(L)=(Total Well Depth-Depth to water)X Well Capacity |                                   |                                |                                | Time of Depth Meter Decon: <b>1307</b> |  |  |  |
| <b>Well Vol = ( 14.43 - 5.33 ) X 0.6 = 5.5 L</b>                  |                                   |                                |                                | 1/4 well vol. = <b>NA</b>              |  |  |  |
| Init Tubing Dpth(ft) <b>10'</b>                                   | Final Tube Dept(ft): <b>10'</b>   | Purge Start Time: <b>1311</b>  | Purge Stop time: <b>1358</b>   | Total Volume Purged <b>6.25 L</b>      |  |  |  |

| Time | Volume Purged (L) | Cumul. Volume Purged (L) | Purge rate mL/min | Depth to water (ft) | pH (SU)   | Temp (°C) | Cond (µmho) | Diss O2 (mg/L) | Turbidity (ntu) | ORP (mv) | Observed odor or color  |
|------|-------------------|--------------------------|-------------------|---------------------|-----------|-----------|-------------|----------------|-----------------|----------|-------------------------|
|      |                   |                          |                   |                     | ± 0.2§    | ± 0.2§    | ± 5%§       | 20% sat§       | 20 max§         |          |                         |
| 1352 | 5.5               | 5.5                      | 150               | 5.54                | 6.11      | 27.5      | 1172        | 0.19           | 2.75            | -22.4    | Slight Odor             |
| 1354 | 0.3               | 5.8                      | 150               | 5.54                | 6.10      | 27.5      | 1178        | 0.19           | 1.90            | -22.7    | Odor                    |
| 1357 | 0.45              | 6.25                     | 150               | 5.54                | 6.09      | 27.5      | 1182        | 0.19           | 1.94            | -22.9    | Some particles floating |
|      |                   |                          |                   |                     | ↓<br>27.6 |           |             |                |                 |          | Yellow color            |

◆ FDEP SOP Section 2212.3

### Sampling Data

Decon Depth Mtr - rinse with analyte free water  
§Purge method FDEP-SOP 2212.3.1

| Sampled By(Print): <b>S. Phillips, K. Brakel</b> |          |                            |                     | Sampler(s) Signatures: <i>S. Phillips, K. Brakel</i>   |          |  |  |
|--|----------|----------------------------|---------------------|--|----------|--|--|
| Sampling Method: <b>PP</b>                       |          | Tube Material: <b>PP/S</b> |                     | Sampling Started Tube Dpth(ft): <b>10'</b> Time: <b>1359</b>                                 |          | Sampling completed Tube Dpth(ft): <b>10'</b> Time: <b>1437</b> |  |
| Field Decon: <b>NO</b>                           |          | Field Filtered: <b>NO</b>  |                     | Duplicate: <b>YES</b> <input checked="" type="checkbox"/> <b>NO</b> <input type="checkbox"/> |          | Acid ID# <b>HNO3: DL71301 H2SO4: NA</b>                        |  |
| Sample Container Specification                   |          |                            | Sample Preservation |  |          | ALS acidified metals   |  |
| ID:  | Material | Volume(mL)                 | Preservative        | Volume added   | final pH | Intended Analysis or method                                    |  |
| D18F069-07A                                      | PE       | 60                         | HNO3                | preacidified bottle  | 1.3      | Metals   |  |
| D18F069-07B                                      | PE       | 250                        | Chill <6 deg        | n/a  | n/a      | Anions: F, Cl, SO4   |  |
| D18F069-07C                                      | PE       | 2000                       | HNO3                | 4 mL   | 1.3      | Radium 226+228 Combined  |  |
| D18F069-07D                                      | PE       | 2000                       | Chill <6 deg        | n/a  | n/a      | Solids: TSS, TDS   |  |

Well found locked on arrival     Well left locked on departure  
 Temperature: **79°F**    Winds: **SSW @ 6 mph**    Cloud Cover: **Mostly Cloudy**    Precip: **0**  
 Remarks:

# DGS Groundwater Sampling Log



|                               |                      |                                 |                                   |           |                 |
|-------------------------------|----------------------|---------------------------------|-----------------------------------|-----------|-----------------|
| WELL ID: <b>LF-4</b>          | Location:            | Latitude: <b>29°45'50.5008"</b> | Longitude: <b>-82°23'58.6248"</b> | MSL @ TOC | Date In Service |
| Quarter: <u>CCR July 2018</u> | Date: <u>7-18-18</u> |                                 |                                   | 186.01    | 2017            |
| Well Type: <b>D</b>           |                      |                                 |                                   |           |                 |

### Purging Data

|   |                                   |  |                                  |
|---|-----------------------------------|--|----------------------------------|
| Diameter(in) <b>2</b>   | Total well depth(ft) <b>13.95</b> | Depth to water(ft) <b>4.92</b>         | Well capacity(L/ft) <b>0.6</b>   |
| Distance from TOC to top of screen <b>3.95</b> ft.                |                                   | Purging Method: <b>PP</b>              | Equipment Volume = <b>750 mL</b> |
| 1 WELL VOLUME(L)=(Total Well Depth-Depth to water)X Well Capacity |                                   | Time of Depth Meter Decon: <u>1201</u> |                                  |
| <b>Well Vol = ( 13.95 - 4.92 ) X 0.6 = 5.4 L</b>                  |                                   | 1/4 well vol. = <b>NA</b>              |                                  |
| Init Tubing Dpth(ft) / 0'   | Final Tube Dept(ft): <u>10'</u>   | Purge Start Time: <u>12:03</u>         | Purge Stop time: <u>12:37</u>    |
|   |                                   | Total Volume Purged <u>6.2 L</u>       |                                  |

| Time  | Volume Purged (L) | Cumul. Volume Purged (L) | Purge rate mL/min | Depth to water (ft) | pH (SU)                        | Temp (°C) | Cond (µmho) | Diss O2 (mg/L) | Turbidity (ntu) | ORP (mv) | Observed odor or color                                |
|-------|-------------------|--------------------------|-------------------|---------------------|--------------------------------|-----------|-------------|----------------|-----------------|----------|---|
|       |                   |                          |                   |                     | ± 0.2§                         | ± 0.2§    | ± 5%§       | 20% sat§       | 20 max§         |          |   |
| 12:32 | 5.4               | 5.4                      | 200               | 5.15                | 6.46                           | 27.6      | 918         | 1.50           | 5.28            | 29.4     | No Odor<br>Yellow<br>Color<br>Some particles floating |
| 12:34 | 0.4               | 5.8                      | 200               | 5.15                | 6.45                           | 27.6      | 924         | 1.40           | 4.15            | 29.1     |   |
| 12:36 | 0.4               | 6.2                      | 200               | 5.15                | 6.44                           | 27.6      | 931         | 1.35           | 3.03            | 28.5     |   |
|       |                   |                          |                   |                     | ↓<br>NIST<br>certific<br>+ 0.1 | (27.7)    |             |                |                 |          |   |

← 203 DO

◆ FDEP SOP Section 2212.3

### Sampling Data

Decon Depth Mtr - rinse with analyte free water  
§Purge method FDEP-SOP 2212.3.1

|  |          |                            |                     |  |          |  |  |
|--|----------|----------------------------|---------------------|--|----------|--|--|
| Sampled By(Print): <u>S. Phillips, K. Brakefield</u> |          |                            |                     | Sampler(s) Signatures: <u>S. Phillips, K. Brakefield</u>                               |          |  |  |
| Sampling Method: <b>PP</b>                           |          | Tube Material: <b>PP/S</b> |                     | Sampling Started<br>Tube Dpth(ft): <u>10'</u> Time: <u>12:39</u>                       |          | Sampling completed<br>Tube Dpth(ft): <u>10'</u> Time: <u>13:03</u> |  |
| Field Decon: <b>NO</b>                               |          | Field Filtered: <b>NO</b>  |                     | Duplicate: <b>YES</b> <input checked="" type="radio"/> <b>NO</b> <input type="radio"/> |          | Acid ID# HNO3: <u>DL71301</u> H2SO4: <u>NA</u>                     |  |
| Sample Container Specification                       |          |                            | Sample Preservation |  |          | Intended Analysis or method  |  |
| ID:  | Material | Volume(mL)                 | Preservative        | Volume added   | final pH |  |  |
| <u>D18F069-089</u>                                   | PE       | 60                         | HNO3                | preacidified bottle  | 1.3      | Metals   |  |
| <u>D18F069-088</u>                                   | PE       | 250                        | Chill <6 deg        | n/a  | n/a      | Anions: F, Cl, SO4   |  |
| <u>D18F069-08C</u>                                   | PE       | 2000                       | HNO3                | 4 mL   | 1.6      | Radium 226+228 Combined  |  |
| <u>D18F069-08D</u>                                   | PE       | 2000                       | Chill <6 deg        | n/a  | n/a      | Solids: TSS, TDS   |  |

Metals acidified by ALS

|  |   |
|--|---|
| <input checked="" type="checkbox"/> Well found locked on arrival | <input checked="" type="checkbox"/> Well left locked on departure |
| Temperature: <u>79°F</u>   | Winds: <u>SSW @ 6mph</u>  |
| Cloud Cover: <u>Mostly Cloudy</u>                                | Precip: <u>0</u>  |
| Remarks:   |   |

# DGS Groundwater Sampling Log



|                               |                      |                               |                                 |           |                 |
|-------------------------------|----------------------|-------------------------------|---------------------------------|-----------|-----------------|
| WELL ID: <b>R4T5 (CCR)</b>    | Location:            | Latitude: <b>29°45'52.14"</b> | Longitude: <b>-82°23'33.18"</b> | MSL @ TOC | Date In Service |
| Quarter: <u>CCR July 2018</u> | Date: <u>7-18-18</u> |                               |                                 | 187.46    | 7-93            |
| Well Type: <b>D</b>           |                      |                               |                                 |           |                 |

### Purging Data

| Diameter(in)  | 2                 | Total well depth(ft)     | 15.08             | Depth to water(ft)                              | Well capacity(L/ft) | 0.6                       |             |                |                 |          |                        |
|---|-------------------|--------------------------|-------------------|---|---------------------|---------------------------|-------------|----------------|-----------------|----------|------------------------|
| Distance from TOC to top of screen                                |                   | 5.08 ft.                 |                   | Purging Method: PP                              |                     | Equipment Volume = 750 mL |             |                |                 |          |                        |
| 1 WELL VOLUME(L)=(Total Well Depth-Depth to water)X Well Capacity |                   |                          |                   | Time of Depth Meter Decon: <input type="text"/> |                     |                           |             |                |                 |          |                        |
| <b>Well Vol = ( 15.08 - ) X 0.6 =</b>                             |                   |                          |                   | <b>L</b> 1/4 well vol.=                         |                     |                           |             |                |                 |          |                        |
| Init Tubing Dpth(ft)  |                   | Final Tube Dept(ft):     |                   | Purge Start Time:                               |                     | Purge Stop time:          |             |                |                 |          |                        |
|   |                   |                          |                   |   |                     | Total Volume Purged L     |             |                |                 |          |                        |
| Time  | Volume Purged (L) | Cumul. Volume Purged (L) | Purge rate mL/min | Depth to water (ft)                             | pH (SU)             | Temp (°C)                 | Cond (µmho) | Diss O2 (mg/L) | Turbidity (ntu) | ORP (mv) | Observed odor or color |
|   |                   |                          |                   |   | ± 0.2§              | ± 0.2§                    | ± 5%§       | 20% sat§       | 20 max§         |          |                        |
| See 3Q18 field logs for data                                      |                   |                          |                   |   |                     |                           |             |                |                 |          |                        |

Decon Depth Mtr - rinse with analyte free water  
§Purge method FDEP-SOP 2212.3.1

◆ FDEP SOP Section 2212.3

### Sampling Data

|  |          |                     |              |  |            |                                      |  |
|--|----------|---------------------|--------------|--|------------|--------------------------------------|--|
| Sampled By(Print): <u>S. Phillips, K. Brakefield</u> |          |                     |              | Sampler(s) Signatures: <u>S. Phillips, K. Brakefield</u> |            |                                      |  |
| Sampling Method: PP                                  |          | Tube Material: PP/S |              | Sampling Started Time: _____                             |            | Sampling completed Time: _____       |  |
| Field Decon: NO                                      |          | Field Filtered: NO  |              | Duplicate: YES <input checked="" type="radio"/>          |            | Acid ID# HNO3: <u>DL 71301</u>       |  |
| Sample Container Specification                       |          | Sample Preservation |              |  |            | Intended Analysis or method          |  |
| ID:  | Material | Volume(mL)          | Preservative | Volume added   | final pH   |                                      |  |
|  | PE       | 60                  | HNO3         | preacidified bottle                                      |            | Metals } <u>see 3Q18</u>             |  |
|  | PE       | 250                 | Chill <6 deg | n/a  | n/a        | Anions: F, Cl, SO4 } <u>see 3Q18</u> |  |
| <u>D&amp;F 019-DAC</u>                               | PE       | 2000                | HNO3         | 4 mL   | <u>1.3</u> | Radium 226+228 Combined              |  |
|  | PE       | 2000                | Chill <6 deg | n/a  | n/a        | Solids: TSS, TDS } <u>see 3Q18</u>   |  |

|  |   |
|--|---|
| <input checked="" type="checkbox"/> Well found locked on arrival | <input checked="" type="checkbox"/> Well left locked on departure |
| Temperature: _____   | Winds: _____  |
| Cloud Cover: _____   | Precip: _____   |
| Remarks: <u>See 3Q18 for info</u>                                |   |

# DGS Groundwater Sampling Log



|                      |                      |                               |                                 |   |
|----------------------|----------------------|-------------------------------|---------------------------------|---|
| WELL ID: <b>R4T5</b> | Location:            | Latitude: <b>29°45'52.14"</b> | Longitude: <b>-82°23'33.18"</b> | MSL @ TOC Date In Service: <b>187.46 7-93</b> |
| Quarter: <b>3Q18</b> | Date: <b>7-18-18</b> | Well Type: <b>I</b>           |                                 |   |

### Purging Data

|   |                                   |   |                                  |
|---|-----------------------------------|---|----------------------------------|
| Diameter(in) <b>2</b>   | Total well depth(ft) <b>15.08</b> | Depth to water(ft) <b>9.88</b>          | Well capacity(L/ft) <b>0.6</b>   |
| Distance from TOC to top of screen <b>5.08</b> ft.                |                                   | Purging Method: <b>PP</b>               | Equipment Volume = <b>750 mL</b> |
| 1 WELL VOLUME(L)=(Total Well Depth-Depth to water)X Well Capacity |                                   | Time of Depth Meter Decon: <b>0.631</b> |                                  |
| <b>Well Vol = ( 15.08 - 9.88 ) X 0.6 = 3.2 L</b>                  |                                   | 1/4 well vol. = <b>0.8 L</b>            |                                  |
| Init Tubing Dpth(ft) <b>10.4</b>                                  | Final Tube Dept(ft): <b>10.8</b>  | Purge Start Time: <b>0.631</b>          | Purge Stop time: <b>0.721</b>    |
|   |                                   | Total Volume Purged <b>6.4 L</b>        |                                  |

| Time  | Volume Purged (L) | Cumul. Volume Purged (L) | Purge rate mL/min | Depth to water (ft) | pH (SU) | Temp (°C)                                 | Cond (µmho) | Diss O2 (mg/L) | Turbidity (ntu) | ORP (mv) | Observed odor or color                |
|-------|-------------------|--------------------------|-------------------|---------------------|---------|---|-------------|----------------|-----------------|----------|---------------------------------------|
|       |                   |                          |                   |                     | ± 0.2§  | ± 0.2§                                    | ± 5%§       | 20% sat§       | 20 max§         |          |                                       |
| 0.659 | 3.2               | 3.2                      | 180               | 10.30               | 6.03    | 26.2                                      | 730         | 0.27           | 0.33            | 147.0    | Clear yellowish color<br>Sulfex color |
| 0.706 | 0.8               | 4.0                      | 180               | 10.30               | 6.03    | 26.2                                      | 728         | 0.25           | 0.28            | 142.6    |                                       |
| 0.711 | 0.8               | 4.8                      | 180               | 10.30               | 6.03    | 26.1                                      | 723         | 0.21           | 0.31            | 130.0    |                                       |
| 0.716 | 0.8               | 5.6                      | 180               | 10.30               | 6.02    | 26.1                                      | 720         | 0.26           | 0.29            | 135.6    |                                       |
| 0.721 | 0.8               | 6.4                      | 180               | 10.30               | 6.02    | 26.1                                      | 717         | 0.27           | 0.29            | 136.8    |                                       |
|       |                   |                          |                   |                     |         | ↓<br>NIST<br>CON<br>+0.1°C<br><b>26.2</b> |             |                |                 |          |                                       |

◆ FDEP SOP Section 2212.3

### Sampling Data

Decon Depth Mtr - rinse with analyte free water  
§Purge method FDEP-SOP 2212.3.1

|  |                            |  |                          |   |                       |                             |  |
|--|----------------------------|--|--------------------------|---|-----------------------|-----------------------------|--|
| Sampled By(Print): <b>Shelley Phillips, Kent Brahefeld</b> |                            |  |                          | Sampler(s) Signatures: <i>J. Phillips, K. Brahefeld</i> |                       |                             |  |
| Sampling Method: <b>PP</b>                                 | Tube Material: <b>PP/S</b> | Sampling Started Tube Dpth(ft): <b>10.8'</b>           | Time: <b>0.724</b>       | Sampling completed Tube Dpth(ft): <b>10.8'</b>          | Time: <b>0.800</b>    |                             |  |
| Field Decon: <b>NO</b>                                     | Field Filtered: <b>NO</b>  | Duplicate: <b>YES</b> <input checked="" type="radio"/> | NO <input type="radio"/> | Acid ID# HNO3: <b>DL71301</b>                           | H2SO4: <b>DL62802</b> | Als acid for metals (F)     |  |
| Sample Container Specification                             |                            |  | Sample Preservation      |   |                       | Intended Analysis or method |  |
| ID:  | Material                   | Volume(mL)   | Preservative             | Volume added  | final pH              |                             |  |
| <b>D18F068-04A</b>   | PE                         | 2000   | Chill <6 deg             | none  | n/a                   | Physical Analysis           |  |
| <b>D181068-04B</b>   | PE                         | 250  | Chill 6 deg C            | none  | n/a                   | Anions                      |  |
| <b>D182068-04C</b>   | PE                         | 250  | Chill + H2SO             | 0.5 mL  | 1.3                   | Demand-NPDOC and NO3+NO2    |  |
| <b>D18F068-04D</b>   | PE                         | 1000   | HNO3                     | 2 mL  | 1.6                   | Radiological-GA             |  |
| <b>D18F068-04E</b>   | PE                         | 500  | HNO3                     | 1 mL  | 1.3                   | Metals: Hg                  |  |
| <b>D18F068-04F</b>   | PE                         | 60   | HNO3                     | preacidified bottle                                     | 1.3                   | Metals                      |  |

Tubing depth is 0.5 ft below depth to water for every instance.  Well found locked on arrival  Well left locked on departure  
 Temperature: 75°F Winds: Calm Cloud Cover: Partly cloudy Precip: None  
 Remarks: Noticed issue with ORP during second set of parameters. Corrected and started parameters again.

# DGS Groundwater Sampling Log



|                               |                      |                                  |                                    |                           |                                |
|-------------------------------|----------------------|----------------------------------|------------------------------------|---------------------------|--------------------------------|
| WELL ID: <b>R6T4 (CCR)</b>    | Location:            | Latitude:<br><b>29°46'00.90"</b> | Longitude:<br><b>-82°23'40.20"</b> | MSL @ TOC<br><b>183.6</b> | Date In Service<br><b>7-93</b> |
| Quarter: <b>July 2018 CCR</b> | Date: <b>7-17-18</b> | Well Type: <b>U</b>              |                                    |                           |                                |

### Purging Data

|   |                                   |                                  |   |
|---|-----------------------------------|----------------------------------|---|
| Diameter(in) <b>2</b>   | Total well depth(ft) <b>14.13</b> | Depth to water(ft) <b>2.95</b>   | Well capacity(L/ft) <b>0.6</b>          |
| Distance from TOC to top of screen <b>4.13</b> ft.                |                                   | Purging Method: <b>PP</b>        | Equipment Volume = <b>750 mL</b>        |
| 1 WELL VOLUME(L)=(Total Well Depth-Depth to water)X Well Capacity |                                   |                                  | Time of Depth Meter Decon: <b>15:18</b> |
| <b>Well Vol = ( 14.13 - 2.95 ) X 0.6 = 6.7 L</b>                  |                                   |                                  | 1/4 well vol. = <b>1.7</b>              |
| Init Tubing Dpth(ft) <b>3.45</b>                                  | Final Tube Dept(ft): <b>3.63</b>  | Purge Start Time: <b>1522</b>    | Purge Stop time: <b>1545</b>            |
|   |                                   | Total Volume Purged <b>9.1 L</b> |   |

| Time                               | Volume Purged (L) | Cumul. Volume Purged (L) | Purge rate mL/min | Depth to water (ft) | pH (SU) | Temp (°C) | Cond (µmho) | Diss O2 (mg/L) | Turbidity (ntu) | ORP (mv) | Observed odor or color |
|------------------------------------|-------------------|--------------------------|-------------------|---------------------|---------|-----------|-------------|----------------|-----------------|----------|------------------------|
|                                    |                   |                          |                   |                     | ± 0.2§  | ± 0.2§    | ± 5%§       | 20% sat§       | 20 max§         |          |                        |
| <i>See 3Q18 Field Log for Data</i> |                   |                          |                   |                     |         |           |             |                |                 |          |                        |
|                                    |                   |                          |                   |                     |         |           |             |                |                 |          |                        |
|                                    |                   |                          |                   |                     |         |           |             |                |                 |          |                        |
|                                    |                   |                          |                   |                     |         |           |             |                |                 |          |                        |
|                                    |                   |                          |                   |                     |         |           |             |                |                 |          |                        |
|                                    |                   |                          |                   |                     |         |           |             |                |                 |          |                        |
|                                    |                   |                          |                   |                     |         |           |             |                |                 |          |                        |
|                                    |                   |                          |                   |                     |         |           |             |                |                 |          |                        |
|                                    |                   |                          |                   |                     |         |           |             |                |                 |          |                        |
|                                    |                   |                          |                   |                     |         |           |             |                |                 |          |                        |

◆ FDEP SOP Section 2212.3

### Sampling Data

Decon Depth Mtr - rinse with analyte free water  
§Purge method FDEP-SOP 2212.3.1

|  |           |                            |  |  |            |  |  |
|--|-----------|----------------------------|--|--|------------|--|--|
| Sampled By(Print): <b>S. Phillips, K. Brakefield</b> |           |                            |  | Sampler(s) Signatures: <i>[Signatures]</i>                       |            |  |  |
| Sampling Method: <b>PP</b>                           |           | Tube Material: <b>PP/S</b> |  | Sampling Started<br>Tube Dpth(ft): <b>3.63</b> Time: <b>1545</b> |            | Sampling completed<br>Tube Dpth(ft): <b>3.63</b> Time: <b>1559</b> |  |
| Field Decon: <b>NO</b>                               |           | Field Filtered: <b>NO</b>  |  | Duplicate: <b>YES</b> <input checked="" type="radio"/>           |            | Acid ID# <b>HNO3: DL71301</b><br><i>for Radium</i>                 |  |
| Sample Container Specification                       |           |                            | Sample Preservation                                  |  |            | Intended Analysis or method  |  |
| ID:  | Material  | Volume(mL)                 | Preservative   | Volume added   | final pH   |  |  |
|  |           |                            | <i>see 3Q18 for container data except for Radium</i> |  |            |  |  |
| <b>NA</b>  | <b>PE</b> | <b>60</b>                  | <b>HNO3</b>  | <b>preacidified bottle</b>                                       | <b>---</b> | <b>Metals</b> <i>See 3Q18</i>                                      |  |
| <b>NA</b>  | <b>PE</b> | <b>250</b>                 | <b>Chill &lt;6 deg</b>                               | <b>n/a</b>   | <b>n/a</b> | <b>Anions: FI, Cl, SO4</b> <i>see 3Q18</i>                         |  |
| <b>DIG FOG-10C</b>                                   | <b>PE</b> | <b>2000</b>                | <b>HNO3</b>  | <b>4 mL</b>  | <b>1.3</b> | <b>Radium 226+228 Combined</b>                                     |  |
| <b>NA</b>  | <b>PE</b> | <b>2000</b>                | <b>Chill &lt;6 deg</b>                               | <b>n/a</b>   | <b>n/a</b> | <b>Solids: TSS, TDS</b> <i>see 3Q18</i>                            |  |

|  |   |
|--|---|
| <input checked="" type="checkbox"/> Well found locked on arrival | <input checked="" type="checkbox"/> Well left locked on departure |
| Temperature: _____   | Winds: _____  |
| Cloud Cover: _____   | Precip: _____   |
| Remarks: <i>see 3Q18 field log for more info.</i>                |   |

# DGS Groundwater Sampling Log



|                      |                      |                               |                                 |  |
|----------------------|----------------------|-------------------------------|---------------------------------|--|
| WELL ID: <b>R6T4</b> | Location:            | Latitude: <b>29°46'00.90"</b> | Longitude: <b>-82°23'40.20"</b> | MSL @ TOC Date In Service: <b>183.6 7-93</b> |
| Quarter: <b>3Q18</b> | Date: <b>7-17-18</b> | Well Type: <b>I</b>           |                                 |  |

### Purging Data

|   |                                   |                                |   |
|---|-----------------------------------|--------------------------------|---|
| Diameter(in) <b>2</b>   | Total well depth(ft) <b>14.13</b> | Depth to water(ft) <b>2.95</b> | Well capacity(L/ft) <b>0.6</b>          |
| Distance from TOC to top of screen <b>4.13</b> ft.                |                                   | Purging Method: <b>PP</b>      | Equipment Volume = <b>750 mL</b>        |
| 1 WELL VOLUME(L)=(Total Well Depth-Depth to water)X Well Capacity |                                   |                                | Time of Depth Meter Decon: <b>15:18</b> |
| <b>Well Vol = ( 14.13 - 2.95 ) X 0.6 = 7.17 L</b>                 |                                   |                                | <b>1/4 well vol. = 1.7</b>              |
| Init Tubing Dpth(ft) <b>3.45</b>                                  | Final Tube Dept(ft): <b>3.63</b>  | Purge Start Time: <b>1522</b>  | Purge Stop time: <b>1544</b>            |
|   |                                   |                                | Total Volume Purged <b>9.1 L</b>        |

| Time  | Volume Purged (L) | Cumul. Volume Purged (L) | Purge rate mL/min | Depth to water (ft) | pH (SU)                                  | Temp (°C) | Cond (µmho) | Diss O2 (mg/L) | Turbidity (ntu) | ORP (mv) | Observed odor or color                          |
|-------|-------------------|--------------------------|-------------------|---------------------|--|-----------|-------------|----------------|-----------------|----------|---|
|       |                   |                          |                   |                     | ± 0.2§                                   | ± 0.2§    | ± 5%§       | 20% sat§       | 20 max§         |          |   |
| 15:35 | 6.7               | 6.7                      | 500               | 3.13                | 6.89                                     | 28.2      | 380         | 0.15           | 0.41            | -109.7   | Sulfur Odor<br>Clear<br>slight color<br>7-17-18 |
| 15:39 | 1.7               | 8.4                      | 500               | 3.13                | 6.89                                     | 28.3      | 381         | 0.14           | 0.48            | -110.7   |   |
| 15:43 | 1.7               | 9.1                      | 500               | 3.13                | 6.89                                     | 28.2      | 382         | 0.13           | 0.35            | -112.5   |   |
|       |                   |                          |                   |                     | ↓<br>NIST<br>Cern<br>PO.1<br><b>28.3</b> |           |             |                |                 |          |   |

◆ FDEP SOP Section 2212.3

### Sampling Data

Decon Depth Mtr - rinse with analyte free water  
§Purge method FDEP-SOP 2212.3.1

|  |                            |   |   |
|--|----------------------------|---|---|
| Sampled By(Print): <b>S. Phillips, K. Brakefield</b> |                            | Sampler(s) Signatures: <b>J. Phillips, K. Brakefield</b>      |   |
| Sampling Method: <b>PP</b>                           | Tube Material: <b>PP/S</b> | Sampling Started Tube Dpth(ft): <b>3.63</b> Time: <b>1545</b> | Sampling completed Tube Dpth(ft): <b>3.63</b> Time: <b>1559</b> |
| Field Decon: <b>NO</b>                               | Field Filtered: <b>NO</b>  | Duplicate: <b>YES</b> <input checked="" type="radio"/>        | Acid ID# HNO3: <b>DL71301</b> H2SO4: <b>DL62802</b>             |
| Sample Container Specification                       |                            | Sample Preservation   |   |
| ID:  | Material                   | Volume(mL)  | Preservative  |
|  |                            |   | Volume added  |
|  |                            |   | final pH  |
|  |                            |   | Intended Analysis or method                                     |
| <b>D18F068-06A</b>                                   | <b>PE</b>                  | <b>2000</b>   | <b>Chill &lt;6 deg</b>  |
|  |                            |   | <b>none</b>   |
|  |                            |   | <b>n/a</b>  |
|  |                            |   | <b>Physical Analysis</b>  |
| <b>D18F068-06B</b>                                   | <b>PE</b>                  | <b>250</b>  | <b>Chill 6 deg C</b>  |
|  |                            |   | <b>none</b>   |
|  |                            |   | <b>n/a</b>  |
|  |                            |   | <b>Anions</b>   |
| <b>D18F068-06C</b>                                   | <b>PE</b>                  | <b>250</b>  | <b>Chill + H2SO</b>   |
|  |                            |   | <b>0.5 mL</b>   |
|  |                            |   | <b>1.6</b>  |
|  |                            |   | <b>Demand-NPDOC and NO3+NO2</b>                                 |
| <b>D18F068-06D</b>                                   | <b>PE</b>                  | <b>1000</b>   | <b>HNO3</b>   |
|  |                            |   | <b>2 mL</b>   |
|  |                            |   | <b>1.6</b>  |
|  |                            |   | <b>Radiological-GA</b>  |
| <b>D18F068-06E</b>                                   | <b>PE</b>                  | <b>500</b>  | <b>HNO3</b>   |
|  |                            |   | <b>1 mL</b>   |
|  |                            |   | <b>1.6</b>  |
|  |                            |   | <b>Metals: Hg</b>   |
| <b>D18F068-06F</b>                                   | <b>PE</b>                  | <b>60</b>   | <b>HNO3</b>   |
|  |                            |   | <b>preacidified bottle</b>                                      |
|  |                            |   | <b>1.3</b>  |
|  |                            |   | <b>Metals</b>   |

Tubing depth is **0.5** ft below depth to water for every instance.  Well found locked on arrival  Well left locked on departure  
 Temperature: **76°F** Winds: **SSW @ 3** Cloud Cover: **Overcast** Precip: **light rain**  
 Remarks:

# DGS Groundwater Sampling Log



|                      |                      |                               |                                 |   |
|----------------------|----------------------|-------------------------------|---------------------------------|---|
| WELL ID: <b>R6T8</b> | Location:            | Latitude: <b>29°45'39.32"</b> | Longitude: <b>-82°23'42.81"</b> | MSL @ TOC Date In Service: <b>177.49 8-94</b> |
| Quarter: <b>3Q18</b> | Date: <b>7-19-18</b> | Well Type: <b>I</b>           |                                 |   |

### Purging Data

|   |                                   |  |                                  |
|---|-----------------------------------|--|----------------------------------|
| Diameter(in) <b>2</b>   | Total well depth(ft) <b>14.13</b> | Depth to water(ft) <b>2.05</b>         | Well capacity(L/ft) <b>0.6</b>   |
| Distance from TOC to top of screen <b>4.13</b> ft.                | Purging Method: <b>PP</b>         |  | Equipment Volume = <b>750 mL</b> |
| 1 WELL VOLUME(L)=(Total Well Depth-Depth to water)X Well Capacity |                                   | Time of Depth Meter Decon: <b>0902</b> |                                  |
| <b>Well Vol = ( 14.13 - 2.05 ) X <sup>2.05</sup> 0.6 = 7.25 L</b> |                                   | 1/4 well vol. = <b>1.8</b>             |                                  |
| Init Tubing Dpth(ft) <b>2.55</b>                                  | Final Tube Dept(ft): <b>3.23</b>  | Purge Start Time: <b>0906</b>          | Purge Stop time: <b>11:16</b>    |
| Total Volume Purged <b>21.25 L</b>                                |                                   |  |                                  |

| Time | Volume Purged (L) | Cumul. Volume Purged (L) | Purge rate mL/min | Depth to water (ft) | pH (SU) | Temp (°C) | Cond (µmho) | Diss O2 (mg/L) | Turbidity (ntu) | ORP (mv) | Observed odor or color                                 |
|------|-------------------|--------------------------|-------------------|---------------------|---------|-----------|-------------|----------------|-----------------|----------|--|
|      |                   |                          |                   |                     | ± 0.2§  | ± 0.2§    | ± 5%§       | 20% sat§       | 20 max§         |          |  |
| 0952 | 7.25              | 7.25                     | 150               | 2.70                | 6.67    | 26.2      | 540         | 1.01           | 0.31            | 23.7     | No odor < 20% DO<br>Clear color<br>Slight yellow color |
| 1006 | 2.2               | 9.45                     | 150               | 2.70                | 6.51    | 26.2      | 463         | 0.36           | 0.57            | 32.4     |  |
| 1017 | 1.8               | 11.25                    | 160               | 2.70                | 6.40    | 26.2      | 420         | 0.23           | 0.62            | 26.9     |  |
| 1028 | 1.8               | 14.05                    | 160               | 2.73                | 6.35    | 26.2      | 400         | 0.19           | 0.41            | 24.2     |  |
| 1040 | 1.8               | 15.85                    | 160               | 2.73                | 6.32    | 26.1      | 391         | 0.18           | 0.41            | 20.7     |  |
| 1052 | 1.8               | 17.65                    | 160               | 2.74                | 6.26    | 26.1      | 364         | 0.18           | 0.47            | 21.6     |  |
| 1103 | 1.8               | 19.45                    | 160               | 2.74                | 6.25    | 26.2      | 360         | 0.17           | 0.39            | 20.1     |  |
| 1115 | 1.8               | 21.25                    | 160               | 2.73                | 6.23    | 26.2      | 353         | 0.16           | 0.42            | 19.5     |  |
|      |                   |                          |                   |                     |         |           |             |                |                 |          |  |
|      |                   |                          |                   |                     |         |           |             |                |                 |          |  |

### Sampling Data

Decon Depth Mtr - rinse with analyte free water  
§Purge method FDEP-SOP 2212.3.1

◆ FDEP SOP Section 2212.3

|                                       |                            |  |   |   |                    |
|---------------------------------------|----------------------------|--|---|---|--------------------|
| Sampled By(Print): <b>S. Phillips</b> |                            |  | Sampler(s) Signatures: <i>[Signature]</i> |   |                    |
| Sampling Method: <b>PP</b>            | Tube Material: <b>PP/S</b> | Sampling Started Tube Dpth(ft): <b>3.23</b>  | Time: <b>11:17</b>                        | Sampling completed Tube Dpth(ft): <b>3.23</b> | Time: <b>11:56</b> |
| Field Decon: <b>NO</b>                | Field Filtered: <b>NO</b>  | Duplicate: <b>YES</b> <input checked="" type="radio"/> <b>NO</b> <input type="radio"/> | Acid ID# <b>HNO3: DL71301</b>             | <b>H2SO4: DL62802</b>                         |                    |
| Sample Container Specification        |                            |  | Sample Preservation                       |   |                    |
| ID:                                   | Material                   | Volume(mL)   | Preservative                              | Volume added                                  | final pH           |
| <b>DI8F068-07A</b>                    | <b>PE</b>                  | <b>2000</b>  | <b>Chill &lt;6 deg</b>                    | <b>none</b>                                   | <b>n/a</b>         |
| <b>DI8F068-07B</b>                    | <b>PE</b>                  | <b>250</b>   | <b>Chill 6 deg C</b>                      | <b>none</b>                                   | <b>n/a</b>         |
| <b>DI8F068-07C</b>                    | <b>PE</b>                  | <b>250</b>   | <b>Chill + H2SO</b>                       | <b>0.5 mL</b>                                 | <b>1.6</b>         |
| <b>DI8F068-07D</b>                    | <b>PE</b>                  | <b>1000</b>  | <b>HNO3</b>                               | <b>2 mL</b>                                   | <b>1.6</b>         |
| <b>DI8F068-07E</b>                    | <b>PE</b>                  | <b>500</b>   | <b>HNO3</b>                               | <b>1 mL</b>                                   | <b>1.6</b>         |
| <b>DI8F068-07F</b>                    | <b>PE</b>                  | <b>60</b>  | <b>HNO3</b>                               | <b>preacidified bottle</b>                    | <b>1.3</b>         |
|                                       |                            |  | Intended Analysis or method               |   |                    |
|                                       |                            |  | <i>Metals preacidified by ALS</i>         |   |                    |
|                                       |                            |  | Physical Analysis                         |   |                    |
|                                       |                            |  | Anions                                    |   |                    |
|                                       |                            |  | Demand-NPDOC and NO3+NO2                  |   |                    |
|                                       |                            |  | Radiological-GA                           |   |                    |
|                                       |                            |  | Metals: Hg                                |   |                    |
|                                       |                            |  | Metals                                    |   |                    |

Tubing depth is 0.5 ft below depth to water for every instance.  Well found locked on arrival  Well left locked on departure  
 Temperature: **84°F** Winds: **S @ 11 mph** Cloud Cover: **Mostly Cloudy** Precip: **0**  
 Remarks: *1st purge figured wrong miscalculated*  
*CCR container for Radium*  
**DI8F068-11C, PE, 2000 mL, HNO3, 4 mL, pH = 1.6**  
 Codes: PP/S + Polypropylene+Silicone tubing PP: Peristaltic Pump PE: Polyethylene B



# DGS Groundwater Sampling Log



WELL ID: **R10T8** Location: Latitude: **29°45'35.72"** Longitude: **-82°24'06.07"** MSL @ TOC Date In Service: **181.42 4-84**

Quarter: **3Q 78** Date: **7-19-18** Well Type: **C**

## Purging Data

|   |             |                      |              |  |             |                     |               |
|---|-------------|----------------------|--------------|--|-------------|---------------------|---------------|
| Diameter(in)  | <b>2</b>    | Total well depth(ft) | <b>14.53</b> | Depth to water(ft)                     | <b>5.52</b> | Well capacity(L/ft) | <b>0.6</b>    |
| Distance from TOC to top of screen                                | <b>9.53</b> | ft.                  |              | Purging Method:                        | <b>PP</b>   | Equipment Volume =  | <b>750 mL</b> |
| 1 WELL VOLUME(L)=(Total Well Depth-Depth to water)X Well Capacity |             |                      |              | Time of Depth Meter Decon: <b>1438</b> |             |                     |               |
| <b>Well Vol = ( 14.53 - 5.52 ) X 0.6 = 5.4 L</b>                  |             |                      |              | 1/4 well vol. = <b>1.4</b>             |             |                     |               |
| Init Tubing Dpth(ft)  | <b>6.02</b> | Final Tube Dept(ft)  | <b>6.30</b>  | Purge Start Time:                      | <b>1440</b> | Purge Stop time:    | <b>1509</b>   |
| Total Volume Purged   |             |                      |              |  |             |                     | <b>8.9 L</b>  |

| Time | Volume Purged (L) | Cumul. Volume Purged (L) | Purge rate mL/min | Depth to water (ft) | pH (SU)         | Temp (°C)   | Cond (µmho) | Diss O2 (mg/L) | Turbidity (ntu) | ORP (mv) | Observed odor or color                  |
|------|-------------------|--------------------------|-------------------|---------------------|-----------------|-------------|-------------|----------------|-----------------|----------|---|
|      |                   |                          |                   |                     | ± 0.2§          | ± 0.2§      | ± 5%§       | 20% sat§       | 20 max§         |          |   |
| 1501 | 1.4               | 6.1                      | 360               | 5.80                | 5.67            | 25.4        | 132         | 0.26           | 0.20            | -62.0    | Slight sulfur odor<br>no color<br>clear |
| 1505 | 1.4               | 7.5                      | 360               | 5.80                | 5.66            | 25.3        | 130         | 0.27           | 0.32            | -63.6    |   |
| 1509 | 1.4               | 8.9                      | 360               | 5.80                | 5.66            | 25.3        | 129         | 0.26           | 0.21            | -65.6    |   |
|      |                   |                          |                   |                     | NIST cert. ±0.1 | <b>25.4</b> |             |                |                 |          |   |

Decon Depth Mtr - rinse with analyte free water  
Purge method FDEP-SOP 2212.3.1

FDEP SOP Section 2212.3

## Sampling Data

Sampled By(Print): **S. Phillips, K. Brakefield** Sampler(s) Signatures: *S. Phillips, K. Brakefield*

Sampling Method: **PP** Tube Material: **PP/S** Sampling Started Tube Dpth(ft): **6.30** Time: **1510** Sampling completed Tube Dpth(ft): **6.30** Time: **1529**

Field Decon: **NO** Field Filtered: **NO** Duplicate: **YES**  **NO** Acid ID# HNO3: **DL 71301** H2SO4: **DL 62802**

Metals preacidified by ALS

| Sample Container Specification |          |            | Sample Preservation |                     |          | Intended Analysis or method |
|--------------------------------|----------|------------|---------------------|---------------------|----------|-----------------------------|
| ID:                            | Material | Volume(mL) | Preservative        | Volume added        | final pH |                             |
| D18F068-11A                    | PE       | 2000       | Chill <6 deg        | none                | n/a      | Physical Analysis           |
| D18F068-11B                    | PE       | 250        | Chill 6 deg C       | none                | n/a      | Anions                      |
| D18F068-11C                    | PE       | 250        | Chill + H2SO        | 0.5 mL              | 1.6      | Demand-NPDOC and NO3+NO2    |
| D18F068-11D                    | PE       | 1000       | HNO3                | 2 mL                | 1.3      | Radiological-GA             |
| D18F068-11E                    | PE       | 500        | HNO3                | 1 mL                | 1.3      | Metals: Hg                  |
| D18F068-11F                    | PE       | 60         | HNO3                | preacidified bottle | 1.3      | Metals                      |

Tubing depth is **0.5** ft below depth to water for every instance.  Well found locked on arrival  Well left locked on departure  
 Temperature: **78°F** Winds: **WSW 7 mph** Cloud Cover: **Mostly Cloudy** Precip: **0**  
 Remarks:

CCR Radium Bottle  
 D18F069-12C PE 2000 mL HNO3 4 mL pH = 1.3  
 Codes: PP/S + Polypropylene+Silicone tubing PP: Peristaltic Pump PE: Polyethylene B

# DGS Groundwater Sampling Log



WELL ID: **R11T4** Location: Latitude: **29°45'58.10"** Longitude: **-82°24'11.98"** MSL @ TOC Date In Service: **178.76 4-84**

Quarter: **3Q18** Date: **7-19-18** Well Type: **C**

### Purging Data

| Diameter(in)  | <b>2</b>          | Total well depth(ft)     | <b>15.17</b>      | Depth to water(ft)  | <b>2.69</b>                                  | Well capacity(L/ft)                     | <b>0.6</b>    |                |                 |          |                                  |
|---|-------------------|--------------------------|-------------------|---------------------|--|---|---------------|----------------|-----------------|----------|----------------------------------|
| Distance from TOC to top of screen                                | <b>10.17</b>      | ft.                      |                   | Purging Method:     | <b>PP</b>                                    | Equipment Volume =                      | <b>750 mL</b> |                |                 |          |                                  |
| 1 WELL VOLUME(L)=(Total Well Depth-Depth to water)X Well Capacity |                   |                          |                   |                     |  | Time of Depth Meter Decon: <b>1250</b>  |               |                |                 |          |                                  |
| <b>Well Vol = ( 15.17 - 2.69 ) X <sup>12.49</sup> 0.6 =</b>       |                   |                          |                   |                     |  | <b>7.5 L</b> 1/4 well vol. = <b>1.9</b> |               |                |                 |          |                                  |
| Init Tubing Dpth(ft)  | <b>3.19</b>       | Final Tube Dept(ft)      | <b>3.62</b>       | Purge Start Time:   | <b>1300</b>                                  | Purge Stop time:                        | <b>1348</b>   |                |                 |          |                                  |
|   |                   |                          |                   |                     |  | Total Volume Purged <b>11.3L</b>        |               |                |                 |          |                                  |
| Time  | Volume Purged (L) | Cumul. Volume Purged (L) | Purge rate mL/min | Depth to water (ft) | pH (SU)                                      | Temp (°C)                               | Cond (µmho)   | Diss O2 (mg/L) | Turbidity (ntu) | ORP (mv) | Observed odor or color           |
|   |                   |                          |                   |                     | ± 0.2§                                       | ± 0.2§                                  | ± 5%§         | 20% sat§       | 20 max§         |          |                                  |
| 1332  | 7.5               | 7.5                      | 260               | 3.12                | 5.39   | 26.5                                    | 254           | 0.29           | 0.41            | -28.4    | Sulfur odor<br>clear<br>no color |
| 1339  | 1.9               | 9.4                      | 260               | 3.12                | 5.37   | 26.4                                    | 254           | 0.18           | 0.29            | -69.4    |                                  |
| 1347  | 1.9               | 11.3                     | 260               | 3.12                | 5.37   | 26.3                                    | 253           | 0.17           | 0.32            | -88.0    |                                  |
|   |                   |                          |                   |                     | ↓<br>NIST<br>Cert<br>70.1°C<br><b>(26.4)</b> |   |               |                |                 |          |                                  |

Decon Depth Mtr - rinse with analyte free water  
§Purge method FDEP-SOP 2212.3.1

◆ FDEP SOP Section 2212.3

### Sampling Data

Sampled By(Print): **S. Phillips, K. Brakefield** Sampler(s) Signatures: *S. Phillips, K. Brakefield*

| Sampling Method:               | <b>PP</b> | Tube Material:  | <b>PP/S</b>         | Sampling Started Tube Dpth(ft): | <b>3.62</b> | Time:                            | <b>1349</b>    | Sampling completed Tube Dpth(ft): | <b>3.62</b> | Time:           | <b>1413</b> |
|--------------------------------|-----------|-----------------|---------------------|---------------------------------|-------------|----------------------------------|----------------|-----------------------------------|-------------|-----------------|-------------|
| Field Decon:                   | <b>NO</b> | Field Filtered: | <b>NO</b>           | Duplicate:                      | <b>YES</b>  | <input checked="" type="radio"/> | Acid ID# HNO3: | <b>DL 76301</b>                   | H2SO4:      | <b>DL 62802</b> |             |
| Sample Container Specification |           |                 | Sample Preservation |                                 |             | Intended Analysis or method      |                |                                   |             |                 |             |
| ID:                            | Material  | Volume(mL)      | Preservative        | Volume added                    | final pH    |                                  |                |                                   |             |                 |             |
| D18F068-12A                    | PE        | 2000            | Chill <6 deg        | none                            | n/a         | Physical Analysis                |                |                                   |             |                 |             |
| D18F068-13B                    | PE        | 250             | Chill 6 deg C       | none                            | n/a         | Anions                           |                |                                   |             |                 |             |
| D18F068-12C                    | PE        | 250             | Chill + H2SO        | 0.5 mL                          | 1.3         | Demand-NPDOC and NO3+NO2         |                |                                   |             |                 |             |
| D18F068-12D                    | PE        | 1000            | HNO3                | 2 mL                            | 1.3         | Radiological-GA                  |                |                                   |             |                 |             |
| D18F068-12E                    | PE        | 500             | HNO3                | 1 mL                            | 1.3         | Metals: Hg                       |                |                                   |             |                 |             |
| D18F068-12F                    | PE        | 60              | HNO3                | preacidified bottle             | 1.3         | Metals                           |                |                                   |             |                 |             |

metals pre acidified by ALS

Tubing depth is **0.5** ft below depth to water for every instance.  Well found locked on arrival  Well left locked on departure  
 Temperature: **78°F** Winds: **SW @ 9mph** Cloud Cover: **overcast** Precip: **light drizzle**  
 Remarks:

CCR container for Radium  
 D18F068-13C PE 2000 mL HNO3 4 mL pH=1.0  
 Codes: PP/S + Polypropylene+Silicone tubing PP: Peristaltic Pump PE: Polyethylene B

for bottle bottles 50 7-19-18



# DGS Groundwater Sampling Log



WELL ID **EBLANK** Location: Latitude: **na** Longitude: **na** MSL @ TOC Date In Service: **0 na**

Quarter: **3Q18** Date: **7-18-18** Well Type: **na**

## Purging Data

|   |            |                      |            |  |             |                     |               |
|---|------------|----------------------|------------|--|-------------|---------------------|---------------|
| Diameter(in)  | <b>na</b>  | Total well depth(ft) | <b>0</b>   | Depth to water(ft)                     | <b>N/A</b>  | Well capacity(L/ft) | <b>0</b>      |
| Distance from TOC to top of screen                                | <b>0</b>   | ft.                  |            | Purging Method:                        | <b>PP</b>   | Equipment Volume =  | <b>750 mL</b> |
| 1 WELL VOLUME(L)=(Total Well Depth-Depth to water)X Well Capacity |            |                      |            | Time of Depth Meter Decon:             |             |                     |               |
| <b>Well Vol = ( 0 - N/A ) X 0 =</b>                               |            |                      |            | <b>N/A L</b> 1/4 well vol.= <b>N/A</b> |             |                     |               |
| Init Tubing Dpth(ft)  | <b>N/A</b> | Final Tube Dept(ft): | <b>N/A</b> | Purge Start Time:                      | <b>0810</b> | Purge Stop time:    | <b>0824</b>   |
|   |            |                      |            |  |             | Total Volume Purged | <b>N/A L</b>  |

| Time | Volume Purged (L) | Cumul. Volume Purged (L) | Purge rate mL/min | Depth to water (ft) | pH (SU)            | Temp (°C) | Cond (µmho) | Diss O2 (mg/L) | Turbidity (ntu) | ORP (mv) | Observed odor or color |
|------|-------------------|--------------------------|-------------------|---------------------|--------------------|-----------|-------------|----------------|-----------------|----------|------------------------|
|      |                   |                          |                   |                     | ± 0.2§             | ± 0.2§    | ± 5%§       | 20% sat§       | 20 max§         |          |                        |
| 0819 | N/A               | N/A                      | 500               | N/A                 | 5.93               | 25.7      | 0.77        | 7.98           | 0.13            | 158.6    | Clear                  |
| 0821 | N/A               | N/A                      | 500               | N/A                 | 5.88               | 25.7      | 0.75        | 7.95           | 0.13            | 173.6    | No color               |
| 0823 | N/A               | N/A                      | 500               | N/A                 | 5.85               | 25.7      | 0.76        | 7.95           | 0.14            | 182.0    | No odor                |
|      |                   |                          |                   |                     | N/A<br>Conc<br>0.2 | 25.9      |             |                |                 |          |                        |

Decon Depth Mtr - rinse with analyte free water  
§Purge method FDEP-SOP 2212.3.1

◆ FDEP SOP Section 2212.3

## Sampling Data

Sampled By(Print): *Shelley Phillips, Kent Brakelield* Sampler(s) Signatures: *J. Phillips, K. Brakelield*

|                                |          |                 |                     |                                 |          |                                     |                |                                   |        |         |                            |
|--------------------------------|----------|-----------------|---------------------|---------------------------------|----------|-------------------------------------|----------------|-----------------------------------|--------|---------|----------------------------|
| Sampling Method:               | PP       | Tube Material:  | PP/S                | Sampling Started Tube Dpth(ft): | N/A      | Time:                               | 0825           | Sampling completed Tube Dpth(ft): | N/A    | Time:   | 0839                       |
| Field Decon:                   | NO       | Field Filtered: | NO                  | Duplicate:                      | YES      | <input checked="" type="radio"/> NO | Acid ID# HNO3: | DL71301                           | H2SO4: | DL62802 | ALS acid: fresh for metals |
| Sample Container Specification |          |                 | Sample Preservation |                                 |          | Intended Analysis or method         |                |                                   |        |         |                            |
| ID:                            | Material | Volume(mL)      | Preservative        | Volume added                    | final pH |                                     |                |                                   |        |         |                            |
| D18F068-14A                    | PE       | 2000            | Chill <6 deg        | none                            | n/a      | Physical Analysis                   |                |                                   |        |         |                            |
| D18F068-14B                    | PE       | 250             | Chill 6 deg C       | none                            | n/a      | Anions                              |                |                                   |        |         |                            |
| D18F068-14C                    | PE       | 250             | Chill + H2SO        | 0.5 mL                          | 1.3      | Demand-NPDOC and NO3+NO2            |                |                                   |        |         |                            |
| D18F068-14D                    | PE       | 1000            | HNO3                | 2 mL                            | 1.3      | Radiological-GA                     |                |                                   |        |         |                            |
| D18F068-14E                    | PE       | 500             | HNO3                | 1 mL                            | 1.3      | Metals: Hg                          |                |                                   |        |         |                            |
| D18F068-14F                    | PE       | 60              | HNO3                | preacidified bottle             | 1.3      | Metals                              |                |                                   |        |         |                            |

Tubing depth is **N/A** ft below depth to water for every instance. **N/A** Well found locked on arrival **N/A** Well left locked on departure  
 Temperature: **79°F** Winds: **WSW @ 3 mph** Cloud Cover: **Partly cloudy** Precip: **None**  
 Remarks: **Collected at R4T5.**





# Instrument Calibration Log

Model Star A329

Serial Number G09761

Manufacturer: Thermo Orion

Date Purchased 12-2017

Parameter: pH/ISE/Cond/DO

GRU Prop Tag# none

QTR: 3Q18 :used manuf SOP for calibrations and FDOP 1200 SOP for verifications  
4 CCR

|            | Standard Concentration, ID#, Expiration Date | Unit  |
|------------|--|-------|
| Standard A | 100, ID# DB82101, exp 12-31-19               | uS/cm |
| Standard B | 1413, ID# DB80701, exp 1-31-20               | uS/cm |
| Standard C | 10000, ID# DB80702, exp 9-30-19              | uS/cm |

QC ID DA81811, TV=718 Range: 646-790

+/- 5%

| Date    | Time | STD A,B,C | STD Value | Instrument Response | Dev./ P or F | Calibrated (Yes/No)           | Type (Int/Cont) | Sampler Initials |
|---------|------|-----------|-----------|---------------------|--------------|-------------------------------|-----------------|------------------|
| 7-10-18 | 0846 | A         | 100       | 99.2                | 0.8% P       | No                            | Cont            | SP               |
| 7-10-18 | 0847 | B         | 1413      | 1410                | 0.21% P      | No                            | Cont            | SP               |
| 7-10-18 | 0851 | C         | 10,000    | 10,060              | 0.6% P       | No                            | Cont            | SP               |
| 7-10-18 | 0954 | QC        | 718       | 712.2               | P            | —                             | —               | SP               |
| 7-13-18 | 1719 | B         | 1413      | 1386                | 1.9% P       | No <small>exp 7-16-18</small> | Cont            | SP               |
| 7-17-18 | 1644 | B         | 1413      | 1392                | 1.5% P       | No                            | Cont            | SP               |
| 7-18-18 | 1547 | B         | 1413      | 1383                | 2.1% P       | No                            | Cont            | SP               |
| 7-19-18 | 1579 | B         | 1413      | 1387                | 1.8% P       | No                            | Cont            | SP               |
|         |      |           |           |                     |              |                               |                 |                  |
|         |      |           |           |                     |              |                               |                 |                  |
|         |      |           |           |                     |              |                               |                 |                  |
|         |      |           |           |                     |              |                               |                 |                  |
|         |      |           |           |                     |              |                               |                 |                  |
|         |      |           |           |                     |              |                               |                 |                  |
|         |      |           |           |                     |              |                               |                 |                  |
|         |      |           |           |                     |              |                               |                 |                  |
|         |      |           |           |                     |              |                               |                 |                  |
|         |      |           |           |                     |              |                               |                 |                  |
|         |      |           |           |                     |              |                               |                 |                  |
|         |      |           |           |                     |              |                               |                 |                  |
|         |      |           |           |                     |              |                               |                 |                  |
|         |      |           |           |                     |              |                               |                 |                  |
|         |      |           |           |                     |              |                               |                 |                  |
|         |      |           |           |                     |              |                               |                 |                  |
|         |      |           |           |                     |              |                               |                 |                  |

PASS (JB)









# Deerhaven Generating Station Water Elevations

Date: 7-16-18

| Well  | Time | TOC@MSL | Depth to Water                                | Time Depth Mtr<br>Cleaned | Locked<br>Arrival | Locked<br>Depart.     |
|-------|------|---------|---|---------------------------|-------------------|-----------------------|
| R1T6  | 7:33 | 188.95  | 4.40  | 7:32                      | ✓                 | ✓                     |
| R2T1  | 7:10 | 185.19  | 4.04  | 7:09                      | ✓                 | no Tech is<br>pumping |
| R3T7  | 7:46 | 182.55  | 3.88  | 7:44                      | ✓                 | ✓                     |
| R4T5  | 8:21 | 187.46  | 10.24   | 8:20                      | ✓                 | ✓                     |
| R6T1  | 9:34 | 185.28  | 5.05  | 9:33                      | ✓                 | ✓                     |
| R6T4  | 7:56 | 183.60  | 3.69  | 7:55                      | ✓                 | ✓                     |
| R6T8  | 8:27 | 177.49  | 2.62  | 8:26                      | ✓                 | —                     |
| R6T12 | 8:37 | 173.38  | 3.78  | 8:37                      | ✓                 | ✓                     |
| R8T10 | 8:42 | 177.40  | 5.44  | 8:42                      | ✓                 | —                     |
| R9T5  | 8:04 | 184.64  | 5.62  | 8:03                      | ✓                 | —                     |
| R10T8 | 9:00 | 181.42  | 6.70  | 8:58                      | ✓                 | ✓                     |
| R11T4 | 9:25 | 178.76  | 3.30  | 9:23                      |                   |                       |
| SIS1  | 7:52 | 185.11  | 4.69 <sup>sp</sup><br><del>7.51</del> 7-16-18 | 7:51                      | ✓                 | ✓                     |
| SIS2  | 8:23 | 183.30  | 5.94  | 8:22                      |                   |                       |
| SIS3  | 8:15 | 183.11  | 3.52  | 8:14                      | ✓                 | ✓                     |
| SIS4  | 8:17 | 183.87  | 4.98  | 8:16                      | —                 | —                     |
| LF1   | 8:01 | 185.76  | 5.17  | 8:00                      | ✓                 | ✓                     |
| LF2   | 8:11 | 183.35  | 4.43  | 8:11                      | ✓                 | ✓                     |
| LF3   | 8:09 | 185.05  | 5.72  | 8:08                      | ✓                 | ✓                     |
| LF4   | 8:07 | 186.01  | 5.75  | 8:06                      | —                 | ✓                     |

## July 2018 CCR Field and Analytical Narrative

### Field Narrative:

- The pH, conductivity, RDO, and depth meter sensors were verified against the NIST reference thermometer/probe (CP 117152 & CP148863), and the depth meter was selected for the purpose of measuring temperature in the field; however, the conductivity temperature sensor was used for the Equipment Blank parameter.
- CCR Well sampling was done in conjunction with the Quarterly Groundwater Well sampling and began on Tuesday, July 17, 2018 and was completed on Thursday, July 19, 2018 by Kent Brakefield and Shelley Phillips
- In addition, we collected 3 GW wells (R6T8, R10T8, and R11T4), as requested by Justin Smith, as Alternate Source in lieu of putting in additional wells.
- All wells were found secured with a lock upon arrival and left locked upon departure.
- Weather: Tuesday (7-17-18) morning temperatures ranged from 77 °F to 83 °F with partly cloudy skies and a light southwest wind. The afternoon brought overcast skies, one heavy downpour and then a light rain the remainder of the day. The temperature remained in the upper 70's all afternoon and the winds were SW and light except during the rainstorm which lasted about 10 minutes. Wednesday (7-18-18) we collected only CCR wells and the morning temperatures ranged from 77 °F to 84 °F with partly cloudy skies and SW light wind with a 10 minute rain around 1100. In the afternoon, temperatures ranged from 79 °F to 87 °F with partly cloudy skies and SW wind 6-9 mph. On Thursday (7-19-18) the temperature was around 76 °F with partly cloudy skies and a calm wind and changed to the mid 80's temperature with mostly cloudy skies and south wind winds at 9 mph. Around 1130 a thunderstorm hit with heavy downpour for about 5 minutes and then a light drizzle. The afternoon temperature was 78 °F with mostly cloudy to overcast skies with wind SW 7-9 mph and some light drizzle periodically.
- At all the wells where rain occurred (SIS-1, SIS-4, LF-1, R6T4 and R11T4), the wells and equipment remained under cover of the truck canopy, a tarp and/or the 10 X 10 canopy and it did not affect collecting samples or parameters.
- Well R4T5: During the first two parameters there was an issue with the ORP sensor (it was not in the flow-through container) which we rectified and started over taking the parameters
- SIS-2: Tried to reduce the DO but was unable. This well historically has higher DO levels.
- SIS-3: It rained during well purge, but had stopped once sampling began.
- SIS-4: Just before the start of taking parameters it began to rain and became heavy. We covered the well and equipment with truck canopy and tarp and allowed the well to continue purging until the rain subsided. We did continue to experience light rain but it did not affect the rest of the purging or sampling. After the first set of parameters, we noticed the conductivity still climbing so we waited until it stabilized before collecting anymore sets of parameters.
- R6T8: During sampling there was some rain and a heavy downpour turning to light rain during the collection of the Radium and Solids samples but the sampling occurred under the 10 X 10 canopy and did not impact the collection.
- Equipment Blank: The Equipment Blank was collected at R4T5 after that well was collected.
- Instruments: Calibration verifications were performed on all instruments and passed.

## July 2018 CCR Field and Analytical Narrative

### **ANALYTICAL NARRATIVE:**

#### **Analytical Narrative: Internal Analysis**

TSS and TDS analysis were performed and all results were satisfactory.

#### **Analytical Narrative: External Laboratories**

- PACE Analytical Services analyzed samples for Anions and Radium 226 +228 combined. The Equipment Blank sample for Radium 226 + 228 analysis cap broke open during shipment from PACE in Ormond Beach to PACE in Pittsburg so they were unable to analyze the sample for radium 226 + 228.
- ALS Global (Jacksonville) analyzed samples for the following metals: Antimony, Arsenic, Lead, Cobalt and Thallium by Method 200.8 and Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Selenium, Molybdenum and Lithium by 200.7.
  - Boron and selenium were detected in the method blank. In the samples where boron and selenium were detected at equal to or less than ten times the method blank, they were qualified with a “V” as per FDEP.
  - Magnesium and selenium were detected in the Equipment Blank and the associated method blank; these analytes were less than PQL and were qualified with a “V” as per FDEP.
  - For Barnstead water (reagent grade water used for Equipment Blank) Mg was detected in both the method blank associated with the Barnstead analysis and the Barnstead water; therefore the result was qualified with a “V” as per FDEP. In addition, calcium was detected in Barnstead water but not in Method Blank; however, the result was less than the PQL.

#### **Contract Laboratories Used:**

- PACE Analytical Services, Inc.
- ALS Global

Submitted by: Shelley Phillips, QAO

**Deerhaven Generating Station**

Project: Environmental

D-38

Gainesville FL/USA, 32653

Project Manager: Dan Sweat

**SAMPLED:** 16-Jul-18**REPORTED:** 23-Jul-18 13:43**RECEIVED:** 26-Jun-18

| <b>LAB #</b>      |       | D18F067-01        | D18F067-02        | D18F067-03     | D18F067-04         | D18F067-05         | D18F067-06         |
|-------------------|-------|-------------------|-------------------|----------------|--------------------|--------------------|--------------------|
| <b>MATRIX</b>     |       | Groundwater       | Groundwater       | Groundwater    | Groundwater        | Groundwater        | Groundwater        |
| <b>SAMPLE ID</b>  | Units | MWD-1-6<br>(R1T6) | MWB-2-1<br>(R2T1) | MWI-3-7 (R3T7) | MWI-4-5<br>(R4T5B) | MWD-6-1<br>(R6T1B) | MWI-6-4<br>(R6T4B) |
| Water level(NGVD) | ft    | 184.55            | 181.15            | 178.67         | 177.22             | 180.23             | 179.91             |

|                                     |           |                            |  |                 |  |  |  |
|-------------------------------------|-----------|----------------------------|--|-----------------|--|--|--|
| <b>Deerhaven Generating Station</b> |           | Project: Environmental     |  |                 |  |  |  |
| D-38                                |           |                            |  |                 |  |  |  |
| Gainesville FL/USA, 32653           |           | Project Manager: Dan Sweat |  |                 |  |  |  |
| <b>SAMPLED:</b>                     | 16-Jul-18 | <b>REPORTED:</b>           |  | 23-Jul-18 13:43 |  |  |  |
| <b>RECEIVED:</b>                    | 26-Jun-18 |                            |  |                 |  |  |  |

| LAB #            |                 | D18F067-07         | D18F067-08          | D18F067-09          | D18F067-10         | D18F067-11          | D18F067-12           |
|------------------|-----------------|--------------------|---------------------|---------------------|--------------------|---------------------|----------------------|
| <b>MATRIX</b>    | Minimum         | Groundwater        | Groundwater         | Groundwater         | Groundwater        | Groundwater         | Groundwater          |
| <b>SAMPLE ID</b> | Reporting Limit | MWI-6-8<br>(R6T8B) | MWD-6-12<br>(R6T12) | MWC-8-10<br>(R8T10) | MWI-9-5<br>(R9T5B) | MWC-10-8<br>(R10T8) | MWC-11-4<br>(R11T4B) |

**\*\*\* DEFAULT GENERAL METHOD \*\*\* (Water)**

|                   |    |        |        |        |        |        |        |
|-------------------|----|--------|--------|--------|--------|--------|--------|
| Water level(NGVD) | ft | 174.87 | 169.60 | 171.96 | 179.02 | 174.72 | 175.46 |
|-------------------|----|--------|--------|--------|--------|--------|--------|

|                                     |           |                            |  |                 |  |  |  |
|-------------------------------------|-----------|----------------------------|--|-----------------|--|--|--|
| <b>Deerhaven Generating Station</b> |           | Project: Environmental     |  |                 |  |  |  |
| D-38                                |           |                            |  |                 |  |  |  |
| Gainesville FL/USA, 32653           |           | Project Manager: Dan Sweat |  |                 |  |  |  |
| <b>SAMPLED:</b>                     | 16-Jul-18 | <b>REPORTED:</b>           |  | 23-Jul-18 13:43 |  |  |  |
| <b>RECEIVED:</b>                    | 26-Jun-18 |                            |  |                 |  |  |  |

| LAB #            |                 | D18F067-13  | D18F067-14  | D18F067-15  | D18F067-16  | D18F067-17  | D18F067-18  |
|------------------|-----------------|-------------|-------------|-------------|-------------|-------------|-------------|
| <b>MATRIX</b>    | Minimum         | Groundwater | Groundwater | Groundwater | Groundwater | Groundwater | Groundwater |
| <b>SAMPLE ID</b> | Reporting Limit | SIS-1       | SIS-2       | SIS-3       | SIS-4       | LF-1        | LF-2        |

**\*\*\* DEFAULT GENERAL METHOD \*\*\* (Water)**

|                   |    |        |        |        |        |        |        |
|-------------------|----|--------|--------|--------|--------|--------|--------|
| Water level(NGVD) | ft | 180.42 | 177.36 | 179.59 | 178.89 | 180.59 | 178.92 |
|-------------------|----|--------|--------|--------|--------|--------|--------|



|                                     |           |                            |  |                 |  |  |  |
|-------------------------------------|-----------|----------------------------|--|-----------------|--|--|--|
| <b>Deerhaven Generating Station</b> |           | Project: Environmental     |  |                 |  |  |  |
| D-38                                |           |                            |  |                 |  |  |  |
| Gainesville FL/USA, 32653           |           | Project Manager: Dan Sweat |  |                 |  |  |  |
| <b>SAMPLED:</b>                     | 16-Jul-18 | <b>REPORTED:</b>           |  | 23-Jul-18 13:43 |  |  |  |
| <b>RECEIVED:</b>                    | 26-Jun-18 |                            |  |                 |  |  |  |

|                  |                 |             |             |   |   |   |   |
|------------------|-----------------|-------------|-------------|---|---|---|---|
| <b>LAB #</b>     |                 | D18F067-19  | D18F067-20  | - | - | - | - |
| <b>MATRIX</b>    | Minimum         | Groundwater | Groundwater | - | - | - | - |
| <b>SAMPLE ID</b> | Reporting Limit | LF-3        | LF-4        | - | - | - | - |

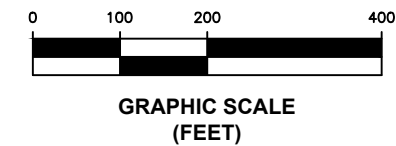
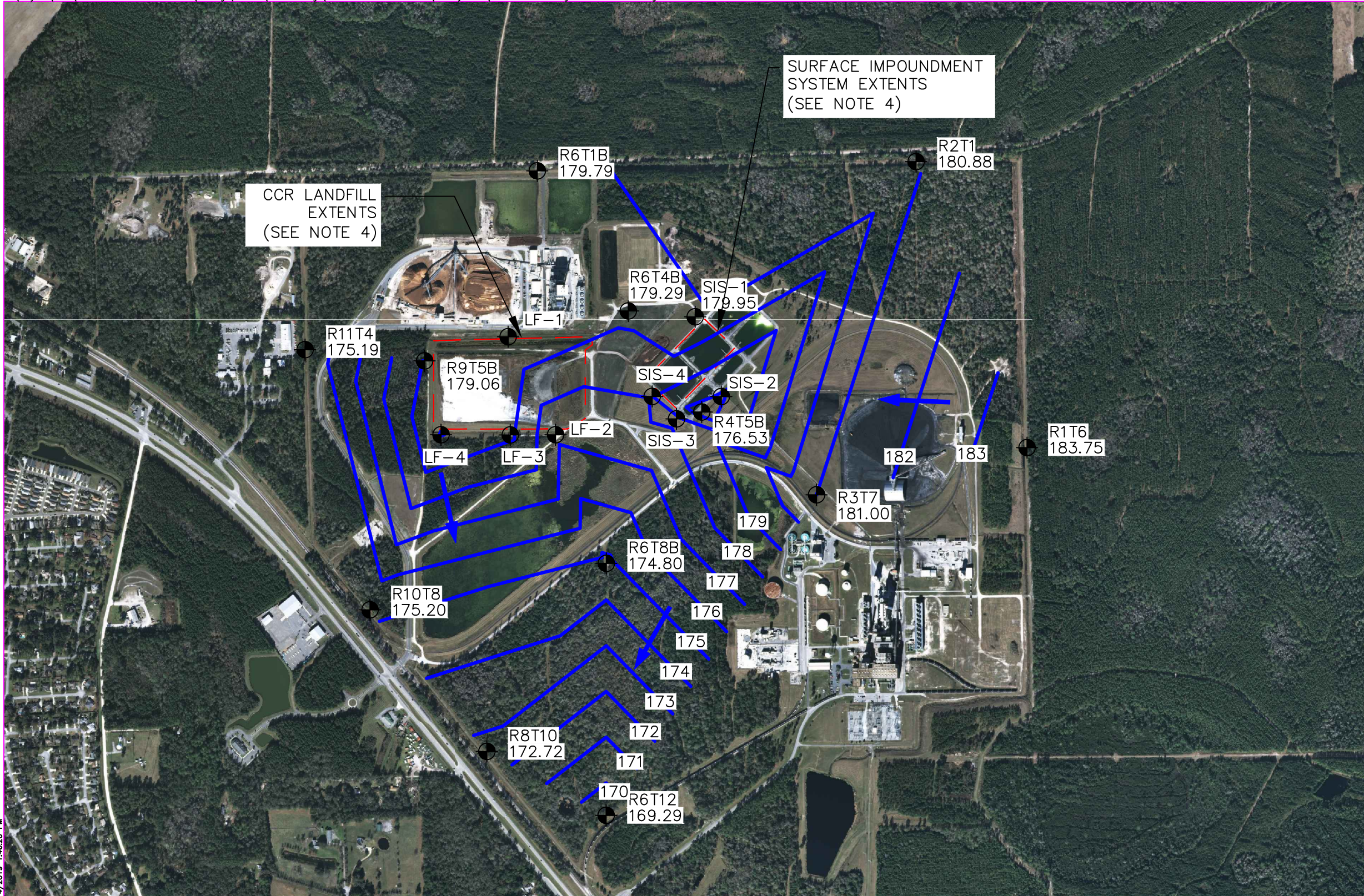
**\*\*\* DEFAULT GENERAL METHOD \*\*\* (Water)**

|                   |    |        |        |   |   |   |   |
|-------------------|----|--------|--------|---|---|---|---|
| Water level(NGVD) | ft | 179.33 | 180.26 | - | - | - | - |
|-------------------|----|--------|--------|---|---|---|---|

**Comments:**

3Q18 Depth to Waters for all wells

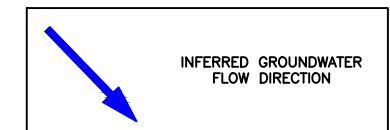
Attachment C  
Potentiometric Contours and Site-Wide  
Groundwater Flow Direction, January and  
July, 2018



NOTES:

1. THE CCR LANDFILL AND CCR SURFACE IMPOUNDMENT SYSTEM (AND ADJACENT PROCESS PONDS) ARE SURROUNDED BY A SLURRY WALL CONTAINMENT SYSTEM KEYED INTO AN EXISTING NATURAL CLAY LAYER - THE CCR UNITS WERE DESIGNED TO BE HYDRAULICALLY ISOLATED FROM THE SURROUNDING SURFICIAL AQUIFER. THEREFORE, THE POTENTIOMETRIC SURFACES PRESENTED IN THESE DRAWINGS WERE USED TO ROUGHLY INFER THE GROUNDWATER FLOW DIRECTION OUTSIDE THE EXTENTS OF THE CCR UNITS.
2. 2014 AERIAL IMAGERY FROM FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION LAND BOUNDARY INFORMATION SYSTEM
3. GROUNDWATER ELEVATIONS REFERENCED TO THE NATIONAL GEODETIC VERTICAL DATUM OF 1929.
4. EXTENTS OF CCR UNITS ARE APPROXIMATE.

LEGEND



1/4/2019 1:46:20 PM

| LTR | DATE | REVISIONS | BY | APPRD. |
|-----|------|-----------|----|--------|
|     |      |           |    |        |
|     |      |           |    |        |
|     |      |           |    |        |

DESIGNED \_\_\_\_\_  
DRAWN JS, JW  
CHECKED \_\_\_\_\_



**INNOVATIVE WASTE CONSULTING SERVICES, LLC**  
3720 NW 43rd St. Suite 103  
GAINESVILLE, FL 32605  
PHONE: (352) 331-4828  
FAX: (352) 331-4842

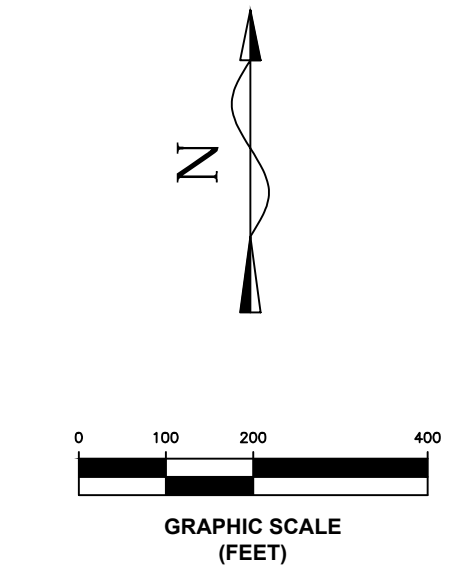
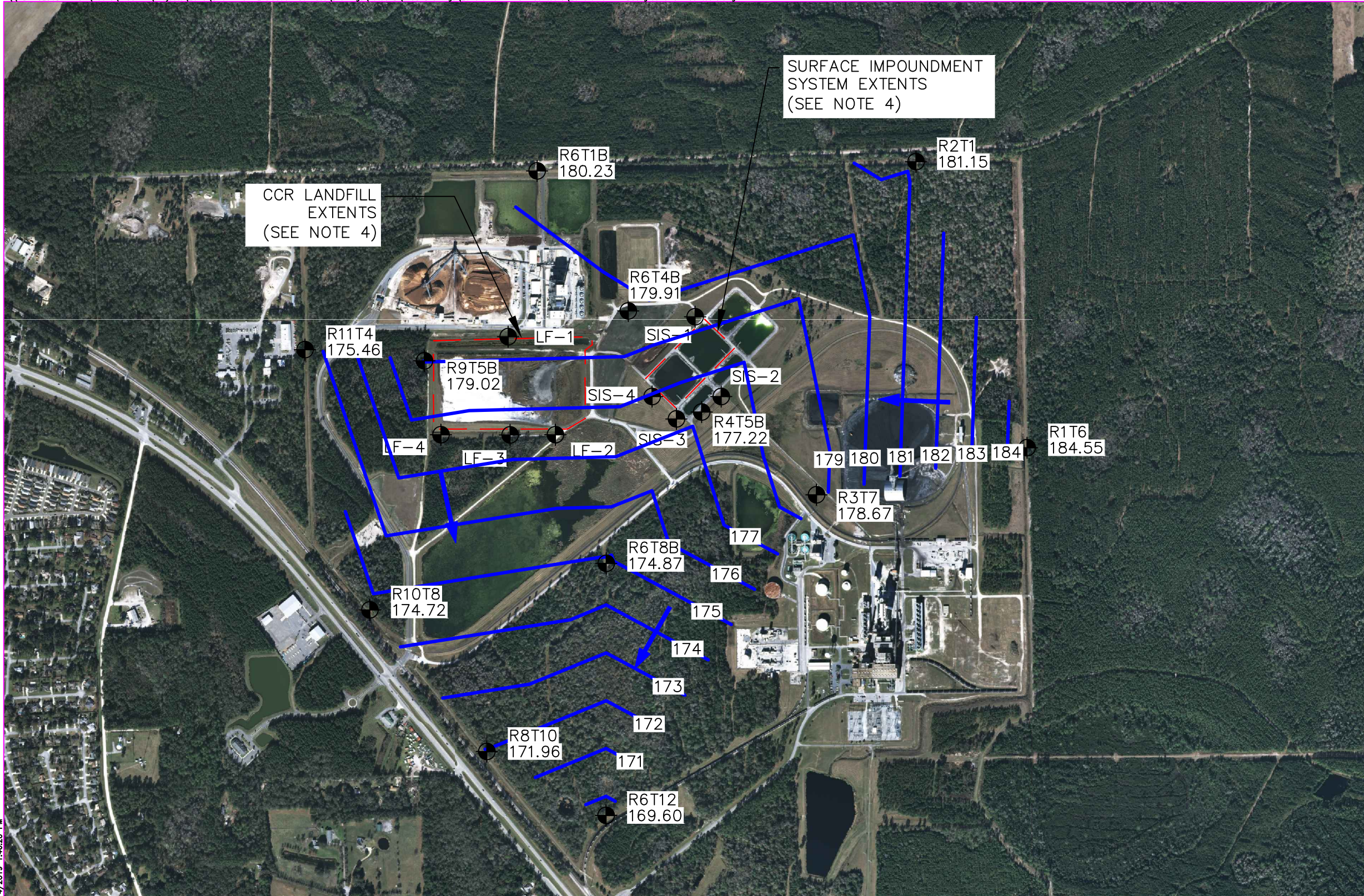


**GAINESVILLE REGIONAL UTILITIES**  
DEERHAVEN GENERATING STATION  
10001 NW 13TH ST.  
GAINESVILLE, FL 32653

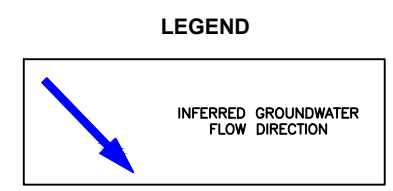
JANUARY 2019  
CCR UNITS  
GROUNDWATER MONITORING  
AND CORRECTIVE ACTION REPORT

GROUNDWATER CONTOURS  
AND FLOW DIRECTION  
21 JANUARY 2018

DATE:  
6 JANUARY 2019  
SCALE:  
AS SHOWN  
DWG No:  
1 OF 1



- NOTES:**
1. THE CCR LANDFILL AND CCR SURFACE IMPOUNDMENT SYSTEM (AND ADJACENT PROCESS PONDS) ARE SURROUNDED BY A SLURRY WALL CONTAINMENT SYSTEM KEYED INTO AN EXISTING NATURAL CLAY LAYER - THE CCR UNITS WERE DESIGNED TO BE HYDRAULICALLY ISOLATED FROM THE SURROUNDING SURFICIAL AQUIFER. THEREFORE, THE POTENTIOMETRIC SURFACES PRESENTED IN THESE DRAWINGS WERE USED TO ROUGHLY INFER THE GROUNDWATER FLOW DIRECTION OUTSIDE THE EXTENTS OF THE CCR UNITS.
  2. 2014 AERIAL IMAGERY FROM FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION LAND BOUNDARY INFORMATION SYSTEM
  3. GROUNDWATER ELEVATIONS REFERENCED TO THE NATIONAL GEODETIC VERTICAL DATUM OF 1929.
  4. EXTENTS OF CCR UNITS ARE APPROXIMATE.



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| LTR | DATE | REVISIONS | BY | APPRD. |
|-----|------|-----------|----|--------|
|     |      |           |    |        |
|     |      |           |    |        |
|     |      |           |    |        |

DESIGNED \_\_\_\_\_  
 DRAWN JS, JW  
 CHECKED \_\_\_\_\_



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**GAINESVILLE REGIONAL UTILITIES**  
 DEERHAVEN GENERATING STATION  
 10001 NW 13TH ST.  
 GAINESVILLE, FL 32653

JANUARY 2019  
 CCR UNITS  
 GROUNDWATER MONITORING  
 AND CORRECTIVE ACTION REPORT

GROUNDWATER CONTOURS  
 AND FLOW DIRECTION  
 16-18 JULY 2018

DATE:  
 6 JANUARY 2019  
 SCALE:  
 AS SHOWN  
 DWG No:  
 1 OF 1

Attachment D  
Alternative Source Demonstration for  
Lithium and Molybdenum for the CCR  
Landfill.

# Gainesville Regional Utilities Deerhaven Generating Station

## Alternative Source Demonstration for Groundwater Impacts Near the Coal Combustion Residuals Landfill

**Prepared for:**

Gainesville Regional Utilities  
Deerhaven Generating Station  
10001 NW 13<sup>th</sup> Street  
Gainesville, Florida



**Prepared by:**

Innovative Waste Consulting Services, LLC  
3720 NW 43<sup>rd</sup> St., Suite 103  
Gainesville, Florida



September 2018

**TABLE OF CONTENTS**

**1.0 Introduction .....3**  
**2.0 Sampling Methodology Summary .....3**  
**3.0 Summary of Chemical Analysis Results .....5**  
**4.0 Summary and Future Considerations .....8**  
**5.0 References .....9**  
**6.0 Professional Engineer Certification .....10**

**LIST OF FIGURES**

Figure 1. Test Boring Locations Along Each Test Area Lateral Line ..... 4  
Figure 2. General Arrangement of Test Area Zones (Not to Scale) ..... 5  
Figure 3. Background Concentrations and Top and Bottom Interval Test Sample Concentrations of Lithium and Molybdenum ..... 7

**LIST OF TABLES**

Table 1. Background Soil Concentrations of Lithium and Molybdenum ..... 6  
Table 2. Test Sample Concentrations of Lithium and Molybdenum ..... 6

**ATTACHMENTS**

- Attachment A - Background and Test Sampling Areas Near the CCR Landfill
- Attachment B - Laboratory Analysis Results

**LIST OF ABBREVIATIONS**

|      |  |
|------|--|
| CCR  | Coal Combustion Residuals                      |
| DGS  | Deerhaven Generating Station                   |
| FDEP | Florida Department of Environmental Protection |
| GRU  | Gainesville Regional Utilities                 |
| PE   | Professional Engineer                          |

## 1.0 Introduction

Gainesville Regional Utilities (GRU) Deerhaven Generating Station (DGS) has two Coal Combustion Residuals (CCR) units including a surface impoundment system and a CCR landfill. These CCR units are subject to the groundwater monitoring requirements of the CCR Rule (i.e., Title 40 of the Code of Federal Regulations (CFR), Part 257, Subpart D – Standards for the Disposal of CCR in Landfills and Surface Impoundments). Part of the requirements of the CCR Rule include groundwater monitoring to assess potential impacts to the upper-most aquifer surrounding CCR units.

Groundwater is monitored at the CCR Landfill at DGS using a network of one upgradient and three downgradient wells. Based on previous studies, the groundwater flow direction of the uppermost aquifer is generally towards the south. GRU completed a statistical analysis of groundwater monitoring results for the initial sampling event of the assessment monitoring program. The results of the analysis showed concentrations of lithium above the groundwater protection standard (i.e., 40 µg/L, per 40 CFR 257.95(h)(2)(iii)) in a downgradient well. Elevated concentrations of molybdenum were also observed in a separate well; however, these concentrations have not exceeded the groundwater protection standard for molybdenum (i.e., 100 µg/L, per 40 CFR 257.95(h)(2)(iv)).

This memorandum summarizes and discusses the results of a soil sampling and characterization effort used to evaluate whether soils/sediments in the vicinity of CCR landfill downgradient wells may be the cause of the elevated concentrations of lithium and molybdenum.

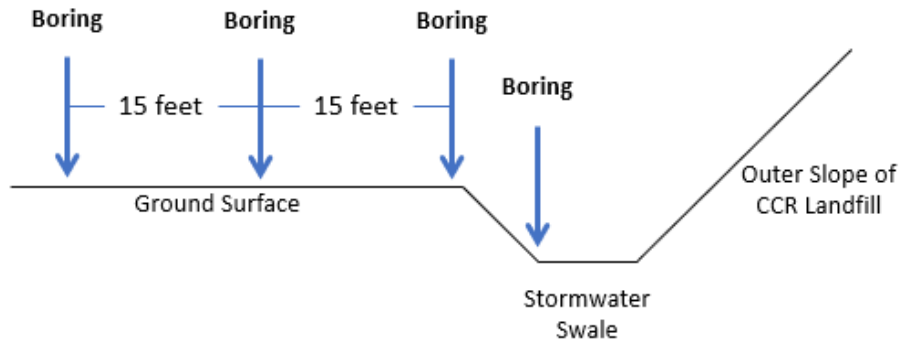
## 2.0 Sampling Methodology Summary

Soil sampling and analysis was conducted to evaluate whether the soils to the south of the CCR Landfill are a source of the elevated groundwater lithium concentrations. The soil sampling and analysis effort was generally conducted in accordance with guidance provided by the Florida Department of Environmental Protection (FDEP) and with sampling standard operating procedures developed by FDEP (FDEP 2012, FDEP 2017a, FDEP 2017b, FDEP 2017c). The concentrations of the parameters of interest in soil samples collected from the southern portion of the CCR Landfill (herein referred to as *test areas*) were compared to background soil samples to assess whether test area have soil with lithium and molybdenum concentrations significantly above the background conditions.

All borings were advanced by means of a bucket auger. Samples were collected from soils/sediments removed from the hollow core of the bucket auger. A total of 138 borings were advanced – 8 of the borings were advanced in locations not expected to be impacted by the CCR Landfill, and the remaining 130 were advanced in the southern test area. The background soil concentration was established based on 16 samples collected from the 8 background boreholes (herein referred to as *test borings/samples*) that were advanced into soils in an area located to the southeast of the landfill. Based on discussions with GRU, this undeveloped area has not been impacted by plant construction and operations and should be representative of background soil.



Test borings were advanced in a strip of land located to the south of the CCR landfill. Borings were arranged in lines spaced at 30-foot intervals laterally (i.e., oriented east-west) along this strip of land. Depending on the amount of space available, there were up to 4 borings advanced in each line. The boring layout along each line is depicted in Figure 1 below.



**Figure 1. Test Boring Locations Along Each Test Area Lateral Line**

Borings were categorized into rows:

- Row 1 includes samples collected at the toe of the stormwater swale
- Row 2 includes samples collected at the top of the stormwater swale
- Row 3 includes samples collected 15 feet from the top of the stormwater swale
- Row 4 includes samples collected 30 feet from the top of the stormwater swale (if space was available)

Two soil samples were collected from each borehole - one sample was collected from the top interval and one from the bottom interval. The extent of the top interval was dependent on the appearance of the soil removed from the borehole. In general, at least one layer encountered in the top 2 feet of soil in the southern test area did not visually resemble background soils. A sample of this layer, when present, was collected for characterization. However, if only soils similar in appearance to background soil layers were encountered in the first 2 feet of the borehole, the soil removed from the first 2 feet was mixed and a sample was collected from this mixed soil.

If layers that did not visually resemble background soils were encountered, the auger was advanced until soil similar in appearance to background soils was reached. If only background soils were encountered in the first 2 feet, the auger was advanced until a depth of 2 feet was reached. A clean auger (augers were cleaned with laboratory grade high-purity water between each interval/borehole) was then used to further advance the borehole. A second soil sample was taken from this bottom interval soil.

The southern test area was divided into 3 zones. These zones are depicted in

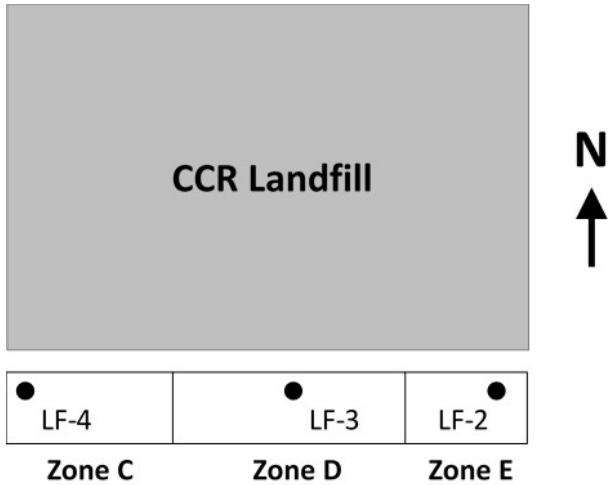


Figure 2. Zone C and D were separated by the approximate east-west midpoint between downgradient wells LF-3 and LF-4. Zone D and E were separated by the approximate east-west midpoint between downgradient wells LF-2 and LF-3. Samples were composited based on zone, depth, and row. For example, all samples collected from the top interval of borings in Zone E that were 15 feet from the outside edge of the top of the stormwater swale (i.e., Row 3) were composited. Twenty-two (22) composite samples from the southern test area were analyzed for lithium and molybdenum.

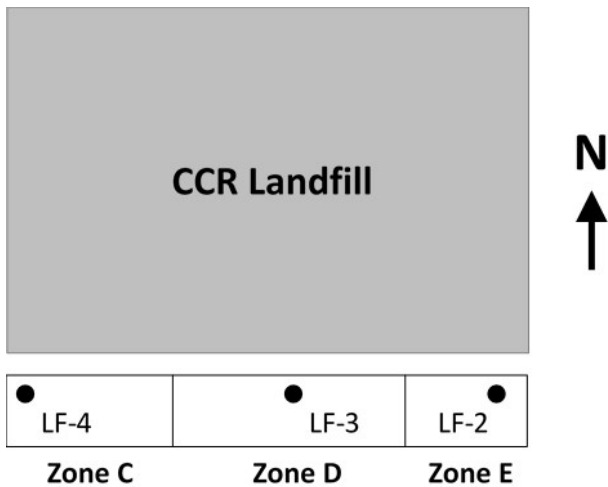


Figure 2. General Arrangement of Test Area Zones (Not to Scale)

### 3.0 Summary of Chemical Analysis Results

Per one of the non-statistical approaches described in FDEP (2012), the concentrations (dry weight basis) of lithium and molybdenum from the test samples were compared with the maximum concentration of these parameters measured in background samples. FDEP (2012) recommends comparison between discrete background and test samples. All background samples were discretely measured. However, in this soil characterization, 130 individual test samples were

composited to evaluate lithium and molybdenum concentrations representative of 22 discrete, three-dimensional regions.

Table 1 summarizes the lithium and molybdenum concentrations of background soil samples. Per FDEP (2012), the upper end of the range of background concentrations is defined as the lower of the maximum background concentration or twice the mean of the background concentration. Therefore, the upper end of the range of background concentrations is 1.8 mg/kg for lithium (i.e., twice the mean) and 0.14 mg/kg for molybdenum (i.e., the upper end of the concentration range).

**Table 1. Background Soil Concentrations of Lithium and Molybdenum**

| Boring | Lithium (mg/kg) |            | Molybdenum (mg/kg) |              |
|--------|-----------------|------------|--------------------|--------------|
|        | Top             | Bottom     | Top                | Bottom       |
| B-1    | 1.2             | 0.4        | 0.05               | 0.05         |
| B-2    | 0.8             | <i>0.1</i> | 0.1                | 0.05         |
| B-3    | 1               | 0.3        | 0.05               | 0.05         |
| B-4    | 1               | <i>0.1</i> | 0.09               | 0.05         |
| B-5    | 1.7             | 0.5        | 0.09               | 0.05         |
| B-6    | 1.9             | 0.5        | 0.14               | <i>0.015</i> |
| B-7    | 2.1             | 0.5        | 0.14               | 0.1          |
| B-8    | 2.4             | 0.2        | <b>0.15</b>        | <b>0.21</b>  |
| Mean   | 0.92            |            | 0.073              |              |

Notes:

*italicized* – Analyte was not detected. The value shown is half of the detection limit.

**bold** - Analyte detected in method blank. The value was not considered in the analysis.

Table 2 presents a summary of the concentrations of lithium and molybdenum found in the test samples. The shaded cells represent those concentrations found above the upper end of the range of background concentrations described above.

**Table 2. Test Sample Concentrations of Lithium and Molybdenum**

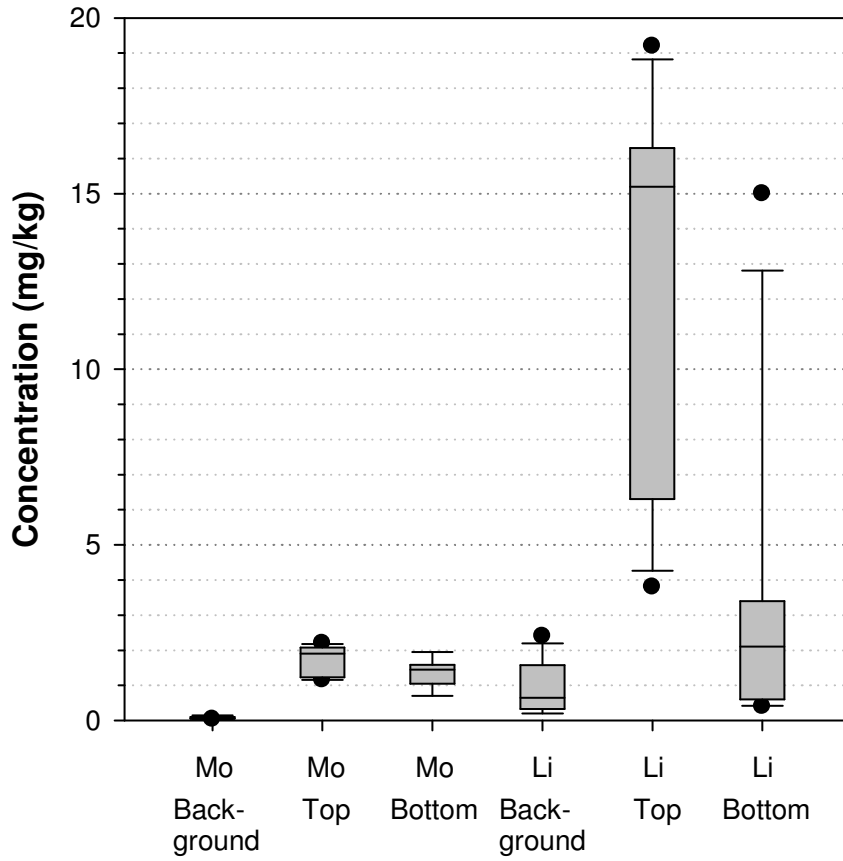
| Zone | Lithium (mg/kg) |      |      |     |        |     |     |     | Molybdenum (mg/kg) |     |      |      |            |      |     |             |
|------|-----------------|------|------|-----|--------|-----|-----|-----|--------------------|-----|------|------|------------|------|-----|-------------|
|      | Top             |      |      |     | Bottom |     |     |     | Top                |     |      |      | Bottom     |      |     |             |
|      | R1              | R2   | R3   | R4  | R1     | R2  | R3  | R4  | R1                 | R2  | R3   | R4   | R1         | R2   | R3  | R4          |
| C    | 6.1             | 17.3 | 13.9 | 6.3 | 15     | 2.1 | 1.1 | 0.4 | 1.23               | 1.9 | 2.08 | 1.2  | 1.95       | 1.45 | 1.1 | <b>0.39</b> |
| D    | 3.8             | 16.3 | 15.8 | 9.9 | 2.2    | 3.4 | 4   | 0.5 | 1.49               | 2.2 | 1.91 | 2.07 | 1.57       | 1.51 | 1   | 1.21        |
| E    | 19.2            | 15.2 | 15.4 | -   | 0.6    | 1.8 | 2.4 | -   | 1.9                | 1.5 | 1.15 | -    | <b>0.1</b> | 0.7  | 1.6 | -           |

Note:

**bold** - Analyte detected in method blank. The value was not considered in the analysis.

The concentration of both lithium and molybdenum was found above the upper end of background concentration range in samples collected from both the upper and lower interval of the borings. However, lower interval concentrations are noticeably lower than upper interval concentrations; for lithium, the median of the upper interval concentrations is nearly an order of magnitude higher than the median of the lower interval concentrations. Figure 3 presents a box-

and-whisker plot showing the distribution of lithium and molybdenum concentrations measured in background samples and in the samples collected from the top and bottom intervals of the test area borings. For instances where the parameter was below detection, a concentration equal to the detection limit was used.



**Figure 3. Background Concentrations and Top and Bottom Interval Test Sample Concentrations of Lithium and Molybdenum**

As shown in the figure, all concentrations are well below the Florida Soil Cleanup Target Levels for lithium (i.e., 44,000 mg/kg for direct exposure industrial and 1,700 mg/kg for direct exposure residential) and molybdenum (i.e., 11,000 mg/kg for direct exposure industrial and 440 mg/kg for direct exposure residential).

As an additional step in the soil characterization, GRU used the Synthetic Precipitation Leaching Procedure to evaluate whether test samples were capable of leaching lithium and/or molybdenum at concentrations above the CCR Rule-listed groundwater protection standards. Three (3) of the composite test samples leached lithium at concentrations equal to or above the groundwater protection standard (i.e., 40 µg/L).

## **4.0 Summary and Future Considerations**

The evaluation suggests that the top layer of soil in the vicinity of the downgradient wells contains lithium and molybdenum at levels significantly greater than those in background soil and has the potential to cause elevated levels of lithium and molybdenum in the downgradient wells. GRU plans to continue monitoring groundwater quality surrounding the CCR Landfill under the assessment monitoring program. Based on the results of the soil characterization, GRU is considering approaches to mitigate the impact of the in-place soil on groundwater quality. One approach under consideration is to excavate and use these top-interval soils for landfill operations within the CCR Landfill slurry wall extents.

## **5.0 References**

- FDEP (2012). Guidance for Comparing Background and Site Chemical Concentrations in Soil. Developed by the Florida Department of Environmental Protection, Bureau of Waste Cleanup, Program & Technical Support Section. January 2012.
- FDEP (2017a). FS 3000 Soil. Division of Environmental Assessment and Restoration, Quality Assurance. Florida Department of Environmental Protection. Revised January 2017.
- FDEP (2017b). FC 1000 Cleaning/Decontamination Procedures. Division of Environmental Assessment and Restoration, Quality Assurance. Florida Department of Environmental Protection. Revised January 2017.
- FDEP (2017c). FS 1000 General Sampling Procedures. Division of Environmental Assessment and Restoration, Quality Assurance. Florida Department of Environmental Protection. Revised January 2017.

## 6.0 Professional Engineer Certification

This alternative source demonstration was prepared under the supervision, direction and control of the undersigned registered professional engineer (PE).

Name of Professional Engineer: Justin L. Smith  
Company: Innovative Waste Consulting Services, LLC  
Date: September 26, 2018  
PE Registration State: Florida  
PE License No.: 80463  
Signature and PE Seal:



This item has been electronically signed and sealed by Justin L. Smith, PE on 26 September 2018 using a SHA-1 authentication code.

Printed copies of this document are not considered signed and sealed and the SHA-1 authentication code must be verified on electronic copies.

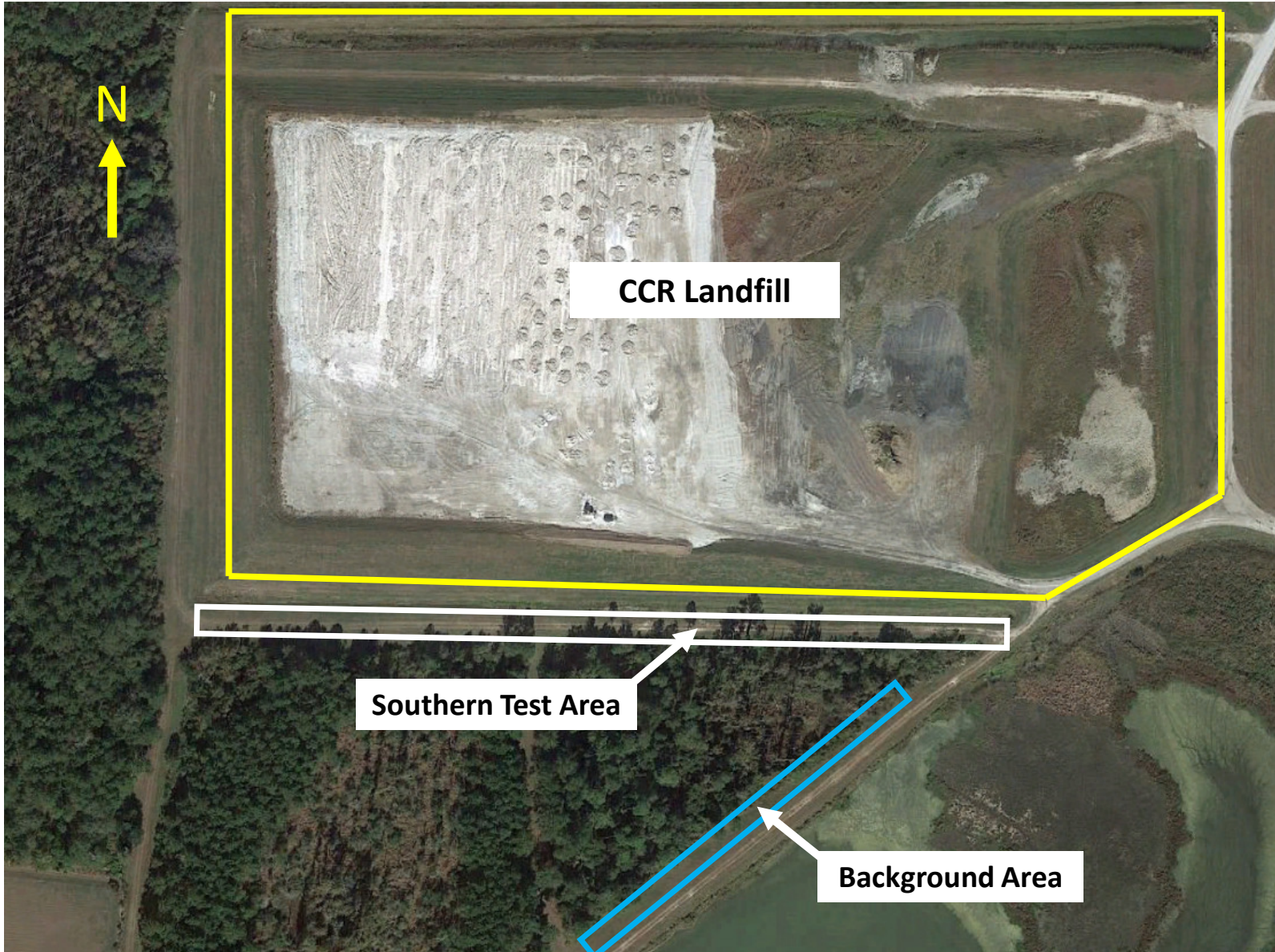
Justin L.  
Smith

Digitally signed by Justin L. Smith  
DN: cn=Justin L. Smith,  
o=Innovative Waste Consulting  
Services, LLC, ou,  
email=jsmith@iwcs.biz, c=US  
Date: 2018.09.26 15:58:30 -04'00'

## **Attachment A**

### **Background and Test Sampling Areas Near the CCR Landfill**





N



CCR Landfill

Southern Test Area

Background Area

**Attachment B**  
**Laboratory Analysis Results**



June 18, 2018

Service Request No:J1803828

Jeffery Boudreau  
Gainesville Regional Utilities  
10001 NW 13th St  
Gainesville, FL 32653

**Laboratory Results for: GRU DGS CCR LF Characterization**

Dear Jeffery,

Enclosed are the results of the sample(s) submitted to our laboratory May 25, 2018  
For your reference, these analyses have been assigned our service request number **J1803828**.

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and ALS Environmental is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report. In accordance to the NELAC 2003 Standard, a statement on the estimated uncertainty of measurement of any quantitative analysis will be supplied upon request.

Respectfully submitted,

**ALS Group USA, Corp. dba ALS Environmental**

Gina Bondani  
Project Manager

ADDRESS 9143 Philips Highway, Suite 200, Jacksonville, FL 32256  
PHONE +1 904 739 2277 | FAX +1 904 739 2011  
ALS Group USA, Corp.  
dba ALS Environmental



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## Table of Contents

|                            |    |
|----------------------------|----|
| CoverLetter                | 1  |
| Table of Contents          | 2  |
| Narrative Documents        | 4  |
| Narrative Documents        | 5  |
| Hit Summary List           | 6  |
| Sample Receipt Information | 8  |
| Sample Cross-Reference     | 9  |
| Chain Of Custody           | 10 |
| Miscellaneous Forms        | 12 |
| Qualifiers                 | 13 |
| Acronyms                   | 15 |
| Analyst Summary            | 16 |
| Sample Results             | 19 |
| Metals                     | 20 |
| E-R1-T - Metals            | 21 |
| E-R1-B - Metals            | 23 |
| E-R2-T - Metals            | 24 |
| E-R2-B - Metals            | 26 |
| E-R3-T - Metals            | 27 |
| E-R3-B - Metals            | 29 |
| T-1-10 - Metals            | 30 |
| T-2-34 - Metals            | 32 |

## Table of Contents (continued)

|                       |    |
|-----------------------|----|
| T-3-26 - Metals       | 34 |
| T-4-17 - Metals       | 36 |
| General Chemistry     | 38 |
| E-R1-T - GenChem      | 39 |
| E-R1-B - GenChem      | 40 |
| E-R2-T - GenChem      | 41 |
| E-R2-B - GenChem      | 42 |
| E-R3-T - GenChem      | 43 |
| E-R3-B - GenChem      | 44 |
| T-1-10 - GenChem      | 45 |
| T-2-34 - GenChem      | 46 |
| T-3-26 - GenChem      | 47 |
| T-4-17 - GenChem      | 48 |
| QC Summary Forms      | 49 |
| Metals                | 50 |
| Metals                |    |
| Method Blank - Metals | 51 |
| Method Blank - Metals | 53 |
| Method Blank - Metals | 54 |



# Narrative Documents

**ALS Environmental—Jacksonville Laboratory**  
9143 Philips Highway, Suite 200, Jacksonville, FL 32256  
Phone (904) 739-2277 Fax (904) 739-2011  
[www.alsglobal.com](http://www.alsglobal.com)



**Client:** Gainesville Regional Utilities  
**Project:** GRU DGS CCR LF Characterization  
**Sample Matrix:** Soil

**Service Request:** J1803828  
**Date Received:** 5/25/18

### CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier I data deliverables. When appropriate to the procedure, method blank results have been reported with each analytical test. Analytical procedures performed by the lab are validated in accordance with NELAC standards. Parameters that are included in the NELAC Fields of Testing but are not included in the lab's NELAC accreditation are identified in the discussion of each analytical procedure.

#### Sample Receipt

10 soil samples were received for analysis at ALS Environmental on 5/25/18. The samples were received in good condition and consistent with the accompanying chain of custody form. Samples are refrigerated at  $\leq 6^{\circ}\text{C}$  upon receipt at the lab except for aqueous samples designated for metals analyses, which are stored at room temperature.

#### Metals Analyses:

The reporting limit is elevated for analyte(s) analyzed by ICP/AES in sample(s) J1803828-003. These sample(s) contained high concentrations of Calcium that cause spectral interference that could not be corrected for without diluting the samples.

#### General Chemistry Analyses:

No significant data anomalies were noted with this analysis.

Approved by  Date 6/18/2018



**SAMPLE DETECTION SUMMARY**

**CLIENT ID: E-R1-T Lab ID: J1803828-001**

| Analyte           | Results | Flag | MDL     | MRL   | Units   | Method         |
|-------------------|---------|------|---------|-------|---------|----------------|
| Solids, Total     | 67.3    |      |         |       | Percent | 160.3 Modified |
| Lithium, SPLP     | 0.00800 |      | 0.00101 |       | ppm     | 6010D          |
| Lithium, Total    | 19.2    |      | 0.2     | 5.6   | mg/Kg   | 6010D          |
| Molybdenum, SPLP  | 0.030   |      | 0.0003  | 0.010 | mg/L    | 6010D          |
| Molybdenum, Total | 1.90    |      | 0.04    | 0.56  | mg/Kg   | 6010D          |

**CLIENT ID: E-R1-B Lab ID: J1803828-002**

| Analyte           | Results | Flag | MDL  | MRL  | Units   | Method         |
|-------------------|---------|------|------|------|---------|----------------|
| Solids, Total     | 91.5    |      |      |      | Percent | 160.3 Modified |
| Lithium, Total    | 0.6     | I    | 0.2  | 4.8  | mg/Kg   | 6010D          |
| Molybdenum, Total | 0.1     | IV   | 0.03 | 0.48 | mg/Kg   | 6010D          |

**CLIENT ID: E-R2-T Lab ID: J1803828-003**

| Analyte           | Results | Flag | MDL     | MRL   | Units   | Method         |
|-------------------|---------|------|---------|-------|---------|----------------|
| Solids, Total     | 79.5    |      |         |       | Percent | 160.3 Modified |
| Lithium, SPLP     | 0.0100  |      | 0.00101 |       | ppm     | 6010D          |
| Lithium, Total    | 15.2    |      | 0.2     | 5.2   | mg/Kg   | 6010D          |
| Molybdenum, SPLP  | 0.012   |      | 0.0003  | 0.010 | mg/L    | 6010D          |
| Molybdenum, Total | 1.5     |      | 0.06    | 1.0   | mg/Kg   | 6010D          |

**CLIENT ID: E-R2-B Lab ID: J1803828-004**

| Analyte           | Results | Flag | MDL  | MRL  | Units   | Method         |
|-------------------|---------|------|------|------|---------|----------------|
| Solids, Total     | 92.4    |      |      |      | Percent | 160.3 Modified |
| Lithium, Total    | 1.8     | I    | 0.2  | 4.4  | mg/Kg   | 6010D          |
| Molybdenum, Total | 0.70    |      | 0.03 | 0.44 | mg/Kg   | 6010D          |

**CLIENT ID: E-R3-T Lab ID: J1803828-005**

| Analyte           | Results | Flag | MDL     | MRL   | Units   | Method         |
|-------------------|---------|------|---------|-------|---------|----------------|
| Solids, Total     | 77.9    |      |         |       | Percent | 160.3 Modified |
| Lithium, SPLP     | 0.0110  |      | 0.00101 |       | ppm     | 6010D          |
| Lithium, Total    | 15.4    |      | 0.2     | 6.1   | mg/Kg   | 6010D          |
| Molybdenum, SPLP  | 0.009   | I    | 0.0003  | 0.010 | mg/L    | 6010D          |
| Molybdenum, Total | 1.15    |      | 0.04    | 0.61  | mg/Kg   | 6010D          |

**CLIENT ID: E-R3-B Lab ID: J1803828-006**

| Analyte           | Results | Flag | MDL  | MRL  | Units   | Method         |
|-------------------|---------|------|------|------|---------|----------------|
| Solids, Total     | 90.8    |      |      |      | Percent | 160.3 Modified |
| Lithium, Total    | 2.4     | I    | 0.2  | 5.0  | mg/Kg   | 6010D          |
| Molybdenum, Total | 1.60    |      | 0.03 | 0.50 | mg/Kg   | 6010D          |

**CLIENT ID: T-1-10 Lab ID: J1803828-007**

| Analyte       | Results | Flag | MDL     | MRL | Units   | Method         |
|---------------|---------|------|---------|-----|---------|----------------|
| Solids, Total | 77.7    |      |         |     | Percent | 160.3 Modified |
| Lithium, SPLP | 0.0150  |      | 0.00101 |     | ppm     | 6010D          |





**SAMPLE DETECTION SUMMARY**

**CLIENT ID: T-1-10** **Lab ID: J1803828-007**

| Analyte           | Results | Flag | MDL    | MRL   | Units | Method |
|-------------------|---------|------|--------|-------|-------|--------|
| Lithium, Total    | 17.7    |      | 0.2    | 5.5   | mg/Kg | 6010D  |
| Molybdenum, SPLP  | 0.022   |      | 0.0003 | 0.010 | mg/L  | 6010D  |
| Molybdenum, Total | 1.65    |      | 0.03   | 0.55  | mg/Kg | 6010D  |

**CLIENT ID: T-2-34** **Lab ID: J1803828-008**

| Analyte           | Results | Flag | MDL     | MRL   | Units   | Method         |
|-------------------|---------|------|---------|-------|---------|----------------|
| Solids, Total     | 69.4    |      |         |       | Percent | 160.3 Modified |
| Lithium, SPLP     | 0.0180  |      | 0.00101 |       | ppm     | 6010D          |
| Lithium, Total    | 41.5    |      | 0.2     | 6.1   | mg/Kg   | 6010D          |
| Molybdenum, SPLP  | 0.038   |      | 0.0003  | 0.010 | mg/L    | 6010D          |
| Molybdenum, Total | 2.91    |      | 0.04    | 0.61  | mg/Kg   | 6010D          |

**CLIENT ID: T-3-26** **Lab ID: J1803828-009**

| Analyte           | Results | Flag | MDL     | MRL   | Units   | Method         |
|-------------------|---------|------|---------|-------|---------|----------------|
| Solids, Total     | 77.6    |      |         |       | Percent | 160.3 Modified |
| Lithium, SPLP     | 0.0270  |      | 0.00101 |       | ppm     | 6010D          |
| Lithium, Total    | 20.3    |      | 0.2     | 5.6   | mg/Kg   | 6010D          |
| Molybdenum, SPLP  | 0.037   |      | 0.0003  | 0.010 | mg/L    | 6010D          |
| Molybdenum, Total | 2.00    |      | 0.03    | 0.56  | mg/Kg   | 6010D          |

**CLIENT ID: T-4-17** **Lab ID: J1803828-010**

| Analyte           | Results | Flag | MDL     | MRL   | Units   | Method         |
|-------------------|---------|------|---------|-------|---------|----------------|
| Solids, Total     | 88.1    |      |         |       | Percent | 160.3 Modified |
| Lithium, SPLP     | 0.0160  |      | 0.00101 |       | ppm     | 6010D          |
| Lithium, Total    | 13.9    |      | 0.2     | 4.8   | mg/Kg   | 6010D          |
| Molybdenum, SPLP  | 0.019   |      | 0.0003  | 0.010 | mg/L    | 6010D          |
| Molybdenum, Total | 1.81    |      | 0.03    | 0.48  | mg/Kg   | 6010D          |



## Sample Receipt Information

**ALS Environmental—Jacksonville Laboratory**  
9143 Philips Highway, Suite 200, Jacksonville, FL 32256  
Phone (904) 739-2277 Fax (904) 739-2011  
[www.alsglobal.com](http://www.alsglobal.com)

**Client:** Gainesville Regional Utilities  
**Project:** GRU DGS CCR LF Characterization

**Service Request:**J1803828

**SAMPLE CROSS-REFERENCE**

| <u>SAMPLE #</u> | <u>CLIENT SAMPLE ID</u> | <u>DATE</u> | <u>TIME</u> |
|-----------------|-------------------------|-------------|-------------|
| J1803828-001    | E-R1-T                  | 5/17/2018   | 1740        |
| J1803828-002    | E-R1-B                  | 5/15/2018   | 1600        |
| J1803828-003    | E-R2-T                  | 5/17/2018   | 1740        |
| J1803828-004    | E-R2-B                  | 5/15/2018   | 1600        |
| J1803828-005    | E-R3-T                  | 5/17/2018   | 1740        |
| J1803828-006    | E-R3-B                  | 5/14/2018   | 1703        |
| J1803828-007    | T-1-10                  | 5/18/2018   | 1617        |
| J1803828-008    | T-2-34                  | 5/18/2018   | 1625        |
| J1803828-009    | T-3-26                  | 5/18/2018   | 1635        |
| J1803828-010    | T-4-17                  | 5/18/2018   | 1645        |

**Cooler Receipt Form**

Client: Deerhaven Power Plant Service Request #: J1803828  
 Project: GRU DGS CCR LE Characterization Shipping paid by ALS?  
 Cooler received on 5/25/18 and opened on 5/25/18 by SWS Yes  No  N/A  
 COURIER: ALS  UPS  FEDEX  DHL  Client  Other  Airbill # 8/27 8324 8446

- 1 Were custody seals on outside of cooler? Yes  No   
 If yes, how many and where? #:     on lid other N/A
- 2 Were seals intact and signature and date correct? Yes  No  N/A
- 3 Were custody papers properly filled out? Yes  No  N/A
- 4 Temperature of cooler(s) upon receipt (Should be 0°C and ≤ 6°C) 24.9°C
- 5 Thermometer ID T121
- 6 Temperature Blank Present? Yes  No
- 7 Were Ice or Ice Packs present Ice  Ice Packs  No
- 8 Did all bottles arrive in good condition (unbroken, etc....)?  Yes  No  N/A
- 9 Type of packing material present Netting  Vial Holder  Bubble Wrap   
 Paper  Styrofoam  Other  N/A
- 10 Were all bottle labels complete (sample ID, preservation, etc....)?  Yes  No  N/A
- 11 Did all bottle labels and tags agree with custody papers?  Yes  No  N/A
- 12 Were the correct bottles used for the tests indicated?  Yes  No  N/A
- 13 Were all of the preserved bottles received with the appropriate preservative?  
 HNO3 pH<2 H2SO4 pH<2 ZnAc2/NaOH pH>9 NaOH pH>12 HCl pH<2  
 Preservative additions noted below Yes  No  N/A
- 14 Were all samples received within analysis holding times?  Yes  No  N/A
- 15 Were VOA vials free of air bubbles greater than 6mm? If present, note below Yes  No  N/A
- 16 Where did the bottles originate?  ALS  Client

| Sample ID | Reagent | Lot # | ml added | Initials Date/Time |
|-----------|---------|-------|----------|--------------------|
|           |         |       |          |                    |
|           |         |       |          |                    |
|           |         |       |          |                    |
|           |         |       |          |                    |
|           |         |       |          |                    |
|           |         |       |          |                    |
|           |         |       |          |                    |
|           |         |       |          |                    |
|           |         |       |          |                    |
|           |         |       |          |                    |

Additional comments and/or explanation of all discrepancies noted above: No date or times on COC. Cooler temp received out of temp at 24.9°C

Client approval to run samples if discrepancies noted: BWB Date: 5/25/18



# CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

SR# **J1803828**

CAS Contract

PAGE **1** OF **1**

9143 Philips Highway, Ste 200 • Jacksonville, FL 32256 (904) 739-2277 • 800-695-7222 x06 • FAX (904) 739-2011

|  |  |   |               |
|--|--|---|---------------|
| Project Name<br><b>GRU DGS CCR LF Characterization</b>   |  | Project Number  |               |
| Project Manager<br><b>Jeff Boudreau</b>  |  | Email Address<br><b>boudreauj@gru.com</b>   |               |
| Company/Address<br><b>Deerhaven Power Plant</b>  |  | ANALYSIS REQUESTED (Include Method Number and Container Preservative)   |               |
| 10001 NW 13th Street   |  | PRESERVATIVE <b>0 0</b>   |               |
| Gainesville, FL 32653-17864  |  | NUMBER OF CONTAINERS <b>5</b>   |               |
| Phone # <b>352-393-6346</b>  |  | FAX #   |               |
| Sampler's Signature<br><i>Justin L. Smith</i>  |  | Sampler's Printed Name<br><b>Justin L. Smith</b>  |               |
| CLIENT SAMPLE ID   |  | LAB ID  | SAMPLING DATE |
| E-R1-T   |  |   |               |
| E-R1-B   |  |   |               |
| E-R2-T   |  |   |               |
| E-R2-B   |  |   |               |
| E-R3-T   |  |   |               |
| E-R3-B   |  |   |               |
| T-1-10   |  |   |               |
| T-2-34   |  |   |               |
| T-3-26   |  |   |               |
| T-4-17   |  |   |               |
| SPECIAL INSTRUCTIONS/COMMENTS<br><b>Li + Mo</b><br><b>dry basis for totals</b><br><b>24.90c</b>  |  | TURNAROUND REQUIREMENTS<br>RUSH (SURCHARGES APPLY)<br><input checked="" type="checkbox"/> STANDARD<br>REQUESTED FAX DATE<br>REQUESTED REPORT DATE   |               |
| REPORT REQUIREMENTS<br><input checked="" type="checkbox"/> I. Results Only<br><input checked="" type="checkbox"/> II. Results + QC Summaries (LCS, DUP, MS/MSD as required)<br><input type="checkbox"/> III. Results + QC and Calibration Summaries<br><input type="checkbox"/> IV. Data Validation Report with Raw Data<br><input type="checkbox"/> V. Specialized Forms / Custom Report<br>Edata <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |  | INVOICE INFORMATION<br>PO # <b>Visa</b><br>BILL TO: <b>Jeff Boudreau</b>  |               |
| See QAPP <input type="checkbox"/>  |  | RECEIVED BY<br><b>Justin L. Smith</b><br>Signature<br><b>Justin L. Smith</b><br>Printed Name<br><b>Justin L. Smith</b><br>Firm<br><b>DWCS</b><br>Date/Time<br><b>5/24/18</b>                  |               |
| SAMPLE RECEIPT: CONDITION/COOLER TEMP:   |  | RECEIVED BY<br><b>Shelley Phillips</b><br>Signature<br><b>Shelley Phillips</b><br>Printed Name<br><b>Shelley Phillips</b><br>Firm<br><b>GRU-DGS</b><br>Date/Time<br><b>5-24-18 / 1100</b>     |               |
| RELINQUISHED BY<br><b>Justin L. Smith</b><br>Signature<br><b>Justin L. Smith</b><br>Printed Name<br><b>Justin L. Smith</b><br>Firm<br><b>DWCS</b><br>Date/Time<br><b>5/24/18</b>   |  | RELINQUISHED BY<br><b>Shelley Phillips</b><br>Signature<br><b>Shelley Phillips</b><br>Printed Name<br><b>Shelley Phillips</b><br>Firm<br><b>GRU-DGS</b><br>Date/Time<br><b>5-24-18 / 1130</b> |               |
| CUSTODY SEALS: <b>Y (N)</b>  |  | RECEIVED BY<br><b>Shelley Phillips</b><br>Signature<br><b>Shelley Phillips</b><br>Printed Name<br><b>Shelley Phillips</b><br>Firm<br><b>GRU-DGS</b><br>Date/Time<br><b>5-24-18 / 1130</b>     |               |
| Signature<br><b>Justin L. Smith</b>  |  | Signature<br><b>Shelley Phillips</b>  |               |
| Printed Name<br><b>Justin L. Smith</b>   |  | Printed Name<br><b>Shelley Phillips</b>   |               |
| Firm<br><b>DWCS</b>  |  | Firm<br><b>GRU-DGS</b>  |               |
| Date/Time<br><b>5/24/18</b>  |  | Date/Time<br><b>5-24-18 / 1130</b>  |               |
| RELINQUISHED BY  |  | RECEIVED BY   |               |
| Signature  |  | Signature   |               |
| Printed Name   |  | Printed Name  |               |
| Firm   |  | Firm  |               |
| Date/Time  |  | Date/Time   |               |



## Miscellaneous Forms

**ALS Environmental—Jacksonville Laboratory**  
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Phone (904) 739-2277 Fax (904) 739-2011  
[www.alsglobal.com](http://www.alsglobal.com)



## **FLORIDA DEP DATA QUALIFIERS**

- B Results based upon colony counts outside the acceptable range.
- D Measurement was made in the field.
- H Value based on field kit determination; results may not be accurate.
- I The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
- J Estimated value (one of the following reasons is discussed in the project case narrative).
1. The result may be inaccurate because the surrogate recovery limits have been exceeded.
  2. No known quality control criteria exists for the component.
  3. The reported value failed to meet the established quality control criteria for either precision or accuracy.
  4. The sample matrix interfered with the ability to make any accurate determination (e.g., primary and confirmation results show greater than 40% RPD).
  5. The data is questionable because of improper laboratory or field protocols (e.g., GC/MS Tune did not meet method criteria).
- K Off scale low. The value is less than the lowest calibration standard but greater than the method reporting limit (MRL).
- L Off scale high. The analyte is above the upper limit of the linear calibration range.
- M The MDL/MRL has been elevated because the analyte could not be accurately quantified due to matrix interference.
- N Presumptive evidence of the analyte. Confirmation was not performed.
- Q Sample held beyond the accepted holding time.
- T Value reported is less than the laboratory method detection limit. The value is reported for informational purposes only.
- U Indicates that the compound was analyzed for but not detected.
- V Indicates that the analyte was detected in both the sample and the associated method blank.
- Y The laboratory analysis was from an improperly preserved sample.
- Z Too many colonies were present (TNTC). The numeric value represents the filtration volume.



**Jacksonville Lab ID # for State Certifications<sup>1</sup>**

| <b>Agency</b>  | <b>Number</b>    | <b>Expiration Date</b> |
|--|------------------|------------------------|
| Department of Defense  | 66206            | 6/30/2020              |
| Florida Department of Health                                   | E82502           | 6/30/2018              |
| Georgia Department of Natural Resources                        | 958              | 6/30/2018              |
| Kentucky Division of Waste Management                          | 123042           | 6/30/2018              |
| Louisiana Department of Environmental Quality                  | 02086            | 6/30/2019              |
| Maine Department of Health and Human Services                  | 2017003          | 2/3/2019               |
| North Carolina Department of Environment and Natural Resources | 527              | 12/31/2018             |
| Pennsylvania Department of Environmental Protection            | 68-04835         | 8/31/2018              |
| South Carolina Department of Health and Environmental Control  | 96021001         | 6/30/2018              |
| Texas Commission on Environmental Quality                      | T104704197-18-10 | 5/31/2019              |
| Virginia Environmental Accreditation Program                   | 460191           | 12/14/2018             |

<sup>1</sup> Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state or agency requirements. The test results meet requirements of the current NELAP/TNI standards or state or agency requirements, where applicable, except as noted in the laboratory case narrative provided. For a specific list of accredited analytes, refer to <http://www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads/North-America-Downloads>





## ACRONYMS

|            |  |
|------------|--|
| ASTM       | American Society for Testing and Materials   |
| A2LA       | American Association for Laboratory Accreditation  |
| CARB       | California Air Resources Board   |
| CAS Number | Chemical Abstract Service registry Number  |
| CFC        | Chlorofluorocarbon   |
| CFU        | Colony-Forming Unit  |
| DEC        | Department of Environmental Conservation   |
| DEQ        | Department of Environmental Quality  |
| DHS        | Department of Health Services  |
| DOE        | Department of Ecology  |
| DOH        | Department of Health   |
| EPA        | U. S. Environmental Protection Agency  |
| ELAP       | Environmental Laboratory Accreditation Program   |
| GC         | Gas Chromatography   |
| GC/MS      | Gas Chromatography/Mass Spectrometry   |
| LUFT       | Leaking Underground Fuel Tank  |
| M          | Modified   |
| MCL        | Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA. |
| MDL        | Method Detection Limit   |
| MPN        | Most Probable Number   |
| MRL        | Method Reporting Limit   |
| NA         | Not Applicable   |
| NC         | Not Calculated   |
| NCASI      | National Council of the Paper Industry for Air and Stream Improvement  |
| ND         | Not Detected   |
| NIOSH      | National Institute for Occupational Safety and Health  |
| PQL        | Practical Quantitation Limit   |
| RCRA       | Resource Conservation and Recovery Act   |
| SIM        | Selected Ion Monitoring  |
| TPH        | Total Petroleum Hydrocarbons   |
| tr         | Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.                           |

ALS Group USA, Corp.  
dba ALS Environmental

Analyst Summary report

**Client:** Gainesville Regional Utilities  
**Project:** GRU DGS CCR LF Characterization

**Service Request:** J1803828

**Sample Name:** E-R1-T  
**Lab Code:** J1803828-001  
**Sample Matrix:** Soil

**Date Collected:** 05/17/18  
**Date Received:** 05/25/18

**Analysis Method**  
160.3 Modified  
6010D

**Extracted/Digested By**  
  
EGARDNER

**Analyzed By**  
ALANE  
EGARDNER

**Sample Name:** E-R1-B  
**Lab Code:** J1803828-002  
**Sample Matrix:** Soil

**Date Collected:** 05/15/18  
**Date Received:** 05/25/18

**Analysis Method**  
160.3 Modified  
6010D

**Extracted/Digested By**  
  
EGARDNER

**Analyzed By**  
ALANE  
EGARDNER

**Sample Name:** E-R2-T  
**Lab Code:** J1803828-003  
**Sample Matrix:** Soil

**Date Collected:** 05/17/18  
**Date Received:** 05/25/18

**Analysis Method**  
160.3 Modified  
6010D

**Extracted/Digested By**  
  
EGARDNER

**Analyzed By**  
ALANE  
EGARDNER

**Sample Name:** E-R2-B  
**Lab Code:** J1803828-004  
**Sample Matrix:** Soil

**Date Collected:** 05/15/18  
**Date Received:** 05/25/18

**Analysis Method**  
160.3 Modified  
6010D

**Extracted/Digested By**  
  
EGARDNER

**Analyzed By**  
ALANE  
EGARDNER

ALS Group USA, Corp.  
dba ALS Environmental

Analyst Summary report

**Client:** Gainesville Regional Utilities  
**Project:** GRU DGS CCR LF Characterization

**Service Request:** J1803828

**Sample Name:** E-R3-T  
**Lab Code:** J1803828-005  
**Sample Matrix:** Soil

**Date Collected:** 05/17/18  
**Date Received:** 05/25/18

**Analysis Method**  
160.3 Modified  
6010D

**Extracted/Digested By**  
  
EGARDNER

**Analyzed By**  
ALANE  
EGARDNER

**Sample Name:** E-R3-B  
**Lab Code:** J1803828-006  
**Sample Matrix:** Soil

**Date Collected:** 05/14/18  
**Date Received:** 05/25/18

**Analysis Method**  
160.3 Modified  
6010D

**Extracted/Digested By**  
  
EGARDNER

**Analyzed By**  
ALANE  
EGARDNER

**Sample Name:** T-1-10  
**Lab Code:** J1803828-007  
**Sample Matrix:** Soil

**Date Collected:** 05/18/18  
**Date Received:** 05/25/18

**Analysis Method**  
160.3 Modified  
6010D

**Extracted/Digested By**  
  
EGARDNER

**Analyzed By**  
ALANE  
EGARDNER

**Sample Name:** T-2-34  
**Lab Code:** J1803828-008  
**Sample Matrix:** Soil

**Date Collected:** 05/18/18  
**Date Received:** 05/25/18

**Analysis Method**  
160.3 Modified  
6010D

**Extracted/Digested By**  
  
EGARDNER

**Analyzed By**  
ALANE  
EGARDNER

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dba ALS Environmental

Analyst Summary report

**Client:** Gainesville Regional Utilities  
**Project:** GRU DGS CCR LF Characterization

**Service Request:** J1803828

**Sample Name:** T-3-26  
**Lab Code:** J1803828-009  
**Sample Matrix:** Soil

**Date Collected:** 05/18/18  
**Date Received:** 05/25/18

**Analysis Method**  
160.3 Modified  
6010D

**Extracted/Digested By**  
  
EGARDNER

**Analyzed By**  
ALANE  
EGARDNER

**Sample Name:** T-4-17  
**Lab Code:** J1803828-010  
**Sample Matrix:** Soil

**Date Collected:** 05/18/18  
**Date Received:** 05/25/18

**Analysis Method**  
160.3 Modified  
6010D  
6010D

**Extracted/Digested By**  
  
EGARDNER  
CSULLIVAN

**Analyzed By**  
ALANE  
EGARDNER  
EGARDNER



# Sample Results

**ALS Environmental—Jacksonville Laboratory**  
9143 Philips Highway, Suite 200, Jacksonville, FL 32256  
Phone (904) 739-2277 Fax (904) 739-2011  
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# Metals

**ALS Environmental—Jacksonville Laboratory**  
9143 Philips Highway, Suite 200, Jacksonville, FL 32256  
Phone (904)739-2277 Fax (904)739-2011  
[www.alsglobal.com](http://www.alsglobal.com)

ALS Group USA, Corp.  
dba ALS Environmental

Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** GRU DGS CCR LF Characterization  
**Sample Matrix:** Soil  
**Sample Name:** E-R1-T  
**Lab Code:** J1803828-001

**Service Request:** J1803828  
**Date Collected:** 05/17/18 17:40  
**Date Received:** 05/25/18 09:45  
**Basis:** As Received

**Synthetic Precipitation Leachate Procedure (SPLP)**  
**Inorganic Parameters**

**Pre-Prep Method:** EPA 1312

| <b>Analyte Name</b> | <b>Analysis Method</b> | <b>Result</b>  | <b>Units</b> | <b>PQL</b> | <b>MDL</b> | <b>Dil.</b> | <b>Date Analyzed</b> | <b>Date Extracted</b> | <b>Q</b> |
|---------------------|------------------------|----------------|--------------|------------|------------|-------------|----------------------|-----------------------|----------|
| Lithium, SPLP       | 6010D                  | <b>0.00800</b> | ppm          | -          | 0.00101    | 1           | 06/15/18 18:33       | 06/15/18              |          |
| Molybdenum, SPLP    | 6010D                  | <b>0.030</b>   | mg/L         | 0.010      | 0.0003     | 1           | 06/15/18 18:34       | 06/15/18              |          |

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Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** GRU DGS CCR LF Characterization  
**Sample Matrix:** Soil  
**Sample Name:** E-R1-T  
**Lab Code:** J1803828-001

**Service Request:** J1803828  
**Date Collected:** 05/17/18 17:40  
**Date Received:** 05/25/18 09:45  
**Basis:** Dry

Inorganic Parameters

| Analyte Name      | Analysis Method | Result | Units | PQL  | MDL  | Dil. | Date Analyzed  | Date Extracted | Q |
|-------------------|-----------------|--------|-------|------|------|------|----------------|----------------|---|
| Lithium, Total    | 6010D           | 19.2   | mg/Kg | 5.6  | 0.2  | 1    | 06/04/18 23:44 | 06/04/18       |   |
| Molybdenum, Total | 6010D           | 1.90   | mg/Kg | 0.56 | 0.04 | 1    | 06/04/18 23:45 | 06/04/18       |   |



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Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** GRU DGS CCR LF Characterization  
**Sample Matrix:** Soil  
**Sample Name:** E-R1-B  
**Lab Code:** J1803828-002

**Service Request:** J1803828  
**Date Collected:** 05/15/18 16:00  
**Date Received:** 05/25/18 09:45  
**Basis:** Dry

Inorganic Parameters

| Analyte Name      | Analysis Method | Result        | Units | PQL  | MDL  | Dil. | Date Analyzed  | Date Extracted | Q |
|-------------------|-----------------|---------------|-------|------|------|------|----------------|----------------|---|
| Lithium, Total    | 6010D           | <b>0.6 I</b>  | mg/Kg | 4.8  | 0.2  | 1    | 06/05/18 00:05 | 06/04/18       |   |
| Molybdenum, Total | 6010D           | <b>0.1 IV</b> | mg/Kg | 0.48 | 0.03 | 1    | 06/05/18 00:06 | 06/04/18       |   |

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Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** GRU DGS CCR LF Characterization  
**Sample Matrix:** Soil  
**Sample Name:** E-R2-T  
**Lab Code:** J1803828-003

**Service Request:** J1803828  
**Date Collected:** 05/17/18 17:40  
**Date Received:** 05/25/18 09:45  
**Basis:** As Received

**Synthetic Precipitation Leachate Procedure (SPLP)**  
**Inorganic Parameters**

**Pre-Prep Method:** EPA 1312

| <b>Analyte Name</b> | <b>Analysis Method</b> | <b>Result</b> | <b>Units</b> | <b>PQL</b> | <b>MDL</b> | <b>Dil.</b> | <b>Date Analyzed</b> | <b>Date Extracted</b> | <b>Q</b> |
|---------------------|------------------------|---------------|--------------|------------|------------|-------------|----------------------|-----------------------|----------|
| Lithium, SPLP       | 6010D                  | <b>0.0100</b> | ppm          | -          | 0.00101    | 1           | 06/15/18 19:10       | 06/15/18              |          |
| Molybdenum, SPLP    | 6010D                  | <b>0.012</b>  | mg/L         | 0.010      | 0.0003     | 1           | 06/15/18 19:11       | 06/15/18              |          |

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Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** GRU DGS CCR LF Characterization  
**Sample Matrix:** Soil  
**Sample Name:** E-R2-T  
**Lab Code:** J1803828-003

**Service Request:** J1803828  
**Date Collected:** 05/17/18 17:40  
**Date Received:** 05/25/18 09:45  
**Basis:** Dry

Inorganic Parameters

| <b>Analyte Name</b> | <b>Analysis Method</b> | <b>Result</b> | <b>Units</b> | <b>PQL</b> | <b>MDL</b> | <b>Dil.</b> | <b>Date Analyzed</b> | <b>Date Extracted</b> | <b>Q</b> |
|---------------------|------------------------|---------------|--------------|------------|------------|-------------|----------------------|-----------------------|----------|
| Lithium, Total      | 6010D                  | 15.2          | mg/Kg        | 5.2        | 0.2        | 1           | 06/05/18 00:25       | 06/04/18              |          |
| Molybdenum, Total   | 6010D                  | 1.5           | mg/Kg        | 1.0        | 0.06       | 2           | 06/05/18 21:27       | 06/04/18              |          |

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Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** GRU DGS CCR LF Characterization  
**Sample Matrix:** Soil  
**Sample Name:** E-R2-B  
**Lab Code:** J1803828-004

**Service Request:** J1803828  
**Date Collected:** 05/15/18 16:00  
**Date Received:** 05/25/18 09:45  
**Basis:** Dry

Inorganic Parameters

| Analyte Name      | Analysis Method | Result | Units | PQL  | MDL  | Dil. | Date Analyzed  | Date Extracted | Q |
|-------------------|-----------------|--------|-------|------|------|------|----------------|----------------|---|
| Lithium, Total    | 6010D           | 1.8 I  | mg/Kg | 4.4  | 0.2  | 1    | 06/05/18 01:10 | 06/04/18       |   |
| Molybdenum, Total | 6010D           | 0.70   | mg/Kg | 0.44 | 0.03 | 1    | 06/05/18 01:12 | 06/04/18       |   |

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Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** GRU DGS CCR LF Characterization  
**Sample Matrix:** Soil  
**Sample Name:** E-R3-T  
**Lab Code:** J1803828-005

**Service Request:** J1803828  
**Date Collected:** 05/17/18 17:40  
**Date Received:** 05/25/18 09:45  
**Basis:** As Received

**Synthetic Precipitation Leachate Procedure (SPLP)**  
**Inorganic Parameters**

**Pre-Prep Method:** EPA 1312

| <b>Analyte Name</b> | <b>Analysis Method</b> | <b>Result</b>  | <b>Units</b> | <b>PQL</b> | <b>MDL</b> | <b>Dil.</b> | <b>Date Analyzed</b> | <b>Date Extracted</b> | <b>Q</b> |
|---------------------|------------------------|----------------|--------------|------------|------------|-------------|----------------------|-----------------------|----------|
| Lithium, SPLP       | 6010D                  | <b>0.0110</b>  | ppm          | -          | 0.00101    | 1           | 06/15/18 19:15       | 06/15/18              |          |
| Molybdenum, SPLP    | 6010D                  | <b>0.009 I</b> | mg/L         | 0.010      | 0.0003     | 1           | 06/15/18 19:16       | 06/15/18              |          |

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Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** GRU DGS CCR LF Characterization  
**Sample Matrix:** Soil  
**Sample Name:** E-R3-T  
**Lab Code:** J1803828-005

**Service Request:** J1803828  
**Date Collected:** 05/17/18 17:40  
**Date Received:** 05/25/18 09:45

**Basis:** Dry

**Inorganic Parameters**

| <b>Analyte Name</b> | <b>Analysis Method</b> | <b>Result</b> | <b>Units</b> | <b>PQL</b> | <b>MDL</b> | <b>Dil.</b> | <b>Date Analyzed</b> | <b>Date Extracted</b> | <b>Q</b> |
|---------------------|------------------------|---------------|--------------|------------|------------|-------------|----------------------|-----------------------|----------|
| Lithium, Total      | 6010D                  | 15.4          | mg/Kg        | 6.1        | 0.2        | 1           | 06/05/18 01:15       | 06/04/18              |          |
| Molybdenum, Total   | 6010D                  | 1.15          | mg/Kg        | 0.61       | 0.04       | 1           | 06/05/18 01:16       | 06/04/18              |          |

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Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** GRU DGS CCR LF Characterization  
**Sample Matrix:** Soil  
**Sample Name:** E-R3-B  
**Lab Code:** J1803828-006

**Service Request:** J1803828  
**Date Collected:** 05/14/18 17:03  
**Date Received:** 05/25/18 09:45  
**Basis:** Dry

Inorganic Parameters

| Analyte Name      | Analysis Method | Result | Units | PQL  | MDL  | Dil. | Date Analyzed  | Date Extracted | Q |
|-------------------|-----------------|--------|-------|------|------|------|----------------|----------------|---|
| Lithium, Total    | 6010D           | 2.4 I  | mg/Kg | 5.0  | 0.2  | 1    | 06/05/18 01:36 | 06/04/18       |   |
| Molybdenum, Total | 6010D           | 1.60   | mg/Kg | 0.50 | 0.03 | 1    | 06/05/18 01:37 | 06/04/18       |   |

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Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** GRU DGS CCR LF Characterization  
**Sample Matrix:** Soil  
**Sample Name:** T-1-10  
**Lab Code:** J1803828-007

**Service Request:** J1803828  
**Date Collected:** 05/18/18 16:17  
**Date Received:** 05/25/18 09:45  
**Basis:** As Received

**Synthetic Precipitation Leachate Procedure (SPLP)**  
**Inorganic Parameters**

**Pre-Prep Method:** EPA 1312

| <b>Analyte Name</b> | <b>Analysis Method</b> | <b>Result</b> | <b>Units</b> | <b>PQL</b> | <b>MDL</b> | <b>Dil.</b> | <b>Date Analyzed</b> | <b>Date Extracted</b> | <b>Q</b> |
|---------------------|------------------------|---------------|--------------|------------|------------|-------------|----------------------|-----------------------|----------|
| Lithium, SPLP       | 6010D                  | <b>0.0150</b> | ppm          | -          | 0.00101    | 1           | 06/15/18 19:34       | 06/15/18              |          |
| Molybdenum, SPLP    | 6010D                  | <b>0.022</b>  | mg/L         | 0.010      | 0.0003     | 1           | 06/15/18 19:36       | 06/15/18              |          |



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Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** GRU DGS CCR LF Characterization  
**Sample Matrix:** Soil  
**Sample Name:** T-1-10  
**Lab Code:** J1803828-007

**Service Request:** J1803828  
**Date Collected:** 05/18/18 16:17  
**Date Received:** 05/25/18 09:45  
**Basis:** Dry

Inorganic Parameters

| Analyte Name      | Analysis Method | Result | Units | PQL  | MDL  | Dil. | Date Analyzed  | Date Extracted | Q |
|-------------------|-----------------|--------|-------|------|------|------|----------------|----------------|---|
| Lithium, Total    | 6010D           | 17.7   | mg/Kg | 5.5  | 0.2  | 1    | 06/05/18 01:41 | 06/04/18       |   |
| Molybdenum, Total | 6010D           | 1.65   | mg/Kg | 0.55 | 0.03 | 1    | 06/05/18 01:41 | 06/04/18       |   |

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Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** GRU DGS CCR LF Characterization  
**Sample Matrix:** Soil  
**Sample Name:** T-2-34  
**Lab Code:** J1803828-008

**Service Request:** J1803828  
**Date Collected:** 05/18/18 16:25  
**Date Received:** 05/25/18 09:45  
**Basis:** As Received

**Synthetic Precipitation Leachate Procedure (SPLP)**

**Inorganic Parameters**

**Pre-Prep Method:** EPA 1312

| <b>Analyte Name</b> | <b>Analysis Method</b> | <b>Result</b> | <b>Units</b> | <b>PQL</b> | <b>MDL</b> | <b>Dil.</b> | <b>Date Analyzed</b> | <b>Date Extracted</b> | <b>Q</b> |
|---------------------|------------------------|---------------|--------------|------------|------------|-------------|----------------------|-----------------------|----------|
| Lithium, SPLP       | 6010D                  | <b>0.0180</b> | ppm          | -          | 0.00101    | 1           | 06/15/18 19:39       | 06/15/18              |          |
| Molybdenum, SPLP    | 6010D                  | <b>0.038</b>  | mg/L         | 0.010      | 0.0003     | 1           | 06/15/18 19:40       | 06/15/18              |          |

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Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** GRU DGS CCR LF Characterization  
**Sample Matrix:** Soil  
**Sample Name:** T-2-34  
**Lab Code:** J1803828-008

**Service Request:** J1803828  
**Date Collected:** 05/18/18 16:25  
**Date Received:** 05/25/18 09:45  
**Basis:** Dry

**Inorganic Parameters**

| <b>Analyte Name</b> | <b>Analysis Method</b> | <b>Result</b> | <b>Units</b> | <b>PQL</b> | <b>MDL</b> | <b>Dil.</b> | <b>Date Analyzed</b> | <b>Date Extracted</b> | <b>Q</b> |
|---------------------|------------------------|---------------|--------------|------------|------------|-------------|----------------------|-----------------------|----------|
| Lithium, Total      | 6010D                  | <b>41.5</b>   | mg/Kg        | 6.1        | 0.2        | 1           | 06/05/18 01:45       | 06/04/18              |          |
| Molybdenum, Total   | 6010D                  | <b>2.91</b>   | mg/Kg        | 0.61       | 0.04       | 1           | 06/05/18 01:45       | 06/04/18              |          |

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Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** GRU DGS CCR LF Characterization  
**Sample Matrix:** Soil  
**Sample Name:** T-3-26  
**Lab Code:** J1803828-009

**Service Request:** J1803828  
**Date Collected:** 05/18/18 16:35  
**Date Received:** 05/25/18 09:45  
**Basis:** As Received

**Synthetic Precipitation Leachate Procedure (SPLP)**  
**Inorganic Parameters**

**Pre-Prep Method:** EPA 1312

| <b>Analyte Name</b> | <b>Analysis Method</b> | <b>Result</b> | <b>Units</b> | <b>PQL</b> | <b>MDL</b> | <b>Dil.</b> | <b>Date Analyzed</b> | <b>Date Extracted</b> | <b>Q</b> |
|---------------------|------------------------|---------------|--------------|------------|------------|-------------|----------------------|-----------------------|----------|
| Lithium, SPLP       | 6010D                  | <b>0.0270</b> | ppm          | -          | 0.00101    | 1           | 06/15/18 19:44       | 06/15/18              |          |
| Molybdenum, SPLP    | 6010D                  | <b>0.037</b>  | mg/L         | 0.010      | 0.0003     | 1           | 06/15/18 19:45       | 06/15/18              |          |

ALS Group USA, Corp.  
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Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** GRU DGS CCR LF Characterization  
**Sample Matrix:** Soil  
**Sample Name:** T-3-26  
**Lab Code:** J1803828-009

**Service Request:** J1803828  
**Date Collected:** 05/18/18 16:35  
**Date Received:** 05/25/18 09:45  
**Basis:** Dry

Inorganic Parameters

| Analyte Name      | Analysis Method | Result | Units | PQL  | MDL  | Dil. | Date Analyzed  | Date Extracted | Q |
|-------------------|-----------------|--------|-------|------|------|------|----------------|----------------|---|
| Lithium, Total    | 6010D           | 20.3   | mg/Kg | 5.6  | 0.2  | 1    | 06/05/18 01:49 | 06/04/18       |   |
| Molybdenum, Total | 6010D           | 2.00   | mg/Kg | 0.56 | 0.03 | 1    | 06/05/18 01:49 | 06/04/18       |   |

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Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** GRU DGS CCR LF Characterization  
**Sample Matrix:** Soil  
**Sample Name:** T-4-17  
**Lab Code:** J1803828-010

**Service Request:** J1803828  
**Date Collected:** 05/18/18 16:45  
**Date Received:** 05/25/18 09:45  
**Basis:** As Received

**Synthetic Precipitation Leachate Procedure (SPLP)**  
**Inorganic Parameters**

**Pre-Prep Method:** EPA 1312

| <b>Analyte Name</b> | <b>Analysis Method</b> | <b>Result</b> | <b>Units</b> | <b>PQL</b> | <b>MDL</b> | <b>Dil.</b> | <b>Date Analyzed</b> | <b>Date Extracted</b> | <b>Q</b> |
|---------------------|------------------------|---------------|--------------|------------|------------|-------------|----------------------|-----------------------|----------|
| Lithium, SPLP       | 6010D                  | <b>0.0160</b> | ppm          | -          | 0.00101    | 1           | 06/15/18 19:49       | 06/15/18              |          |
| Molybdenum, SPLP    | 6010D                  | <b>0.019</b>  | mg/L         | 0.010      | 0.0003     | 1           | 06/15/18 19:50       | 06/15/18              |          |

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Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** GRU DGS CCR LF Characterization  
**Sample Matrix:** Soil  
**Sample Name:** T-4-17  
**Lab Code:** J1803828-010

**Service Request:** J1803828  
**Date Collected:** 05/18/18 16:45  
**Date Received:** 05/25/18 09:45

**Basis:** Dry

Inorganic Parameters

| Analyte Name      | Analysis Method | Result | Units | PQL  | MDL  | Dil. | Date Analyzed  | Date Extracted | Q |
|-------------------|-----------------|--------|-------|------|------|------|----------------|----------------|---|
| Lithium, Total    | 6010D           | 13.9   | mg/Kg | 4.8  | 0.2  | 1    | 06/01/18 01:54 | 05/31/18       |   |
| Molybdenum, Total | 6010D           | 1.81   | mg/Kg | 0.48 | 0.03 | 1    | 06/01/18 01:55 | 05/31/18       |   |



## General Chemistry

**ALS Environmental—Jacksonville Laboratory**  
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Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** GRU DGS CCR LF Characterization  
**Sample Matrix:** Soil  
**Sample Name:** E-R1-T  
**Lab Code:** J1803828-001

**Service Request:** J1803828  
**Date Collected:** 05/17/18 17:40  
**Date Received:** 05/25/18 09:45  
**Basis:** As Received

Inorganic Parameters

| <u>Analyte Name</u> | <u>Analysis Method</u> | <u>Result</u> | <u>Units</u> | <u>PQL</u> | <u>MDL</u> | <u>Dil.</u> | <u>Date Analyzed</u> | <u>Q</u> |
|---------------------|------------------------|---------------|--------------|------------|------------|-------------|----------------------|----------|
| Solids, Total       | 160.3 Modified         | 67.3          | Percent      | -          | -          | 1           | 05/29/18 14:20       |          |

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Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** GRU DGS CCR LF Characterization  
**Sample Matrix:** Soil  
**Sample Name:** E-R1-B  
**Lab Code:** J1803828-002

**Service Request:** J1803828  
**Date Collected:** 05/15/18 16:00  
**Date Received:** 05/25/18 09:45  
**Basis:** As Received

Inorganic Parameters

| <u>Analyte Name</u> | <u>Analysis Method</u> | <u>Result</u> | <u>Units</u> | <u>PQL</u> | <u>MDL</u> | <u>Dil.</u> | <u>Date Analyzed</u> | <u>Q</u> |
|---------------------|------------------------|---------------|--------------|------------|------------|-------------|----------------------|----------|
| Solids, Total       | 160.3 Modified         | 91.5          | Percent      | -          | -          | 1           | 05/29/18 14:20       |          |

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Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** GRU DGS CCR LF Characterization  
**Sample Matrix:** Soil  
**Sample Name:** E-R2-T  
**Lab Code:** J1803828-003

**Service Request:** J1803828  
**Date Collected:** 05/17/18 17:40  
**Date Received:** 05/25/18 09:45  
**Basis:** As Received

Inorganic Parameters

| <u>Analyte Name</u> | <u>Analysis Method</u> | <u>Result</u> | <u>Units</u> | <u>PQL</u> | <u>MDL</u> | <u>Dil.</u> | <u>Date Analyzed</u> | <u>Q</u> |
|---------------------|------------------------|---------------|--------------|------------|------------|-------------|----------------------|----------|
| Solids, Total       | 160.3 Modified         | 79.5          | Percent      | -          | -          | 1           | 05/29/18 14:20       |          |

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Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** GRU DGS CCR LF Characterization  
**Sample Matrix:** Soil  
**Sample Name:** E-R2-B  
**Lab Code:** J1803828-004

**Service Request:** J1803828  
**Date Collected:** 05/15/18 16:00  
**Date Received:** 05/25/18 09:45  
**Basis:** As Received

Inorganic Parameters

| <u>Analyte Name</u> | <u>Analysis Method</u> | <u>Result</u> | <u>Units</u> | <u>PQL</u> | <u>MDL</u> | <u>Dil.</u> | <u>Date Analyzed</u> | <u>Q</u> |
|---------------------|------------------------|---------------|--------------|------------|------------|-------------|----------------------|----------|
| Solids, Total       | 160.3 Modified         | 92.4          | Percent      | -          | -          | 1           | 05/29/18 14:20       |          |

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dba ALS Environmental

Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** GRU DGS CCR LF Characterization  
**Sample Matrix:** Soil  
**Sample Name:** E-R3-T  
**Lab Code:** J1803828-005

**Service Request:** J1803828  
**Date Collected:** 05/17/18 17:40  
**Date Received:** 05/25/18 09:45  
**Basis:** As Received

Inorganic Parameters

| <u>Analyte Name</u> | <u>Analysis Method</u> | <u>Result</u> | <u>Units</u> | <u>PQL</u> | <u>MDL</u> | <u>Dil.</u> | <u>Date Analyzed</u> | <u>Q</u> |
|---------------------|------------------------|---------------|--------------|------------|------------|-------------|----------------------|----------|
| Solids, Total       | 160.3 Modified         | 77.9          | Percent      | -          | -          | 1           | 05/29/18 14:20       |          |

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Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** GRU DGS CCR LF Characterization  
**Sample Matrix:** Soil  
**Sample Name:** E-R3-B  
**Lab Code:** J1803828-006

**Service Request:** J1803828  
**Date Collected:** 05/14/18 17:03  
**Date Received:** 05/25/18 09:45  
**Basis:** As Received

Inorganic Parameters

| <u>Analyte Name</u> | <u>Analysis Method</u> | <u>Result</u> | <u>Units</u> | <u>PQL</u> | <u>MDL</u> | <u>Dil.</u> | <u>Date Analyzed</u> | <u>Q</u> |
|---------------------|------------------------|---------------|--------------|------------|------------|-------------|----------------------|----------|
| Solids, Total       | 160.3 Modified         | 90.8          | Percent      | -          | -          | 1           | 05/29/18 14:20       |          |

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Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** GRU DGS CCR LF Characterization  
**Sample Matrix:** Soil  
**Sample Name:** T-1-10  
**Lab Code:** J1803828-007

**Service Request:** J1803828  
**Date Collected:** 05/18/18 16:17  
**Date Received:** 05/25/18 09:45  
**Basis:** As Received

Inorganic Parameters

| <u>Analyte Name</u> | <u>Analysis Method</u> | <u>Result</u> | <u>Units</u> | <u>PQL</u> | <u>MDL</u> | <u>Dil.</u> | <u>Date Analyzed</u> | <u>Q</u> |
|---------------------|------------------------|---------------|--------------|------------|------------|-------------|----------------------|----------|
| Solids, Total       | 160.3 Modified         | 77.7          | Percent      | -          | -          | 1           | 05/29/18 14:20       |          |

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Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** GRU DGS CCR LF Characterization  
**Sample Matrix:** Soil  
**Sample Name:** T-2-34  
**Lab Code:** J1803828-008

**Service Request:** J1803828  
**Date Collected:** 05/18/18 16:25  
**Date Received:** 05/25/18 09:45  
**Basis:** As Received

Inorganic Parameters

| Analyte Name  | Analysis Method | Result | Units   | PQL | MDL | Dil. | Date Analyzed  | Q |
|---------------|-----------------|--------|---------|-----|-----|------|----------------|---|
| Solids, Total | 160.3 Modified  | 69.4   | Percent | -   | -   | 1    | 05/29/18 14:20 |   |



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Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** GRU DGS CCR LF Characterization  
**Sample Matrix:** Soil  
**Sample Name:** T-3-26  
**Lab Code:** J1803828-009

**Service Request:** J1803828  
**Date Collected:** 05/18/18 16:35  
**Date Received:** 05/25/18 09:45  
**Basis:** As Received

Inorganic Parameters

| <u>Analyte Name</u> | <u>Analysis Method</u> | <u>Result</u> | <u>Units</u> | <u>PQL</u> | <u>MDL</u> | <u>Dil.</u> | <u>Date Analyzed</u> | <u>Q</u> |
|---------------------|------------------------|---------------|--------------|------------|------------|-------------|----------------------|----------|
| Solids, Total       | 160.3 Modified         | 77.6          | Percent      | -          | -          | 1           | 05/29/18 14:20       |          |

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Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** GRU DGS CCR LF Characterization  
**Sample Matrix:** Soil  
**Sample Name:** T-4-17  
**Lab Code:** J1803828-010

**Service Request:** J1803828  
**Date Collected:** 05/18/18 16:45  
**Date Received:** 05/25/18 09:45  
**Basis:** As Received

Inorganic Parameters

| <u>Analyte Name</u> | <u>Analysis Method</u> | <u>Result</u> | <u>Units</u> | <u>PQL</u> | <u>MDL</u> | <u>Dil.</u> | <u>Date Analyzed</u> | <u>Q</u> |
|---------------------|------------------------|---------------|--------------|------------|------------|-------------|----------------------|----------|
| Solids, Total       | 160.3 Modified         | 88.1          | Percent      | -          | -          | 1           | 05/29/18 14:20       |          |



## QC Summary Forms

**ALS Environmental - Jacksonville Laboratory**  
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# Metals

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Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** GRU DGS CCR LF Characterization  
**Sample Matrix:** Soil  
**Sample Name:** Method Blank  
**Lab Code:** J1803828-MB1

**Service Request:** J1803828  
**Date Collected:** NA  
**Date Received:** NA

**Basis:** As Received

Inorganic Parameters

| Analyte Name     | Analysis Method | Result   | Units | PQL   | MDL    | Dil. | Date Analyzed  | Date Extracted | Q |
|------------------|-----------------|----------|-------|-------|--------|------|----------------|----------------|---|
| Lithium, SPLP    | 6010D           | .00101 U | ppm   | -     | .00101 | 1    | 06/15/18 18:13 | 06/15/18       |   |
| Molybdenum, SPLP | 6010D           | 0.0003 U | mg/L  | 0.010 | 0.0003 | 1    | 06/15/18 18:14 | 06/15/18       |   |

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Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** GRU DGS CCR LF Characterization  
**Sample Matrix:** Soil  
**Sample Name:** Method Blank  
**Lab Code:** J1803828-MB1

**Service Request:** J1803828  
**Date Collected:** NA  
**Date Received:** NA  
**Basis:** Dry

Inorganic Parameters

| Analyte Name      | Analysis Method | Result        | Units | PQL  | MDL  | Dil. | Date Analyzed  | Date Extracted | Q |
|-------------------|-----------------|---------------|-------|------|------|------|----------------|----------------|---|
| Lithium, Total    | 6010D           | 0.2 U         | mg/Kg | 5.0  | 0.2  | 1    | 06/01/18 01:38 | 05/31/18       |   |
| Molybdenum, Total | 6010D           | <b>0.05 I</b> | mg/Kg | 0.50 | 0.03 | 1    | 06/01/18 01:39 | 05/31/18       |   |

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Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** GRU DGS CCR LF Characterization  
**Sample Matrix:** Soil  
**Sample Name:** Method Blank  
**Lab Code:** J1803828-MB2

**Service Request:** J1803828  
**Date Collected:** NA  
**Date Received:** NA  
**Basis:** Dry

Inorganic Parameters

| Analyte Name      | Analysis Method | Result        | Units | PQL  | MDL  | Dil. | Date Analyzed  | Date Extracted | Q |
|-------------------|-----------------|---------------|-------|------|------|------|----------------|----------------|---|
| Lithium, Total    | 6010D           | 0.2 U         | mg/Kg | 5.0  | 0.2  | 1    | 06/04/18 20:51 | 06/04/18       |   |
| Molybdenum, Total | 6010D           | <b>0.05 I</b> | mg/Kg | 0.50 | 0.03 | 1    | 06/04/18 20:52 | 06/04/18       |   |

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Analytical Report

**Client:** Gainesville Regional Utilities  
**Project:** GRU DGS CCR LF Characterization  
**Sample Matrix:** Soil  
**Sample Name:** Method Blank  
**Lab Code:** J1803828-MB3

**Service Request:** J1803828  
**Date Collected:** NA  
**Date Received:** NA  
**Basis:** Dry

Inorganic Parameters

| Analyte Name      | Analysis Method | Result        | Units | PQL  | MDL  | Dil. | Date Analyzed  | Date Extracted | Q |
|-------------------|-----------------|---------------|-------|------|------|------|----------------|----------------|---|
| Lithium, Total    | 6010D           | 0.2 U         | mg/Kg | 5.0  | 0.2  | 1    | 06/05/18 00:10 | 06/04/18       |   |
| Molybdenum, Total | 6010D           | <b>0.05 I</b> | mg/Kg | 0.50 | 0.03 | 1    | 06/05/18 00:11 | 06/04/18       |   |