

# Gainesville Regional Utilities Deerhaven Generating Station



## Coal Combustion Residuals Units 2020 Annual Groundwater Monitoring and Corrective Action Report

**Prepared for:**

Gainesville Regional Utilities  
Gainesville, Florida



**Prepared by:**

Innovative Technical Solutions  
Gainesville, Florida



January 27, 2021

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## ATTACHMENTS

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## List of Abbreviations

AMP	Assessment Monitoring Program
CCR	Coal Combustion Residuals
GWMP	Groundwater Monitoring Plan
GWPS	Groundwater Protection Standard
GRU	Gainesville Regional Utilities
ITS	Innovative Technical Solutions
PQL	Practical Quantitation Limit
SIS	Surface Impoundment System
SSI	Statistically Significant Increase
UES	Universal Engineering Sciences

## 1.0 Current Status Overview

In accordance with 40 CFR 257.90(e)(6)(i) – (vi), the following is a summary of the current status of the units:

- At the beginning of 2020, both the surface impoundment system (SIS) and the landfill are under assessment monitoring
- Both units remain in assessment monitoring as of the end of 2020.
- The following statistically significant increases over background were noted for Appendix III parameters:
  - For the SIS: fluoride (SIS-2 and R4T5) and total dissolved solids (TDS) (R4T5)
  - For the landfill: boron (LF-3 and LF-4), chloride (LF-2 and LF-3), pH (LF-4), sulfate (LF-3 and LF-4), and fluoride (LF-2)
- Both the SIS and landfill entered into assessment monitoring January 10, 2018.
- There was no statistically significant levels above groundwater protection standards noted for Appendix IV parameters during the 2020 reporting year.
- No remedial actions were initiated or completed during 2020.

## 2.0 Site Background

The Deerhaven Generating Station (site) has two coal combustion residuals (CCR) units: a surface impoundment system, known as the SIS, and a landfill. The SIS 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 that 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 once every five years) excavated from the SIS 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, SIS and the Landfill both entered into an Assessment Monitoring Program (AMP) due to the detection of Appendix III parameters at concentrations above the respective background levels (IWCS 2018a).

### 3.0 Well Installation and Decommissioning

A network of 8 groundwater monitoring wells (i.e., 1 upgradient and 3 downgradient wells for each CCR unit) was installed on March 7, 2017 (UES 2017) to monitor the SIS and landfill. These wells are used to supplement existing wells to develop an independent groundwater monitoring well network for each CCR unit. The three downgradient wells for the CCR landfill (LF-2, LF-3, and LF-4) were removed and reinstalled in 2019 as part of a perimeter stormwater ditch modification project (UES 2019). Two additional wells (LF-5 and LF-6) and a piezometer were installed on the west side of the landfill in June 2020 for more accurate characterization of groundwater flow direction and quality on this side of the landfill, and the groundwater monitoring plan was updated to include these wells. The following wells are currently used for monitoring groundwater quality around the CCR Landfill: one upgradient well (LF-1) and five downgradient wells (LF-2, LF-3, LF-4, LF-5, and LF-6) (UES 2020).

Table 2-1 below provides a summary of each well’s ID, coordinates, and whether the well is classified as upgradient or downgradient 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 SIS</b>			
<b>Well ID</b>	<b>Northing</b>	<b>Easting</b>	<b>Upgradient/Downgradient</b>
SIS-1	285,024	2,637,081	Upgradient
R6T4	285,074	2,636,502	Upgradient
R4T5	284,200	2,637,137	Downgradient
SIS-2	284,334	2,637,307	Downgradient
SIS-3	284,141	2,636,920	Downgradient
SIS-4	284,335	2,636,709	Downgradient
<b>CCR Landfill</b>			
<b>Well ID</b>	<b>Northing</b>	<b>Easting</b>	<b>Upgradient/Downgradient</b>
LF-1	284,852	2,635,464	Upgradient
LF-2	284,008	2,635,888	Downgradient
LF-3	283,992	2,635,457	Downgradient
LF-4	283,987	2,634,914	Downgradient
LF-5	284,315	2,634,787	Downgradient
LF-6	284,619	2,634,789	Downgradient

### 4.0 Key Actions Completed

The following key actions associated with groundwater monitoring of the CCR units have been completed in 2020 under the AMP established in January 2018:

- Continued sampling of Appendix III and Appendix IV parameters under the AMP. A table summarizing the number of samples collected from each well, the date each sample was collected 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.
- Statistical analysis of the downgradient measurements of Appendix III, and IV parameters for each CCR unit for the AMP sampling events. A summary of this analysis is presented in the next section.
- Background values for appendix III parameters were updated per the site's groundwater monitoring plan (GWMP) if a given parameter had at least 8 new samples since the initial establishment of background values.
- Two additional wells (LF-5 and LF-6) and a piezometer were installed on the west side of the landfill in June 2020 for more accurate characterization of groundwater flow direction and quality on this side of the landfill, and the groundwater monitoring plan was updated to include these wells.

**Table 3-1. Sampling Dates and Total Samples Collected from Each CCR Unit Groundwater Monitoring Well, with Highlighted Cells Indicating the Range of Background Data for Appendix III Parameters.**

Date	SIS						Landfill					
	SIS-1	R6T4	R4T5	SIS-2	SIS-3	SIS-4	LF-1	LF-2	LF-3	LF-4	LF-5	LF-6
10/5/2015		X	X									
1/25/2016		X	X									
4/8/2016		X	X									
7/28/2016		X	X									
10/20/2016		X	X									
1/9/2017		X	X									
4/5/2017		X	X									
4/17/2017	X			X	X	X	X	X	X	X		
5/15/2017	X			X	X	X	X	X	X	X		
5/30/2017	X			X	X	X	X	X	X	X		
6/19/2017	X			X	X	X	X	X	X	X		
7/9/2017	X		X	X	X	X	X	X	X	X		
7/10/2017		X										
7/31/2017	X			X	X	X	X	X	X	X		
8/22/2017	X			X	X	X	X	X	X	X		
9/18/2017	X			X	X	X	X	X	X	X		
1/23/2018	X		X	X	X	X	X	X	X	X		
1/24/2018		X										
2/15/2018	X		X	X	X	X	X	X	X	X		
2/16/2018		X										
3/8/2018	X		X	X	X	X	X	X	X	X		

4/3/2018	X		X	X	X	X	X	X	X	X		
4/4/2018		X										
7/17/2018	X		X	X	X	X	X	X	X	X		
7/18/2018		X										
1/16/2019	X		X	X	X	X	X	X	X	X		
1/17/2019		X										
5/9/2019							X	X	X	X		
5/10/2019		X	X				X					
7/16/2019	X		X	X	X	X	X	X	X	X		
7/17/2019		X										
10/25/2019								X	X	X		
1/14/2020	X	X										
1/15/2020			X				X	X	X			
1/16/2020				X	X	X						
1/17/2020										X		
7/21/2020	X	X										
7/22/2020					X	X						
7/23/2020			X	X			X	X	X	X		
10/15/2020											X	X
11/18/2020											X	X
12/9/2020											X	X
<b>Total Samples Collected</b>	<b>17</b>	<b>17</b>	<b>18</b>	<b>17</b>	<b>17</b>	<b>17</b>	<b>19</b>	<b>19</b>	<b>19</b>	<b>19</b>	<b>3</b>	<b>3</b>

## 5.0 Summary of Statistical Analysis Results

### 5.1 Appendix III Parameters

Prediction limits with retesting developed in the 2017 annual report were updated if 8 new samples were available for each parameter and each well, as described in the GWMP (IWCS 2017). With the additional data points from the 2 semi-annual sampling events of 2020, eight new measurements became available for all Appendix III parameters for the SIS and for 2 parameters for the landfill (pH and fluoride) during this reporting year. The measurements of the most recent eight samples were statistically compared to the initial eight samples, which were collected during 2017 and were used to develop the background concentration for these parameters. The remaining parameters for the landfill will be updated in 2021 when they should have a total of 8 new samples to include. These prediction intervals were used to evaluate whether Appendix III parameters in downgradient wells sampled for each CCR unit were measured at a statistically significant increase (SSI) above the respective background concentration. Table 4-1 and 4-2 summarize this analysis for Appendix III parameters. New wells (LF-5 and LF-6) were not included in this analysis because 4 samples were not available, but the results available to date are included in Appendix A.

An SSI over background for TDS and fluoride occurred for the SIS. An SSI over background occurred for five parameters (boron, chloride, pH, sulfate, and fluoride) at the CCR landfill, as shown in Table 4-2. The SIS and landfill will remain in assessment monitoring until all Appendix III and IV parameters concentrations are shown to be below the respective background level for two consecutive sampling events (§257.95(e)).

**Table 4-1. Appendix III Parameters Observed at a SSI over Background for the SIS Wells**

Appendix III Parameter	Retest Strategy	Prediction Limit (mg/L)	Wells with an SSI			
			SIS-2	SIS-3	SIS-4	R4T5
Fluoride	1-of-2	0.25	X			X
TDS	1-of-2	465				X

**Table 4-2. Appendix III Parameters Observed at a SSI Over Background for the Landfill Wells**

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
Chloride	1-of-3	21.8	X	X	
pH <sup>1</sup>	1-of-2	5.2 – 6.0			X
Sulfate	1-of-3	21.4		X	X
Fluoride	1-of-2	0.1	X		

<sup>1</sup> pH measured in standard units.

## 5.2 Appendix IV Parameters

Table 4-3 and Table 4-4 summarize the statistical analysis of Appendix IV parameters measured above the detection limit for the SIS and landfill, respectively. The tables also present the groundwater protection standard (GWPS) and the GWPS type. For parameters with at least one reading observed above the GWPS, the statistical method (and if applicable, retest frequency) used to evaluate whether there is a statistically significant concentration above the GWPS (i.e., exceedance) is shown. No method is listed for parameters that were never measured above the GWPS for any sampling events.

No exceedances of a GWPS were observed in this reporting period. In previous years, lithium and molybdenum exceedances were observed (IWCS 2020; IWCS 2019) but these have not been observed since the removal of the surficial soil—around the western and southern side of the landfill—that were found to contain lithium and molybdenum above the background soils at the site as described in the alternative source demonstration (IWCS 2018b). Molybdenum has not been detected since the soil relocation project was completed, and lithium concentrations at LF-4 have gradually declined below the GWPS since the soil relocation project.



During previous sampling events in 2017, SIS background wells (i.e., SIS-1, R6T4) had elevated readings of thallium. However, these readings were below the practical quantification limit (PQL) of the analysis method used by the laboratory at the time. Similarly, individual elevated readings of thallium were also found in downgradient well R4T5, however these also were below the PQL. Because there have been 8 new readings since the original background value was established, these older background data were removed from the background dataset because it is significantly different from the more recent data collected. Because thallium has not been detected in the last 8 readings at R4T5, thallium will now be analyzed for an SSI over background according to the double quantification rule.

As required by §257.90(e)(3), the laboratory results for all 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 CCR well sampling events (and for a quarterly site-wide 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 SIS Wells**

Parameter	Detected in Downgradient Wells?	GWPS		GWPS Type	Statistical Method to Assess Well Data With One or More Measurements 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	MCL	-	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	4	ug/L	MCL	-	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	Non-Parametric LCL for Median	NO

**Table 4-4. Appendix IV Parameters Statistical Analysis Results at Landfill Wells**

Parameter	Detected in Downgradient Wells?	GWPS		GWPS Type	Statistical Method to Assess Well Data With One or More Measurements Above the GWPS	Statistically Significant Exceedance Above the GWPS?
		Value	Units			
Antimony	Yes	6	ug/L	MCL	Parametric 95% LCL for Mean	NO
Lithium	Yes	40	ug/L	MCL	Non-Parametric LCL for Median	No
Thallium	Yes	3	ug/L	MCL	-	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	5	ug/L	MCL	-	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 95% LCL for Mean	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 for Mean	NO

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

Because Appendix III and/or IV parameters were detected at levels showing a SSI over background concentrations for both CCR units, both units remain under the assessment monitoring program (AMP), which was initially established on January 10, 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.

Please note that sampling results from the final (i.e., December 2020) sampling event, which included only the new wells (LF-5, and LF-6), were not received from the laboratory at the time this report was developed. Therefore, these results and their impact (if any) on the groundwater monitoring program for the CCR landfill have not yet been evaluated.

## **7.0 Upcoming Activities**

Groundwater sampling will continue under the AMP, including January and July 2021 (i.e., semi-annual) sampling of all previously-detected Appendix III/IV parameters and July 2021 (i.e., annual) sampling of all Appendix III/IV parameters. Monitoring of Appendix III/IV parameters under the AMP will continue until the occurrence of two consecutive sampling events with no SSI above background concentrations, in which case the unit 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. Therefore, these parameters will continue to be monitored annually at the respective units where these were not detected. If detected in the future, these parameters will be monitored semi-annually.

As discussed in Section 3, two additional wells were installed along the western side of the CCR landfill (LF-5, and LF-6), but as of the end of 2020, data for at least four independent samples at these wells were not yet available. These additional downgradient wells will be incorporated into the semi-annual and annual analysis for 2021, and in the 2021 annual report.

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

The CCR landfill and SIS (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 semi-annual and annual groundwater monitoring events (i.e., January 13, 2020 and July 20, 2020 respectively) were used to develop an estimate of the rate and direction of groundwater flow at the site. Potentiometric contour maps developed from this data using QGIS software are presented in Attachment C. The average gradient of the potentiometric surfaces for January and July sampling events were both estimated to be 0.002 ft/ft.

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 0.03 feet per day.

## 9.0 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.
- IWCS (2018a). 2018 Annual Groundwater Monitoring and Corrective Action Report. Prepared for Gainesville Regional Utilities, Deerhaven Generating Station by Innovative Waste Consulting Services, January 2018.
- IWCS (2018b). Alternative Source Demonstration for Groundwater Impacts Near the Coal Combustion Residuals Landfill. Prepared for Gainesville Regional Utilities, Deerhaven Generating Station by Innovative Waste Consulting Services, September 2018.
- IWCS (2019). 2018 Annual Groundwater Monitoring and Corrective Action Report. Prepared for Gainesville Regional Utilities, Deerhaven Generating Station by Innovative Waste Consulting Services, January 2019.
- IWCS (2020). 2019 Annual Groundwater Monitoring and Corrective Action Report. Prepared for Gainesville Regional Utilities, Deerhaven Generating Station by Innovative Waste Consulting Services, January 2019.
- 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. April 6, 2017.
- UES (2019). Coal Combustion Residuals (CCR) Surface Impoundment System and Updated Landfill Groundwater Monitoring Systems Design and Construction. Prepared by Universal Engineering Sciences for Innovative Waste Consulting Services, LLC. July 10, 2019, Draft Report.
- UES (2020). Geotechnical Consulting Services – Coal Combustion Residuals (CCR) Surface Impoundment System and Updated Landfill Groundwater Monitoring Systems Design and Construction, Deerhaven Generating Station (DGS), 10001 NW 13<sup>th</sup> Street, Gainesville, Alachua County, Florida. Prepared for Innovative Waste Consulting Services, LLC by Universal Engineering Sciences, November 2020.

## 10.0 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 report has been digitally signed and sealed by J.W., PE on the date indicated. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies

Attachment A  
Sampling Laboratory Analysis Reports



March 27, 2020

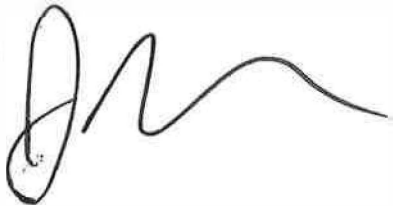
Jim Wally  
Environmental Engineer  
Innovative Waste Consulting Services, LLC  
3720 NW 43<sup>rd</sup> St. Suite 103  
Gainesville, Florida 32606

Dear Jim Wally,

Enclosed are the TSS and TDS results for the 2020 January CCR Groundwater samples. I included R9T5 since your plan is to include this well in the next event.

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 Directory  
Deerhaven Generating Station  
10001 NW 13<sup>th</sup> Street  
Gainesville, FL 32653  
(352) 393-6346  
[boudreaujp@gru.com](mailto:boudreaujp@gru.com)

**Total Suspended Solids - Non Filterable Residue-SM2540D**

Analysis Dates: 1-16-2020 and 1-22-2020

Sample ID	ID	TSS, Result, mg/L	MDL, mg/L	PQL, mg/L	Qualifier
D20A009-04	R4T5	1.0	1.0	4.0	U
D20A009-06	R6T4	1.0	1.0	4.0	U
D20A009-07	R6T8	1.0	1.0	4.0	U
D20A009-10	R9T5	1.0	1.0	4.0	U
D20A009-11	R10T8	1.0	1.0	4.0	U
D20A009-12	R11T4	1.0	1.0	4.0	U
D20A009-14	E-BLK	1.0	1.0	4.0	U
D20A020-01	LF-1	1.0	1.0	4.0	U
D20A020-02	LF-2	2.3	1.0	4.0	I
D20A020-03	LF-3	1.0	1.0	4.0	U
D20A020-04	LF-4	1.7	1.0	4.0	I
D20A020-05	SIS-1	1.0	1.0	4.0	U
D20A020-06	SIS-2	3.0	1.0	4.0	I
D20A020-07	SIS-3	1.1	1.0	4.0	I
D20A020-08	SIS-4	1.0	1.0	4.0	U

**QC DATA**

2005003-BLK1	BLK	1.0	1.0	4.0	U
2005003-SRM1	SRM	27.6	1.0	4.0	
2005003-DUP1	DUP	1.0	1.0	4.0	
2005005-BLK1	BLK	1.0	1.0	4.0	U
2005005-SRM1	SRM	34.2	1.0	4.0	
2005005-DUP1	DUP	1.0	1.0	4.0	

SRM TV, mg/L	34.3		SRM TV, mg/L	44.1	
SRM, mg/L	27.6		SRM, mg/L	34.2	
% Recovery	80.5	% Range	% Recovery	77.6	% Range
Low Range, mg/L	24.9	72.6	Low Range, mg/L	33.5	76.0
High Range, mg/L	40.5	118.1	High Range, mg/L	50.9	115.4

Sample	1.0
Duplicate	1.0
%RPD	0.0

Sample	1.0
Duplicate	1.0
%RPD	0.0

**Total Dissolved Solids - Filterable Residue-SM2540C**

Analysis Dates: 1-16-2020 and 1-22-2020

Sample ID	ID	TDS, Result, mg/L	MDL, mg/L	PQL, mg/L	Qualifier
D20A009-04	R4T5	467	10	40	
D20A009-06	R6T4	215	10	40	
D20A009-07	R6T8	392	10	40	
D20A009-10	R9T5	307	10	40	
D20A009-11	R10T8	84	10	40	
D20A009-12	R11T4	176	10	40	
D20A009-14	E-BLK	10	10	40	U
D20A020-01	LF-1	134	10	40	
D20A020-02	LF-2	310	10	40	
D20A020-03	LF-3	378	10	40	
D20A020-04	LF-4	134	10	40	
D20A020-05	SIS-1	253	10	40	
D20A020-06	SIS-2	276	10	40	
D20A020-07	SIS-3	288	10	40	
D20A020-08	SIS-4	393	10	40	

**QC DATA**

2005003-BLK1	BLK	10	10	40	U
2005003-SRM1	SRM	668	10	40	
2005003-DUP1	DUP	144	10	40	
2005005-BLK1	BLK	10	10	40	U
2005005-SRM1	SRM	721	10	40	
2005005-DUP1	DUP	220	10	40	

SRM TV, mg/L	661		SRM TV, mg/L	718	
SRM, mg/L	668		SRM, mg/L	721	
% Recovery	101.1	% Range	% Recovery	100.4	% Range
Low Range, mg/L	595	90.0	Low Range, mg/L	646	90.0
High Range, mg/L	727	110.0	High Range, mg/L	790	110.0

Sample	140
Duplicate	144
%RPD	2.8

Sample	215
Duplicate	220
%RPD	2.3

February 13, 2020

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

RE: Project: D20A020  
Pace Project No.: 35525746

Dear Mr. Boudreau:

Enclosed are the analytical results for sample(s) received by the laboratory on January 22, 2020. 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  
Kimberly Morrison, Deerhaven Labs  
Shelley Phillips, Deerhaven Lab



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: D20A020  
Pace Project No.: 35525746

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### Pace Analytical Services Pennsylvania

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  
Florida: Cert E871149 SEKS WET  
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 DHR Certification #: 9964C  
Wisconsin Approve List for Rad  
Wyoming Certification #: 8TMS-L

### Pace Analytical Services Ormond Beach

8 East Tower Circle, Ormond Beach, FL 32174  
Alaska DEC- CS/UST/LUST  
Alabama Certification #: 41320  
Arizona Certification# AZ0819  
Colorado Certification: FL NELAC Reciprocity  
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  
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  
West Virginia Certification #: 9962C  
Wisconsin Certification #: 399079670  
Wyoming (EPA Region 8): FL NELAC Reciprocity

## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: D20A020

Pace Project No.: 35525746

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**Pace Analytical Services Asheville**

2225 Riverside Drive, Asheville, NC 28804

Florida/NELAP Certification #: E87648

Massachusetts Certification #: M-NC030

North Carolina Drinking Water Certification #: 37712

North Carolina Wastewater Certification #: 40

South Carolina Certification #: 99030001

Virginia/VELAP Certification #: 460222

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## REPORT OF LABORATORY ANALYSIS

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### SAMPLE SUMMARY

Project: D20A020

Pace Project No.: 35525746

Lab ID	Sample ID	Matrix	Date Collected	Date Received
35525746001	D20A020-01	Water	01/15/20 09:45	01/22/20 11:30
35525746002	D20A020-02	Water	01/16/20 14:32	01/22/20 11:30
35525746003	D20A020-03	Water	01/16/20 15:32	01/22/20 11:30
35525746004	D20A020-04	Water	01/17/20 08:37	01/22/20 11:30
35525746005	D20A020-05	Water	01/15/20 14:32	01/22/20 11:30
35525746006	D20A020-06	Water	01/16/20 13:12	01/22/20 11:30
35525746007	D20A020-07	Water	01/16/20 09:48	01/22/20 11:30
35525746008	D20A020-08	Water	01/16/20 11:40	01/22/20 11:30
35525746009	D20A020-09	Water	01/15/20 15:37	01/22/20 11:30
35525746010	D20A020-10	Water	01/14/20 09:51	01/22/20 11:30
35525746011	D20A020-11	Water	01/17/20 12:08	01/22/20 11:30
35525746012	D20A020-12	Water	01/18/20 08:27	01/22/20 11:30
35525746013	D20A020-13	Water	01/18/20 10:09	01/22/20 11:30
35525746014	D20A020-14	Water	01/16/20 10:37	01/22/20 11:30

### REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: D20A020  
Pace Project No.: 35525746

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
35525746001	D20A020-01	EPA 6020B	JMW1	4	PASI-A
		EPA 903.1	MK1	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		EPA 300.0	JDM	3	PASI-O
35525746002	D20A020-02	EPA 6020B	JMW1	4	PASI-A
		EPA 903.1	MK1	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		EPA 300.0	JDM	3	PASI-O
35525746003	D20A020-03	EPA 6020B	JMW1, JOR	4	PASI-A
		EPA 903.1	MK1	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		EPA 300.0	JDM	3	PASI-O
35525746004	D20A020-04	EPA 6020B	JMW1	4	PASI-A
		EPA 903.1	MK1	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		EPA 300.0	JDM	3	PASI-O
35525746005	D20A020-05	EPA 6020B	JMW1	4	PASI-A
		EPA 903.1	MK1	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		EPA 300.0	JDM	3	PASI-O
35525746006	D20A020-06	EPA 6020B	JMW1	4	PASI-A
		EPA 903.1	MK1	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		EPA 300.0	JDM	3	PASI-O
35525746007	D20A020-07	EPA 6020B	JMW1	4	PASI-A
		EPA 903.1	MK1	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		EPA 300.0	JDM	3	PASI-O
35525746008	D20A020-08	EPA 6020B	JMW1	4	PASI-A
		EPA 903.1	MK1	1	PASI-PA

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### SAMPLE ANALYTE COUNT

Project: D20A020  
Pace Project No.: 35525746

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
35525746009	D20A020-09	EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		EPA 300.0	JDM	3	PASI-O
		EPA 6020B	BG2, JOR	4	PASI-A
		EPA 903.1	MK1	1	PASI-PA
35525746010	D20A020-10	EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		EPA 6020B	JOR	4	PASI-A
		EPA 903.1	MK1	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
35525746011	D20A020-11	Total Radium Calculation	JAL	1	PASI-PA
		EPA 6020B	JOR	4	PASI-A
		EPA 903.1	MK1	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
35525746012	D20A020-12	EPA 6020B	JOR	4	PASI-A
		EPA 903.1	MK1	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		EPA 6020B	JOR	4	PASI-A
35525746013	D20A020-13	EPA 903.1	MK1	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		EPA 6020B	JOR	4	PASI-A
		EPA 903.1	MK1	1	PASI-PA
35525746014	D20A020-14	EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		EPA 6020B	JOR	4	PASI-A
		EPA 903.1	MK1	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: D20A020  
Pace Project No.: 35525746

**Sample: D20A020-01**      **Lab ID: 35525746001**      Collected: 01/15/20 09:45      Received: 01/22/20 11:30      Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6020 MET ICPMS</b>		Analytical Method: EPA 6020B    Preparation Method: EPA 3010A							
Antimony	<b>0.50</b>	ug/L	0.50	0.11	1	02/01/20 02:03	02/07/20 20:22	7440-36-0	
Boron	<b>171</b>	ug/L	25.0	2.6	1	02/01/20 02:03	02/07/20 20:22	7440-42-8	
Lithium	<b>3.0</b>	ug/L	2.5	0.42	1	02/01/20 02:03	02/07/20 20:22	7439-93-2	
Thallium	<b>0.10</b>	ug/L	0.10	0.060	1	02/01/20 02:03	02/07/20 20:22	7440-28-0	
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0							
Chloride	<b>8.9</b>	mg/L	5.0	2.5	1		01/30/20 13:33	16887-00-6	
Fluoride	<b>0.070</b>	mg/L	0.050	0.015	1		01/30/20 13:33	16984-48-8	
Sulfate	<b>29.5</b>	mg/L	5.0	2.5	1		01/30/20 13:33	14808-79-8	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: D20A020  
Pace Project No.: 35525746

**Sample: D20A020-02**      **Lab ID: 35525746002**      Collected: 01/16/20 14:32      Received: 01/22/20 11:30      Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6020 MET ICPMS</b>		Analytical Method: EPA 6020B    Preparation Method: EPA 3010A							
Antimony	<b>0.11 U</b>	ug/L	0.50	0.11	1	02/01/20 02:03	02/07/20 20:44	7440-36-0	
Boron	<b>97.3</b>	ug/L	25.0	2.6	1	02/01/20 02:03	02/07/20 20:44	7440-42-8	
Lithium	<b>2.3 I</b>	ug/L	2.5	0.42	1	02/01/20 02:03	02/07/20 20:44	7439-93-2	
Thallium	<b>0.060 U</b>	ug/L	0.10	0.060	1	02/01/20 02:03	02/07/20 20:44	7440-28-0	
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0							
Chloride	<b>41.4</b>	mg/L	5.0	2.5	1		01/30/20 14:39	16887-00-6	
Fluoride	<b>0.33</b>	mg/L	0.050	0.015	1		01/30/20 14:39	16984-48-8	
Sulfate	<b>78.5</b>	mg/L	5.0	2.5	1		01/30/20 14:39	14808-79-8	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: D20A020  
Pace Project No.: 35525746

**Sample: D20A020-03**      **Lab ID: 35525746003**      Collected: 01/16/20 15:32      Received: 01/22/20 11:30      Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6020 MET ICPMS</b>		Analytical Method: EPA 6020B    Preparation Method: EPA 3010A							
Antimony	<b>0.11 U</b>	ug/L	0.50	0.11	1	02/01/20 02:03	02/07/20 20:49	7440-36-0	
Boron	<b>2460</b>	ug/L	500	51.0	20	02/01/20 02:03	02/09/20 20:46	7440-42-8	
Lithium	<b>0.42 U</b>	ug/L	2.5	0.42	1	02/01/20 02:03	02/07/20 20:49	7439-93-2	
Thallium	<b>0.060 U</b>	ug/L	0.10	0.060	1	02/01/20 02:03	02/07/20 20:49	7440-28-0	
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0							
Chloride	<b>21.5</b>	mg/L	5.0	2.5	1		01/30/20 15:01	16887-00-6	
Fluoride	<b>0.044 I</b>	mg/L	0.050	0.015	1		01/30/20 15:01	16984-48-8	
Sulfate	<b>92.5</b>	mg/L	10.0	5.0	2		01/31/20 05:21	14808-79-8	

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### ANALYTICAL RESULTS

Project: D20A020  
Pace Project No.: 35525746

**Sample: D20A020-04**      **Lab ID: 35525746004**      Collected: 01/17/20 08:37      Received: 01/22/20 11:30      Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6020 MET ICPMS</b>		Analytical Method: EPA 6020B    Preparation Method: EPA 3010A							
Antimony	<b>0.11 U</b>	ug/L	0.50	0.11	1	02/01/20 02:03	02/07/20 20:53	7440-36-0	
Boron	<b>458</b>	ug/L	25.0	2.6	1	02/01/20 02:03	02/07/20 20:53	7440-42-8	
Lithium	<b>8.4</b>	ug/L	2.5	0.42	1	02/01/20 02:03	02/07/20 20:53	7439-93-2	
Thallium	<b>0.099 I</b>	ug/L	0.10	0.060	1	02/01/20 02:03	02/07/20 20:53	7440-28-0	
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0							
Chloride	<b>4.4 I</b>	mg/L	5.0	2.5	1		01/30/20 15:23	16887-00-6	
Fluoride	<b>0.078</b>	mg/L	0.050	0.015	1		01/30/20 15:23	16984-48-8	
Sulfate	<b>62.8</b>	mg/L	5.0	2.5	1		01/30/20 15:23	14808-79-8	

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## ANALYTICAL RESULTS

Project: D20A020  
Pace Project No.: 35525746

**Sample: D20A020-05**      **Lab ID: 35525746005**      Collected: 01/15/20 14:32      Received: 01/22/20 11:30      Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6020 MET ICPMS</b>		Analytical Method: EPA 6020B    Preparation Method: EPA 3010A							
Antimony	<b>0.14 I</b>	ug/L	0.50	0.11	1	02/01/20 02:03	02/07/20 20:57	7440-36-0	
Boron	<b>36.7</b>	ug/L	25.0	2.6	1	02/01/20 02:03	02/07/20 20:57	7440-42-8	
Lithium	<b>0.42 U</b>	ug/L	2.5	0.42	1	02/01/20 02:03	02/07/20 20:57	7439-93-2	
Thallium	<b>0.060 U</b>	ug/L	0.10	0.060	1	02/01/20 02:03	02/07/20 20:57	7440-28-0	
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0							
Chloride	<b>12.2</b>	mg/L	5.0	2.5	1		01/30/20 15:45	16887-00-6	
Fluoride	<b>0.20</b>	mg/L	0.050	0.015	1		01/30/20 15:45	16984-48-8	
Sulfate	<b>12.9</b>	mg/L	5.0	2.5	1		01/30/20 15:45	14808-79-8	

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### ANALYTICAL RESULTS

Project: D20A020  
Pace Project No.: 35525746

**Sample: D20A020-06**      **Lab ID: 35525746006**      Collected: 01/16/20 13:12      Received: 01/22/20 11:30      Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6020 MET ICPMS</b>		Analytical Method: EPA 6020B    Preparation Method: EPA 3010A							
Antimony	<b>0.19 I</b>	ug/L	0.50	0.11	1	02/01/20 02:03	02/07/20 21:02	7440-36-0	
Boron	<b>29.3</b>	ug/L	25.0	2.6	1	02/01/20 02:03	02/07/20 21:02	7440-42-8	
Lithium	<b>0.42 U</b>	ug/L	2.5	0.42	1	02/01/20 02:03	02/07/20 21:02	7439-93-2	
Thallium	<b>0.060 U</b>	ug/L	0.10	0.060	1	02/01/20 02:03	02/07/20 21:02	7440-28-0	
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0							
Chloride	<b>5.6</b>	mg/L	5.0	2.5	1		01/30/20 16:07	16887-00-6	
Fluoride	<b>0.41</b>	mg/L	0.050	0.015	1		01/30/20 16:07	16984-48-8	
Sulfate	<b>16.7</b>	mg/L	5.0	2.5	1		01/30/20 16:07	14808-79-8	

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### ANALYTICAL RESULTS

Project: D20A020  
Pace Project No.: 35525746

**Sample: D20A020-07**      **Lab ID: 35525746007**      Collected: 01/16/20 09:48      Received: 01/22/20 11:30      Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6020 MET ICPMS</b>		Analytical Method: EPA 6020B    Preparation Method: EPA 3010A							
Antimony	<b>0.15 I</b>	ug/L	0.50	0.11	1	02/01/20 02:03	02/07/20 21:15	7440-36-0	
Boron	<b>23.3 I</b>	ug/L	25.0	2.6	1	02/01/20 02:03	02/07/20 21:15	7440-42-8	
Lithium	<b>0.63 I</b>	ug/L	2.5	0.42	1	02/01/20 02:03	02/07/20 21:15	7439-93-2	
Thallium	<b>0.060 U</b>	ug/L	0.10	0.060	1	02/01/20 02:03	02/07/20 21:15	7440-28-0	
<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		01/30/20 16:29	16887-00-6	
Fluoride	<b>0.16</b>	mg/L	0.050	0.015	1		01/30/20 16:29	16984-48-8	
Sulfate	<b>25.9</b>	mg/L	5.0	2.5	1		01/30/20 16:29	14808-79-8	

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### ANALYTICAL RESULTS

Project: D20A020  
Pace Project No.: 35525746

**Sample: D20A020-08**      **Lab ID: 35525746008**      Collected: 01/16/20 11:40      Received: 01/22/20 11:30      Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6020 MET ICPMS</b>		Analytical Method: EPA 6020B    Preparation Method: EPA 3010A							
Antimony	<b>0.27 I</b>	ug/L	0.50	0.11	1	02/01/20 02:03	02/07/20 21:20	7440-36-0	
Boron	<b>13.2 I</b>	ug/L	25.0	2.6	1	02/01/20 02:03	02/07/20 21:20	7440-42-8	
Lithium	<b>0.42 U</b>	ug/L	2.5	0.42	1	02/01/20 02:03	02/07/20 21:20	7439-93-2	
Thallium	<b>0.060 U</b>	ug/L	0.10	0.060	1	02/01/20 02:03	02/07/20 21:20	7440-28-0	
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0							
Chloride	<b>15.5</b>	mg/L	10.0	5.0	2		01/30/20 16:51	16887-00-6	
Fluoride	<b>0.20</b>	mg/L	0.10	0.029	2		01/30/20 16:51	16984-48-8	
Sulfate	<b>55.1</b>	mg/L	10.0	5.0	2		01/30/20 16:51	14808-79-8	

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### ANALYTICAL RESULTS

Project: D20A020  
Pace Project No.: 35525746

**Sample: D20A020-09**      **Lab ID: 35525746009**      Collected: 01/15/20 15:37      Received: 01/22/20 11:30      Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6020 MET ICPMS</b>		Analytical Method: EPA 6020B    Preparation Method: EPA 3010A							
Antimony	<b>0.11 U</b>	ug/L	0.50	0.11	1	02/01/20 02:03	02/11/20 12:29	7440-36-0	
Boron	<b>15.6 I</b>	ug/L	25.0	2.6	1	02/01/20 02:03	02/12/20 18:08	7440-42-8	
Lithium	<b>0.42 U</b>	ug/L	2.5	0.42	1	02/01/20 02:03	02/11/20 12:29	7439-93-2	
Thallium	<b>0.060 U</b>	ug/L	0.10	0.060	1	02/01/20 02:03	02/11/20 12:29	7440-28-0	

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### ANALYTICAL RESULTS

Project: D20A020  
Pace Project No.: 35525746

**Sample: D20A020-10**      **Lab ID: 35525746010**      Collected: 01/14/20 09:51      Received: 01/22/20 11:30      Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6020 MET ICPMS</b>		Analytical Method: EPA 6020B    Preparation Method: EPA 3010A							
Antimony	<b>0.11 U</b>	ug/L	0.50	0.11	1	02/01/20 02:03	02/09/20 21:56	7440-36-0	
Boron	<b>12.6 I</b>	ug/L	25.0	2.6	1	02/01/20 02:03	02/09/20 21:56	7440-42-8	
Lithium	<b>0.42 U</b>	ug/L	2.5	0.42	1	02/01/20 02:03	02/09/20 21:56	7439-93-2	
Thallium	<b>0.060 U</b>	ug/L	0.10	0.060	1	02/01/20 02:03	02/09/20 21:56	7440-28-0	

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## ANALYTICAL RESULTS

Project: D20A020

Pace Project No.: 35525746

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**Sample: D20A020-14**      **Lab ID: 35525746014**      Collected: 01/16/20 10:37      Received: 01/22/20 11:30      Matrix: Water

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Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6020 MET ICPMS</b>		Analytical Method: EPA 6020B    Preparation Method: EPA 3010A							
Antimony	<b>0.11 U</b>	ug/L	0.50	0.11	1	02/01/20 02:03	02/09/20 22:36	7440-36-0	
Boron	<b>5.1 I</b>	ug/L	25.0	2.6	1	02/01/20 02:03	02/09/20 22:36	7440-42-8	
Lithium	<b>0.42 U</b>	ug/L	2.5	0.42	1	02/01/20 02:03	02/09/20 22:36	7439-93-2	
Thallium	<b>0.060 U</b>	ug/L	0.10	0.060	1	02/01/20 02:03	02/09/20 22:36	7440-28-0	

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### QUALITY CONTROL DATA

Project: D20A020  
Pace Project No.: 35525746

QC Batch: 522654 Analysis Method: EPA 6020B  
QC Batch Method: EPA 3010A Analysis Description: 6020 MET  
Associated Lab Samples: 35525746001, 35525746002, 35525746003, 35525746004, 35525746005, 35525746006, 35525746007, 35525746008

METHOD BLANK: 2795490 Matrix: Water  
Associated Lab Samples: 35525746001, 35525746002, 35525746003, 35525746004, 35525746005, 35525746006, 35525746007, 35525746008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	ug/L	0.11 U	0.50	0.11	02/06/20 18:23	
Boron	ug/L	2.6 U	25.0	2.6	02/06/20 18:23	
Lithium	ug/L	0.42 U	2.5	0.42	02/06/20 18:23	
Thallium	ug/L	0.060 U	0.10	0.060	02/06/20 18:23	

LABORATORY CONTROL SAMPLE: 2795491

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	50	49.7	99	80-120	
Boron	ug/L	50	51.1	102	80-120	
Lithium	ug/L	50	51.6	103	80-120	
Thallium	ug/L	10	10.1	101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2795492 2795493

Parameter	Units	35525746001		2795492		2795493		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec				
Antimony	ug/L	0.50	50	50	54.1	53.1	107	105	75-125	2	20
Boron	ug/L	171	50	50	211	217	80	92	75-125	3	20
Lithium	ug/L	3.0	50	50	50.5	49.4	95	93	75-125	2	20
Thallium	ug/L	0.10	10	10	10.4	10.6	103	105	75-125	2	20

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### QUALITY CONTROL DATA

Project: D20A020  
Pace Project No.: 35525746

QC Batch: 522655      Analysis Method: EPA 6020B  
QC Batch Method: EPA 3010A      Analysis Description: 6020 MET  
Associated Lab Samples: 35525746009, 35525746010, 35525746011, 35525746012, 35525746013, 35525746014

METHOD BLANK: 2795494      Matrix: Water  
Associated Lab Samples: 35525746009, 35525746010, 35525746011, 35525746012, 35525746013, 35525746014

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	ug/L	0.11 U	0.50	0.11	02/10/20 10:41	
Boron	ug/L	2.6 U	25.0	2.6	02/10/20 10:41	
Lithium	ug/L	0.42 U	2.5	0.42	02/10/20 10:41	
Thallium	ug/L	0.060 U	0.10	0.060	02/10/20 10:41	

LABORATORY CONTROL SAMPLE: 2795495

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	50	53.6	107	80-120	
Boron	ug/L	50	52.4	105	80-120	
Lithium	ug/L	50	53.2	106	80-120	
Thallium	ug/L	10	10.5	105	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2795496      2795497

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		35525746009 Result	Spike Conc.	Spike Conc.	Result						
Antimony	ug/L	0.11 U	50	50	49.9	49.8	100	99	75-125	0	20
Boron	ug/L	15.6 I	50	50	63.6	62.6	96	94	75-125	2	20
Lithium	ug/L	0.42 U	50	50	45.8	44.9	92	90	75-125	2	20
Thallium	ug/L	0.060 U	10	10	10.8	10.4	108	104	75-125	3	20

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### QUALITY CONTROL DATA

Project: D20A020  
Pace Project No.: 35525746

QC Batch: 606238 Analysis Method: EPA 300.0  
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions  
Associated Lab Samples: 35525746001, 35525746002, 35525746003, 35525746004, 35525746005, 35525746006, 35525746007, 35525746008

METHOD BLANK: 3294393 Matrix: Water  
Associated Lab Samples: 35525746001, 35525746002, 35525746003, 35525746004, 35525746005, 35525746006, 35525746007, 35525746008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	2.5 U	5.0	2.5	01/30/20 12:48	
Fluoride	mg/L	0.015 U	0.050	0.015	01/30/20 12:48	
Sulfate	mg/L	2.5 U	5.0	2.5	01/30/20 12:48	

LABORATORY CONTROL SAMPLE: 3294394

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	48.1	96	90-110	
Fluoride	mg/L	5	5.0	100	90-110	
Sulfate	mg/L	50	47.8	96	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3294482 3294483

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		35525746001 Result	Spike Conc.	Spike Conc.	MS Result						
Chloride	mg/L	8.9	50	50	57.6	57.7	98	98	90-110	0	20
Fluoride	mg/L	0.070	5	5	5.0	5.0	98	98	90-110	0	20
Sulfate	mg/L	29.5	50	50	80.9	80.9	103	103	90-110	0	20

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: D20A020

Pace Project No.: 35525746

Sample: D20A020-01      Lab ID: 35525746001      Collected: 01/15/20 09:45      Received: 01/22/20 11:30      Matrix: Water  
PWS:      Site ID:      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 903.1	0.531U ± 0.330 (0.531) C:NA T:93%	pCi/L	02/03/20 16:09	13982-63-3	
Radium-228	EPA 904.0	1.12 ± 0.458 (0.729) C:82% T:86%	pCi/L	02/03/20 15:17	15262-20-1	
Total Radium	Total Radium Calculation	1.34 ± 0.788 (1.26)	pCi/L	02/04/20 15:11	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: D20A020

Pace Project No.: 35525746

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 903.1	1.06 ± 0.669 (0.755) C:NA T:84%	pCi/L	02/03/20 16:24	13982-63-3	
Radium-228	EPA 904.0	0.989U ± 0.524 (0.989) C:78% T:83%	pCi/L	02/03/20 15:18	15262-20-1	
Total Radium	Total Radium Calculation	1.97 ± 1.19 (1.74)	pCi/L	02/04/20 15:11	7440-14-4	

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**ANALYTICAL RESULTS - RADIOCHEMISTRY**

Project: D20A020  
Pace Project No.: 35525746

**Sample: D20A020-03**      **Lab ID: 35525746003**      Collected: 01/16/20 15:32      Received: 01/22/20 11:30      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 ± 0.643 (0.704)</b> C:NA T:93%	pCi/L	02/03/20 16:24	13982-63-3	
Radium-228	EPA 904.0	<b>0.890U ± 0.475 (0.890)</b> C:79% T:80%	pCi/L	02/03/20 15:18	15262-20-1	
Total Radium	Total Radium Calculation	<b>1.95 ± 1.12 (1.59)</b>	pCi/L	02/04/20 15:11	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: D20A020

Pace Project No.: 35525746

Sample: **D20A020-04** Lab ID: **35525746004** Collected: 01/17/20 08:37 Received: 01/22/20 11:30 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>0.736 ± 0.595 (0.332)</b> C:NA T:90%	pCi/L	02/03/20 16:24	13982-63-3	
Radium-228	EPA 904.0	<b>0.991U ± 0.500 (0.991)</b> C:79% T:83%	pCi/L	02/03/20 15:18	15262-20-1	
Total Radium	Total Radium Calculation	<b>1.38 ± 1.10 (1.32)</b>	pCi/L	02/04/20 15:11	7440-14-4	

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## ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: D20A020

Pace Project No.: 35525746

**Sample: D20A020-05**      **Lab ID: 35525746005**      Collected: 01/15/20 14:32      Received: 01/22/20 11:30      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>1.05U ± 0.564 (1.05)</b> C:NA T:91%	pCi/L	02/03/20 16:09	13982-63-3	
Radium-228	EPA 904.0	<b>1.20 ± 0.474 (0.739)</b> C:80% T:87%	pCi/L	02/03/20 15:17	15262-20-1	
Total Radium	Total Radium Calculation	<b>1.79U ± 1.04 (1.79)</b>	pCi/L	02/04/20 15:11	7440-14-4	

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## ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: D20A020

Pace Project No.: 35525746

**Sample: D20A020-06**      **Lab ID: 35525746006**      Collected: 01/16/20 13:12      Received: 01/22/20 11:30      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>0.755U ± 0.364 (0.755)</b> C:NA T:94%	pCi/L	02/03/20 16:24	13982-63-3	
Radium-228	EPA 904.0	<b>0.693U ± 0.329 (0.693)</b> C:79% T:95%	pCi/L	02/03/20 15:18	15262-20-1	
Total Radium	Total Radium Calculation	<b>1.45U ± 0.693 (1.45)</b>	pCi/L	02/04/20 15:11	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: D20A020

Pace Project No.: 35525746

Sample: **D20A020-07** Lab ID: **35525746007** Collected: 01/16/20 09:48 Received: 01/22/20 11:30 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>1.05U ± 0.440 (1.05)</b> C:NA T:90%	pCi/L	02/03/20 16:09	13982-63-3	
Radium-228	EPA 904.0	<b>0.786U ± 0.425 (0.786)</b> C:77% T:82%	pCi/L	02/03/20 15:18	15262-20-1	
Total Radium	Total Radium Calculation	<b>1.84U ± 0.865 (1.84)</b>	pCi/L	02/04/20 15:11	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: D20A020

Pace Project No.: 35525746

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 903.1	1.11U ± 0.660 (1.11) C:NA T:90%	pCi/L	02/03/20 16:24	13982-63-3	
Radium-228	EPA 904.0	0.798U ± 0.350 (0.798) C:83% T:86%	pCi/L	02/03/20 15:18	15262-20-1	
Total Radium	Total Radium Calculation	1.91U ± 1.01 (1.91)	pCi/L	02/04/20 15:11	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: D20A020

Pace Project No.: 35525746

Sample: **D20A020-09** Lab ID: **35525746009** Collected: 01/15/20 15:37 Received: 01/22/20 11:30 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>0.739 ± 0.517 (0.624)</b> C:NA T:99%	pCi/L	02/03/20 16:09	13982-63-3	
Radium-228	EPA 904.0	<b>0.663U ± 0.324 (0.663)</b> C:78% T:97%	pCi/L	02/03/20 15:17	15262-20-1	
Total Radium	Total Radium Calculation	<b>1.29U ± 0.841 (1.29)</b>	pCi/L	02/04/20 15:11	7440-14-4	

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## ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: D20A020

Pace Project No.: 35525746

**Sample:** D20A020-14      **Lab ID:** 35525746014      Collected: 01/16/20 10:37      Received: 01/22/20 11:30      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>0.823U ± 0.458 (0.823)</b> C:NA T:97%	pCi/L	02/03/20 16:09	13982-63-3	
Radium-228	EPA 904.0	<b>0.845U ± 0.392 (0.845)</b> C:80% T:75%	pCi/L	02/03/20 15:18	15262-20-1	
Total Radium	Total Radium Calculation	<b>1.67U ± 0.850 (1.67)</b>	pCi/L	02/04/20 15:11	7440-14-4	

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**QUALITY CONTROL - RADIOCHEMISTRY**

Project: D20A020  
Pace Project No.: 35525746

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QC Batch:	381263	Analysis Method:	EPA 903.1
QC Batch Method:	EPA 903.1	Analysis Description:	903.1 Radium-226
Associated Lab Samples:	35525746001, 35525746002, 35525746003, 35525746004, 35525746005, 35525746006, 35525746007, 35525746008, 35525746009, 35525746010, 35525746011, 35525746012, 35525746013, 35525746014		

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METHOD BLANK:	1847884	Matrix:	Water
Associated Lab Samples:	35525746001, 35525746002, 35525746003, 35525746004, 35525746005, 35525746006, 35525746007, 35525746008, 35525746009, 35525746010, 35525746011, 35525746012, 35525746013, 35525746014		

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.174 ± 0.342 (0.625) C:NA T:89%	pCi/L	02/03/20 16:09	

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: D20A020  
Pace Project No.: 35525746

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QC Batch:	381604	Analysis Method:	EPA 904.0
QC Batch Method:	EPA 904.0	Analysis Description:	904.0 Radium 228
Associated Lab Samples:	35525746001, 35525746002, 35525746003, 35525746004, 35525746005, 35525746006, 35525746007, 35525746008, 35525746009, 35525746010, 35525746011, 35525746012, 35525746013, 35525746014		

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METHOD BLANK:	1849400	Matrix:	Water
Associated Lab Samples:	35525746001, 35525746002, 35525746003, 35525746004, 35525746005, 35525746006, 35525746007, 35525746008, 35525746009, 35525746010, 35525746011, 35525746012, 35525746013, 35525746014		

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.453 ± 0.404 (0.819) C:72% T:78%	pCi/L	02/03/20 12:05	

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: D20A020  
Pace Project No.: 35525746

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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-A Pace Analytical Services - Asheville  
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: D20A020  
Pace Project No.: 35525746

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
35525746001	D20A020-01	EPA 3010A	522654	EPA 6020B	522676
35525746002	D20A020-02	EPA 3010A	522654	EPA 6020B	522676
35525746003	D20A020-03	EPA 3010A	522654	EPA 6020B	522676
35525746004	D20A020-04	EPA 3010A	522654	EPA 6020B	522676
35525746005	D20A020-05	EPA 3010A	522654	EPA 6020B	522676
35525746006	D20A020-06	EPA 3010A	522654	EPA 6020B	522676
35525746007	D20A020-07	EPA 3010A	522654	EPA 6020B	522676
35525746008	D20A020-08	EPA 3010A	522654	EPA 6020B	522676
35525746009	D20A020-09	EPA 3010A	522655	EPA 6020B	522677
35525746010	D20A020-10	EPA 3010A	522655	EPA 6020B	522677
35525746011	D20A020-11	EPA 3010A	522655	EPA 6020B	522677
35525746012	D20A020-12	EPA 3010A	522655	EPA 6020B	522677
35525746013	D20A020-13	EPA 3010A	522655	EPA 6020B	522677
35525746014	D20A020-14	EPA 3010A	522655	EPA 6020B	522677
35525746001	D20A020-01	EPA 903.1	381263		
35525746002	D20A020-02	EPA 903.1	381263		
35525746003	D20A020-03	EPA 903.1	381263		
35525746004	D20A020-04	EPA 903.1	381263		
35525746005	D20A020-05	EPA 903.1	381263		
35525746006	D20A020-06	EPA 903.1	381263		
35525746007	D20A020-07	EPA 903.1	381263		
35525746008	D20A020-08	EPA 903.1	381263		
35525746009	D20A020-09	EPA 903.1	381263		
35525746010	D20A020-10	EPA 903.1	381263		
35525746011	D20A020-11	EPA 903.1	381263		
35525746012	D20A020-12	EPA 903.1	381263		
35525746013	D20A020-13	EPA 903.1	381263		
35525746014	D20A020-14	EPA 903.1	381263		
35525746001	D20A020-01	EPA 904.0	381604		
35525746002	D20A020-02	EPA 904.0	381604		
35525746003	D20A020-03	EPA 904.0	381604		
35525746004	D20A020-04	EPA 904.0	381604		
35525746005	D20A020-05	EPA 904.0	381604		
35525746006	D20A020-06	EPA 904.0	381604		
35525746007	D20A020-07	EPA 904.0	381604		
35525746008	D20A020-08	EPA 904.0	381604		
35525746009	D20A020-09	EPA 904.0	381604		
35525746010	D20A020-10	EPA 904.0	381604		
35525746011	D20A020-11	EPA 904.0	381604		
35525746012	D20A020-12	EPA 904.0	381604		
35525746013	D20A020-13	EPA 904.0	381604		
35525746014	D20A020-14	EPA 904.0	381604		
35525746001	D20A020-01	Total Radium Calculation	382345		
35525746002	D20A020-02	Total Radium Calculation	382345		
35525746003	D20A020-03	Total Radium Calculation	382345		
35525746004	D20A020-04	Total Radium Calculation	382345		
35525746005	D20A020-05	Total Radium Calculation	382345		

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: D20A020  
Pace Project No.: 35525746

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
35525746006	D20A020-06	Total Radium Calculation	382345		
35525746007	D20A020-07	Total Radium Calculation	382345		
35525746008	D20A020-08	Total Radium Calculation	382345		
35525746009	D20A020-09	Total Radium Calculation	382345		
35525746010	D20A020-10	Total Radium Calculation	382345		
35525746011	D20A020-11	Total Radium Calculation	382345		
35525746012	D20A020-12	Total Radium Calculation	382345		
35525746013	D20A020-13	Total Radium Calculation	382345		
35525746014	D20A020-14	Total Radium Calculation	382345		
35525746001	D20A020-01	EPA 300.0	606238		
35525746002	D20A020-02	EPA 300.0	606238		
35525746003	D20A020-03	EPA 300.0	606238		
35525746004	D20A020-04	EPA 300.0	606238		
35525746005	D20A020-05	EPA 300.0	606238		
35525746006	D20A020-06	EPA 300.0	606238		
35525746007	D20A020-07	EPA 300.0	606238		
35525746008	D20A020-08	EPA 300.0	606238		

### REPORT OF LABORATORY ANALYSIS

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SUBCONTRACT ORDER  
Deerhaven Generating Station  
D20A020

WO# : 35525746



35525746

**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

*Viewed  
ecoc*

Analysis	Expires	Laboratory ID	Comments
<b>Sample Name: LF-1</b>			
<b>Sample ID: D20A020-01</b>	<b>Water</b>	<b>Sampled: 15-Jan-20 09:45</b>	
D_Anions - Fluoride	12-Feb-20 09:45		
D_Anions - Sulfates	12-Feb-20 09:45		
D_Antimony by 6020	13-Jul-20 09:45		
D_Boron by 6020	13-Jul-20 09:45		
D_Lithium by 6020	13-Jul-20 09:45		
D_Radium226+228_Combined	09-Jul-20 09:45		
D_Thallium by 6020	13-Jul-20 09:45		
D_Anions - Chlorides	12-Feb-20 09:45		
<i>Containers Supplied:</i>			
D_HDPE, HNO3 pH<2 - 250mL extra (B)			
D_HDPE, Chill @<6*C - 250mL (C)			
D_HDPE, HNO3 pH<2 - 2000mL (D)			
<b>Sample Name: LF-2</b>			
<b>Sample ID: D20A020-02</b>	<b>Water</b>	<b>Sampled: 16-Jan-20 14:32</b>	
D_Anions - Fluoride	13-Feb-20 14:32		
D_Thallium by 6020	14-Jul-20 14:32		
D_Radium226+228_Combined	10-Jul-20 14:32		
D_Lithium by 6020	14-Jul-20 14:32		
D_Boron by 6020	14-Jul-20 14:32		
D_Anions - Sulfates	13-Feb-20 14:32		
D_Anions - Chlorides	13-Feb-20 14:32		
D_Antimony by 6020	14-Jul-20 14:32		
<i>Containers Supplied:</i>			
D_HDPE, HNO3 pH<2 - 250mL extra (B)			
D_HDPE, Chill @<6*C - 250mL (C)			
D_HDPE, HNO3 pH<2 - 2000mL (D)			

Released By: *[Signature]* Date: 1-21-2020  
 Received By: *AS/PAIP* Date: 1/22/20 1:50  
 Received By: *WZ T-353* Date:





**SUBCONTRACT ORDER**  
**Deerhaven Generating Station**  
**D20A020**

Analysis	Expires	Laboratory ID	Comments
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**Sample Name: LF-3**

**Sample ID: D20A020-03      Water      Sampled: 16-Jan-20 15:32**



D_Anions - Fluoride	13-Feb-20 15:32
D_Antimony by 6020	14-Jul-20 15:32
D_Boron by 6020	14-Jul-20 15:32
D_Anions - Sulfates	13-Feb-20 15:32
D_Lithium by 6020	14-Jul-20 15:32
D_Thallium by 6020	14-Jul-20 15:32
D_Radium226+228_Combined	10-Jul-20 15:32
D_Anions - Chlorides	13-Feb-20 15:32

*Containers Supplied:*

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

D\_HDPE, Chill @<6\*C - 250mL (C)

D\_HDPE, HNO3 pH<2 - 2000mL (D)

**Sample Name: LF-4**

**Sample ID: D20A020-04      Water      Sampled: 17-Jan-20 08:37**



D_Anions - Sulfates	14-Feb-20 08:37
D_Thallium by 6020	15-Jul-20 08:37
D_Lithium by 6020	15-Jul-20 08:37
D_Radium226+228_Combined	11-Jul-20 08:37
D_Antimony by 6020	15-Jul-20 08:37
D_Anions - Fluoride	14-Feb-20 08:37
D_Anions - Chlorides	14-Feb-20 08:37
D_Boron by 6020	15-Jul-20 08:37

*Containers Supplied:*

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

D\_HDPE, Chill @<6\*C - 250mL (C)

D\_HDPE, HNO3 pH<2 - 2000mL (D)

**Sample Name: SIS-1**

**Sample ID: D20A020-05      Water      Sampled: 15-Jan-20 14:32**



D_Boron by 6020	13-Jul-20 14:32
D_Thallium by 6020	13-Jul-20 14:32
D_Radium226+228_Combined	09-Jul-20 14:32
D_Lithium by 6020	13-Jul-20 14:32
D_Antimony by 6020	13-Jul-20 14:32
D_Anions - Sulfates	12-Feb-20 14:32
D_Anions - Chlorides	12-Feb-20 14:32
D_Anions - Fluoride	12-Feb-20 14:32

*Containers Supplied:*

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

D\_HDPE, Chill @<6\*C - 250mL (C)

D\_HDPE, HNO3 pH<2 - 2000mL (D)

<i>Glenn Davis</i>	<i>1-21-2020</i>	<i>AS / PAIC</i>	<i>1/22/20 1130</i>
Released By	Date	Received By	Date
			<i>11-2 T-353</i>
Released By	Date	Received By	Date



**SUBCONTRACT ORDER**  
**Deerhaven Generating Station**  
**D20A020**

Analysis	Expires	Laboratory ID	Comments
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**Sample Name: SIS-2**

**Sample ID: D20A020-06**      **Water**      **Sampled: 16-Jan-20 13:12**



- D\_Antimony by 6020      14-Jul-20 13:12
- D\_Lithium by 6020      14-Jul-20 13:12
- D\_Radium226+228\_Combined      10-Jul-20 13:12
- D\_Thallium by 6020      14-Jul-20 13:12
- D\_Anions - Chlorides      13-Feb-20 13:12
- D\_Anions - Fluoride      13-Feb-20 13:12
- D\_Boron by 6020      14-Jul-20 13:12
- D\_Anions - Sulfates      13-Feb-20 13:12

*Containers Supplied:*

- D\_HDPE, HNO3 pH<2 - 250mL extra (B)
- D\_HDPE, Chill @<6\*C - 250mL (C)
- D\_HDPE, HNO3 pH<2 - 2000mL (D)

**Sample Name: SIS-3**

**Sample ID: D20A020-07**      **Water**      **Sampled: 16-Jan-20 09:48**



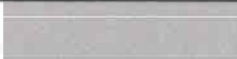
- D\_Anions - Sulfates      13-Feb-20 09:48
- D\_Thallium by 6020      14-Jul-20 09:48
- D\_Radium226+228\_Combined      10-Jul-20 09:48
- D\_Lithium by 6020      14-Jul-20 09:48
- D\_Boron by 6020      14-Jul-20 09:48
- D\_Antimony by 6020      14-Jul-20 09:48
- D\_Anions - Fluoride      13-Feb-20 09:48
- D\_Anions - Chlorides      13-Feb-20 09:48

*Containers Supplied:*

- D\_HDPE, HNO3 pH<2 - 250mL extra (B)
- D\_HDPE, Chill @<6\*C - 250mL (C)
- D\_HDPE, HNO3 pH<2 - 2000mL (D)

**Sample Name: SIS-4**

**Sample ID: D20A020-08**      **Water**      **Sampled: 16-Jan-20 11:40**



- D\_Lithium by 6020      14-Jul-20 11:40
- D\_Thallium by 6020      14-Jul-20 11:40
- D\_Radium226+228\_Combined      10-Jul-20 11:40
- D\_Anions - Chlorides      13-Feb-20 11:40
- D\_Boron by 6020      14-Jul-20 11:40
- D\_Anions - Fluoride      13-Feb-20 11:40
- D\_Anions - Sulfates      13-Feb-20 11:40
- D\_Antimony by 6020      14-Jul-20 11:40

*Containers Supplied:*

- D\_HDPE, HNO3 pH<2 - 250mL extra (B)
- D\_HDPE, Chill @<6\*C - 250mL (C)
- D\_HDPE, HNO3 pH<2 - 2000mL (D)

<i>J. [Signature]</i>	<i>1-21-2020</i>	<i>AS/Duce</i>	<i>1/22/20 1130</i>
Released By	Date	Received By	Date
			<i>112 T-353</i>
Released By	Date	Received By	Date



**SUBCONTRACT ORDER**  
**Deerhaven Generating Station**  
**D20A020**

Analysis	Expires	Laboratory ID	Comments
<b>Sample Name: MWI-4-5 (R4T5B)</b>			
<b>Sample ID: D20A020-09</b>	<b>Water</b>	<b>Sampled:15-Jan-20 15:37</b>	
D_Boron by 6020	13-Jul-20 15:37		
D_Antimony by 6020	13-Jul-20 15:37		
D_Lithium by 6020	13-Jul-20 15:37		
D_Radium226+228_Combined	09-Jul-20 15:37		
D_Thallium by 6020	13-Jul-20 15:37		
<i>Containers Supplied:</i>			
D_HDPE, HNO3 pH<2 - 250mL extra (B)			
D_HDPE, HNO3 pH<2 - 2000mL (D)			
<b>Sample Name: MWI-6-4 (R6T4B)</b>			
<b>Sample ID: D20A020-10</b>	<b>Water</b>	<b>Sampled:14-Jan-20 09:51</b>	
D_Thallium by 6020	12-Jul-20 09:51		
D_Lithium by 6020	12-Jul-20 09:51		
D_Antimony by 6020	12-Jul-20 09:51		
D_Boron by 6020	12-Jul-20 09:51		
D_Radium226+228_Combined	08-Jul-20 09:51		
<i>Containers Supplied:</i>			
D_HDPE, HNO3 pH<2 - 250mL extra (B)			
D_HDPE, HNO3 pH<2 - 2000mL (D)			
<b>Sample Name: MWI-6-8 (R6T8B)</b>			
<b>Sample ID: D20A020-11</b>	<b>Water</b>	<b>Sampled:17-Jan-20 12:08</b>	
D_Thallium by 6020	15-Jul-20 12:08		
D_Radium226+228_Combined	11-Jul-20 12:08		
D_Lithium by 6020	15-Jul-20 12:08		
D_Antimony by 6020	15-Jul-20 12:08		
D_Boron by 6020	15-Jul-20 12:08		
<i>Containers Supplied:</i>			
D_HDPE, HNO3 pH<2 - 250mL extra (B)			
D_HDPE, HNO3 pH<2 - 2000mL (D)			
<b>Sample Name: MWC-10-8 (R10T8)</b>			
<b>Sample ID: D20A020-12</b>	<b>Water</b>	<b>Sampled:18-Jan-20 08:27</b>	
D_Boron by 6020	16-Jul-20 08:27		
D_Antimony by 6020	16-Jul-20 08:27		
D_Thallium by 6020	16-Jul-20 08:27		
D_Radium226+228_Combined	12-Jul-20 08:27		
D_Lithium by 6020	16-Jul-20 08:27		
<i>Containers Supplied:</i>			
D_HDPE, HNO3 pH<2 - 250mL extra (B)			
D_HDPE, HNO3 pH<2 - 2000mL (D)			

Released By: *[Signature]* Date: 1-21-2020 Received By: *[Signature]* Date: 1/22/20 1130  
 Released By: \_\_\_\_\_ Date: \_\_\_\_\_ Received By: *[Signature]* Date: 1/22/20 1130



**Sample Condition Upon Receipt Form (SCUR)**

Project  
Project Manager  
Client

**WO#: 35525746**  
PM: JSB Due Date: 02/07/20  
CLIENT: DEELAB

Date and Initials of person:  
Examining contents: JS  
Label: \_\_\_\_\_  
Deliver: \_\_\_\_\_  
pH: \_\_\_\_\_

Thermometer Used: T-353 Date: 1-22-20 Time: 1154 Initials: JRB

State of Origin: \_\_\_\_\_  For WW projects, all containers verified to ≤6 °C

Cooler #1 Temp. °C	<u>10.9</u> (Visual)	<u>+0.1</u> (Correction Factor)	<u>11.0</u> (Actual)	<u>Metals</u>	<input checked="" type="checkbox"/> Samples on ice, cooling process has begun
Cooler #2 Temp. °C	<u>11.1</u> (Visual)	<u>+0.1</u> (Correction Factor)	<u>11.2</u> (Actual)	<u>RADS</u>	<input checked="" type="checkbox"/> Samples on ice, cooling process has begun
Cooler #3 Temp. °C	<u>11.0</u> (Visual)	<u>+0.1</u> (Correction Factor)	<u>11.1</u> (Actual)	<u>RADS</u>	<input checked="" type="checkbox"/> Samples on ice, cooling process has begun
<u>1-331</u> Cooler #4 Temp. °C	<u>1</u> (Visual)	<u>+1.0</u> (Correction Factor)	<u>1</u> (Actual)	<u>Cooler</u>	<input checked="" 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 # 8139 8749 9950 19927 19938

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	<p>Preservation Information: Preservative: _____ Lot #/Trace #: _____ Date: _____ Time: _____ Initials: _____</p>
Chain of Custody Filled Out	<input 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 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 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: 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): OK temp



*Kanapaha Laboratory*

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

Florida Department of Health Certification E52099

February 18, 2020

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 1/23/2020. 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: D20A009  
Project Manager: Jeff Boudreau

**Reported:**  
02/18/2020 11:29

**ANALYTICAL REPORT FOR SAMPLES**

<b>Laboratory ID</b>	<b>Sample ID</b>	<b>Matrix</b>	<b>Date Sampled</b>	<b>Date Received</b>
K20A076-01	D20A009-01 (MWD-1-6 (R1T6))	Groundwater	01/15/2020 12:17	01/23/2020 14:45
K20A076-02	D20A009-02 (MWB-2-1 (R2T1))	Groundwater	01/14/2020 15:08	01/23/2020 14:45
K20A076-03	D20A009-03 (MWI-3-7 (R3T7))	Groundwater	01/17/2020 14:28	01/23/2020 14:45
K20A076-04	D20A009-04 (MWI-4-5 (R4T5B))	Groundwater	01/15/2020 15:37	01/23/2020 14:45
K20A076-05	D20A009-05 (MWD-6-1 (R6T1B))	Groundwater	01/14/2020 09:00	01/23/2020 14:45
K20A076-06	D20A009-06 (MWI-6-4 (R6T4B))	Groundwater	01/14/2020 09:51	01/23/2020 14:45
K20A076-07	D20A009-07 (MWI-6-8 (R6T8B))	Groundwater	01/17/2020 12:08	01/23/2020 14:45
K20A076-08	D20A009-08 (MWD-6-12 (R6T12))	Groundwater	01/18/2020 12:04	01/23/2020 14:45
K20A076-09	D20A009-09 (MWC-8-10 (R8T10))	Groundwater	01/18/2020 15:17	01/23/2020 14:45
K20A076-10	D20A009-10 (MWI-9-5 (R9T5B))	Groundwater	01/17/2020 10:07	01/23/2020 14:45
K20A076-11	D20A009-11 (MWC-10-8 (R10T8))	Groundwater	01/18/2020 08:27	01/23/2020 14:45
K20A076-12	D20A009-12 (MWC-11-4 (R11T4B))	Groundwater	01/18/2020 10:09	01/23/2020 14:45
K20A076-13	D20A009-13 (MWC-DEEP (DEEP-1))	Groundwater	01/17/2020 15:15	01/23/2020 14:45
K20A076-14	D20A009-14 (EBLANK)	Groundwater	01/16/2020 10:37	01/23/2020 14:45



Deerhaven Laboratory  
Station D-38  
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### D20A009-04 (MWI-4-5 (R4T5B))

K20A076-04 (Groundwater, Grab)

Collected: 01/15/2020 3:37 pm

Analyte	Result Qual	MDL	PQL	Units	Dil	Prepared	Analyzed	Method
<b>Laboratory: Kanapaha Laboratory</b>								
<b>Metals by EPA 200 Series Methods</b>								
Aluminum	101	5.0	20.0	ug/L	1	01/29/2020	02/04/2020	EPA 200.7
Arsenic	2.5 U	2.5	10.0	ug/L	1	01/29/2020	02/04/2020	EPA 200.7
Barium	12.3	0.2	0.8	ug/L	1	01/29/2020	02/04/2020	EPA 200.7
Beryllium	0.10 U	0.10	0.40	ug/L	1	01/29/2020	02/04/2020	EPA 200.7
Cadmium	0.3 U	0.3	1.2	ug/L	1	01/29/2020	02/04/2020	EPA 200.7
Calcium	110	0.10	0.40	mg/L	1	01/29/2020	02/04/2020	EPA 200.7
Chromium	1.5 I	1.2	4.8	ug/L	1	01/29/2020	02/04/2020	EPA 200.7
Cobalt	1.0 U	1.0	4.0	ug/L	1	01/29/2020	02/04/2020	EPA 200.7
Copper	1.5 U	1.5	6.0	ug/L	1	01/29/2020	02/04/2020	EPA 200.7
Iron	22200	21.0	84.0	ug/L	5	01/29/2020	02/04/2020	EPA 200.7
Lead	3.0 U	3.0	12.0	ug/L	1	01/29/2020	02/04/2020	EPA 200.7
Magnesium	36.0	0.01	0.04	mg/L	1	01/29/2020	02/04/2020	EPA 200.7
Manganese	136	1.0	4.0	ug/L	1	01/29/2020	02/04/2020	EPA 200.7
Molybdenum	2.5 U	2.5	10.0	ug/L	1	01/29/2020	02/04/2020	EPA 200.7
Nickel	1.0 U	1.0	4.0	ug/L	1	01/29/2020	02/04/2020	EPA 200.7
Potassium	0.59	0.10	0.40	mg/L	1	01/29/2020	02/04/2020	EPA 200.7
Selenium	4.0 U	4.0	16.0	ug/L	1	01/29/2020	02/04/2020	EPA 200.7
Silver	0.6 U	0.6	2.4	ug/L	1	01/29/2020	02/04/2020	EPA 200.7
Sodium	9.26	0.20	0.80	mg/L	1	01/29/2020	02/04/2020	EPA 200.7
Strontium	96.8	0.3	1.2	ug/L	1	01/29/2020	02/04/2020	EPA 200.7
Vanadium	3.0 U	3.0	12.0	ug/L	1	01/29/2020	02/04/2020	EPA 200.7
Zinc	1.8 U	1.8	7.2	ug/L	1	01/29/2020	02/04/2020	EPA 200.7
Mercury	0.100 U	0.100	0.400	ug/L	1	01/29/2020	01/29/2020	EPA 245.1





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

Project: Environmental  
Project Number: D20A009  
Project Manager: Jeff Boudreau

**Reported:**  
02/18/2020 11:29

**D20A009-06 (MWI-6-4 (R6T4B))**  
**K20A076-06 (Groundwater, Grab)**  
Collected: 01/14/2020 9:51 am

Analyte	Result Qual	MDL	PQL	Units	Dil	Prepared	Analyzed	Method
<b>Laboratory: Kanapaha Laboratory</b>								
<b>Metals by EPA 200 Series Methods</b>								
Aluminum	33.7	5.0	20.0	ug/L	1	01/29/2020	02/04/2020	EPA 200.7
Arsenic	2.5 U	2.5	10.0	ug/L	1	01/29/2020	02/04/2020	EPA 200.7
Barium	14.5	0.2	0.8	ug/L	1	01/29/2020	02/04/2020	EPA 200.7
Beryllium	0.10 U	0.10	0.40	ug/L	1	01/29/2020	02/04/2020	EPA 200.7
Cadmium	0.3 U	0.3	1.2	ug/L	1	01/29/2020	02/04/2020	EPA 200.7
Calcium	67.0	0.10	0.40	mg/L	1	01/29/2020	02/04/2020	EPA 200.7
Chromium	1.2 U	1.2	4.8	ug/L	1	01/29/2020	02/04/2020	EPA 200.7
Cobalt	1.0 U	1.0	4.0	ug/L	1	01/29/2020	02/04/2020	EPA 200.7
Copper	1.5 U	1.5	6.0	ug/L	1	01/29/2020	02/04/2020	EPA 200.7
Iron	171	4.2	16.8	ug/L	1	01/29/2020	02/04/2020	EPA 200.7
Lead	3.0 U	3.0	12.0	ug/L	1	01/29/2020	02/04/2020	EPA 200.7
Magnesium	3.60	0.01	0.04	mg/L	1	01/29/2020	02/04/2020	EPA 200.7
Manganese	28.8	1.0	4.0	ug/L	1	01/29/2020	02/04/2020	EPA 200.7
Molybdenum	2.5 U	2.5	10.0	ug/L	1	01/29/2020	02/04/2020	EPA 200.7
Nickel	1.0 U	1.0	4.0	ug/L	1	01/29/2020	02/04/2020	EPA 200.7
Potassium	1.15	0.10	0.40	mg/L	1	01/29/2020	02/04/2020	EPA 200.7
Selenium	4.0 U	4.0	16.0	ug/L	1	01/29/2020	02/04/2020	EPA 200.7
Silver	0.6 U	0.6	2.4	ug/L	1	01/29/2020	02/04/2020	EPA 200.7
Sodium	6.17	0.20	0.80	mg/L	1	01/29/2020	02/04/2020	EPA 200.7
Strontium	112	0.3	1.2	ug/L	1	01/29/2020	02/04/2020	EPA 200.7
Vanadium	3.0 U	3.0	12.0	ug/L	1	01/29/2020	02/04/2020	EPA 200.7
Zinc	1.8 U	1.8	7.2	ug/L	1	01/29/2020	02/04/2020	EPA 200.7
Mercury	0.100 U	0.100	0.400	ug/L	1	01/29/2020	01/29/2020	EPA 245.1



Deerhaven Laboratory  
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Gainesville, FL/USA 32614-7117

Project: Environmental  
Project Number: D20A009  
Project Manager: Jeff Boudreau

**Reported:**  
02/18/2020 11:29

**D20A009-14 (EBLANK)**  
**K20A076-14 (Groundwater, Grab)**  
Collected: 01/16/2020 10:37 am

Analyte	Result Qual	MDL	PQL	Units	Dil	Prepared	Analyzed	Method
<b>Laboratory: Kanapaha Laboratory</b>								
<b>Metals by EPA 200 Series Methods</b>								
Aluminum	5.0 U	5.0	20.0	ug/L	1	01/29/2020	02/04/2020	EPA 200.7
Arsenic	2.5 U	2.5	10.0	ug/L	1	01/29/2020	02/04/2020	EPA 200.7
Barium	0.3 I	0.2	0.8	ug/L	1	01/29/2020	02/04/2020	EPA 200.7
Beryllium	0.10 U	0.10	0.40	ug/L	1	01/29/2020	02/04/2020	EPA 200.7
Cadmium	0.3 U	0.3	1.2	ug/L	1	01/29/2020	02/04/2020	EPA 200.7
Calcium	0.10 U	0.10	0.40	mg/L	1	01/29/2020	02/04/2020	EPA 200.7
Chromium	1.2 U	1.2	4.8	ug/L	1	01/29/2020	02/04/2020	EPA 200.7
Cobalt	1.0 U	1.0	4.0	ug/L	1	01/29/2020	02/04/2020	EPA 200.7
Copper	1.5 U	1.5	6.0	ug/L	1	01/29/2020	02/04/2020	EPA 200.7
Iron	4.2 U	4.2	16.8	ug/L	1	01/29/2020	02/04/2020	EPA 200.7
Lead	3.0 U	3.0	12.0	ug/L	1	01/29/2020	02/04/2020	EPA 200.7
Magnesium	0.01 U	0.01	0.04	mg/L	1	01/29/2020	02/04/2020	EPA 200.7
Manganese	1.0 U	1.0	4.0	ug/L	1	01/29/2020	02/04/2020	EPA 200.7
Molybdenum	2.5 U	2.5	10.0	ug/L	1	01/29/2020	02/04/2020	EPA 200.7
Nickel	1.0 U	1.0	4.0	ug/L	1	01/29/2020	02/04/2020	EPA 200.7
Potassium	0.10 U	0.10	0.40	mg/L	1	01/29/2020	02/04/2020	EPA 200.7
Selenium	4.0 U	4.0	16.0	ug/L	1	01/29/2020	02/04/2020	EPA 200.7
Silver	0.6 U	0.6	2.4	ug/L	1	01/29/2020	02/04/2020	EPA 200.7
Sodium	0.20 U	0.20	0.80	mg/L	1	01/29/2020	02/04/2020	EPA 200.7
Strontium	0.3 U	0.3	1.2	ug/L	1	01/29/2020	02/04/2020	EPA 200.7
Vanadium	3.0 U	3.0	12.0	ug/L	1	01/29/2020	02/04/2020	EPA 200.7
Zinc	1.8 U	1.8	7.2	ug/L	1	01/29/2020	02/04/2020	EPA 200.7
Mercury	0.100 U	0.100	0.400	ug/L	1	01/29/2020	01/29/2020	EPA 245.1



Deerhaven Laboratory  
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Project: Environmental  
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Project Manager: Jeff Boudreau

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## 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
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### Batch B20A191 - EPA 200.7

#### Blank (B20A191-BLK1)

Prepared: 1/29/2020 Analyzed: 2/4/2020

Manganese	1.0U		1.0	4.0	ug/L						
Potassium	0.10U		0.10	0.40	mg/L						
Nickel	1.0U		1.0	4.0	ug/L						
Sodium	0.20U		0.20	0.80	mg/L						
Magnesium	0.01 U		0.01	0.04	mg/L						
Iron	4.2U		4.2	16.8	ug/L						
Copper	1.5U		1.5	6.0	ug/L						
Vanadium	3.0U		3.0	12.0	ug/L						
Zinc	1.8U		1.8	7.2	ug/L						
Chromium	1.2U		1.2	4.8	ug/L						
Beryllium	0.10U		0.10	0.40	ug/L						
Molybdenum	2.5U		2.5	10.0	ug/L						
Selenium	4.0U		4.0	16.0	ug/L						
Silver	0.6U		0.6	2.4	ug/L						
Calcium	0.10U		0.10	0.40	mg/L						
Aluminum	5.0U		5.0	20.0	ug/L						
Arsenic	2.5U		2.5	10.0	ug/L						
Barium	0.2U		0.2	0.8	ug/L						
Cadmium	0.3U		0.3	1.2	ug/L						
Lead	3.0U		3.0	12.0	ug/L						
Strontium	0.3U		0.3	1.2	ug/L						
Cobalt	1.0U		1.0	4.0	ug/L						

#### LCS (B20A191-BS1)

Prepared: 1/29/2020 Analyzed: 2/4/2020

Lead	105			ug/L	100		105	90-110
Copper	107			ug/L	101		106	90-110
Nickel	103			ug/L	102		101	90-110
Aluminum	108			ug/L	100		108	90-110
Manganese	107			ug/L	101		105	90-110
Cobalt	101			ug/L	101		99.8	90-110
Magnesium	26.0			mg/L	24.8		105	90-110
Barium	104			ug/L	100		104	90-110
Iron	105			ug/L	100		105	90-110
Calcium	26.6			mg/L	25.0		107	90-110
Molybdenum	104			ug/L	100		104	90-110
Cadmium	104			ug/L	101		103	90-110
Chromium	104			ug/L	100		104	90-110
Potassium	25.4			mg/L	25.0		102	90-110
Beryllium	104			ug/L	100		104	90-110
Arsenic	106			ug/L	100		106	90-110
Silver	52.1			ug/L	50.9		102	90-110
Selenium	96.1			ug/L	100		96.1	90-110
Strontium	104			ug/L	100		104	90-110



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## 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
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### Batch B20A191 - EPA 200.7 (Continued)

#### LCS (B20A191-BS1)

Prepared: 1/29/2020 Analyzed: 2/4/2020

Vanadium	108				ug/L	101		107	90-110		
Zinc	104				ug/L	101		103	90-110		
Sodium	26.2				mg/L	25.2		104	90-110		

#### Duplicate (B20A191-DUP1)

Source: K20A076-02

Prepared: 1/29/2020 Analyzed: 2/4/2020

Silver	0.6U		0.6	2.4	ug/L		ND			51.4	
Aluminum	137		5.0	20.0	ug/L		137			0.179	
Zinc	1.8U		1.8	7.2	ug/L		ND			1.19	
Vanadium	3.0U		3.0	12.0	ug/L		ND			NR	
Sodium	2.17		0.20	0.80	mg/L		2.17			0.00	
Selenium	4.0U		4.0	16.0	ug/L		ND			48.0	
Potassium	0.10U		0.10	0.40	mg/L		ND			2.40	
Nickel	1.9I		1.0	4.0	ug/L		1.7			6.83	
Copper	1.5U		1.5	6.0	ug/L		ND			95.5	
Calcium	4.14		0.10	0.40	mg/L		4.18			0.714	
Beryllium	0.10U		0.10	0.40	ug/L		ND			NR	
Strontium	16.3		0.3	1.2	ug/L		16.4			0.710	
Molybdenum	2.5U		2.5	10.0	ug/L		ND			NR	
Cadmium	0.3U		0.3	1.2	ug/L		ND			152	
Cobalt	1.0U		1.0	4.0	ug/L		ND			0.893	
Chromium	1.8I		1.2	4.8	ug/L		1.9			5.10	
Arsenic	2.5U		2.5	10.0	ug/L		ND			NR	
Iron	202		4.2	16.8	ug/L		202			0.192	
Lead	3.0U		3.0	12.0	ug/L		ND			NR	
Magnesium	0.61		0.01	0.04	mg/L		0.61			0.116	
Manganese	8.0		1.0	4.0	ug/L		8.0			0.167	
Barium	1.8		0.2	0.8	ug/L		1.8			0.594	

#### Duplicate (B20A191-DUP2)

Source: K20A089-05

Prepared: 1/29/2020 Analyzed: 2/4/2020

Silver	0.6U		0.6	2.4	ug/L		ND			99.0	
Lead	3.0U		3.0	12.0	ug/L		ND			38.6	
Cadmium	0.3U		0.3	1.2	ug/L		ND			46.1	
Calcium	172		0.20	0.80	mg/L		173			0.250	
Beryllium	0.10U		0.10	0.40	ug/L		ND			12.9	
Vanadium	5.8I		3.0	12.0	ug/L		5.6			3.05	
Arsenic	2.5U		2.5	10.0	ug/L		ND			20.3	
Aluminum	36.8		5.0	20.0	ug/L		36.3			0.952	
Magnesium	30.9		0.02	0.08	mg/L		30.7			0.496	
Copper	9.5		1.5	6.0	ug/L		9.8			2.19	
Barium	21.9		0.2	0.8	ug/L		22.0			0.371	
Iron	118		4.2	16.8	ug/L		119			0.475	
Zinc	7.9		1.8	7.2	ug/L		7.9			0.234	
Potassium	4.14		0.10	0.40	mg/L		3.91			4.08	



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Project Manager: Jeff Boudreau

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## 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
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### Batch B20A191 - EPA 200.7 (Continued)

Duplicate (B20A191-DUP2)	Source: K20A089-05				Prepared: 1/29/2020 Analyzed: 2/4/2020			
Cobalt	1.0U		1.0	4.0	ug/L	ND		39.7
Strontium	746		0.3	1.2	ug/L	743		0.276
Chromium	1.5I		1.2	4.8	ug/L	1.2		12.9
Sodium	38.5		0.20	0.80	mg/L	38.2		0.579
Nickel	1.3I		1.0	4.0	ug/L	1.2		3.68
Selenium	4.0U		4.0	16.0	ug/L	ND		41.4
Molybdenum	97.4		2.5	10.0	ug/L	96.5		0.642
Manganese	14.7		1.0	4.0	ug/L	14.5		1.05

Matrix Spike (B20A191-MS1)	Source: K20A076-02				Prepared: 1/29/2020 Analyzed: 2/4/2020				
Vanadium	524		3.0	12.0	ug/L	500	ND	105	90-110
Nickel	209		1.0	4.0	ug/L	200	1.7	104	90-110
Arsenic	208		2.5	10.0	ug/L	200	ND	104	90-110
Copper	207		1.5	6.0	ug/L	200	ND	103	90-110
Iron	1240		4.2	16.8	ug/L	1000	202	104	90-110
Cobalt	203		1.0	4.0	ug/L	200	ND	102	90-110
Strontium	519		0.3	1.2	ug/L	500	16.4	101	90-110
Beryllium	213		0.10	0.40	ug/L	200	ND	107	90-110
Selenium	48.4		4.0	16.0	ug/L	50.0	ND	96.9	90-110
Lead	207		3.0	12.0	ug/L	200	ND	104	90-110
Manganese	216		1.0	4.0	ug/L	200	8.0	104	90-110
Aluminum	667		5.0	20.0	ug/L	500	137	106	90-110
Chromium	212		1.2	4.8	ug/L	200	1.9	105	90-110
Potassium	25.3		0.10	0.40	mg/L	25.0	ND	101	90-110
Barium	514		0.2	0.8	ug/L	500	1.8	103	90-110
Cadmium	52.0		0.3	1.2	ug/L	50.0	ND	104	90-110
Magnesium	26.5		0.01	0.04	mg/L	25.0	0.61	104	90-110
Zinc	209		1.8	7.2	ug/L	200	ND	104	90-110
Calcium	30.2		0.10	0.40	mg/L	25.0	4.18	104	90-110
Silver	50.7		0.6	2.4	ug/L	50.0	ND	101	90-110
Sodium	28.7		0.20	0.80	mg/L	25.0	2.17	106	90-110
Molybdenum	528		2.5	10.0	ug/L	500	ND	106	90-110

Matrix Spike (B20A191-MS2)	Source: K20A089-05				Prepared: 1/29/2020 Analyzed: 2/4/2020				
Copper	431		3.0	12.0	ug/L	400	9.8	105	90-110
Lead	412		6.0	24.0	ug/L	400	ND	103	90-110
Iron	2160		8.4	33.6	ug/L	2000	119	102	90-110
Silver	101		1.2	4.8	ug/L	100	ND	101	90-110
Potassium	55.3		0.20	0.80	mg/L	50.0	3.91	103	90-110
Barium	1050		0.4	1.6	ug/L	1000	22.0	103	90-110
Molybdenum	1140		5.0	20.0	ug/L	1000	96.5	104	90-110
Selenium	98.3		8.0	32.0	ug/L	100	ND	98.3	90-110
Magnesium	83.3		0.02	0.08	mg/L	50.0	30.7	105	90-110



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

Project: Environmental  
Project Number: D20A009  
Project Manager: Jeff Boudreau

**Reported:**  
02/18/2020 11:29

## 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
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#### Batch B20A191 - EPA 200.7 (Continued)

Matrix Spike (B20A191-MS2)		Source: K20A089-05				Prepared: 1/29/2020 Analyzed: 2/4/2020					
Nickel	405		2.0	8.0	ug/L	400	1.2	101	90-110		
Manganese	422		2.0	8.0	ug/L	400	14.5	102	90-110		
Chromium	412		2.4	9.6	ug/L	400	1.2	103	90-110		
Cadmium	101		0.6	2.4	ug/L	100	ND	101	90-110		
Calcium	225		0.20	0.80	mg/L	50.0	173	105	90-110		
Arsenic	415		5.0	20.0	ug/L	400	ND	104	90-110		
Sodium	90.6		0.40	1.60	mg/L	50.0	38.2	105	90-110		
Aluminum	1070		10.0	40.0	ug/L	1000	36.3	103	90-110		
Vanadium	1050		6.0	24.0	ug/L	1000	5.6	105	90-110		
Cobalt	395		2.0	8.0	ug/L	400	ND	98.8	90-110		
Beryllium	423		0.20	0.80	ug/L	400	ND	106	90-110		
Strontium	1790		0.6	2.4	ug/L	1000	743	104	90-110		
Zinc	414		3.6	14.4	ug/L	400	7.9	102	90-110		

#### Batch B20A192 - MERCURY

Blank (B20A192-BLK1)		Prepared & Analyzed: 1/29/2020									
Mercury	0.100 U		0.100	0.400	ug/L						
LCS (B20A192-BS1)		Prepared & Analyzed: 1/29/2020									
Mercury	1.97		0.100	0.400	ug/L	2.00		98.6	90-110		
Duplicate (B20A192-DUP1)		Source: K20A076-10				Prepared & Analyzed: 1/29/2020					
Mercury	0.100 U		0.100	0.400	ug/L		ND			40.4	
Duplicate (B20A192-DUP2)		Source: K20A087-01				Prepared & Analyzed: 1/29/2020					
Mercury	4.83		0.500	2.00	ug/L		5.03			2.79	
Matrix Spike (B20A192-MS1)		Source: K20A076-10				Prepared & Analyzed: 1/29/2020					
Mercury	2.00		0.100	0.400	ug/L	2.00	ND	100	90-110		
Matrix Spike (B20A192-MS2)		Source: K20A087-01				Prepared & Analyzed: 1/29/2020					
Mercury	25.0		0.100	0.400	ug/L	20.0	5.03	100	90-110		



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

Project: Environmental  
Project Number: D20A009  
Project Manager: Jeff Boudreau

**Reported:**  
02/18/2020 11:29

### 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


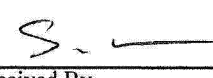


**SUBCONTRACT ORDER**  
**Deerhaven Generating Station**  
**D20A009**

Analysis	Expires	Laboratory ID	Comments
Sample Name: MWI-4-5 (R4T5B)			
Sample ID: D20A009-04	Water	Sampled: 15-Jan-20 15:37	K20A076-04
K_Chromium	13-Jul-20 15:37		
K_Sodium	13-Jul-20 15:37		
K_Mercury, cold vapor	12-Feb-20 15:37		
K_Manganese	13-Jul-20 15:37		
K_Magnesium	13-Jul-20 15:37		
K_Calcium	13-Jul-20 15:37		
K_Aluminum	13-Jul-20 15:37		
K_Molybdenum	13-Jul-20 15:37		
K_Barium	13-Jul-20 15:37		
K_Nickel	13-Jul-20 15:37		
K_Cobalt	13-Jul-20 15:37		
K_Copper	13-Jul-20 15:37		
K_Iron	13-Jul-20 15:37		
K_Lead	13-Jul-20 15:37		
K_Potassium	13-Jul-20 15:37		
K_Selenium	13-Jul-20 15:37		
K_Arsenic	13-Jul-20 15:37		
K_Strontium	13-Jul-20 15:37		
K_Silver	13-Jul-20 15:37		
K_Vanadium	13-Jul-20 15:37		
K_Zinc	13-Jul-20 15:37		
K_Beryllium	13-Jul-20 15:37		
K_Cadmium	13-Jul-20 15:37		

*Containers Supplied:*

D\_HDPE, HNO3 pH<2 - 500mL (E)

	1/23/20		1/23/20	e 1445
Released By	Date	Received By	Date	

Released By	Date	Received By	Date
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**SUBCONTRACT ORDER**  
**Deerhaven Generating Station**  
**D20A009**

Analysis	Expires	Laboratory ID	Comments
<b>Sample Name: MWI-6-4 (R6T4B)</b>			
<b>Sample ID: D20A009-06</b>	<b>Water</b>	<b>Sampled: 14-Jan-20 09:51</b>	<b>K20A076-06</b>
K_Selenium	12-Jul-20 09:51		
K_Silver	12-Jul-20 09:51		
K_Sodium	12-Jul-20 09:51		
K_Lead	12-Jul-20 09:51		
K_Manganese	12-Jul-20 09:51		
K_Mercury, cold vapor	11-Feb-20 09:51		
K_Potassium	12-Jul-20 09:51		
K_Strontium	12-Jul-20 09:51		
K_Cadmium	12-Jul-20 09:51		
K_Vanadium	12-Jul-20 09:51		
K_Molybdenum	12-Jul-20 09:51		
K_Nickel	12-Jul-20 09:51		
K_Iron	12-Jul-20 09:51		
K_Copper	12-Jul-20 09:51		
K_Cobalt	12-Jul-20 09:51		
K_Calcium	12-Jul-20 09:51		
K_Beryllium	12-Jul-20 09:51		
K_Barium	12-Jul-20 09:51		
K_Arsenic	12-Jul-20 09:51		
K_Aluminum	12-Jul-20 09:51		
K_Magnesium	12-Jul-20 09:51		
K_Zinc	12-Jul-20 09:51		
K_Chromium	12-Jul-20 09:51		
<i>Containers Supplied:</i>			
D_HDPE, HNO3 pH<2 - 500mL (E)			

<i>K. K...</i>	<i>K</i>	<i>S.</i>	<i>1/23/20 e 1445</i>
Released By	Date	Received By	Date
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

February 27, 2020

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 1/23/2020. 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: D20A020  
Project Manager: Jeff Boudreau

**Reported:**  
02/27/2020 17:43

### ANALYTICAL REPORT FOR SAMPLES

<b>Laboratory ID</b>	<b>Sample ID</b>	<b>Matrix</b>	<b>Date Sampled</b>	<b>Date Received</b>
K20A074-01	D20A020-01 (LF-1)	Groundwater	01/15/2020 09:45	01/23/2020 14:45
K20A074-02	D20A020-02 (LF-2)	Groundwater	01/16/2020 14:32	01/23/2020 14:45
K20A074-03	D20A020-03 (LF-3)	Groundwater	01/16/2020 15:32	01/23/2020 14:45
K20A074-04	D20A020-04 (LF-4)	Groundwater	01/17/2020 08:37	01/23/2020 14:45
K20A074-05	D20A020-05 (SIS-1)	Groundwater	01/15/2020 14:32	01/23/2020 14:45
K20A074-06	D20A020-06 (SIS-2)	Groundwater	01/16/2020 13:12	01/23/2020 14:45
K20A074-07	D20A020-07 (SIS-3)	Groundwater	01/16/2020 09:48	01/23/2020 14:45
K20A074-08	D20A020-08 (SIS-4)	Groundwater	01/16/2020 11:40	01/23/2020 14:45



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

Project: Environmental  
Project Number: D20A020  
Project Manager: Jeff Boudreau

**Reported:**  
02/27/2020 17:43

**D20A020-01 (LF-1)**  
**K20A074-01 (Groundwater, Grab)**  
Collected: 01/15/2020 9:45 am

Analyte	Result	Qual	MDL	PQL	Units	Dil	Prepared	Analyzed	Method
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**Laboratory: Kanapaha Laboratory**

**Metals by EPA 200 Series Methods**

Arsenic	2.5	U	2.5	10.0	ug/L	1	01/27/2020	02/03/2020	EPA 200.7
Barium	95.3		0.2	0.8	ug/L	1	01/27/2020	02/03/2020	EPA 200.7
Beryllium	0.10	U	0.10	0.40	ug/L	1	01/27/2020	02/03/2020	EPA 200.7
Calcium	25.7		0.10	0.40	mg/L	1	01/27/2020	02/03/2020	EPA 200.7
Chromium	1.2	U	1.2	4.8	ug/L	1	01/27/2020	02/03/2020	EPA 200.7
Cobalt	1.0	U	1.0	4.0	ug/L	1	01/27/2020	02/03/2020	EPA 200.7
Lead	3.0	U	3.0	12.0	ug/L	1	01/27/2020	02/03/2020	EPA 200.7
Molybdenum	7.3	I	2.5	10.0	ug/L	1	01/27/2020	02/03/2020	EPA 200.7
Selenium	4.0	U	4.0	16.0	ug/L	1	01/27/2020	02/03/2020	EPA 200.7

**D20A020-02 (LF-2)**  
**K20A074-02 (Groundwater, Grab)**  
Collected: 01/16/2020 2:32 pm

Analyte	Result	Qual	MDL	PQL	Units	Dil	Prepared	Analyzed	Method
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**Laboratory: Kanapaha Laboratory**

**Metals by EPA 200 Series Methods**

Arsenic	2.5	U	2.5	10.0	ug/L	1	01/27/2020	02/03/2020	EPA 200.7
Barium	85.3		0.2	0.8	ug/L	1	01/27/2020	02/03/2020	EPA 200.7
Beryllium	0.20	I	0.10	0.40	ug/L	1	01/27/2020	02/03/2020	EPA 200.7
Calcium	24.8		0.10	0.40	mg/L	1	01/27/2020	02/03/2020	EPA 200.7
Chromium	4.2	I	1.2	4.8	ug/L	1	01/27/2020	02/03/2020	EPA 200.7
Cobalt	5.1		1.0	4.0	ug/L	1	01/27/2020	02/03/2020	EPA 200.7
Lead	3.0	U	3.0	12.0	ug/L	1	01/27/2020	02/03/2020	EPA 200.7
Molybdenum	2.5	U	2.5	10.0	ug/L	1	01/27/2020	02/03/2020	EPA 200.7
Selenium	4.0	U	4.0	16.0	ug/L	1	01/27/2020	02/03/2020	EPA 200.7



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

Project: Environmental  
Project Number: D20A020  
Project Manager: Jeff Boudreau

**Reported:**  
02/27/2020 17:43

**D20A020-03 (LF-3)**  
**K20A074-03 (Groundwater, Grab)**  
Collected: 01/16/2020 3:32 pm

Analyte	Result	Qual	MDL	PQL	Units	Dil	Prepared	Analyzed	Method
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**Laboratory: Kanapaha Laboratory**

**Metals by EPA 200 Series Methods**

Arsenic	2.5	U	2.5	10.0	ug/L	1	01/27/2020	02/03/2020	EPA 200.7
Barium	51.6		0.2	0.8	ug/L	1	01/27/2020	02/03/2020	EPA 200.7
Beryllium	0.10	U	0.10	0.40	ug/L	1	01/27/2020	02/03/2020	EPA 200.7
Calcium	13.2		0.10	0.40	mg/L	1	01/27/2020	02/03/2020	EPA 200.7
Chromium	7.1		1.2	4.8	ug/L	1	01/27/2020	02/03/2020	EPA 200.7
Cobalt	1.0	U	1.0	4.0	ug/L	1	01/27/2020	02/03/2020	EPA 200.7
Lead	3.0	U	3.0	12.0	ug/L	1	01/27/2020	02/03/2020	EPA 200.7
Molybdenum	2.5	U	2.5	10.0	ug/L	1	01/27/2020	02/03/2020	EPA 200.7
Selenium	4.0	U	4.0	16.0	ug/L	1	01/27/2020	02/03/2020	EPA 200.7

**D20A020-04 (LF-4)**  
**K20A074-04 (Groundwater, Grab)**  
Collected: 01/17/2020 8:37 am

Analyte	Result	Qual	MDL	PQL	Units	Dil	Prepared	Analyzed	Method
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**Laboratory: Kanapaha Laboratory**

**Metals by EPA 200 Series Methods**

Arsenic	2.5	U	2.5	10.0	ug/L	1	01/27/2020	02/03/2020	EPA 200.7
Barium	35.0		0.2	0.8	ug/L	1	01/27/2020	02/03/2020	EPA 200.7
Beryllium	0.10	U	0.10	0.40	ug/L	1	01/27/2020	02/03/2020	EPA 200.7
Calcium	15.0		0.10	0.40	mg/L	1	01/27/2020	02/03/2020	EPA 200.7
Chromium	2.0	I	1.2	4.8	ug/L	1	01/27/2020	02/03/2020	EPA 200.7
Cobalt	1.4	I	1.0	4.0	ug/L	1	01/27/2020	02/03/2020	EPA 200.7
Lead	3.0	U	3.0	12.0	ug/L	1	01/27/2020	02/03/2020	EPA 200.7
Molybdenum	2.5	U	2.5	10.0	ug/L	1	01/27/2020	02/03/2020	EPA 200.7
Selenium	4.0	U	4.0	16.0	ug/L	1	01/27/2020	02/03/2020	EPA 200.7



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

Project: Environmental  
Project Number: D20A020  
Project Manager: Jeff Boudreau

**Reported:**  
02/27/2020 17:43

**D20A020-05 (SIS-1)**  
**K20A074-05 (Groundwater, Grab)**  
Collected: 01/15/2020 2:32 pm

Analyte	Result	Qual	MDL	PQL	Units	Dil	Prepared	Analyzed	Method
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**Laboratory: Kanapaha Laboratory**

**Metals by EPA 200 Series Methods**

Arsenic	2.5	U	2.5	10.0	ug/L	1	01/27/2020	02/03/2020	EPA 200.7
Barium	15.7		0.2	0.8	ug/L	1	01/27/2020	02/03/2020	EPA 200.7
Cadmium	0.3	U	0.3	1.2	ug/L	1	01/27/2020	02/03/2020	EPA 200.7
Calcium	57.4		0.10	0.40	mg/L	1	01/27/2020	02/03/2020	EPA 200.7
Chromium	1.2	U	1.2	4.8	ug/L	1	01/27/2020	02/03/2020	EPA 200.7
Cobalt	1.0	U	1.0	4.0	ug/L	1	01/27/2020	02/03/2020	EPA 200.7
Lead	3.0	U	3.0	12.0	ug/L	1	01/27/2020	02/03/2020	EPA 200.7
Molybdenum	2.5	U	2.5	10.0	ug/L	1	01/27/2020	02/03/2020	EPA 200.7
Selenium	4.0	U	4.0	16.0	ug/L	1	01/27/2020	02/03/2020	EPA 200.7

**D20A020-06 (SIS-2)**  
**K20A074-06 (Groundwater, Grab)**  
Collected: 01/16/2020 1:12 pm

Analyte	Result	Qual	MDL	PQL	Units	Dil	Prepared	Analyzed	Method
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**Laboratory: Kanapaha Laboratory**

**Metals by EPA 200 Series Methods**

Arsenic	2.5	U	2.5	10.0	ug/L	1	01/27/2020	02/03/2020	EPA 200.7
Barium	5.9		0.2	0.8	ug/L	1	01/27/2020	02/03/2020	EPA 200.7
Cadmium	0.3	U	0.3	1.2	ug/L	1	01/27/2020	02/03/2020	EPA 200.7
Calcium	76.1		0.10	0.40	mg/L	1	01/27/2020	02/03/2020	EPA 200.7
Chromium	1.2	U	1.2	4.8	ug/L	1	01/27/2020	02/03/2020	EPA 200.7
Cobalt	1.0	U	1.0	4.0	ug/L	1	01/27/2020	02/03/2020	EPA 200.7
Lead	3.0	U	3.0	12.0	ug/L	1	01/27/2020	02/03/2020	EPA 200.7
Molybdenum	2.7	I	2.5	10.0	ug/L	1	01/27/2020	02/03/2020	EPA 200.7
Selenium	4.0	U	4.0	16.0	ug/L	1	01/27/2020	02/03/2020	EPA 200.7



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

Project: Environmental  
Project Number: D20A020  
Project Manager: Jeff Boudreau

**Reported:**  
02/27/2020 17:43

**D20A020-07 (SIS-3)**  
**K20A074-07 (Groundwater, Grab)**  
Collected: 01/16/2020 9:48 am

Analyte	Result	Qual	MDL	PQL	Units	Dil	Prepared	Analyzed	Method
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**Laboratory: Kanapaha Laboratory**

**Metals by EPA 200 Series Methods**

Arsenic	2.5	U	2.5	10.0	ug/L	1	01/27/2020	02/03/2020	EPA 200.7
Barium	10.3		0.2	0.8	ug/L	1	01/27/2020	02/03/2020	EPA 200.7
Cadmium	0.3	U	0.3	1.2	ug/L	1	01/27/2020	02/03/2020	EPA 200.7
Calcium	58.0		0.10	0.40	mg/L	1	01/27/2020	02/03/2020	EPA 200.7
Chromium	1.7	I	1.2	4.8	ug/L	1	01/27/2020	02/03/2020	EPA 200.7
Cobalt	1.0	U	1.0	4.0	ug/L	1	01/27/2020	02/03/2020	EPA 200.7
Lead	3.0	U	3.0	12.0	ug/L	1	01/27/2020	02/03/2020	EPA 200.7
Molybdenum	2.5	U	2.5	10.0	ug/L	1	01/27/2020	02/03/2020	EPA 200.7
Selenium	4.0	U	4.0	16.0	ug/L	1	01/27/2020	02/03/2020	EPA 200.7

**D20A020-08 (SIS-4)**  
**K20A074-08 (Groundwater, Grab)**  
Collected: 01/16/2020 11:40 am

Analyte	Result	Qual	MDL	PQL	Units	Dil	Prepared	Analyzed	Method
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**Laboratory: Kanapaha Laboratory**

**Metals by EPA 200 Series Methods**

Arsenic	2.9	I	2.5	10.0	ug/L	1	01/27/2020	02/03/2020	EPA 200.7
Barium	19.2		0.2	0.8	ug/L	1	01/27/2020	02/03/2020	EPA 200.7
Cadmium	0.3	U	0.3	1.2	ug/L	1	01/27/2020	02/03/2020	EPA 200.7
Calcium	82.8		0.10	0.40	mg/L	1	01/27/2020	02/03/2020	EPA 200.7
Chromium	1.5	I	1.2	4.8	ug/L	1	01/27/2020	02/03/2020	EPA 200.7
Cobalt	1.0	U	1.0	4.0	ug/L	1	01/27/2020	02/03/2020	EPA 200.7
Lead	3.0	U	3.0	12.0	ug/L	1	01/27/2020	02/03/2020	EPA 200.7
Molybdenum	2.5	U	2.5	10.0	ug/L	1	01/27/2020	02/03/2020	EPA 200.7
Selenium	4.0	U	4.0	16.0	ug/L	1	01/27/2020	02/03/2020	EPA 200.7





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

Project: Environmental  
Project Number: D20A020  
Project Manager: Jeff Boudreau

**Reported:**  
02/27/2020 17:43

## 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
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### Batch B20A170 - EPA 200.7

#### Blank (B20A170-BLK1)

Prepared: 1/27/2020 Analyzed: 2/3/2020

Lead	3.0U		3.0	12.0	ug/L						
Arsenic	2.5U		2.5	10.0	ug/L						
Cadmium	0.3U		0.3	1.2	ug/L						
Cobalt	1.0U		1.0	4.0	ug/L						
Calcium	0.10U		0.10	0.40	mg/L						
Beryllium	0.10U		0.10	0.40	ug/L						
Chromium	1.2U		1.2	4.8	ug/L						
Selenium	4.0U		4.0	16.0	ug/L						
Barium	0.2U		0.2	0.8	ug/L						
Molybdenum	2.5U		2.5	10.0	ug/L						

#### LCS (B20A170-BS1)

Prepared: 1/27/2020 Analyzed: 2/3/2020

Calcium	25.6				mg/L	25.0		102	90-110		
Arsenic	108				ug/L	100		108	90-110		
Cadmium	102				ug/L	101		101	90-110		
Chromium	102				ug/L	100		102	90-110		
Selenium	95.5				ug/L	100		95.5	90-110		
Beryllium	101				ug/L	100		101	90-110		
Cobalt	99.4				ug/L	101		98.5	90-110		
Molybdenum	102				ug/L	100		102	90-110		
Lead	103				ug/L	100		103	90-110		
Barium	100				ug/L	100		100	90-110		

#### Duplicate (B20A170-DUP1)

Source: K20A075-01

Prepared: 1/27/2020 Analyzed: 2/3/2020

Arsenic	5.7I		2.5	10.0	ug/L		4.5			16.1	
Cadmium	0.3U		0.3	1.2	ug/L		ND			NR	
Barium	50.2		0.2	0.8	ug/L		50.7			0.682	
Beryllium	0.10U		0.10	0.40	ug/L		ND			30.3	
Lead	17.3		3.0	12.0	ug/L		17.7			1.43	
Calcium	182		2.00	8.00	mg/L		183			0.515	
Selenium	4.0U		4.0	16.0	ug/L		ND			35.1	
Chromium	7.4		1.2	4.8	ug/L		7.4			0.534	
Cobalt	2.0I		1.0	4.0	ug/L		2.1			1.30	
Molybdenum	63.2		2.5	10.0	ug/L		64.0			0.869	

#### Matrix Spike (B20A170-MS1)

Source: K20A075-01

Prepared: 2/10/2020 Analyzed: 2/13/2020

Molybdenum	11200J		50.0	200	ug/L	10000	64.0	112	90-110		
Arsenic	4400		50.0	200	ug/L	4000	4.5	110	90-110		
Lead	4350		60.0	240	ug/L	4000	17.7	109	90-110		
Calcium	750J		2.00	8.00	mg/L	500	183	113	90-110		
Cobalt	4270		20.0	80.0	ug/L	4000	2.1	107	90-110		
Cadmium	1090		6.0	24.0	ug/L	1000	ND	109	90-110		



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

Project: Environmental  
Project Number: D20A020  
Project Manager: Jeff Boudreau

**Reported:**  
02/27/2020 17:43

**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
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**Batch B20A170 - EPA 200.7 (Continued)**

**Matrix Spike (B20A170-MS1)**

**Source: K20A075-01**

Prepared: 2/10/2020 Analyzed: 2/13/2020

Chromium	4360		24.0	96.0	ug/L	4000	7.4	109	90-110		
Beryllium	4530 J		2.00	8.00	ug/L	4000	ND	113	90-110		
Selenium	1040		80.0	320	ug/L	1000	ND	104	90-110		
Barium	10800		4.0	16.0	ug/L	10000	50.7	108	90-110		



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

Project: Environmental  
Project Number: D20A020  
Project Manager: Jeff Boudreau

**Reported:**  
02/27/2020 17:43

### Notes and Definitions

<u>Qualifier</u>	<u>Description</u>
J	Estimated value. Quality control associated with the reported value failed to meet the established quality control criteria.
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**  
**D20A020**

**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: LF-1</b>			
<b>Sample ID: D20A020-01</b>	<b>Water</b>	<b>Sampled:15-Jan-20 09:45</b>	<b>K20A074-01</b>
K_Arsenic	13-Jul-20 09:45		
K_Barium	13-Jul-20 09:45		
K_Beryllium	13-Jul-20 09:45		
K_Calcium	13-Jul-20 09:45		
K_Chromium	13-Jul-20 09:45		
K_Cobalt	13-Jul-20 09:45		
K_Lead	13-Jul-20 09:45		
K_Molybdenum	13-Jul-20 09:45		
K_Selenium	13-Jul-20 09:45		
<i>Containers Supplied:</i>			
D_HDPE, HNO3 pH<2 - 500mL (A)			
<b>Sample Name: LF-2</b>			
<b>Sample ID: D20A020-02</b>	<b>Water</b>	<b>Sampled:16-Jan-20 14:32</b>	<b>K20A074-02</b>
K_Cobalt	14-Jul-20 14:32		
K_Selenium	14-Jul-20 14:32		
K_Lead	14-Jul-20 14:32		
K_Chromium	14-Jul-20 14:32		
K_Beryllium	14-Jul-20 14:32		
K_Barium	14-Jul-20 14:32		
K_Arsenic	14-Jul-20 14:32		
K_Molybdenum	14-Jul-20 14:32		
K_Calcium	14-Jul-20 14:32		
<i>Containers Supplied:</i>			
D_HDPE, HNO3 pH<2 - 500mL (A)			

K. Mena      1/23/20      S. ~      1/23/20 @ 1445  
 Released By                      Date                      Received By                      Date

Released By                      Date                      Received By                      Date



**SUBCONTRACT ORDER**  
**Deerhaven Generating Station**  
**D20A020**

Analysis	Expires	Laboratory ID	Comments
<b>Sample Name: LF-3</b>			
<b>Sample ID: D20A020-03</b>	<b>Water</b>	<b>Sampled: 16-Jan-20 15:32</b>	<b>K20A074-03</b>
K_Calcium	14-Jul-20 15:32		
K_Molybdenum	14-Jul-20 15:32		
K_Lead	14-Jul-20 15:32		
K_Chromium	14-Jul-20 15:32		
K_Beryllium	14-Jul-20 15:32		
K_Barium	14-Jul-20 15:32		
K_Arsenic	14-Jul-20 15:32		
K_Selenium	14-Jul-20 15:32		
K_Cobalt	14-Jul-20 15:32		
<i>Containers Supplied:</i>			
D_HDPE, HNO3 pH<2 - 500mL (A)			
<b>Sample Name: LF-4</b>			
<b>Sample ID: D20A020-04</b>	<b>Water</b>	<b>Sampled: 17-Jan-20 08:37</b>	<b>K20A074-04</b>
K_Beryllium	15-Jul-20 08:37		
K_Molybdenum	15-Jul-20 08:37		
K_Lead	15-Jul-20 08:37		
K_Cobalt	15-Jul-20 08:37		
K_Chromium	15-Jul-20 08:37		
K_Calcium	15-Jul-20 08:37		
K_Selenium	15-Jul-20 08:37		
K_Barium	15-Jul-20 08:37		
K_Arsenic	15-Jul-20 08:37		
<i>Containers Supplied:</i>			
D_HDPE, HNO3 pH<2 - 500mL (A)			
<b>Sample Name: SIS-1</b>			
<b>Sample ID: D20A020-05</b>	<b>Water</b>	<b>Sampled: 15-Jan-20 14:32</b>	<b>K20A074-05</b>
K_Molybdenum	13-Jul-20 14:32		
K_Barium	13-Jul-20 14:32		
K_Arsenic	13-Jul-20 14:32		
K_Cadmium	13-Jul-20 14:32		
K_Lead	13-Jul-20 14:32		
K_Selenium	13-Jul-20 14:32		
K_Cobalt	13-Jul-20 14:32		
K_Calcium	13-Jul-20 14:32		
K_Chromium	13-Jul-20 14:32		
<i>Containers Supplied:</i>			
D_HDPE, HNO3 pH<2 - 500mL (A)			

Released By K. Morrison Date 1/23/20 Received By S. ~ Date 1/23/20 @ 1445

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



**SUBCONTRACT ORDER**  
**Deerhaven Generating Station**  
**D20A020**

Analysis	Expires	Laboratory ID	Comments
<b>Sample Name: SIS-2</b>			
<b>Sample ID: D20A020-06</b>	<b>Water</b>	<b>Sampled: 16-Jan-20 13:12</b>	<b>K20A074-06</b>
K_Molybdenum	14-Jul-20 13:12		
K_Cobalt	14-Jul-20 13:12		
K_Chromium	14-Jul-20 13:12		
K_Calcium	14-Jul-20 13:12		
K_Cadmium	14-Jul-20 13:12		
K_Barium	14-Jul-20 13:12		
K_Lead	14-Jul-20 13:12		
K_Arsenic	14-Jul-20 13:12		
K_Selenium	14-Jul-20 13:12		
<i>Containers Supplied:</i>			
D_HDPE, HNO3 pH<2 - 500mL (A)			
<b>Sample Name: SIS-3</b>			
<b>Sample ID: D20A020-07</b>	<b>Water</b>	<b>Sampled: 16-Jan-20 09:48</b>	<b>K20A074-07</b>
K_Selenium	14-Jul-20 09:48		
K_Arsenic	14-Jul-20 09:48		
K_Barium	14-Jul-20 09:48		
K_Cobalt	14-Jul-20 09:48		
K_Calcium	14-Jul-20 09:48		
K_Chromium	14-Jul-20 09:48		
K_Cadmium	14-Jul-20 09:48		
K_Lead	14-Jul-20 09:48		
K_Molybdenum	14-Jul-20 09:48		
<i>Containers Supplied:</i>			
D_HDPE, HNO3 pH<2 - 500mL (A)			
<b>Sample Name: SIS-4</b>			
<b>Sample ID: D20A020-08</b>	<b>Water</b>	<b>Sampled: 16-Jan-20 11:40</b>	<b>K20A074-08</b>
K_Molybdenum	14-Jul-20 11:40		
K_Selenium	14-Jul-20 11:40		
K_Cadmium	14-Jul-20 11:40		
K_Calcium	14-Jul-20 11:40		
K_Chromium	14-Jul-20 11:40		
K_Lead	14-Jul-20 11:40		
K_Arsenic	14-Jul-20 11:40		
K_Barium	14-Jul-20 11:40		
K_Cobalt	14-Jul-20 11:40		
<i>Containers Supplied:</i>			
D_HDPE, HNO3 pH<2 - 500mL (A)			

Released By: Kim Morrison      Date: 1-23-20      Received By: [Signature]      Date: 1/23/20 @ 1445

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

February 06, 2020

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

RE: Project: D20A009  
Pace Project No.: 35525749

Dear Mr. Boudreau:

Enclosed are the analytical results for sample(s) received by the laboratory on January 22, 2020. 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 client requested that the samples for 35525749003 and 005 be re-checked. The labels for the sulfuric acid and unpreserved containers were found to have been switched by Pace. The samples were re-run and a revised report generated.

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  
Kimberly Morrison, Deerhaven Labs  
Shelley Phillips, Deerhaven Lab



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: D20A009  
Pace Project No.: 35525749

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### **Pace Analytical Services Pennsylvania**

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  
Florida: Cert E871149 SEKS WET  
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

### **Pace Analytical Services Ormond Beach**

8 East Tower Circle, Ormond Beach, FL 32174  
Alaska DEC- CS/UST/LUST  
Alabama Certification #: 41320  
Arizona Certification# AZ0819  
Colorado Certification: FL NELAC Reciprocity  
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  
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  
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: D20A009  
Pace Project No.: 35525749

Lab ID	Sample ID	Matrix	Date Collected	Date Received
35525749001	D20A009-01	Water	01/15/20 12:17	01/22/20 11:30
35525749002	D20A009-02	Water	01/14/20 15:08	01/22/20 11:30
35525749003	D20A009-03	Water	01/17/20 14:28	01/22/20 11:30
35525749004	D20A009-04	Water	01/15/20 15:37	01/22/20 11:30
35525749005	D20A009-05	Water	01/14/20 09:00	01/22/20 11:30
35525749006	D20A009-06	Water	01/14/20 09:51	01/22/20 11:30
35525749007	D20A009-07	Water	01/17/20 12:08	01/22/20 11:30
35525749008	D20A009-08	Water	01/18/20 12:04	01/22/20 11:30
35525749009	D20A009-09	Water	01/18/20 15:17	01/22/20 11:30
35525749010	D20A009-10	Water	01/17/20 10:07	01/22/20 11:30
35525749011	D20A009-11	Water	01/18/20 08:27	01/22/20 11:30
35525749012	D20A009-12	Water	01/18/20 10:09	01/22/20 11:30
35525749013	D20A009-13	Water	01/17/20 15:15	01/22/20 11:30
35525749014	D20A009-14	Water	01/16/20 10:37	01/22/20 11:30

### REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: D20A009  
Pace Project No.: 35525749

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
35525749001	D20A009-01	SM 7110C-11	CLA	1	PASI-PA
		EPA 300.0	JDM	2	PASI-O
		EPA 353.2	MH1	1	PASI-O
		SM 5310B	SA1	1	PASI-O
35525749002	D20A009-02	SM 7110C-11	CLA	1	PASI-PA
		EPA 300.0	JDM	2	PASI-O
		EPA 353.2	MH1	1	PASI-O
		SM 5310B	SA1	1	PASI-O
35525749003	D20A009-03	SM 7110C-11	CLA	1	PASI-PA
		EPA 300.0	JDM	2	PASI-O
		EPA 353.2	MH1	1	PASI-O
		SM 5310B	SA1	1	PASI-O
35525749004	D20A009-04	SM 7110C-11	CLA	1	PASI-PA
		EPA 300.0	JDW	3	PASI-O
		EPA 353.2	MH1	1	PASI-O
		SM 5310B	SA1	1	PASI-O
35525749005	D20A009-05	SM 7110C-11	CLA	1	PASI-PA
		EPA 300.0	JDM	2	PASI-O
		EPA 353.2	MH1	1	PASI-O
		SM 5310B	SA1	1	PASI-O
35525749006	D20A009-06	SM 7110C-11	CLA	1	PASI-PA
		EPA 300.0	JDW	3	PASI-O
		EPA 353.2	MH1	1	PASI-O
		SM 5310B	SA1	1	PASI-O
35525749007	D20A009-07	SM 7110C-11	CLA	1	PASI-PA
		EPA 300.0	JDW	3	PASI-O
		EPA 353.2	MH1	1	PASI-O
		SM 5310B	SA1	1	PASI-O
35525749008	D20A009-08	SM 7110C-11	CLA	1	PASI-PA
		EPA 300.0	JDW	2	PASI-O
		EPA 353.2	MH1	1	PASI-O
		SM 5310B	SA1	1	PASI-O
35525749009	D20A009-09	SM 7110C-11	CLA	1	PASI-PA
		EPA 300.0	JDW	2	PASI-O
		EPA 353.2	MH1	1	PASI-O
		SM 5310B	SA1	1	PASI-O
35525749010	D20A009-10	SM 7110C-11	CLA	1	PASI-PA

### REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: D20A009  
Pace Project No.: 35525749

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
35525749011	D20A009-11	EPA 300.0	JDW	2	PASI-O
		EPA 353.2	MH1	1	PASI-O
		SM 5310B	SA1	1	PASI-O
		SM 7110C-11	CLA	1	PASI-PA
		EPA 300.0	JDW	3	PASI-O
35525749012	D20A009-12	EPA 353.2	MH1	1	PASI-O
		SM 5310B	SA1	1	PASI-O
		SM 7110C-11	CLA	1	PASI-PA
		EPA 300.0	JDW	3	PASI-O
35525749013	D20A009-13	EPA 353.2	MH1	1	PASI-O
		SM 5310B	SA1	1	PASI-O
		SM 7110C-11	CLA	1	PASI-PA
		EPA 300.0	JDW	2	PASI-O
35525749014	D20A009-14	EPA 353.2	MH1	1	PASI-O
		SM 5310B	SA1	1	PASI-O
		SM 7110C-11	CLA	1	PASI-PA
		EPA 300.0	JDW	3	PASI-O
		EPA 353.2	MH1	1	PASI-O
		SM 5310B	SA1	1	PASI-O

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: D20A009  
Pace Project No.: 35525749

**Sample: D20A009-04**      **Lab ID: 35525749004**      Collected: 01/15/20 15:37      Received: 01/22/20 11:30      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>3.3 I</b>	mg/L	5.0	2.5	1		02/01/20 08:00	16887-00-6	
Fluoride	<b>0.27</b>	mg/L	0.050	0.015	1		02/01/20 08:00	16984-48-8	
Sulfate	<b>2.5 U</b>	mg/L	5.0	2.5	1		02/01/20 08:00	14808-79-8	
<b>353.2 Nitrogen, NO2/NO3 pres.</b>		Analytical Method: EPA 353.2							
Nitrogen, NO2 plus NO3	<b>0.041 I</b>	mg/L	0.050	0.033	1		01/23/20 13:50		
<b>5310B TOC</b>		Analytical Method: SM 5310B							
Total Organic Carbon	<b>21.8</b>	mg/L	1.0	0.50	1		01/30/20 23:44	7440-44-0	

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## ANALYTICAL RESULTS

Project: D20A009  
Pace Project No.: 35525749

**Sample: D20A009-06**      **Lab ID: 35525749006**      Collected: 01/14/20 09:51      Received: 01/22/20 11:30      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>4.8 I</b>	mg/L	5.0	2.5	1		01/31/20 11:00	16887-00-6	
Fluoride	<b>0.097</b>	mg/L	0.050	0.015	1		01/31/20 11:00	16984-48-8	
Sulfate	<b>20.8</b>	mg/L	5.0	2.5	1		01/31/20 11:00	14808-79-8	
<b>353.2 Nitrogen, NO2/NO3 pres.</b>		Analytical Method: EPA 353.2							
Nitrogen, NO2 plus NO3	<b>0.033 U</b>	mg/L	0.050	0.033	1		01/23/20 13:55		
<b>5310B TOC</b>		Analytical Method: SM 5310B							
Total Organic Carbon	<b>6.3</b>	mg/L	1.0	0.50	1		01/31/20 00:17	7440-44-0	

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## ANALYTICAL RESULTS

Project: D20A009  
Pace Project No.: 35525749

Sample: D20A009-14      Lab ID: 35525749014      Collected: 01/16/20 10:37      Received: 01/22/20 11:30      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		01/31/20 15:23	16887-00-6	
Fluoride	0.015 U	mg/L	0.050	0.015	1		01/31/20 15:23	16984-48-8	
Sulfate	2.5 U	mg/L	5.0	2.5	1		01/31/20 15:23	14808-79-8	
<b>353.2 Nitrogen, NO2/NO3 pres.</b>									
Analytical Method: EPA 353.2									
Nitrogen, NO2 plus NO3	0.033 U	mg/L	0.050	0.033	1		01/23/20 14:25		
<b>5310B TOC</b>									
Analytical Method: SM 5310B									
Total Organic Carbon	0.50 U	mg/L	1.0	0.50	1		01/31/20 03:16	7440-44-0	

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**QUALITY CONTROL DATA**

Project: D20A009  
Pace Project No.: 35525749

QC Batch: 606238 Analysis Method: EPA 300.0  
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions  
Associated Lab Samples: 35525749001, 35525749002

METHOD BLANK: 3294393 Matrix: Water  
Associated Lab Samples: 35525749001, 35525749002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	2.5 U	5.0	2.5	01/30/20 12:48	
Sulfate	mg/L	2.5 U	5.0	2.5	01/30/20 12:48	

LABORATORY CONTROL SAMPLE: 3294394

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	48.1	96	90-110	
Sulfate	mg/L	50	47.8	96	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3294482 3294483

Parameter	Units	35525746001		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	Conc.										
Chloride	mg/L	8.9	50	50	57.6	57.7	98	98	90-110	0	20		
Sulfate	mg/L	29.5	50	50	80.9	80.9	103	103	90-110	0	20		

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### QUALITY CONTROL DATA

Project: D20A009  
Pace Project No.: 35525749

QC Batch: 606425 Analysis Method: EPA 300.0  
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions  
Associated Lab Samples: 35525749004, 35525749006, 35525749007, 35525749008, 35525749009, 35525749010, 35525749011, 35525749012, 35525749013, 35525749014

METHOD BLANK: 3295673 Matrix: Water  
Associated Lab Samples: 35525749003, 35525749004, 35525749005, 35525749006, 35525749007, 35525749008, 35525749009, 35525749010, 35525749011, 35525749012, 35525749013, 35525749014

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	2.5 U	5.0	2.5	01/31/20 09:11	
Fluoride	mg/L	0.015 U	0.050	0.015	01/31/20 09:11	
Sulfate	mg/L	2.5 U	5.0	2.5	01/31/20 09:11	

LABORATORY CONTROL SAMPLE: 3295674

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	47.0	94	90-110	
Fluoride	mg/L	5	4.8	97	90-110	
Sulfate	mg/L	50	46.7	93	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3296294 3296295

Parameter	Units	35525749006		3296295		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.						
Chloride	mg/L	4.8 I	50	50	52.2	52.2	95	95	90-110	0	20
Fluoride	mg/L	0.097	5	5	5.0	5.0	98	98	90-110	0	20
Sulfate	mg/L	20.8	50	50	70.9	71.0	100	100	90-110	0	20

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3296296 3296297

Parameter	Units	35527430001		3296297		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.						
Chloride	mg/L	7.2	50	50	54.9	55.6	95	97	90-110	1	20
Fluoride	mg/L	0.065	5	5	4.9	5.0	97	98	90-110	1	20
Sulfate	mg/L	22.8	50	50	72.5	73.0	99	100	90-110	1	20

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### QUALITY CONTROL DATA

Project: D20A009  
Pace Project No.: 35525749

QC Batch: 607359 Analysis Method: EPA 300.0  
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions  
Associated Lab Samples: 35525749003, 35525749005

METHOD BLANK: 3299791 Matrix: Water  
Associated Lab Samples: 35525749003, 35525749005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	2.5 U	5.0	2.5	02/04/20 12:38	
Sulfate	mg/L	2.5 U	5.0	2.5	02/04/20 12:38	

LABORATORY CONTROL SAMPLE: 3299792

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	46.9	94	90-110	
Sulfate	mg/L	50	46.6	93	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3299939 3299940

Parameter	Units	35525749003		3299940		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result							
Chloride	mg/L	36.6	100	100	140	139	103	102	90-110	1	20	
Sulfate	mg/L	191	100	100	309	304	118	113	90-110	2	20	J(M1), L

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3299941 3299942

Parameter	Units	50248176001		3299942		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result							
Chloride	mg/L	22.2	50	50	73.1	73.1	102	102	90-110	0	20	
Sulfate	mg/L	28.5	50	50	78.9	78.8	101	100	90-110	0	20	

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### QUALITY CONTROL DATA

Project: D20A009  
Pace Project No.: 35525749

QC Batch: 604286 Analysis Method: EPA 353.2  
QC Batch Method: EPA 353.2 Analysis Description: 353.2 Nitrate + Nitrite, preserved  
Associated Lab Samples: 35525749001, 35525749002, 35525749004, 35525749006, 35525749007, 35525749008, 35525749009, 35525749010

METHOD BLANK: 3284620 Matrix: Water  
Associated Lab Samples: 35525749001, 35525749002, 35525749003, 35525749004, 35525749005, 35525749006, 35525749007, 35525749008, 35525749009, 35525749010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	0.033 U	0.050	0.033	01/23/20 13:24	

LABORATORY CONTROL SAMPLE: 3284621

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	2	2.0	101	90-110	

MATRIX SPIKE SAMPLE: 3284623

Parameter	Units	35525736001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	1.0	2	2.8	89	90-110	J(M1)

MATRIX SPIKE SAMPLE: 3284625

Parameter	Units	35525749001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	0.048 I	2	1.7	84	90-110	J(M1)

SAMPLE DUPLICATE: 3284622

Parameter	Units	35525736001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	1.0	0.99	1	20	

SAMPLE DUPLICATE: 3284624

Parameter	Units	35525749001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	0.048 I	0.049 I		20	

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### QUALITY CONTROL DATA

Project: D20A009  
Pace Project No.: 35525749

QC Batch: 604288      Analysis Method: EPA 353.2  
QC Batch Method: EPA 353.2      Analysis Description: 353.2 Nitrate + Nitrite, preserved  
Associated Lab Samples: 35525749011, 35525749012, 35525749013, 35525749014

METHOD BLANK: 3284632      Matrix: Water  
Associated Lab Samples: 35525749011, 35525749012, 35525749013, 35525749014

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	0.033 U	0.050	0.033	01/23/20 14:02	

LABORATORY CONTROL SAMPLE: 3284633

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	2	2.0	100	90-110	

MATRIX SPIKE SAMPLE: 3284635

Parameter	Units	35525483001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	0.26	2	2.1	92	90-110	

MATRIX SPIKE SAMPLE: 3284637

Parameter	Units	35525749014 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	0.033 U	2	1.9	93	90-110	

SAMPLE DUPLICATE: 3284634

Parameter	Units	35525483001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	0.26	0.26	0	20	

SAMPLE DUPLICATE: 3284636

Parameter	Units	35525749014 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	0.033 U	0.033 U		20	

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### QUALITY CONTROL DATA

Project: D20A009  
Pace Project No.: 35525749

QC Batch: 607429 Analysis Method: EPA 353.2  
QC Batch Method: EPA 353.2 Analysis Description: 353.2 Nitrate + Nitrite, preserved  
Associated Lab Samples: 35525749003, 35525749005

METHOD BLANK: 3300044 Matrix: Water  
Associated Lab Samples: 35525749003, 35525749005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	0.033 U	0.050	0.033	02/04/20 15:36	

LABORATORY CONTROL SAMPLE: 3300045

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	2	2.0	99	90-110	

MATRIX SPIKE SAMPLE: 3300047

Parameter	Units	92463393017 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	6.9	10	16.3	94	90-110	

MATRIX SPIKE SAMPLE: 3300049

Parameter	Units	35527956003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	0.034 I	2	2.0	98	90-110	

SAMPLE DUPLICATE: 3300046

Parameter	Units	92463393017 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	6.9	7.0	1	20	

SAMPLE DUPLICATE: 3300048

Parameter	Units	35527956003 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	0.034 I	0.033 U		20	

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### QUALITY CONTROL DATA

Project: D20A009  
Pace Project No.: 35525749

QC Batch: 606077 Analysis Method: SM 5310B  
QC Batch Method: SM 5310B Analysis Description: 5310B TOC  
Associated Lab Samples: 35525749001, 35525749002, 35525749004, 35525749006, 35525749007, 35525749008, 35525749009, 35525749010, 35525749011, 35525749012, 35525749013, 35525749014

METHOD BLANK: 3293757 Matrix: Water  
Associated Lab Samples: 35525749001, 35525749002, 35525749003, 35525749004, 35525749005, 35525749006, 35525749007, 35525749008, 35525749009, 35525749010, 35525749011, 35525749012, 35525749013, 35525749014

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Organic Carbon	mg/L	0.50 U	1.0	0.50	01/30/20 20:55	

LABORATORY CONTROL SAMPLE: 3293758

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	20	18.9	95	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3293759 3293760

Parameter	Units	35527017002 Result	MS	MSD	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	Spike Conc.								
Total Organic Carbon	mg/L	0.65 I	20	20	22.2	22.6	95	97	80-120	2	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3293761 3293762

Parameter	Units	35525749009 Result	MS	MSD	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	Spike Conc.								
Total Organic Carbon	mg/L	40.1	20	20	58.6	59.0	93	95	80-120	1	20	

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### QUALITY CONTROL DATA

Project: D20A009  
Pace Project No.: 35525749

QC Batch: 607627      Analysis Method: SM 5310B  
QC Batch Method: SM 5310B      Analysis Description: 5310B TOC  
Associated Lab Samples: 35525749003, 35525749005

METHOD BLANK: 3301493      Matrix: Water  
Associated Lab Samples: 35525749003, 35525749005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Organic Carbon	mg/L	0.50 U	1.0	0.50	02/05/20 09:45	

LABORATORY CONTROL SAMPLE: 3301494

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	20	18.9	95	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3301495      3301496

Parameter	Units	35525749003		3301495		3301496		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec				
Total Organic Carbon	mg/L	6.7	20	20	26.5	26.6	99	100	80-120	1	20

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3301497      3301498

Parameter	Units	35528121003		3301497		3301498		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec				
Total Organic Carbon	mg/L	1.4	20	20	20.3	20.3	95	95	80-120	0	20

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**ANALYTICAL RESULTS - RADIOCHEMISTRY**

Project: D20A009

Pace Project No.: 35525749

<b>Sample: D20A009-04</b>		<b>Lab ID: 35525749004</b>	Collected: 01/15/20 15:37	Received: 01/22/20 11:30	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC)	Carr Trac	Units	Analyzed	CAS No.	Qual
Gross Alpha	SM 7110C-11	<b>2.04U ± 1.10 (2.04)</b>		pCi/L	01/29/20 16:20	12587-46-1	
		C:NA T:NA					

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**ANALYTICAL RESULTS - RADIOCHEMISTRY**

Project: D20A009

Pace Project No.: 35525749

<b>Sample: D20A009-06</b>		<b>Lab ID: 35525749006</b>	Collected: 01/14/20 09:51	Received: 01/22/20 11:30	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC)	Carr Trac	Units	Analyzed	CAS No.	Qual
Gross Alpha	SM 7110C-11	<b>1.63U ± 1.04</b>	<b>(1.63)</b>	pCi/L	01/29/20 16:28	12587-46-1	
		<b>C:NA T:NA</b>					

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**ANALYTICAL RESULTS - RADIOCHEMISTRY**

Project: D20A009

Pace Project No.: 35525749

<b>Sample: D20A009-14</b>		<b>Lab ID: 35525749014</b>	Collected: 01/16/20 10:37	Received: 01/22/20 11:30	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC) Carr Trac		Units	Analyzed	CAS No.	Qual
Gross Alpha	SM 7110C-11	2.25U ± 1.07 (2.25) C:NA T:NA		pCi/L	01/29/20 16:20	12587-46-1	

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: D20A009

Pace Project No.: 35525749

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QC Batch:	381374	Analysis Method:	SM 7110C-11
QC Batch Method:	SM 7110C-11	Analysis Description:	7110C Gross Alpha
Associated Lab Samples:	35525749001, 35525749002, 35525749003, 35525749004, 35525749005, 35525749006, 35525749007, 35525749008, 35525749009, 35525749010, 35525749011, 35525749012, 35525749013, 35525749014		

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METHOD BLANK:	1848321	Matrix:	Water
Associated Lab Samples:	35525749001, 35525749002, 35525749003, 35525749004, 35525749005, 35525749006, 35525749007, 35525749008, 35525749009, 35525749010, 35525749011, 35525749012, 35525749013, 35525749014		

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Gross Alpha	-0.272 ± 0.253 (0.576) C:NA T:NA	pCi/L	01/29/20 16:28	

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## QUALIFIERS

Project: D20A009  
Pace Project No.: 35525749

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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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without the written consent of Pace Analytical Services, LLC.

### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: D20A009  
Pace Project No.: 35525749

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
35525749001	D20A009-01	SM 7110C-11	381374		
35525749002	D20A009-02	SM 7110C-11	381374		
35525749003	D20A009-03	SM 7110C-11	381374		
35525749004	D20A009-04	SM 7110C-11	381374		
35525749005	D20A009-05	SM 7110C-11	381374		
35525749006	D20A009-06	SM 7110C-11	381374		
35525749007	D20A009-07	SM 7110C-11	381374		
35525749008	D20A009-08	SM 7110C-11	381374		
35525749009	D20A009-09	SM 7110C-11	381374		
35525749010	D20A009-10	SM 7110C-11	381374		
35525749011	D20A009-11	SM 7110C-11	381374		
35525749012	D20A009-12	SM 7110C-11	381374		
35525749013	D20A009-13	SM 7110C-11	381374		
35525749014	D20A009-14	SM 7110C-11	381374		
35525749001	D20A009-01	EPA 300.0	606238		
35525749002	D20A009-02	EPA 300.0	606238		
35525749003	D20A009-03	EPA 300.0	607359		
35525749004	D20A009-04	EPA 300.0	606425		
35525749005	D20A009-05	EPA 300.0	607359		
35525749006	D20A009-06	EPA 300.0	606425		
35525749007	D20A009-07	EPA 300.0	606425		
35525749008	D20A009-08	EPA 300.0	606425		
35525749009	D20A009-09	EPA 300.0	606425		
35525749010	D20A009-10	EPA 300.0	606425		
35525749011	D20A009-11	EPA 300.0	606425		
35525749012	D20A009-12	EPA 300.0	606425		
35525749013	D20A009-13	EPA 300.0	606425		
35525749014	D20A009-14	EPA 300.0	606425		
35525749001	D20A009-01	EPA 353.2	604286		
35525749002	D20A009-02	EPA 353.2	604286		
35525749003	D20A009-03	EPA 353.2	607429		
35525749004	D20A009-04	EPA 353.2	604286		
35525749005	D20A009-05	EPA 353.2	607429		
35525749006	D20A009-06	EPA 353.2	604286		
35525749007	D20A009-07	EPA 353.2	604286		
35525749008	D20A009-08	EPA 353.2	604286		
35525749009	D20A009-09	EPA 353.2	604286		
35525749010	D20A009-10	EPA 353.2	604286		
35525749011	D20A009-11	EPA 353.2	604288		
35525749012	D20A009-12	EPA 353.2	604288		
35525749013	D20A009-13	EPA 353.2	604288		
35525749014	D20A009-14	EPA 353.2	604288		
35525749001	D20A009-01	SM 5310B	606077		

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: D20A009  
Pace Project No.: 35525749

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
35525749002	D20A009-02	SM 5310B	606077		
35525749003	D20A009-03	SM 5310B	607627		
35525749004	D20A009-04	SM 5310B	606077		
35525749005	D20A009-05	SM 5310B	607627		
35525749006	D20A009-06	SM 5310B	606077		
35525749007	D20A009-07	SM 5310B	606077		
35525749008	D20A009-08	SM 5310B	606077		
35525749009	D20A009-09	SM 5310B	606077		
35525749010	D20A009-10	SM 5310B	606077		
35525749011	D20A009-11	SM 5310B	606077		
35525749012	D20A009-12	SM 5310B	606077		
35525749013	D20A009-13	SM 5310B	606077		
35525749014	D20A009-14	SM 5310B	606077		

### REPORT OF LABORATORY ANALYSIS

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SUBCONTRACT ORDER  
Deerhaven Generating Station  
D20A009

WO# : 35525749  
35525749

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: D20A009-01</b>	<b>Water</b>	<b>Sampled: 15-Jan-20 12:17</b>	
D_Anions - Sulfates	12-Feb-20 12:17		
D_Gross Alpha	09-Jul-20 12:17		Cond = 534.7
D_NO3/NO2	12-Feb-20 12:17		
D_TOC	12-Feb-20 12:17		
D_Anions - Chlorides	12-Feb-20 12:17		
<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: MWB-2-1 (R2T1)</b>			
<b>Sample ID: D20A009-02</b>	<b>Water</b>	<b>Sampled: 14-Jan-20 15:08</b>	
D_Gross Alpha	08-Jul-20 15:08		Cond = 46.67
D_NO3/NO2	11-Feb-20 15:08		
D_Anions - Sulfates	11-Feb-20 15:08		
D_Anions - Chlorides	11-Feb-20 15:08		
D_TOC	11-Feb-20 15:08		
<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)			

ecoc ✓  
GPA only

Released By: Kimberly Morrison Date: 1/21/20  
 Received By: AS Pale Date: 1/22/20 1130  
 Released By: \_\_\_\_\_ Date: \_\_\_\_\_  
 Received By: \_\_\_\_\_ Date: \_\_\_\_\_  
 M2 T353



**SUBCONTRACT ORDER**  
**Deerhaven Generating Station**  
**D20A009**

Analysis	Expires	Laboratory ID	Comments
<b>Sample Name: MWI-3-7 (R3T7)</b>			
<b>Sample ID: D20A009-03</b>	<b>Water</b>	<b>Sampled: 17-Jan-20 14:28</b>	
D_TOC	14-Feb-20 14:28		
D_Gross Alpha	11-Jul-20 14:28		Cond = 835.1
D_NO3/NO2	14-Feb-20 14:28		
D_Anions - Chlorides	14-Feb-20 14:28		
D_Anions - Sulfates	14-Feb-20 14:28		
<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: D20A009-04</b>	<b>Water</b>	<b>Sampled: 15-Jan-20 15:37</b>	
D_Gross Alpha	09-Jul-20 15:37		Cond = 804.1
D_NO3/NO2	12-Feb-20 15:37		
D_Anions - Chlorides	12-Feb-20 15:37		
D_Anions - Fluoride	12-Feb-20 15:37		
D_Anions - Sulfates	12-Feb-20 15:37		
D_TOC	12-Feb-20 15:37		
<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: D20A009-05</b>	<b>Water</b>	<b>Sampled: 14-Jan-20 09:00</b>	
D_Gross Alpha	08-Jul-20 09:00		Cond = 675.8
D_NO3/NO2	11-Feb-20 09:00		
D_Anions - Chlorides	11-Feb-20 09:00		
D_Anions - Sulfates	11-Feb-20 09:00		
D_TOC	11-Feb-20 09:00		
<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: Kimberly Morrison Date: 1/21/20
 Received By: AS/Pace Date: 1/22/20

Released By: \_\_\_\_\_ Date: \_\_\_\_\_
 Received By: WJ Date: 1-23



**SUBCONTRACT ORDER**  
**Deerhaven Generating Station**  
**D20A009**

Analysis	Expires	Laboratory ID	Comments
<b>Sample Name: MWI-6-4 (R6T4B)</b>			
<b>Sample ID: D20A009-06</b>	<b>Water</b>	<b>Sampled: 14-Jan-20 09:51</b>	
D_Anions - Chlorides	11-Feb-20 09:51		
D_TOC	11-Feb-20 09:51		
D_NO3/NO2	11-Feb-20 09:51		
D_Gross Alpha	08-Jul-20 09:51		Cond = 389.2
D_Anions - Fluoride	11-Feb-20 09:51		
D_Anions - Sulfates	11-Feb-20 09:51		
<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: D20A009-07</b>	<b>Water</b>	<b>Sampled: 17-Jan-20 12:08</b>	
D_Anions - Fluoride	14-Feb-20 12:08		
D_Gross Alpha	11-Jul-20 12:08		Cond = 676.5
D_NO3/NO2	14-Feb-20 12:08		
D_TOC	14-Feb-20 12:08		
D_Anions - Chlorides	14-Feb-20 12:08		
D_Anions - Sulfates	14-Feb-20 12:08		
<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: D20A009-08</b>	<b>Water</b>	<b>Sampled: 18-Jan-20 12:04</b>	
D_Anions - Sulfates	15-Feb-20 12:04		
D_TOC	15-Feb-20 12:04		
D_NO3/NO2	15-Feb-20 12:04		
D_Gross Alpha	12-Jul-20 12:04		Cond = 176.3
D_Anions - Chlorides	15-Feb-20 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)			

<i>Kimberly Korman</i>	<i>1/21/20</i>	<i>AS/pulle</i>	<i>1/22/20 1130</i>
Released By	Date	Received By	Date
			<i>7-853 112</i>
Released By	Date	Received By	Date





**SUBCONTRACT ORDER**  
**Deerhaven Generating Station**  
**D20A009**

Analysis	Expires	Laboratory ID	Comments
<b>Sample Name: MWC-8-10 (R8T10)</b>			
<b>Sample ID: D20A009-09</b>	<b>Water</b>	<b>Sampled: 18-Jan-20 15:17</b>	
D_Anions - Chlorides	15-Feb-20 15:17		
D_Anions - Sulfates	15-Feb-20 15:17		
D_TOC	15-Feb-20 15:17		
D_Gross Alpha	12-Jul-20 15:17		Cond = 437.8
D_NO3/NO2	15-Feb-20 15:17		
<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: MWI-9-5 (R9T5B)</b>			
<b>Sample ID: D20A009-10</b>	<b>Water</b>	<b>Sampled: 17-Jan-20 10:07</b>	
D_Anions - Chlorides	14-Feb-20 10:07		
D_Gross Alpha	11-Jul-20 10:07		Cond = 533.7
D_NO3/NO2	14-Feb-20 10:07		
D_Anions - Sulfates	14-Feb-20 10:07		
D_TOC	14-Feb-20 10:07		
<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: D20A009-11</b>	<b>Water</b>	<b>Sampled: 18-Jan-20 08:27</b>	
D_Anions - Chlorides	15-Feb-20 08:27		
D_Anions - Sulfates	15-Feb-20 08:27		
D_Gross Alpha	12-Jul-20 08:27		Cond = 123.5
D_NO3/NO2	15-Feb-20 08:27		
D_Anions - Fluoride	15-Feb-20 08:27		
D_TOC	15-Feb-20 08:27		
<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: Kimberly R. Morrison Date: 1/21/20
 Received By: AS/pave Date: 1/22/20 11:30  
 Released By: \_\_\_\_\_ Date: \_\_\_\_\_
 Received By: \_\_\_\_\_ Date: 1/22/20 11:53



**SUBCONTRACT ORDER**  
**Deerhaven Generating Station**  
**D20A009**

Analysis	Expires	Laboratory ID	Comments
<b>Sample Name: MWC-11-4 (R11T4B)</b>			
<b>Sample ID: D20A009-12</b>	<b>Water</b>	<b>Sampled: 18-Jan-20 10:09</b>	
D_Anions - Fluoride	15-Feb-20 10:09		
D_Gross Alpha	12-Jul-20 10:09		Cond = 280.9
D_Anions - Sulfates	15-Feb-20 10:09		
D_Anions - Chlorides	15-Feb-20 10:09		
D_TOC	15-Feb-20 10:09		
D_NO3/NO2	15-Feb-20 10:09		
<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: D20A009-13</b>	<b>Water</b>	<b>Sampled: 17-Jan-20 15:15</b>	
D_Anions - Chlorides	14-Feb-20 15:15		
D_Anions - Sulfates	14-Feb-20 15:15		
D_Gross Alpha	11-Jul-20 15:15		Cond = 491.6
D_TOC	14-Feb-20 15:15		
D_NO3/NO2	14-Feb-20 15:15		
<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: D20A009-14</b>	<b>Water</b>	<b>Sampled: 16-Jan-20 10:37</b>	
D_NO3/NO2	13-Feb-20 10:37		
D_Anions - Sulfates	13-Feb-20 10:37		
D_Anions - Fluoride	13-Feb-20 10:37		
D_TOC	13-Feb-20 10:37		
D_Gross Alpha	10-Jul-20 10:37		Cond = 0.959
D_Anions - Chlorides	13-Feb-20 10:37		
<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: Kimberly Morris      Date: 1/21/20      Received By: AS/PALE      Date: 1/22/20 11:30  
 (with handwritten note: T253 11/2)

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

**WO#: 35525749**

m (SCUR)

Project #  
Project Manager:  
Client:

PM: JSB Due Date: 02/07/20  
CLIENT: DEELAB

Date and Initials of person:  
Examining contents: JSB  
Label: \_\_\_\_\_  
Deliver: \_\_\_\_\_  
pH: \_\_\_\_\_

Thermometer Used: T-353 Date: 1-22-20 Time: 1154 Initials: JRB

State of Origin: \_\_\_\_\_  For WV projects, all containers verified to  $\leq 6^\circ\text{C}$

Cooler #1 Temp. °C 10.9 (Visual) +0.1 (Correction Factor) 11.0 (Actual) Metaph  Samples on ice, cooling process has begun  
Cooler #2 Temp. °C 11.1 (Visual) +0.1 (Correction Factor) 11.2 (Actual) Pads  Samples on ice, cooling process has begun  
Cooler #3 Temp. °C 11.0 (Visual) +0.1 (Correction Factor) 11.1 (Actual) Pads  Samples on ice, cooling process has begun  
T-353 Cooler #4 Temp. °C 11 (Visual) +0.1 (Correction Factor) 11.1 (Actual) Cooler  Samples on ice, cooling process has begun  
Cooler #5 Temp. °C \_\_\_\_\_ (Visual) \_\_\_\_\_ (Correction Factor) \_\_\_\_\_ (Actual)  Samples on ice, cooling process has begun  
Cooler #6 Temp. °C \_\_\_\_\_ (Visual) \_\_\_\_\_ (Correction Factor) \_\_\_\_\_ (Actual)  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 # 8139 3749 9950 19927 19938

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	<p>Preservation Information: Preservative: _____ Lot #/Trace #: _____ Date: _____ Time: _____ Initials: _____</p>
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 type="checkbox"/> No <input 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 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: 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 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): Temp ok

Project Manager Review: \_\_\_\_\_ Date: \_\_\_\_\_



*Kanapaha Laboratory*

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

Florida Department of Health Certification E52099

September 03, 2020

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 7/28/2020. 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: D20G028  
Project Manager: Jeff Boudreau

**Reported:**  
09/03/2020 13:33

**ANALYTICAL REPORT FOR SAMPLES**

<b>Laboratory ID</b>	<b>Sample ID</b>	<b>Matrix</b>	<b>Date Sampled</b>	<b>Date Received</b>
K20H009-01	D20G028-01 (LF-1)	Groundwater	07/23/2020 08:12	07/28/2020 11:30
K20H009-02	D20G028-02 (LF-2)	Groundwater	07/23/2020 12:04	07/28/2020 11:30
K20H009-03	D20G028-03 (LF-3)	Groundwater	07/23/2020 11:06	07/28/2020 11:30
K20H009-04	D20G028-04 (LF-4)	Groundwater	07/23/2020 10:10	07/28/2020 11:30
K20H009-05	D20G028-05 (SIS-1)	Groundwater	07/22/2020 13:11	07/28/2020 11:30
K20H009-06	D20G028-06 (SIS-2)	Groundwater	07/23/2020 13:36	07/28/2020 11:30
K20H009-07	D20G028-07 (SIS-3)	Groundwater	07/22/2020 15:12	07/28/2020 11:30
K20H009-08	D20G028-08 (SIS-4)	Groundwater	07/22/2020 16:52	07/28/2020 11:30
K20H009-09	D20G028-12 (LF-7)	Groundwater	07/23/2020 09:18	07/28/2020 11:30



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

Project: Environmental  
Project Number: D20G028  
Project Manager: Jeff Boudreau

**Reported:**  
09/03/2020 13:33

**D20G028-01 (LF-1)**  
**K20H009-01 (Groundwater, Grab)**  
Collected: 07/23/2020 8:12 am

Analyte	Result	Qual	MDL	PQL	Units	Dil	Prepared	Analyzed	Method
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**Laboratory: Kanapaha Laboratory**

**Metals by EPA 200 Series Methods**

Arsenic	2.5	U	2.5	10.0	ug/L	1	08/04/2020	08/25/2020	EPA 200.7
Barium	360		0.2	0.8	ug/L	1	08/04/2020	08/25/2020	EPA 200.7
Beryllium	0.10	U	0.10	0.40	ug/L	1	08/04/2020	08/25/2020	EPA 200.7
Cadmium	0.3	U	0.3	1.2	ug/L	1	08/04/2020	08/25/2020	EPA 200.7
Calcium	82.9		0.10	0.40	mg/L	1	08/04/2020	08/20/2020	EPA 200.7
Chromium	1.2	U	1.2	4.8	ug/L	1	08/04/2020	08/25/2020	EPA 200.7
Cobalt	1.0	U	1.0	4.0	ug/L	1	08/04/2020	08/25/2020	EPA 200.7
Lead	3.0	U	3.0	12.0	ug/L	1	08/04/2020	08/25/2020	EPA 200.7
Molybdenum	32.7		2.5	10.0	ug/L	1	08/04/2020	08/25/2020	EPA 200.7
Selenium	4.0	U	4.0	16.0	ug/L	1	08/04/2020	08/25/2020	EPA 200.7
Mercury	0.100	U	0.100	0.400	ug/L	1	08/04/2020	08/04/2020	EPA 245.1

**D20G028-02 (LF-2)**  
**K20H009-02 (Groundwater, Grab)**  
Collected: 07/23/2020 12:04 pm

Analyte	Result	Qual	MDL	PQL	Units	Dil	Prepared	Analyzed	Method
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**Laboratory: Kanapaha Laboratory**

**Metals by EPA 200 Series Methods**

Arsenic	2.5	U	2.5	10.0	ug/L	1	08/04/2020	08/25/2020	EPA 200.7
Barium	36.4		0.2	0.8	ug/L	1	08/04/2020	08/25/2020	EPA 200.7
Beryllium	0.14	I	0.10	0.40	ug/L	1	08/04/2020	08/25/2020	EPA 200.7
Cadmium	0.3	U	0.3	1.2	ug/L	1	08/04/2020	08/25/2020	EPA 200.7
Calcium	16.3		0.10	0.40	mg/L	1	08/04/2020	08/20/2020	EPA 200.7
Chromium	4.2	I	1.2	4.8	ug/L	1	08/04/2020	08/25/2020	EPA 200.7
Cobalt	5.0		1.0	4.0	ug/L	1	08/04/2020	08/25/2020	EPA 200.7
Lead	3.0	U	3.0	12.0	ug/L	1	08/04/2020	08/25/2020	EPA 200.7
Molybdenum	2.5	U	2.5	10.0	ug/L	1	08/04/2020	08/25/2020	EPA 200.7
Selenium	4.0	U	4.0	16.0	ug/L	1	08/04/2020	08/25/2020	EPA 200.7
Mercury	0.100	U	0.100	0.400	ug/L	1	08/04/2020	08/04/2020	EPA 245.1



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

Project: Environmental  
Project Number: D20G028  
Project Manager: Jeff Boudreau

**Reported:**  
09/03/2020 13:33

**D20G028-03 (LF-3)**  
**K20H009-03 (Groundwater, Grab)**  
Collected: 07/23/2020 11:06 am

Analyte	Result	Qual	MDL	PQL	Units	Dil	Prepared	Analyzed	Method
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**Laboratory: Kanapaha Laboratory**

**Metals by EPA 200 Series Methods**

Arsenic	2.5	U	2.5	10.0	ug/L	1	08/04/2020	08/25/2020	EPA 200.7
Barium	62.1		0.2	0.8	ug/L	1	08/04/2020	08/25/2020	EPA 200.7
Beryllium	0.10	U	0.10	0.40	ug/L	1	08/04/2020	08/25/2020	EPA 200.7
Cadmium	0.3	U	0.3	1.2	ug/L	1	08/04/2020	08/25/2020	EPA 200.7
Calcium	15.2		0.10	0.40	mg/L	1	08/04/2020	08/20/2020	EPA 200.7
Chromium	7.1		1.2	4.8	ug/L	1	08/04/2020	08/25/2020	EPA 200.7
Cobalt	1.0	U	1.0	4.0	ug/L	1	08/04/2020	08/25/2020	EPA 200.7
Lead	3.0	U	3.0	12.0	ug/L	1	08/04/2020	08/25/2020	EPA 200.7
Molybdenum	2.5	U	2.5	10.0	ug/L	1	08/04/2020	08/25/2020	EPA 200.7
Selenium	4.0	U	4.0	16.0	ug/L	1	08/04/2020	08/25/2020	EPA 200.7
Mercury	0.100	U	0.100	0.400	ug/L	1	08/04/2020	08/04/2020	EPA 245.1

**D20G028-04 (LF-4)**  
**K20H009-04 (Groundwater, Grab)**  
Collected: 07/23/2020 10:10 am

Analyte	Result	Qual	MDL	PQL	Units	Dil	Prepared	Analyzed	Method
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**Laboratory: Kanapaha Laboratory**

**Metals by EPA 200 Series Methods**

Arsenic	2.5	U	2.5	10.0	ug/L	1	08/04/2020	08/25/2020	EPA 200.7
Barium	39.4		0.2	0.8	ug/L	1	08/04/2020	08/25/2020	EPA 200.7
Beryllium	0.10	U	0.10	0.40	ug/L	1	08/04/2020	08/25/2020	EPA 200.7
Cadmium	0.3	U	0.3	1.2	ug/L	1	08/04/2020	08/25/2020	EPA 200.7
Calcium	12.0		0.10	0.40	mg/L	1	08/04/2020	08/20/2020	EPA 200.7
Chromium	1.7	I	1.2	4.8	ug/L	1	08/04/2020	08/25/2020	EPA 200.7
Cobalt	1.5	I	1.0	4.0	ug/L	1	08/04/2020	08/25/2020	EPA 200.7
Lead	3.0	U	3.0	12.0	ug/L	1	08/04/2020	08/25/2020	EPA 200.7
Molybdenum	2.5	U	2.5	10.0	ug/L	1	08/04/2020	08/25/2020	EPA 200.7
Selenium	4.0	U	4.0	16.0	ug/L	1	08/04/2020	08/25/2020	EPA 200.7
Mercury	0.100	U	0.100	0.400	ug/L	1	08/04/2020	08/04/2020	EPA 245.1



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

Project: Environmental  
Project Number: D20G028  
Project Manager: Jeff Boudreau

**Reported:**  
09/03/2020 13:33

**D20G028-05 (SIS-1)**  
**K20H009-05 (Groundwater, Grab)**  
Collected: 07/22/2020 1:11 pm

Analyte	Result	Qual	MDL	PQL	Units	Dil	Prepared	Analyzed	Method
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**Laboratory: Kanapaha Laboratory**

**Metals by EPA 200 Series Methods**

Arsenic	2.5	U	2.5	10.0	ug/L	1	08/04/2020	08/25/2020	EPA 200.7
Barium	18.5		0.2	0.8	ug/L	1	08/04/2020	08/25/2020	EPA 200.7
Beryllium	0.10	U	0.10	0.40	ug/L	1	08/04/2020	08/25/2020	EPA 200.7
Cadmium	0.3	U	0.3	1.2	ug/L	1	08/04/2020	08/25/2020	EPA 200.7
Calcium	63.5		0.10	0.40	mg/L	1	08/04/2020	08/20/2020	EPA 200.7
Chromium	1.2	U	1.2	4.8	ug/L	1	08/04/2020	08/25/2020	EPA 200.7
Cobalt	1.0	U	1.0	4.0	ug/L	1	08/04/2020	08/25/2020	EPA 200.7
Lead	3.0	U	3.0	12.0	ug/L	1	08/04/2020	08/25/2020	EPA 200.7
Molybdenum	2.5	U	2.5	10.0	ug/L	1	08/04/2020	08/25/2020	EPA 200.7
Selenium	4.0	U	4.0	16.0	ug/L	1	08/04/2020	08/25/2020	EPA 200.7
Mercury	0.100	U	0.100	0.400	ug/L	1	08/04/2020	08/04/2020	EPA 245.1

**D20G028-06 (SIS-2)**  
**K20H009-06 (Groundwater, Grab)**  
Collected: 07/23/2020 1:36 pm

Analyte	Result	Qual	MDL	PQL	Units	Dil	Prepared	Analyzed	Method
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**Laboratory: Kanapaha Laboratory**

**Metals by EPA 200 Series Methods**

Arsenic	2.5	U	2.5	10.0	ug/L	1	08/04/2020	08/25/2020	EPA 200.7
Barium	7.1		0.2	0.8	ug/L	1	08/04/2020	08/25/2020	EPA 200.7
Beryllium	0.10	U	0.10	0.40	ug/L	1	08/04/2020	08/25/2020	EPA 200.7
Cadmium	0.3	U	0.3	1.2	ug/L	1	08/04/2020	08/25/2020	EPA 200.7
Calcium	76.4		0.10	0.40	mg/L	1	08/04/2020	08/20/2020	EPA 200.7
Chromium	1.2	U	1.2	4.8	ug/L	1	08/04/2020	08/25/2020	EPA 200.7
Cobalt	1.0	U	1.0	4.0	ug/L	1	08/04/2020	08/25/2020	EPA 200.7
Lead	3.0	U	3.0	12.0	ug/L	1	08/04/2020	08/25/2020	EPA 200.7
Molybdenum	2.5	U	2.5	10.0	ug/L	1	08/04/2020	08/25/2020	EPA 200.7
Selenium	4.0	U	4.0	16.0	ug/L	1	08/04/2020	08/25/2020	EPA 200.7
Mercury	0.100	U	0.100	0.400	ug/L	1	08/04/2020	08/04/2020	EPA 245.1





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

Project: Environmental  
Project Number: D20G028  
Project Manager: Jeff Boudreau

**Reported:**  
09/03/2020 13:33

**D20G028-07 (SIS-3)**  
**K20H009-07 (Groundwater, Grab)**  
Collected: 07/22/2020 3:12 pm

Analyte	Result	Qual	MDL	PQL	Units	Dil	Prepared	Analyzed	Method
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**Laboratory: Kanapaha Laboratory**

**Metals by EPA 200 Series Methods**

Arsenic	2.5	U	2.5	10.0	ug/L	1	08/04/2020	08/25/2020	EPA 200.7
Barium	22.9		0.2	0.8	ug/L	1	08/04/2020	08/25/2020	EPA 200.7
Beryllium	0.10	U	0.10	0.40	ug/L	1	08/04/2020	08/25/2020	EPA 200.7
Cadmium	0.3	U	0.3	1.2	ug/L	1	08/04/2020	08/25/2020	EPA 200.7
Calcium	71.1		0.10	0.40	mg/L	1	08/04/2020	08/20/2020	EPA 200.7
Chromium	1.2	U	1.2	4.8	ug/L	1	08/04/2020	08/25/2020	EPA 200.7
Cobalt	1.0	U	1.0	4.0	ug/L	1	08/04/2020	08/25/2020	EPA 200.7
Lead	3.0	U	3.0	12.0	ug/L	1	08/04/2020	08/25/2020	EPA 200.7
Molybdenum	2.5	U	2.5	10.0	ug/L	1	08/04/2020	08/25/2020	EPA 200.7
Selenium	4.0	U	4.0	16.0	ug/L	1	08/04/2020	08/25/2020	EPA 200.7
Mercury	0.100	U	0.100	0.400	ug/L	1	08/04/2020	08/04/2020	EPA 245.1

**D20G028-08 (SIS-4)**  
**K20H009-08 (Groundwater, Grab)**  
Collected: 07/22/2020 4:52 pm

Analyte	Result	Qual	MDL	PQL	Units	Dil	Prepared	Analyzed	Method
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**Laboratory: Kanapaha Laboratory**

**Metals by EPA 200 Series Methods**

Arsenic	2.5	U	2.5	10.0	ug/L	1	08/04/2020	08/25/2020	EPA 200.7
Barium	13.2		0.2	0.8	ug/L	1	08/04/2020	08/25/2020	EPA 200.7
Beryllium	0.10	U	0.10	0.40	ug/L	1	08/04/2020	08/25/2020	EPA 200.7
Cadmium	0.3	U	0.3	1.2	ug/L	1	08/04/2020	08/25/2020	EPA 200.7
Calcium	77.6		0.10	0.40	mg/L	1	08/04/2020	08/20/2020	EPA 200.7
Chromium	1.2	U	1.2	4.8	ug/L	1	08/04/2020	08/25/2020	EPA 200.7
Cobalt	1.0	U	1.0	4.0	ug/L	1	08/04/2020	08/25/2020	EPA 200.7
Lead	3.0	U	3.0	12.0	ug/L	1	08/04/2020	08/25/2020	EPA 200.7
Molybdenum	2.5	U	2.5	10.0	ug/L	1	08/04/2020	08/25/2020	EPA 200.7
Selenium	4.0	U	4.0	16.0	ug/L	1	08/04/2020	08/25/2020	EPA 200.7
Mercury	0.100	U	0.100	0.400	ug/L	1	08/04/2020	08/04/2020	EPA 245.1



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

Project: Environmental  
Project Number: D20G028  
Project Manager: Jeff Boudreau

**Reported:**  
09/03/2020 13:33

### 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
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#### Batch B20H017 - MERCURY

**Blank (B20H017-BLK1)** Prepared & Analyzed: 8/4/2020

Mercury	0.100	U	0.100	0.400	ug/L						
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**LCS (B20H017-BS1)** Prepared & Analyzed: 8/4/2020

Mercury	1.99		0.100	0.400	ug/L	2.00		99.6	90-110		
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**Duplicate (B20H017-DUP1)** Source: K20H009-09 Prepared & Analyzed: 8/4/2020

Mercury	0.100	U	0.100	0.400	ug/L		ND				NR
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**Duplicate (B20H017-DUP2)** Source: K20G072-01 Prepared & Analyzed: 8/4/2020

Mercury	10.4		0.500	2.00	ug/L		10.6				0.861
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**Matrix Spike (B20H017-MS1)** Source: K20H009-09 Prepared & Analyzed: 8/4/2020

Mercury	2.00		0.100	0.400	ug/L	2.00	ND	100	90-110		
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**Matrix Spike (B20H017-MS2)** Source: K20G072-01 Prepared & Analyzed: 8/4/2020

Mercury	30.6		1.00	4.00	ug/L	20.0	10.6	100	90-110		
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#### Batch B20H019 - EPA 200.7

**Blank (B20H019-BLK1)** Prepared: 8/4/2020 Analyzed: 8/25/2020

Lead	3.0	U	3.0	12.0	ug/L						
Beryllium	0.10	U	0.10	0.40	ug/L						
Cobalt	1.0	U	1.0	4.0	ug/L						
Chromium	1.2	U	1.2	4.8	ug/L						
Cadmium	0.3	U	0.3	1.2	ug/L						
Calcium	0.10	U	0.10	0.40	mg/L						
Arsenic	2.5	U	2.5	10.0	ug/L						
Barium	0.2	U	0.2	0.8	ug/L						
Selenium	4.0	U	4.0	16.0	ug/L						
Molybdenum	2.5	U	2.5	10.0	ug/L						

**LCS (B20H019-BS1)** Prepared: 8/4/2020 Analyzed: 8/20/2020

Calcium	25.5				mg/L	25.0		102	90-110		
Cadmium	99.6				ug/L	101		98.6	90-110		
Beryllium	102				ug/L	100		102	90-110		
Chromium	96.0				ug/L	100		96.0	90-110		
Arsenic	105				ug/L	100		105	90-110		
Barium	98.6				ug/L	100		98.6	90-110		
Molybdenum	93.9				ug/L	100		93.9	90-110		



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

Project: Environmental  
Project Number: D20G028  
Project Manager: Jeff Boudreau

**Reported:**  
09/03/2020 13:33

## 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
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#### Batch B20H019 - EPA 200.7 (Continued)

##### LCS (B20H019-BS1)

Prepared: 8/4/2020 Analyzed: 8/25/2020

Selenium	96.1				ug/L	100		96.1	90-110		
Lead	101				ug/L	100		101	90-110		
Cobalt	100				ug/L	101		99.1	90-110		

##### Duplicate (B20H019-DUP1)

Source: K20H009-08

Prepared: 8/4/2020 Analyzed: 8/25/2020

Arsenic	2.5U		2.5	10.0	ug/L		ND			129	
Selenium	4.0U		4.0	16.0	ug/L		ND			NR	
Molybdenum	2.5U		2.5	10.0	ug/L		ND			9.36	
Lead	3.0U		3.0	12.0	ug/L		ND			153	
Cobalt	1.0U		1.0	4.0	ug/L		ND			27.9	
Cadmium	0.3U		0.3	1.2	ug/L		ND			NR	
Barium	13.2		0.2	0.8	ug/L		13.2			0.0107	
Beryllium	0.10U		0.10	0.40	ug/L		ND			NR	
Chromium	1.2U		1.2	4.8	ug/L		ND			4.85	
Calcium	78.0		0.10	0.40	mg/L		77.6			0.385	

##### Duplicate (B20H019-DUP2)

Source: K20H011-04

Prepared: 8/4/2020 Analyzed: 8/25/2020

Arsenic	2.5U		2.5	10.0	ug/L		ND			49.5	
Beryllium	0.10U		0.10	0.40	ug/L		ND			47.1	
Lead	3.0U		3.0	12.0	ug/L		ND			156	
Calcium	155		0.20	0.80	mg/L		161			2.81	
Barium	22.0		0.2	0.8	ug/L		22.0			0.0257	
Chromium	1.2U		1.2	4.8	ug/L		1.5			21.2	
Molybdenum	91.3		2.5	10.0	ug/L		90.8			0.363	
Cadmium	0.3U		0.3	1.2	ug/L		ND			NR	
Cobalt	1.0U		1.0	4.0	ug/L		ND			78.5	
Selenium	4.0U		4.0	16.0	ug/L		ND			NR	

##### Matrix Spike (B20H019-MS1)

Source: K20H009-08

Prepared: 8/4/2020 Analyzed: 8/25/2020

Selenium	48.8		4.0	16.0	ug/L	50.0	ND	97.7	90-110		
Molybdenum	492		2.5	10.0	ug/L	500	ND	98.5	90-110		
Cobalt	200		1.0	4.0	ug/L	200	ND	99.9	90-110		
Arsenic	202		2.5	10.0	ug/L	200	ND	101	90-110		
Lead	194		3.0	12.0	ug/L	200	ND	97.0	90-110		
Barium	501		0.2	0.8	ug/L	500	13.2	97.5	90-110		
Chromium	193		1.2	4.8	ug/L	200	ND	96.7	90-110		
Beryllium	209		0.10	0.40	ug/L	200	ND	105	90-110		
Calcium	103		0.10	0.40	mg/L	25.0	77.6	103	90-110		
Cadmium	48.9		0.3	1.2	ug/L	50.0	ND	97.8	90-110		

##### Matrix Spike (B20H019-MS2)

Source: K20H011-04

Prepared: 8/4/2020 Analyzed: 8/25/2020



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

Project: Environmental  
Project Number: D20G028  
Project Manager: Jeff Boudreau

**Reported:**  
09/03/2020 13:33

### 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
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#### Batch B20H019 - EPA 200.7 (Continued)

##### Matrix Spike (B20H019-MS2)

Source: K20H011-04

Prepared: 8/4/2020 Analyzed: 8/25/2020

Chromium	383		2.4	9.6	ug/L	400	ND	95.6	90-110		
Calcium	199 J		0.20	0.80	mg/L	50.0	161	75.2	90-110		
Cadmium	97.1		0.6	2.4	ug/L	100	ND	97.1	90-110		
Arsenic	398		5.0	20.0	ug/L	400	ND	99.4	90-110		
Beryllium	404		0.20	0.80	ug/L	400	ND	101	90-110		
Lead	382		6.0	24.0	ug/L	400	ND	95.6	90-110		
Cobalt	398		2.0	8.0	ug/L	400	ND	99.6	90-110		
Barium	994		0.4	1.6	ug/L	1000	22.0	97.2	90-110		
Molybdenum	1070		5.0	20.0	ug/L	1000	90.8	97.5	90-110		
Selenium	99.1		8.0	32.0	ug/L	100	ND	99.1	90-110		



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

Project: Environmental  
Project Number: D20G028  
Project Manager: Jeff Boudreau

**Reported:**  
09/03/2020 13:33

### Notes and Definitions

<u>Qualifier</u>	<u>Description</u>
J	Estimated value. Quality control associated with the reported value failed to meet the established quality control criteria.
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**  
**D20G028**

**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: LF-1</b>			
<b>Sample ID: D20G028-01</b>	<b>Water</b>	<b>Sampled:23-Jul-20 08:12</b>	<b>K20H009-01</b>
K_Lead	19-Jan-21 08:12		
K_Arsenic	19-Jan-21 08:12		
K_Selenium	19-Jan-21 08:12		
K_Mercury, cold vapor	20-Aug-20 08:12		
K_Cobalt	19-Jan-21 08:12		
K_Chromium	19-Jan-21 08:12		
K_Calcium	19-Jan-21 08:12		
K_Cadmium	19-Jan-21 08:12		
K_Beryllium	19-Jan-21 08:12		
K_Barium	19-Jan-21 08:12		
K_Molybdenum	19-Jan-21 08:12		
<i>Containers Supplied:</i>			
D_HDPE, HNO3 pH<2 - 500mL (A)			
<b>Sample Name: LF-2</b>			
<b>Sample ID: D20G028-02</b>	<b>Water</b>	<b>Sampled:23-Jul-20 12:04</b>	<b>K20H009-02</b>
K_Barium	19-Jan-21 12:04		
K_Cobalt	19-Jan-21 12:04		
K_Selenium	19-Jan-21 12:04		
K_Molybdenum	19-Jan-21 12:04		
K_Mercury, cold vapor	20-Aug-20 12:04		
K_Lead	19-Jan-21 12:04		
K_Chromium	19-Jan-21 12:04		
K_Calcium	19-Jan-21 12:04		
K_Beryllium	19-Jan-21 12:04		
K_Arsenic	19-Jan-21 12:04		
K_Cadmium	19-Jan-21 12:04		
<i>Containers Supplied:</i>			
D_HDPE, HNO3 pH<2 - 500mL (A)			

<i>R. Brubaker</i>	<i>7/28/20</i>	<i>John M. DeH</i>	<i>07/28/20 1130</i>
Released By	Date	Received By	Date
Released By	Date	Received By	Date



**SUBCONTRACT ORDER**  
**Deerhaven Generating Station**  
**D20G028**

Analysis	Expires	Laboratory ID	Comments
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Sample Name: LF-3			
Sample ID: D20G028-03	Water	Sampled:23-Jul-20 11:06	K20H009-03

- K\_Barium 19-Jan-21 11:06
- K\_Molybdenum 19-Jan-21 11:06
- K\_Mercury, cold vapor 20-Aug-20 11:06
- K\_Cadmium 19-Jan-21 11:06
- K\_Beryllium 19-Jan-21 11:06
- K\_Chromium 19-Jan-21 11:06
- K\_Calcium 19-Jan-21 11:06
- K\_Lead 19-Jan-21 11:06
- K\_Arsenic 19-Jan-21 11:06
- K\_Selenium 19-Jan-21 11:06
- K\_Cobalt 19-Jan-21 11:06

Containers Supplied:  
D\_HDPE, HNO3 pH<2 - 500mL (A)

Sample Name: LF-4			
Sample ID: D20G028-04	Water	Sampled:23-Jul-20 10:10	K20H009-04

- K\_Selenium 19-Jan-21 10:10
- K\_Mercury, cold vapor 20-Aug-20 10:10
- K\_Molybdenum 19-Jan-21 10:10
- K\_Beryllium 19-Jan-21 10:10
- K\_Arsenic 19-Jan-21 10:10
- K\_Lead 19-Jan-21 10:10
- K\_Cobalt 19-Jan-21 10:10
- K\_Chromium 19-Jan-21 10:10
- K\_Calcium 19-Jan-21 10:10
- K\_Barium 19-Jan-21 10:10
- K\_Cadmium 19-Jan-21 10:10

Containers Supplied:  
D\_HDPE, HNO3 pH<2 - 500mL (A)

Released By	Date	Received By	Date
K. Brakefield	7/28/20	J. Menden	07/28/20 1130

Released By	Date	Received By	Date
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**SUBCONTRACT ORDER**  
**Deerhaven Generating Station**  
**D20G028**

Analysis	Expires	Laboratory ID	Comments
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<b>Sample Name: SIS-1</b>			
<b>Sample ID: D20G028-05</b>	<b>Water</b>	<b>Sampled: 22-Jul-20 13:11</b>	<b>K20H009-05</b>

K_Mercury, cold vapor	19-Aug-20 13:11
K_Cobalt	18-Jan-21 13:11
K_Lead	18-Jan-21 13:11
K_Molybdenum	18-Jan-21 13:11
K_Chromium	18-Jan-21 13:11
K_Calcium	18-Jan-21 13:11
K_Cadmium	18-Jan-21 13:11
K_Arsenic	18-Jan-21 13:11
K_Selenium	18-Jan-21 13:11
K_Beryllium	18-Jan-21 13:11
K_Barium	18-Jan-21 13:11

*Containers Supplied:*  
D\_HDPE, HNO3 pH<2 - 500mL (A)

<b>Sample Name: SIS-2</b>			
<b>Sample ID: D20G028-06</b>	<b>Water</b>	<b>Sampled: 23-Jul-20 13:36</b>	<b>K20H009-06</b>

K_Chromium	19-Jan-21 13:36
K_Mercury, cold vapor	20-Aug-20 13:36
K_Barium	19-Jan-21 13:36
K_Arsenic	19-Jan-21 13:36
K_Cobalt	19-Jan-21 13:36
K_Selenium	19-Jan-21 13:36
K_Molybdenum	19-Jan-21 13:36
K_Beryllium	19-Jan-21 13:36
K_Calcium	19-Jan-21 13:36
K_Cadmium	19-Jan-21 13:36
K_Lead	19-Jan-21 13:36

*Containers Supplied:*  
D\_HDPE, HNO3 pH<2 - 500mL (A)

<i>K. Brakfield</i>	<i>7/28/20</i>	<i>J. Schmidt</i>	<i>07/28/20 1130</i>
Released By	Date	Received By	Date

Released By	Date	Received By	Date
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**SUBCONTRACT ORDER**  
**Deerhaven Generating Station**  
**D20G028**

Analysis	Expires	Laboratory ID	Comments
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Sample Name: SIS-3			
Sample ID: D20G028-07	Water	Sampled: 22-Jul-20 15:12	K20H009-07

- K\_Arsenic 18-Jan-21 15:12
- K\_Cobalt 18-Jan-21 15:12
- K\_Beryllium 18-Jan-21 15:12
- K\_Mercury, cold vapor 19-Aug-20 15:12
- K\_Lead 18-Jan-21 15:12
- K\_Chromium 18-Jan-21 15:12
- K\_Calcium 18-Jan-21 15:12
- K\_Barium 18-Jan-21 15:12
- K\_Selenium 18-Jan-21 15:12
- K\_Molybdenum 18-Jan-21 15:12
- K\_Cadmium 18-Jan-21 15:12

*Containers Supplied:*  
D\_HDPE, HNO3 pH<2 - 500mL (A)

Sample Name: SIS-4			
Sample ID: D20G028-08	Water	Sampled: 22-Jul-20 16:52	K20H009-08

- K\_Selenium 18-Jan-21 16:52
- K\_Beryllium 18-Jan-21 16:52
- K\_Chromium 18-Jan-21 16:52
- K\_Mercury, cold vapor 19-Aug-20 16:52
- K\_Barium 18-Jan-21 16:52
- K\_Arsenic 18-Jan-21 16:52
- K\_Cobalt 18-Jan-21 16:52
- K\_Calcium 18-Jan-21 16:52
- K\_Cadmium 18-Jan-21 16:52
- K\_Molybdenum 18-Jan-21 16:52
- K\_Lead 18-Jan-21 16:52

*Containers Supplied:*  
D\_HDPE, HNO3 pH<2 - 500mL (A)

Released By	Date	Received By	Date
R. Brakefield	7/28/20	J. Menden	07/28/20 1130

Released By	Date	Received By	Date
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August 13, 2020

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

RE: Project: D20G028  
Pace Project No.: 35566466

Dear Mr. Boudreau:

Enclosed are the analytical results for sample(s) received by the laboratory on July 29, 2020. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Asheville
- Pace Analytical Services - Ormond Beach
- Pace Analytical Services - Greensburg

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  
Kimberly Morrison, Deerhaven Labs  
Shelley Phillips, Deerhaven Lab



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: D20G028  
Pace Project No.: 35566466

### Pace Analytical Services Pennsylvania

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  
Florida: Cert E871149 SEKS WET  
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

### Pace Analytical Services Ormond Beach

8 East Tower Circle, Ormond Beach, FL 32174  
Alaska DEC- CS/UST/LUST  
Alabama Certification #: 41320  
Arizona Certification# AZ0819  
Colorado Certification: FL NELAC Reciprocity  
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  
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  
Ohio DEP 87780  
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  
West Virginia Certification #: 9962C  
Wisconsin Certification #: 399079670

## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: D20G028

Pace Project No.: 35566466

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### **Pace Analytical Services Ormond Beach**

Wyoming (EPA Region 8): FL NELAC Reciprocity

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### **Pace Analytical Services Asheville**

2225 Riverside Drive, Asheville, NC 28804

Florida/NELAP Certification #: E87648

Massachusetts Certification #: M-NC030

North Carolina Drinking Water Certification #: 37712

North Carolina Wastewater Certification #: 40

South Carolina Certification #: 99030001

Virginia/VELAP Certification #: 460222

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## REPORT OF LABORATORY ANALYSIS

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### SAMPLE SUMMARY

Project: D20G028

Pace Project No.: 35566466

Lab ID	Sample ID	Matrix	Date Collected	Date Received
35566466001	D20G028-01	Water	07/23/20 08:12	07/29/20 11:20
35566466002	D20G028-02	Water	07/23/20 12:04	07/29/20 11:20
35566466003	D20G028-03	Water	07/23/20 11:06	07/29/20 11:20
35566466004	D20G028-04	Water	07/23/20 10:10	07/29/20 11:20
35566466005	D20G028-05	Water	07/22/20 13:11	07/29/20 11:20
35566466006	D20G028-06	Water	07/23/20 13:36	07/29/20 11:20
35566466007	D20G028-07	Water	07/22/20 15:12	07/29/20 11:20
35566466008	D20G028-08	Water	07/22/20 16:52	07/29/20 11:20
35566466009	D20G028-09	Water	07/23/20 14:48	07/29/20 11:20
35566466010	D20G028-10	Water	07/21/20 10:38	07/29/20 11:20
35566466011	D20G028-11	Water	07/22/20 09:45	07/29/20 11:20
35566466012	D20G028-12	Water	07/23/20 09:18	07/29/20 11:20
35566466013	D20G028-13	Water	07/23/20 17:24	07/29/20 11:20
35566466014	D20G028-14	Water	07/23/20 18:27	07/29/20 11:20

### REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: D20G028  
Pace Project No.: 35566466

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
35566466001	D20G028-01	EPA 6020B	JOR	4	PASI-A
		EPA 903.1	MK1	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		EPA 300.0	YMP	3	PASI-O
35566466002	D20G028-02	EPA 6020B	JOR	4	PASI-A
		EPA 903.1	MK1	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		EPA 300.0	YMP	3	PASI-O
35566466003	D20G028-03	EPA 6020B	JOR	4	PASI-A
		EPA 903.1	MK1	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		EPA 300.0	YMP	3	PASI-O
35566466004	D20G028-04	EPA 6020B	JOR	4	PASI-A
		EPA 903.1	MK1	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		EPA 300.0	YMP	3	PASI-O
35566466005	D20G028-05	EPA 6020B	JOR	4	PASI-A
		EPA 903.1	MK1	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		EPA 300.0	YMP	3	PASI-O
35566466006	D20G028-06	EPA 6020B	JOR	4	PASI-A
		EPA 903.1	MK1	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		EPA 300.0	YMP	3	PASI-O
35566466007	D20G028-07	EPA 6020B	JOR	4	PASI-A
		EPA 903.1	MK1	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		EPA 300.0	YMP	3	PASI-O
35566466008	D20G028-08	EPA 6020B	JOR	4	PASI-A
		EPA 903.1	MK1	1	PASI-PA

### REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: D20G028  
Pace Project No.: 35566466

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
35566466009	D20G028-09	EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		EPA 300.0	YMP	3	PASI-O
		EPA 6020B	JOR	4	PASI-A
		EPA 903.1	MK1	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
35566466010	D20G028-10	Total Radium Calculation	CMC	1	PASI-PA
		EPA 6020B	JOR	4	PASI-A
		EPA 903.1	MK1	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		EPA 6020B	JOR	4	PASI-A
35566466011	D20G028-11	EPA 903.1	MK1	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		EPA 6020B	JOR	4	PASI-A
		EPA 903.1	MK1	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
35566466012	D20G028-12	Total Radium Calculation	CMC	1	PASI-PA
		EPA 6020B	JOR	4	PASI-A
		EPA 903.1	MK1	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		EPA 300.0	YMP	3	PASI-O
35566466013	D20G028-13	EPA 6020B	JOR	4	PASI-A
		EPA 903.1	MK1	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		EPA 6020B	JOR	4	PASI-A
		EPA 903.1	MK1	1	PASI-PA
35566466014	D20G028-14	EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA

PASI-A = Pace Analytical Services - Asheville  
PASI-O = Pace Analytical Services - Ormond Beach  
PASI-PA = Pace Analytical Services - Greensburg

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: D20G028  
Pace Project No.: 35566466

LF-1

**Sample: D20G028-01**      **Lab ID: 35566466001**      Collected: 07/23/20 08:12      Received: 07/29/20 11:20      Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B    Preparation Method: EPA 3010A									
Pace Analytical Services - Asheville									
Antimony	2.9	ug/L	0.50	0.12	1	08/01/20 00:32	08/03/20 18:49	7440-36-0	
Boron	350	ug/L	250	62.3	10	08/01/20 00:32	08/04/20 15:15	7440-42-8	
Lithium	8.3	ug/L	2.5	0.39	1	08/01/20 00:32	08/03/20 18:49	7439-93-2	
Thallium	0.26	ug/L	0.10	0.050	1	08/01/20 00:32	08/03/20 18:49	7440-28-0	
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0									
Pace Analytical Services - Ormond Beach									
Chloride	6.0	mg/L	5.0	2.5	1		08/11/20 22:19	16887-00-6	
Fluoride	0.12	mg/L	0.050	0.015	1		08/11/20 22:19	16984-48-8	
Sulfate	35.1	mg/L	5.0	2.5	1		08/11/20 22:19	14808-79-8	

### REPORT OF LABORATORY ANALYSIS

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LF-2

**ANALYTICAL RESULTS**

Project: D20G028  
Pace Project No.: 35566466

**Sample: D20G028-02**      **Lab ID: 35566466002**      Collected: 07/23/20 12:04      Received: 07/29/20 11:20      Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B    Preparation Method: EPA 3010A									
Pace Analytical Services - Asheville									
Antimony	0.12 U	ug/L	0.50	0.12	1	08/01/20 00:32	08/04/20 15:19	7440-36-0	
Boron	45.4	ug/L	25.0	6.2	1	08/01/20 00:32	08/04/20 15:19	7440-42-8	
Lithium	1.3 I	ug/L	2.5	0.39	1	08/01/20 00:32	08/04/20 15:19	7439-93-2	
Thallium	0.050 U	ug/L	0.10	0.050	1	08/01/20 00:32	08/04/20 15:19	7440-28-0	
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0									
Pace Analytical Services - Ormond Beach									
Chloride	40.2	mg/L	5.0	2.5	1		08/11/20 22:41	16887-00-6	
Fluoride	0.31	mg/L	0.050	0.015	1		08/11/20 22:41	16984-48-8	
Sulfate	17.4	mg/L	5.0	2.5	1		08/11/20 22:41	14808-79-8	

**REPORT OF LABORATORY ANALYSIS**

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LF-3

## ANALYTICAL RESULTS

Project: D20G028  
Pace Project No.: 35566466

Sample: D20G028-03 Lab ID: 35566466003 Collected: 07/23/20 11:06 Received: 07/29/20 11:20 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6020 MET ICPMS</b>		Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Asheville							
Antimony	0.12 U	ug/L	0.50	0.12	1	08/01/20 00:32	08/03/20 18:56	7440-36-0	
Boron	2640	ug/L	1250	311	50	08/01/20 00:32	08/04/20 15:23	7440-42-8	
Lithium	0.39 U	ug/L	2.5	0.39	1	08/01/20 00:32	08/03/20 18:56	7439-93-2	
Thallium	0.050 U	ug/L	0.10	0.050	1	08/01/20 00:32	08/03/20 18:56	7440-28-0	
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0 Pace Analytical Services - Ormond Beach							
Chloride	23.2	mg/L	5.0	2.5	1		08/11/20 23:03	16887-00-6	
Fluoride	0.045 I	mg/L	0.050	0.015	1		08/11/20 23:03	16984-48-8	
Sulfate	138	mg/L	10.0	5.0	2		08/12/20 09:53	14808-79-8	

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### ANALYTICAL RESULTS

Project: D20G028  
Pace Project No.: 35566466

Sample: D20G028-04 Lab ID: 35566466004 Collected: 07/23/20 10:10 Received: 07/29/20 11:20 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3010A									
Pace Analytical Services - Asheville									
Antimony	0.12 U	ug/L	0.50	0.12	1	08/01/20 00:32	08/03/20 19:00	7440-36-0	
Boron	489	ug/L	250	62.3	10	08/01/20 00:32	08/04/20 15:34	7440-42-8	
Lithium	12.3	ug/L	2.5	0.39	1	08/01/20 00:32	08/03/20 19:00	7439-93-2	
Thallium	0.11	ug/L	0.10	0.050	1	08/01/20 00:32	08/03/20 19:00	7440-28-0	
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0									
Pace Analytical Services - Ormond Beach									
Chloride	8.2	mg/L	5.0	2.5	1		08/11/20 23:25	16887-00-6	
Fluoride	0.084	mg/L	0.050	0.015	1		08/11/20 23:25	16984-48-8	
Sulfate	56.7	mg/L	5.0	2.5	1		08/11/20 23:25	14808-79-8	J(M1)

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SIS-1

### ANALYTICAL RESULTS

Project: D20G028  
Pace Project No.: 35566466

Sample: D20G028-05 Lab ID: 35566466005 Collected: 07/22/20 13:11 Received: 07/29/20 11:20 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3010A									
Pace Analytical Services - Asheville									
Antimony	0.12 U	ug/L	0.50	0.12	1	08/01/20 00:32	08/04/20 15:38	7440-36-0	
Boron	17.7 I	ug/L	25.0	6.2	1	08/01/20 00:32	08/04/20 15:38	7440-42-8	
Lithium	0.39 U	ug/L	2.5	0.39	1	08/01/20 00:32	08/04/20 15:38	7439-93-2	
Thallium	0.050 U	ug/L	0.10	0.050	1	08/01/20 00:32	08/04/20 15:38	7440-28-0	
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0									
Pace Analytical Services - Ormond Beach									
Chloride	9.1	mg/L	5.0	2.5	1		08/12/20 02:03	16887-00-6	
Fluoride	0.24	mg/L	0.050	0.015	1		08/12/20 02:03	16984-48-8	
Sulfate	5.1	mg/L	5.0	2.5	1		08/12/20 02:03	14808-79-8	

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SIS-2

**ANALYTICAL RESULTS**

Project: D20G028  
Pace Project No.: 35566466

**Sample: D20G028-06**      **Lab ID: 35566466006**      Collected: 07/23/20 13:36      Received: 07/29/20 11:20      Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B    Preparation Method: EPA 3010A									
Pace Analytical Services - Asheville									
Antimony	0.17 I	ug/L	0.50	0.12	1	08/01/20 00:32	08/04/20 15:42	7440-36-0	
Boron	18.5 I	ug/L	25.0	6.2	1	08/01/20 00:32	08/04/20 15:42	7440-42-8	
Lithium	0.39 U	ug/L	2.5	0.39	1	08/01/20 00:32	08/04/20 15:42	7439-93-2	
Thallium	0.050 U	ug/L	0.10	0.050	1	08/01/20 00:32	08/04/20 15:42	7440-28-0	
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0									
Pace Analytical Services - Ormond Beach									
Chloride	3.8 I	mg/L	5.0	2.5	1		08/12/20 02:25	16887-00-6	
Fluoride	0.36	mg/L	0.050	0.015	1		08/12/20 02:25	16984-48-8	
Sulfate	7.4	mg/L	5.0	2.5	1		08/12/20 02:25	14808-79-8	

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**ANALYTICAL RESULTS** SIS-3

Project: D20G028  
Pace Project No.: 35566466

**Sample: D20G028-07**      **Lab ID: 35566466007**      Collected: 07/22/20 15:12      Received: 07/29/20 11:20      Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B    Preparation Method: EPA 3010A									
Pace Analytical Services - Asheville									
Antimony	<b>0.24 I</b>	ug/L	0.50	0.12	1	08/01/20 00:32	08/04/20 15:45	7440-36-0	
Boron	<b>17.5 I</b>	ug/L	25.0	6.2	1	08/01/20 00:32	08/04/20 15:45	7440-42-8	
Lithium	<b>1.6 I</b>	ug/L	2.5	0.39	1	08/01/20 00:32	08/04/20 15:45	7439-93-2	
Thallium	<b>0.050 U</b>	ug/L	0.10	0.050	1	08/01/20 00:32	08/04/20 15:45	7440-28-0	
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0									
Pace Analytical Services - Ormond Beach									
Chloride	<b>2.7 I</b>	mg/L	5.0	2.5	1		08/12/20 02:48	16887-00-6	
Fluoride	<b>0.16</b>	mg/L	0.050	0.015	1		08/12/20 02:48	16984-48-8	
Sulfate	<b>2.9 I</b>	mg/L	5.0	2.5	1		08/12/20 02:48	14808-79-8	

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SIS-4

### ANALYTICAL RESULTS

Project: D20G028

Pace Project No.: 35566466

Sample: D20G028-08 Lab ID: 35566466008 Collected: 07/22/20 16:52 Received: 07/29/20 11:20 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3010A									
Pace Analytical Services - Asheville									
Antimony	0.24 I	ug/L	0.50	0.12	1	08/01/20 00:32	08/04/20 15:49	7440-36-0	
Boron	13.5 I	ug/L	25.0	6.2	1	08/01/20 00:32	08/04/20 15:49	7440-42-8	
Lithium	0.39 U	ug/L	2.5	0.39	1	08/01/20 00:32	08/04/20 15:49	7439-93-2	
Thallium	0.050 U	ug/L	0.10	0.050	1	08/01/20 00:32	08/04/20 15:49	7440-28-0	
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0									
Pace Analytical Services - Ormond Beach									
Chloride	3.2 I	mg/L	5.0	2.5	1		08/12/20 03:10	16887-00-6	
Fluoride	0.27	mg/L	0.050	0.015	1		08/12/20 03:10	16984-48-8	
Sulfate	4.6 I	mg/L	5.0	2.5	1		08/12/20 03:10	14808-79-8	

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R4T5

### ANALYTICAL RESULTS

Project: D20G028

Pace Project No.: 35566466

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**Sample: D20G028-09**      **Lab ID: 35566466009**      Collected: 07/23/20 14:48      Received: 07/29/20 11:20      Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B    Preparation Method: EPA 3010A									
Pace Analytical Services - Asheville									
Antimony	<b>0.12 U</b>	ug/L	0.50	0.12	1	08/01/20 00:32	08/04/20 15:53	7440-36-0	
Boron	<b>25.7</b>	ug/L	25.0	6.2	1	08/01/20 00:32	08/04/20 15:53	7440-42-8	
Lithium	<b>0.39 U</b>	ug/L	2.5	0.39	1	08/01/20 00:32	08/04/20 15:53	7439-93-2	
Thallium	<b>0.050 U</b>	ug/L	0.10	0.050	1	08/01/20 00:32	08/04/20 15:53	7440-28-0	

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R6T4

### ANALYTICAL RESULTS

Project: D20G028  
Pace Project No.: 35566466

Sample: D20G028-10 Lab ID: 35566466010 Collected: 07/21/20 10:38 Received: 07/29/20 11:20 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3010A									
Pace Analytical Services - Asheville									
Antimony	0.12 U	ug/L	0.50	0.12	1	08/01/20 00:32	08/04/20 16:04	7440-36-0	
Boron	23.4 I	ug/L	25.0	6.2	1	08/01/20 00:32	08/04/20 16:04	7440-42-8	
Lithium	0.45 I	ug/L	2.5	0.39	1	08/01/20 00:32	08/04/20 16:04	7439-93-2	
Thallium	0.050 U	ug/L	0.10	0.050	1	08/01/20 00:32	08/04/20 16:04	7440-28-0	

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### ANALYTICAL RESULTS

Project: D20G028  
Pace Project No.: 35566466

Sample: D20G028-11      Lab ID: 35566466011      Collected: 07/22/20 09:45      Received: 07/29/20 11:20      Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B    Preparation Method: EPA 3010A									
Pace Analytical Services - Asheville									
Antimony	0.12 U	ug/L	0.50	0.12	1	08/01/20 00:32	08/04/20 16:08	7440-36-0	
Boron	6.2 U	ug/L	25.0	6.2	1	08/01/20 00:32	08/04/20 16:08	7440-42-8	
Lithium	0.39 U	ug/L	2.5	0.39	1	08/01/20 00:32	08/04/20 16:08	7439-93-2	
Thallium	0.050 U	ug/L	0.10	0.050	1	08/01/20 00:32	08/04/20 16:08	7440-28-0	

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### ANALYTICAL RESULTS

Project: D20G028  
Pace Project No.: 35566466

**Sample: D20G028-14**      **Lab ID: 35566466014**      Collected: 07/23/20 18:27      Received: 07/29/20 11:20      Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B    Preparation Method: EPA 3010A									
Pace Analytical Services - Asheville									
Antimony	<b>0.12 U</b>	ug/L	0.50	0.12	1	08/01/20 00:32	08/04/20 16:19	7440-36-0	
Boron	<b>6.2 U</b>	ug/L	25.0	6.2	1	08/01/20 00:32	08/04/20 16:19	7440-42-8	
Lithium	<b>0.39 U</b>	ug/L	2.5	0.39	1	08/01/20 00:32	08/04/20 16:19	7439-93-2	
Thallium	<b>0.050 U</b>	ug/L	0.10	0.050	1	08/01/20 00:32	08/04/20 16:19	7440-28-0	

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### QUALITY CONTROL DATA

Project: D20G028  
Pace Project No.: 35566466

QC Batch:	557305	Analysis Method:	EPA 6020B
QC Batch Method:	EPA 3010A	Analysis Description:	6020 MET
		Laboratory:	Pace Analytical Services - Asheville

Associated Lab Samples: 35566466001, 35566466002, 35566466003, 35566466004, 35566466005, 35566466006, 35566466007, 35566466008, 35566466009, 35566466010, 35566466011, 35566466012, 35566466013, 35566466014

METHOD BLANK: 2958330 Matrix: Water  
Associated Lab Samples: 35566466001, 35566466002, 35566466003, 35566466004, 35566466005, 35566466006, 35566466007, 35566466008, 35566466009, 35566466010, 35566466011, 35566466012, 35566466013, 35566466014

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	ug/L	0.12 U	0.50	0.12	08/04/20 14:49	
Boron	ug/L	6.2 U	25.0	6.2	08/04/20 14:49	
Lithium	ug/L	0.39 U	2.5	0.39	08/04/20 14:49	
Thallium	ug/L	0.050 U	0.10	0.050	08/04/20 14:49	

LABORATORY CONTROL SAMPLE: 2958331

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	50	51.6	103	80-120	
Boron	ug/L	50	51.2	102	80-120	
Lithium	ug/L	50	52.2	104	80-120	
Thallium	ug/L	10	10.0	100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2958332 2958333

Parameter	Units	35566446001		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec					
Antimony	ug/L	0.12 U	50	50	51.2	51.6	102	103	75-125	1	20		
Boron	ug/L	6.2 U	50	50	51.4	52.7	101	104	75-125	3	20		
Lithium	ug/L	0.39 U	50	50	53.3	54.4	107	109	75-125	2	20		
Thallium	ug/L	0.050 U	10	10	10.2	10.3	102	103	75-125	1	20		

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### QUALITY CONTROL DATA

Project: D20G028  
Pace Project No.: 35566466

QC Batch:	656084	Analysis Method:	EPA 300.0
QC Batch Method:	EPA 300.0	Analysis Description:	300.0 IC Anions
		Laboratory:	Pace Analytical Services - Ormond Beach

Associated Lab Samples: 35566466005, 35566466006, 35566466007, 35566466008, 35566466012

METHOD BLANK: 3567473 Matrix: Water  
Associated Lab Samples: 35566466005, 35566466006, 35566466007, 35566466008, 35566466012

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	2.5 U	5.0	2.5	08/12/20 01:19	
Fluoride	mg/L	0.015 U	0.050	0.015	08/12/20 01:19	
Sulfate	mg/L	2.5 U	5.0	2.5	08/12/20 01:19	

LABORATORY CONTROL SAMPLE: 3567474

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	100	90-110	
Sulfate	mg/L	50	49.1	98	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3567475 3567476

Parameter	Units	35566466012		3567476		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result								
Chloride	mg/L	8.3	50	50	57.7	57.7	99	99	90-110	0	20		
Fluoride	mg/L	0.089	5	5	5.1	5.1	100	100	90-110	0	20		
Sulfate	mg/L	19.9	50	50	71.5	71.5	103	103	90-110	0	20		

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### QUALITY CONTROL DATA

Project: D20G028  
Pace Project No.: 35566466

QC Batch:	656102	Analysis Method:	EPA 300.0
QC Batch Method:	EPA 300.0	Analysis Description:	300.0 IC Anions
		Laboratory:	Pace Analytical Services - Ormond Beach

Associated Lab Samples: 35566466001, 35566466002, 35566466003, 35566466004

METHOD BLANK: 3567592 Matrix: Water  
Associated Lab Samples: 35566466001, 35566466002, 35566466003, 35566466004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	2.5 U	5.0	2.5	08/11/20 14:14	
Fluoride	mg/L	0.015 U	0.050	0.015	08/11/20 14:14	
Sulfate	mg/L	2.5 U	5.0	2.5	08/11/20 14:14	

LABORATORY CONTROL SAMPLE: 3567593

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	52.1	104	90-110	
Fluoride	mg/L	5	5.3	106	90-110	
Sulfate	mg/L	50	52.0	104	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3567594 3567595

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		35568443001 Result	Spike Conc.	Spike Conc.	MS Result						
Chloride	mg/L	28.1	50	50	84.8	84.8	113	113	90-110	0	20 J(M1)
Fluoride	mg/L	0.24	5	5	5.5	5.5	105	106	90-110	1	20
Sulfate	mg/L	20.0	50	50	73.9	74.1	108	108	90-110	0	20

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3567596 3567597

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		35566466004 Result	Spike Conc.	Spike Conc.	MS Result						
Chloride	mg/L	8.2	50	50	61.1	61.1	106	106	90-110	0	20
Fluoride	mg/L	0.084	5	5	5.4	5.4	107	107	90-110	0	20
Sulfate	mg/L	56.7	50	50	117	116	120	120	90-110	0	20 J(M1), L

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: D20G028

Pace Project No.: 35566466

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: D20G028-01</b> <b>Lab ID: 35566466001</b> Collected: 07/23/20 08:12      Received: 07/29/20 11:20      Matrix: Water <b>PWS:</b> Site ID:      Sample Type:						
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	<b>1.52 ± 0.786 (0.871)</b> C:NA T:82%	pCi/L	08/12/20 12:45	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	<b>1.47 ± 0.584 (0.946)</b> C:63% T:91%	pCi/L	08/10/20 11:37	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>2.99 ± 1.37 (1.82)</b>	pCi/L	08/12/20 13:45	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: D20G028  
Pace Project No.: 35566466

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	<b>0.895U ± 0.650 (0.895)</b> C:NA T:91%	pCi/L	08/12/20 12:45	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	<b>0.767U ± 0.421 (0.767)</b> C:65% T:96%	pCi/L	08/10/20 11:36	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>1.66U ± 1.07 (1.66)</b>	pCi/L	08/12/20 13:45	7440-14-4	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: D20G028

Pace Project No.: 35566466

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: D20G028-03</b> <b>Lab ID: 35566466003</b> Collected: 07/23/20 11:06      Received: 07/29/20 11:20      Matrix: Water PWS:      Site ID:      Sample Type:						
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	<b>2.55 ± 0.938 (0.676)</b> C:NA T:90%	pCi/L	08/12/20 12:45	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	<b>1.15 ± 0.549 (0.961)</b> C:67% T:81%	pCi/L	08/10/20 11:36	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>3.69 ± 1.49 (1.64)</b>	pCi/L	08/12/20 13:45	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: D20G028

Pace Project No.: 35566466

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: D20G028-04</b> <b>Lab ID: 35566466004</b> Collected: 07/23/20 10:10      Received: 07/29/20 11:20      Matrix: Water PWS:      Site ID:      Sample Type:						
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	<b>0.868U ± 0.606 (0.868)</b> C:NA T:93%	pCi/L	08/12/20 12:45	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	<b>1.59 ± 0.561 (0.790)</b> C:66% T:82%	pCi/L	08/10/20 11:35	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>2.31 ± 1.17 (1.66)</b>	pCi/L	08/12/20 13:45	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: D20G028

Pace Project No.: 35566466

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: D20G028-05</b> <b>Lab ID: 35566466005</b> Collected: 07/22/20 13:11      Received: 07/29/20 11:20      Matrix: Water PWS:      Site ID:      Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	<b>1.58 ± 0.921 (1.19)</b> C:NA T:83%	pCi/L	08/12/20 12:29	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	<b>0.699U ± 0.392 (0.699)</b> C:68% T:80%	pCi/L	08/10/20 11:34	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>2.26 ± 1.31 (1.89)</b>	pCi/L	08/12/20 13:45	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: D20G028  
Pace Project No.: 35566466

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: D20G028-06</b> <b>Lab ID: 35566466006</b> Collected: 07/23/20 13:36      Received: 07/29/20 11:20      Matrix: Water <b>PWS:</b> Site ID:      Sample Type:						
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	<b>1.02U ± 0.403 (1.02)</b> <b>C:NA T:85%</b>	pCi/L	08/12/20 12:59	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	<b>0.681U ± 0.367 (0.681)</b> <b>C:64% T:96%</b>	pCi/L	08/10/20 11:36	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>1.70U ± 0.770 (1.70)</b>	pCi/L	08/12/20 13:45	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: D20G028

Pace Project No.: 35566466

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: D20G028-07</b> <b>Lab ID: 35566466007</b> Collected: 07/22/20 15:12      Received: 07/29/20 11:20      Matrix: Water PWS:      Site ID:      Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	<b>0.968U ± 0.490 (0.968)</b> C:NA T:95%	pCi/L	08/12/20 12:45	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	<b>0.791U ± 0.390 (0.791)</b> C:69% T:82%	pCi/L	08/10/20 11:34	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>1.76U ± 0.880 (1.76)</b>	pCi/L	08/12/20 13:45	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: D20G028

Pace Project No.: 35566466

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: D20G028-08</b> <b>Lab ID: 35566466008</b> Collected: 07/22/20 16:52      Received: 07/29/20 11:20      Matrix: Water PWS:      Site ID:      Sample Type:						
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	<b>0.642U ± 0.407 (0.642)</b> <b>C:NA T:97%</b>	pCi/L	08/12/20 12:45	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	<b>1.00 ± 0.413 (0.648)</b> <b>C:68% T:94%</b>	pCi/L	08/10/20 11:34	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>1.36 ± 0.820 (1.29)</b>	pCi/L	08/12/20 13:45	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: D20G028

Pace Project No.: 35566466

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: D20G028-09</b> <b>Lab ID: 35566466009</b> Collected: 07/23/20 14:48      Received: 07/29/20 11:20      Matrix: Water <b>PWS:</b> Site ID:      Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	<b>0.666U ± 0.457 (0.666)</b> <b>C:NA T:100%</b>	pCi/L	08/12/20 12:59	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	<b>0.908U ± 0.471 (0.908)</b> <b>C:64% T:91%</b>	pCi/L	08/10/20 11:36	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>1.57U ± 0.928 (1.57)</b>	pCi/L	08/12/20 13:45	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: D20G028  
Pace Project No.: 35566466

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: D20G028-10</b> <b>Lab ID: 35566466010</b> Collected: 07/21/20 10:38      Received: 07/29/20 11:20      Matrix: Water PWS:      Site ID:      Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	<b>0.782U ± 0.377 (0.782)</b> C:NA T:92%	pCi/L	08/12/20 12:29	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	<b>1.39 ± 0.521 (0.754)</b> C:61% T:85%	pCi/L	08/10/20 11:32	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>1.54U ± 0.898 (1.54)</b>	pCi/L	08/12/20 13:45	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: D20G028

Pace Project No.: 35566466

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: D20G028-11</b> <b>Lab ID: 35566466011</b> Collected: 07/22/20 09:45      Received: 07/29/20 11:20      Matrix: Water <b>PWS:</b> Site ID:      Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	<b>0.648U ± 0.363 (0.648)</b> <b>C:NA T:89%</b>	pCi/L	08/12/20 12:29	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	<b>0.720U ± 0.336 (0.720)</b> <b>C:67% T:83%</b>	pCi/L	08/10/20 11:34	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>1.37U ± 0.699 (1.37)</b>	pCi/L	08/12/20 13:45	7440-14-4	

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: D20G028  
Pace Project No.: 35566466

QC Batch:	407540	Analysis Method:	EPA 903.1
QC Batch Method:	EPA 903.1	Analysis Description:	903.1 Radium-226
		Laboratory:	Pace Analytical Services - Greensburg
Associated Lab Samples:	35566466001, 35566466002, 35566466003, 35566466004, 35566466005, 35566466006, 35566466007, 35566466008, 35566466009, 35566466010, 35566466011, 35566466012, 35566466013, 35566466014		

METHOD BLANK:	1971979	Matrix:	Water
Associated Lab Samples:	35566466001, 35566466002, 35566466003, 35566466004, 35566466005, 35566466006, 35566466007, 35566466008, 35566466009, 35566466010, 35566466011, 35566466012, 35566466013, 35566466014		

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.217 ± 0.398 (0.710) C:NA T:94%	pCi/L	08/12/20 12:29	

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 - RADIOCHEMISTRY

Project: D20G028  
Pace Project No.: 35566466

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QC Batch:	407542	Analysis Method:	EPA 904.0
QC Batch Method:	EPA 904.0	Analysis Description:	904.0 Radium 228
		Laboratory:	Pace Analytical Services - Greensburg

Associated Lab Samples: 35566466001, 35566466002, 35566466003, 35566466004, 35566466005, 35566466006, 35566466007, 35566466008, 35566466009, 35566466010, 35566466011, 35566466012, 35566466013, 35566466014

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METHOD BLANK:	1971983	Matrix:	Water
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Associated Lab Samples: 35566466001, 35566466002, 35566466003, 35566466004, 35566466005, 35566466006, 35566466007, 35566466008, 35566466009, 35566466010, 35566466011, 35566466012, 35566466013, 35566466014

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.961 ± 0.476 (0.810) C:64% T:78%	pCi/L	08/10/20 11:32	

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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## QUALIFIERS

Project: D20G028  
Pace Project No.: 35566466

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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.

### 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: D20G028  
Pace Project No.: 35566466

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
35566466001	D20G028-01	EPA 3010A	557305	EPA 6020B	557327
35566466002	D20G028-02	EPA 3010A	557305	EPA 6020B	557327
35566466003	D20G028-03	EPA 3010A	557305	EPA 6020B	557327
35566466004	D20G028-04	EPA 3010A	557305	EPA 6020B	557327
35566466005	D20G028-05	EPA 3010A	557305	EPA 6020B	557327
35566466006	D20G028-06	EPA 3010A	557305	EPA 6020B	557327
35566466007	D20G028-07	EPA 3010A	557305	EPA 6020B	557327
35566466008	D20G028-08	EPA 3010A	557305	EPA 6020B	557327
35566466009	D20G028-09	EPA 3010A	557305	EPA 6020B	557327
35566466010	D20G028-10	EPA 3010A	557305	EPA 6020B	557327
35566466011	D20G028-11	EPA 3010A	557305	EPA 6020B	557327
35566466012	D20G028-12	EPA 3010A	557305	EPA 6020B	557327
35566466013	D20G028-13	EPA 3010A	557305	EPA 6020B	557327
35566466014	D20G028-14	EPA 3010A	557305	EPA 6020B	557327
35566466001	D20G028-01	EPA 903.1	407540		
35566466002	D20G028-02	EPA 903.1	407540		
35566466003	D20G028-03	EPA 903.1	407540		
35566466004	D20G028-04	EPA 903.1	407540		
35566466005	D20G028-05	EPA 903.1	407540		
35566466006	D20G028-06	EPA 903.1	407540		
35566466007	D20G028-07	EPA 903.1	407540		
35566466008	D20G028-08	EPA 903.1	407540		
35566466009	D20G028-09	EPA 903.1	407540		
35566466010	D20G028-10	EPA 903.1	407540		
35566466011	D20G028-11	EPA 903.1	407540		
35566466012	D20G028-12	EPA 903.1	407540		
35566466013	D20G028-13	EPA 903.1	407540		
35566466014	D20G028-14	EPA 903.1	407540		
35566466001	D20G028-01	EPA 904.0	407542		
35566466002	D20G028-02	EPA 904.0	407542		
35566466003	D20G028-03	EPA 904.0	407542		
35566466004	D20G028-04	EPA 904.0	407542		
35566466005	D20G028-05	EPA 904.0	407542		
35566466006	D20G028-06	EPA 904.0	407542		
35566466007	D20G028-07	EPA 904.0	407542		
35566466008	D20G028-08	EPA 904.0	407542		
35566466009	D20G028-09	EPA 904.0	407542		
35566466010	D20G028-10	EPA 904.0	407542		
35566466011	D20G028-11	EPA 904.0	407542		
35566466012	D20G028-12	EPA 904.0	407542		
35566466013	D20G028-13	EPA 904.0	407542		
35566466014	D20G028-14	EPA 904.0	407542		
35566466001	D20G028-01	Total Radium Calculation	409122		
35566466002	D20G028-02	Total Radium Calculation	409122		
35566466003	D20G028-03	Total Radium Calculation	409122		
35566466004	D20G028-04	Total Radium Calculation	409122		
35566466005	D20G028-05	Total Radium Calculation	409122		

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: D20G028  
Pace Project No.: 35566466

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
35566466006	D20G028-06	Total Radium Calculation	409122		
35566466007	D20G028-07	Total Radium Calculation	409122		
35566466008	D20G028-08	Total Radium Calculation	409122		
35566466009	D20G028-09	Total Radium Calculation	409122		
35566466010	D20G028-10	Total Radium Calculation	409122		
35566466011	D20G028-11	Total Radium Calculation	409122		
35566466012	D20G028-12	Total Radium Calculation	409122		
35566466013	D20G028-13	Total Radium Calculation	409122		
35566466014	D20G028-14	Total Radium Calculation	409122		
35566466001	D20G028-01	EPA 300.0	656102		
35566466002	D20G028-02	EPA 300.0	656102		
35566466003	D20G028-03	EPA 300.0	656102		
35566466004	D20G028-04	EPA 300.0	656102		
35566466005	D20G028-05	EPA 300.0	656084		
35566466006	D20G028-06	EPA 300.0	656084		
35566466007	D20G028-07	EPA 300.0	656084		
35566466008	D20G028-08	EPA 300.0	656084		
35566466012	D20G028-12	EPA 300.0	656084		

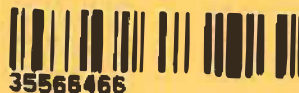
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**SUBCONTRACT ORDER**  
**Deerhaven Generating Station**  
**D20G028**

**WO# : 35566466**



**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
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**Sample Name: LF-1**  
**Sample ID: D20G028-01**      **Water**      **Sampled:23-Jul-20 08:12**

D_Anions - Fluoride	20-Aug-20 08:12
D_Anions - Sulfates	20-Aug-20 08:12
D_Antimony by 6020	19-Jan-21 08:12
D_Boron by 6020	19-Jan-21 08:12
D_Lithium by 6020	19-Jan-21 08:12
D_Radium226+228_Combined	15-Jan-21 08:12
D_Thallium by 6020	19-Jan-21 08:12
D_Anions - Chlorides	20-Aug-20 08:12

*Containers Supplied:*

- D\_HDPE, HNO3 pH<2 - 250mL extra (B)
- D\_HDPE, Chill @<6\*C - 250mL (C)
- D\_HDPE, HNO3 pH<2 - 2000mL (D)

**Sample Name: LF-2**  
**Sample ID: D20G028-02**      **Water**      **Sampled:23-Jul-20 12:04**

D_Lithium by 6020	19-Jan-21 12:04
D_Radium226+228_Combined	15-Jan-21 12:04
D_Boron by 6020	19-Jan-21 12:04
D_Anions - Sulfates	20-Aug-20 12:04
D_Anions - Chlorides	20-Aug-20 12:04
D_Anions - Fluoride	20-Aug-20 12:04
D_Thallium by 6020	19-Jan-21 12:04
D_Antimony by 6020	19-Jan-21 12:04

*Containers Supplied:*

- D\_HDPE, HNO3 pH<2 - 250mL extra (B)
- D\_HDPE, Chill @<6\*C - 250mL (C)
- D\_HDPE, HNO3 pH<2 - 2000mL (D)

*Shipped via FedEx*

<i>K. Braukerfeld</i>	<i>7/28/20</i>	<i>HW/Plan</i>	<i>7/29/20 1120 25.7°C</i>
Released By	Date	Received By	Date

Released By	Date	Received By	Date
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**SUBCONTRACT ORDER**  
**Deerhaven Generating Station**  
**D20G028**

Analysis	Expires	Laboratory ID	Comments
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<b>Sample Name: LF-3</b>			
<b>Sample ID: D20G028-03</b>	<b>Water</b>	<b>Sampled:23-Jul-20 11:06</b>	

D_Anions - Sulfates	20-Aug-20 11:06
D_Antimony by 6020	19-Jan-21 11:06
D_Lithium by 6020	19-Jan-21 11:06
D_Thallium by 6020	19-Jan-21 11:06
D_Anions - Fluoride	20-Aug-20 11:06
D_Anions - Chlorides	20-Aug-20 11:06
D_Boron by 6020	19-Jan-21 11:06
D_Radium226+228_Combined	15-Jan-21 11:06

*Containers Supplied:*  
D\_HDPE, HNO3 pH<2 - 250mL extra (B)  
D\_HDPE, Chill @<6\*C - 250mL (C)  
D\_HDPE, HNO3 pH<2 - 2000mL (D)

<b>Sample Name: LF-4</b>			
<b>Sample ID: D20G028-04</b>	<b>Water</b>	<b>Sampled:23-Jul-20 10:10</b>	

D_Anions - Fluoride	20-Aug-20 10:10
D_Boron by 6020	19-Jan-21 10:10
D_Antimony by 6020	19-Jan-21 10:10
D_Anions - Sulfates	20-Aug-20 10:10
D_Lithium by 6020	19-Jan-21 10:10
D_Thallium by 6020	19-Jan-21 10:10
D_Radium226+228_Combined	15-Jan-21 10:10
D_Anions - Chlorides	20-Aug-20 10:10

*Containers Supplied:*  
D\_HDPE, HNO3 pH<2 - 250mL extra (B)  
D\_HDPE, Chill @<6\*C - 250mL (C)  
D\_HDPE, HNO3 pH<2 - 2000mL (D)

<b>Sample Name: SIS-1</b>			
<b>Sample ID: D20G028-05</b>	<b>Water</b>	<b>Sampled:22-Jul-20 13:11</b>	

D_Anions - Sulfates	19-Aug-20 13:11
D_Antimony by 6020	18-Jan-21 13:11
D_Anions - Fluoride	19-Aug-20 13:11
D_Anions - Chlorides	19-Aug-20 13:11
D_Radium226+228_Combined	14-Jan-21 13:11
D_Lithium by 6020	18-Jan-21 13:11
D_Thallium by 6020	18-Jan-21 13:11
D_Boron by 6020	18-Jan-21 13:11

*Containers Supplied:*  
D\_HDPE, HNO3 pH<2 - 250mL extra (B)  
D\_HDPE, Chill @<6\*C - 250mL (C)  
D\_HDPE, HNO3 pH<2 - 2000mL (D)

<i>R. Brakely</i>	<i>7/28/20</i>	<i>Shipped via Fed Ex</i>	
Released By	Date	Received By	Date
		<i>Henderson</i>	<i>7/29/20 1120 25.7°C</i>

Released By	Date	Received By	Date
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**SUBCONTRACT ORDER**  
**Deerhaven Generating Station**  
**D20G028**

Analysis	Expires	Laboratory ID	Comments
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**Sample Name: SIS-2**

**Sample ID: D20G028-06      Water      Sampled:23-Jul-20 13:36**

D_Thallium by 6020	19-Jan-21 13:36
D_Anions - Chlorides	20-Aug-20 13:36
D_Anions - Fluoride	20-Aug-20 13:36
D_Anions - Sulfates	20-Aug-20 13:36
D_Antimony by 6020	19-Jan-21 13:36
D_Boron by 6020	19-Jan-21 13:36
D_Lithium by 6020	19-Jan-21 13:36
D_Radium226+228_Combined	15-Jan-21 13:36

*Containers Supplied:*

D\_HDPE, HNO3 pH<2 - 250mL extra (B)  
D\_HDPE, Chill @<6°C - 250mL (C)  
D\_HDPE, HNO3 pH<2 - 2000mL (D)

**Sample Name: SIS-3**

**Sample ID: D20G028-07      Water      Sampled:22-Jul-20 15:12**

D_Anions - Chlorides	19-Aug-20 15:12
D_Anions - Sulfates	19-Aug-20 15:12
D_Antimony by 6020	18-Jan-21 15:12
D_Boron by 6020	18-Jan-21 15:12
D_Radium226+228_Combined	14-Jan-21 15:12
D_Thallium by 6020	18-Jan-21 15:12
D_Lithium by 6020	18-Jan-21 15:12
D_Anions - Fluoride	19-Aug-20 15:12

*Containers Supplied:*

D\_HDPE, HNO3 pH<2 - 250mL extra (B)  
D\_HDPE, Chill @<6°C - 250mL (C)  
D\_HDPE, HNO3 pH<2 - 2000mL (D)

**Sample Name: SIS-4**

**Sample ID: D20G028-08      Water      Sampled:22-Jul-20 16:52**

D_Anions - Chlorides	19-Aug-20 16:52
D_Lithium by 6020	18-Jan-21 16:52
D_Boron by 6020	18-Jan-21 16:52
D_Antimony by 6020	18-Jan-21 16:52
D_Anions - Fluoride	19-Aug-20 16:52
D_Thallium by 6020	18-Jan-21 16:52
D_Radium226+228_Combined	14-Jan-21 16:52
D_Anions - Sulfates	19-Aug-20 16:52

*Containers Supplied:*

D\_HDPE, HNO3 pH<2 - 250mL extra (B)  
D\_HDPE, Chill @<6°C - 250mL (C)  
D\_HDPE, HNO3 pH<2 - 2000mL (D)

Released By	Date	Received By	Date
<i>K. Brakefield</i>	<i>7/28/20</i>	<i>Shipped via Fed Ex H. Sullivan</i>	<i>7/29/20 1120 25.7°C</i>

Released By	Date	Received By	Date
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**SUBCONTRACT ORDER**  
**Deerhaven Generating Station**  
**D20G028**

Analysis	Expires	Laboratory ID	Comments
<b>Sample Name: MWI-4-5 (R4T5B)</b>			
<b>Sample ID: D20G028-09</b>	<b>Water</b>	<b>Sampled:23-Jul-20 14:48</b>	
D_Antimony by 6020	19-Jan-21 14:48		
D_Boron by 6020	19-Jan-21 14:48		
D_Lithium by 6020	19-Jan-21 14:48		
D_Radium226+228_Combined	15-Jan-21 14:48		
D_Thallium by 6020	19-Jan-21 14:48		
<i>Containers Supplied:</i>			
D_HDPE, HNO3 pH<2 - 250mL extra (B)			
D_HDPE, HNO3 pH<2 - 2000mL (D)			
<b>Sample Name: MWI-6-4 (R6T4B)</b>			
<b>Sample ID: D20G028-10</b>	<b>Water</b>	<b>Sampled:21-Jul-20 10:38</b>	
D_Lithium by 6020	17-Jan-21 10:38		
D_Radium226+228_Combined	13-Jan-21 10:38		
D_Antimony by 6020	17-Jan-21 10:38		
D_Thallium by 6020	17-Jan-21 10:38		
D_Boron by 6020	17-Jan-21 10:38		
<i>Containers Supplied:</i>			
D_HDPE, HNO3 pH<2 - 250mL extra (B)			
D_HDPE, HNO3 pH<2 - 2000mL (D)			
<b>Sample Name: EBLANK</b>			
<b>Sample ID: D20G028-11</b>	<b>Water</b>	<b>Sampled:22-Jul-20 09:45</b>	
D_Antimony by 6020	18-Jan-21 09:45		
D_Boron by 6020	18-Jan-21 09:45		
D_Lithium by 6020	18-Jan-21 09:45		
D_Radium226+228_Combined	14-Jan-21 09:45		
D_Thallium by 6020	18-Jan-21 09:45		
<i>Containers Supplied:</i>			
D_HDPE, HNO3 pH<2 - 250mL extra (B)			
D_HDPE, HNO3 pH<2 - 2000mL (D)			

Shipped via FedEx

Released By: R. Blaufield      Date: 7/28/20      Received By: HW/Par      Date: 7/29/20 11:20 25.7°C

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

**WO#: 35566466**

(SCUR)

Project #  
Project Manager:  
Client:

PM: JSB Due Date: 08/14/20  
CLIENT: DEELAB

Date and Initials of person:

Examining contents:  
Label: HNH  
Deliver: \_\_\_\_\_  
pH: \_\_\_\_\_

Thermometer Used: T349 Date: 7/29/20 Time: 1136 Initials: TMA

State of Origin:

For WV projects, all containers verified to ≤6 °C

Cooler #1 Temp. °C 0.4 (Visual) +0.1 (Correction Factor) 0.5 (Actual)  
Cooler #2 Temp. °C 24.8 (Visual) \_\_\_\_\_ (Correction Factor) 24.9 (Actual)  
Cooler #3 Temp. °C 25.6 (Visual) \_\_\_\_\_ (Correction Factor) 25.7 (Actual)  
Cooler #4 Temp. °C 24.0 (Visual) \_\_\_\_\_ (Correction Factor) 24.1 (Actual)  
Cooler #5 Temp. °C 23.8 (Visual) \_\_\_\_\_ (Correction Factor) 23.9 (Actual)  
Cooler #6 Temp. °C 24.5 (Visual) \_\_\_\_\_ (Correction Factor) 24.6 (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 # 8139 3750 0340/8118 2198 6000/0328/0339/0317/029

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	<p>Preservation Information: Preservative: _____ Lot #/Trace #: _____ Date: _____ Time: _____ Initials: _____</p>
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: 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: \_\_\_\_\_

**Total Suspended Solids - Non Filterable Residue-SM2540D**

Analysis Dates: 7-23-2020 and 7-28-2020

Sample ID	ID	TSS, Result	MDL	PQL	Qualifier
		mg/L	mg/L	mg/L	
D20G025-04	R4T5	1.0	1.0	4.0	U
D20G025-06	R6T4	1.0	1.0	4.0	U
D20G025-10	R9T5	1.0	1.0	4.0	U
D20G025-14	E-BLK	1.0	1.0	4.0	U
D20G025-15	E-BLK	1.0	1.0	4.0	U
D20G028-01	LF-1	1.0	1.0	4.0	U
D20G028-02	LF-2	1.0	1.0	4.0	U
D20G028-03	LF-3	1.0	1.0	4.0	U
D20G028-04	LF-4	1.0	1.0	4.0	U
D20G028-05	SIS-1	2.6	1.0	4.0	I
D20G028-06	SIS-2	1.0	1.0	4.0	U
D20G028-07	SIS-3	1.0	1.0	4.0	U
D20G028-08	SIS-4	1.0	1.0	4.0	U
D20G028-12	LF-7	1.0	1.0	4.0	U

**QC DATA**

2031020-BLK1	BLK	1.0	1.0	4.0	U
2031020-SRM1	SRM	37.3	1.0	4.0	
2031020-DUP1	DUP	1.0	1.0	4.0	U
2031022-BLK1	BLK	1.0	1.0	4.0	U
2031022-SRM1	SRM	31.5	1.0	4.0	
2031022-DUP1	DUP	1.0	1.0	4.0	U

SRM TV, mg/L	44.1		SRM TV, mg/L	34.3	
SRM, mg/L	37.3		SRM, mg/L	31.5	
% Recovery	84.58	% Range	% Recovery	91.84	% Range
Low Range,mg/L	33.5	76.0	Low Range,mg/L	24.9	72.6
High Range,mg/L	50.9	115.4	High Range,mg/L	40.5	118.1

Sample	1.0
Duplicate	1.0
%RPD	0.0

Sample	1.0
Duplicate	1.0
%RPD	0.0

**Total Dissolved Solids - Filterable Residue-SM2540C**

Analysis Dates: 7-23-2020 and 7-28-2020

Sample ID	ID	TDS, Result	MDL	PQL	Qualifier
		mg/L	mg/L	mg/L	
D20G025-04	R4T5	475	10	40	
D20G025-06	R6T4	236	10	40	
D20G025-10	R9T5	412	10	40	
D20G025-14	E-BLK	10	10	40	U
D20G025-15	E-BLK	10	10	40	U
D20G028-01	LF-1	313	10	40	
D20G028-02	LF-2	243	10	40	
D20G028-03	LF-3	433	10	40	
D20G028-04	LF-4	135	10	40	
D20G028-05	SIS-1	264	10	40	
D20G028-06	SIS-2	261	10	40	
D20G028-07	SIS-3	244	10	40	
D20G028-08	SIS-4	373	10	40	
D20G028-12	LF-7	318	10	40	

**QC DATA**

2031020-BLK1	BLK	10	10	40	U
2031020-SRM1	SRM	725	10	40	
2031020-DUP1	DUP	247	10	40	
2031022-BLK1	BLK	10	10	40	U
2031022-SRM1	SRM	656	10	40	
2031022-DUP1	DUP	180	10	40	

SRM TV, mg/L	718		SRM TV, mg/L	661	
SRM, mg/L	725		SRM, mg/L	656	
% Recovery	100.97	% Range	% Recovery	99.24	% Range
Low Range,mg/L	646	89.97	Low Range,mg/L	595	90.02
High Range,mg/L	790	110.03	High Range,mg/L	727	109.98

Sample	239
Duplicate	247
%RPD	3.29

Sample	178
Duplicate	180
%RPD	1.12



*Kanapaha Laboratory*

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

Florida Department of Health Certification E52099

September 10, 2020

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 7/28/2020. 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: D20G025  
Project Manager: Jeff Boudreau

**Reported:**  
09/10/2020 8:49

**ANALYTICAL REPORT FOR SAMPLES**

<b>Laboratory ID</b>	<b>Sample ID</b>	<b>Matrix</b>	<b>Date Sampled</b>	<b>Date Received</b>
K20H007-01	D20G025-01 (MWD-1-6 (R1T6))	Groundwater	07/21/2020 12:48	07/28/2020 11:30
K20H007-02	D20G025-02 (MWB-2-1 (R2T1))	Groundwater	07/20/2020 18:06	07/28/2020 11:30
K20H007-03	D20G025-03 (MWI-3-7 (R3T7))	Groundwater	07/21/2020 15:20	07/28/2020 11:30
K20H007-04	D20G025-04 (MWI-4-5 (R4T5B))	Groundwater	07/23/2020 14:48	07/28/2020 11:30
K20H007-05	D20G025-05 (MWD-6-1 (R6T1B))	Groundwater	07/21/2020 09:13	07/28/2020 11:30
K20H007-06	D20G025-06 (MWI-6-4 (R6T4B))	Groundwater	07/21/2020 10:38	07/28/2020 11:30
K20H007-07	D20G025-07 (MWI-6-8 (R6T8B))	Groundwater	07/22/2020 09:01	07/28/2020 11:30
K20H007-08	D20G025-08 (MWD-6-12 (R6T12))	Groundwater	07/22/2020 10:40	07/28/2020 11:30
K20H007-09	D20G025-09 (MWC-8-10 (R8T10))	Groundwater	07/24/2020 11:00	07/28/2020 11:30
K20H007-10	D20G025-10 (MWI-9-5 (R9T5B))	Groundwater	07/23/2020 17:24	07/28/2020 11:30
K20H007-11	D20G025-11 (MWC-10-8 (R10T8))	Groundwater	07/24/2020 12:24	07/28/2020 11:30
K20H007-12	D20G025-12 (MWC-11-4 (R11T4B))	Groundwater	07/24/2020 13:40	07/28/2020 11:30
K20H007-13	D20G025-13 (MWC-DEEP (DEEP-1))	Groundwater	07/24/2020 07:42	07/28/2020 11:30
K20H007-14	D20G025-14 (EBLANK)	Groundwater	07/22/2020 09:45	07/28/2020 11:30
K20H007-15	D20G025-15 (EBLANK)	Groundwater	07/23/2020 18:27	07/28/2020 11:30



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

Project: Environmental  
Project Number: D20G025  
Project Manager: Jeff Boudreau

**Reported:**  
09/10/2020 8:49

**D20G025-04 (MWI-4-5 (R4T5B))**  
**K20H007-04 (Groundwater, Grab)**  
Collected: 07/23/2020 2:48 pm

Analyte	Result Qual	MDL	PQL	Units	Dil	Prepared	Analyzed	Method
<b>Laboratory: Kanapaha Laboratory</b>								
<b>Metals by EPA 200 Series Methods</b>								
Aluminum	145	5.0	20.0	ug/L	1	08/24/2020	08/26/2020	EPA 200.7
Arsenic	4.6 I	2.5	10.0	ug/L	1	08/24/2020	08/26/2020	EPA 200.7
Barium	12.9	0.2	0.8	ug/L	1	08/24/2020	08/26/2020	EPA 200.7
Beryllium	0.10 U	0.10	0.40	ug/L	1	08/24/2020	08/26/2020	EPA 200.7
Cadmium	0.3 U	0.3	1.2	ug/L	1	08/24/2020	08/26/2020	EPA 200.7
Calcium	92.5	0.10	0.40	mg/L	1	08/24/2020	08/26/2020	EPA 200.7
Chromium	2.1 I	1.2	4.8	ug/L	1	08/24/2020	08/26/2020	EPA 200.7
Cobalt	1.0 U	1.0	4.0	ug/L	1	08/24/2020	08/26/2020	EPA 200.7
Copper	1.5 U	1.5	6.0	ug/L	1	08/24/2020	08/26/2020	EPA 200.7
Iron	22200	21.0	84.0	ug/L	5	08/24/2020	08/26/2020	EPA 200.7
Lead	3.0 U	3.0	12.0	ug/L	1	08/24/2020	08/26/2020	EPA 200.7
Magnesium	32.0	0.01	0.04	mg/L	1	08/24/2020	08/26/2020	EPA 200.7
Manganese	129	1.0	4.0	ug/L	1	08/24/2020	08/26/2020	EPA 200.7
Molybdenum	2.5 U	2.5	10.0	ug/L	1	08/24/2020	08/26/2020	EPA 200.7
Nickel	1.0 U	1.0	4.0	ug/L	1	08/24/2020	08/26/2020	EPA 200.7
Selenium	4.0 U	4.0	16.0	ug/L	1	08/24/2020	08/26/2020	EPA 200.7
Silver	0.6 U	0.6	2.4	ug/L	1	08/24/2020	08/26/2020	EPA 200.7
Strontium	88.7	0.3	1.2	ug/L	1	08/24/2020	08/26/2020	EPA 200.7
Vanadium	3.0 U	3.0	12.0	ug/L	1	08/24/2020	08/26/2020	EPA 200.7
Zinc	2.1 U	2.1	8.4	ug/L	1	08/24/2020	08/26/2020	EPA 200.7
Mercury	0.100 U	0.100	0.400	ug/L	1	08/06/2020	08/06/2020	EPA 245.1





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

Project: Environmental  
Project Number: D20G025  
Project Manager: Jeff Boudreau

**Reported:**  
09/10/2020 8:49

**D20G025-06 (MWI-6-4 (R6T4B))**  
**K20H007-06 (Groundwater, Grab)**  
Collected: 07/21/2020 10:38 am

Analyte	Result	Qual	MDL	PQL	Units	Dil	Prepared	Analyzed	Method
<b>Laboratory: Kanapaha Laboratory</b>									
<b>Metals by EPA 200 Series Methods</b>									
Aluminum	45.3		5.0	20.0	ug/L	1	08/24/2020	08/26/2020	EPA 200.7
Arsenic	2.5	U	2.5	10.0	ug/L	1	08/24/2020	08/26/2020	EPA 200.7
Barium	20.3		0.2	0.8	ug/L	1	08/24/2020	08/26/2020	EPA 200.7
Beryllium	0.10	U	0.10	0.40	ug/L	1	08/24/2020	08/26/2020	EPA 200.7
Cadmium	0.3	U	0.3	1.2	ug/L	1	08/24/2020	08/26/2020	EPA 200.7
Calcium	70.4		0.10	0.40	mg/L	1	08/24/2020	08/26/2020	EPA 200.7
Chromium	1.2	U	1.2	4.8	ug/L	1	08/24/2020	08/26/2020	EPA 200.7
Cobalt	1.0	U	1.0	4.0	ug/L	1	08/24/2020	08/26/2020	EPA 200.7
Copper	1.5	U	1.5	6.0	ug/L	1	08/24/2020	08/26/2020	EPA 200.7
Iron	211		4.2	16.8	ug/L	1	08/24/2020	08/26/2020	EPA 200.7
Lead	3.0	U	3.0	12.0	ug/L	1	08/24/2020	08/26/2020	EPA 200.7
Magnesium	2.93		0.01	0.04	mg/L	1	08/24/2020	08/26/2020	EPA 200.7
Manganese	25.4		1.0	4.0	ug/L	1	08/24/2020	08/26/2020	EPA 200.7
Molybdenum	2.5	U	2.5	10.0	ug/L	1	08/24/2020	08/26/2020	EPA 200.7
Nickel	1.0	U	1.0	4.0	ug/L	1	08/24/2020	08/26/2020	EPA 200.7
Selenium	4.0	U	4.0	16.0	ug/L	1	08/24/2020	08/26/2020	EPA 200.7
Silver	0.6	U	0.6	2.4	ug/L	1	08/24/2020	08/26/2020	EPA 200.7
Strontium	117		0.3	1.2	ug/L	1	08/24/2020	08/26/2020	EPA 200.7
Vanadium	3.0	U	3.0	12.0	ug/L	1	08/24/2020	08/26/2020	EPA 200.7
Zinc	2.1	U	2.1	8.4	ug/L	1	08/24/2020	08/26/2020	EPA 200.7
Mercury	0.100	U	0.100	0.400	ug/L	1	08/06/2020	08/06/2020	EPA 245.1



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

Project: Environmental  
Project Number: D20G025  
Project Manager: Jeff Boudreau

**Reported:**  
09/10/2020 8:49

**D20G025-14 (EBLANK)**  
**K20H007-14 (Groundwater, Grab)**  
Collected: 07/22/2020 9:45 am

Analyte	Result Qual	MDL	PQL	Units	Dil	Prepared	Analyzed	Method
<b>Laboratory: Kanapaha Laboratory</b>								
<b>Metals by EPA 200 Series Methods</b>								
Aluminum	5.0 U	5.0	20.0	ug/L	1	08/24/2020	08/26/2020	EPA 200.7
Arsenic	2.5 U	2.5	10.0	ug/L	1	08/24/2020	08/26/2020	EPA 200.7
Barium	0.2 U	0.2	0.8	ug/L	1	08/24/2020	08/26/2020	EPA 200.7
Beryllium	0.10 U	0.10	0.40	ug/L	1	08/24/2020	08/26/2020	EPA 200.7
Cadmium	0.3 U	0.3	1.2	ug/L	1	08/24/2020	08/26/2020	EPA 200.7
Calcium	0.10 U	0.10	0.40	mg/L	1	08/24/2020	08/26/2020	EPA 200.7
Chromium	1.2 U	1.2	4.8	ug/L	1	08/24/2020	08/26/2020	EPA 200.7
Cobalt	1.0 U	1.0	4.0	ug/L	1	08/24/2020	08/26/2020	EPA 200.7
Copper	1.5 U	1.5	6.0	ug/L	1	08/24/2020	08/26/2020	EPA 200.7
Iron	4.2 U	4.2	16.8	ug/L	1	08/24/2020	08/26/2020	EPA 200.7
Lead	3.0 U	3.0	12.0	ug/L	1	08/24/2020	08/26/2020	EPA 200.7
Magnesium	0.01 U	0.01	0.04	mg/L	1	08/24/2020	08/26/2020	EPA 200.7
Manganese	1.0 U	1.0	4.0	ug/L	1	08/24/2020	08/26/2020	EPA 200.7
Molybdenum	2.5 U	2.5	10.0	ug/L	1	08/24/2020	08/26/2020	EPA 200.7
Nickel	1.0 U	1.0	4.0	ug/L	1	08/24/2020	08/26/2020	EPA 200.7
Selenium	4.0 U	4.0	16.0	ug/L	1	08/24/2020	08/26/2020	EPA 200.7
Silver	0.6 U	0.6	2.4	ug/L	1	08/24/2020	08/26/2020	EPA 200.7
Strontium	0.3 U	0.3	1.2	ug/L	1	08/24/2020	08/26/2020	EPA 200.7
Vanadium	3.0 U	3.0	12.0	ug/L	1	08/24/2020	08/26/2020	EPA 200.7
Zinc	2.1 U	2.1	8.4	ug/L	1	08/24/2020	08/26/2020	EPA 200.7
Mercury	0.100 U	0.100	0.400	ug/L	1	08/06/2020	08/06/2020	EPA 245.1



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

Project: Environmental  
Project Number: D20G025  
Project Manager: Jeff Boudreau

**Reported:**  
09/10/2020 8:49

**D20G025-15 (EBLANK)**  
**K20H007-15 (Groundwater, Grab)**  
Collected: 07/23/2020 6:27 pm

Analyte	Result Qual	MDL	PQL	Units	Dil	Prepared	Analyzed	Method
<b>Laboratory: Kanapaha Laboratory</b>								
<b>Metals by EPA 200 Series Methods</b>								
Aluminum	5.0 U	5.0	20.0	ug/L	1	08/24/2020	08/26/2020	EPA 200.7
Arsenic	2.5 U	2.5	10.0	ug/L	1	08/24/2020	08/26/2020	EPA 200.7
Barium	0.2 U	0.2	0.8	ug/L	1	08/24/2020	08/26/2020	EPA 200.7
Beryllium	0.10 U	0.10	0.40	ug/L	1	08/24/2020	08/26/2020	EPA 200.7
Cadmium	0.3 U	0.3	1.2	ug/L	1	08/24/2020	08/26/2020	EPA 200.7
Calcium	0.10 U	0.10	0.40	mg/L	1	08/24/2020	08/26/2020	EPA 200.7
Chromium	1.2 U	1.2	4.8	ug/L	1	08/24/2020	08/26/2020	EPA 200.7
Cobalt	1.0 U	1.0	4.0	ug/L	1	08/24/2020	08/26/2020	EPA 200.7
Copper	1.5 U	1.5	6.0	ug/L	1	08/24/2020	08/26/2020	EPA 200.7
Iron	4.2 U	4.2	16.8	ug/L	1	08/24/2020	08/26/2020	EPA 200.7
Lead	3.0 U	3.0	12.0	ug/L	1	08/24/2020	08/26/2020	EPA 200.7
Magnesium	0.01 U	0.01	0.04	mg/L	1	08/24/2020	08/26/2020	EPA 200.7
Manganese	1.0 U	1.0	4.0	ug/L	1	08/24/2020	08/26/2020	EPA 200.7
Molybdenum	2.5 U	2.5	10.0	ug/L	1	08/24/2020	08/26/2020	EPA 200.7
Nickel	1.0 U	1.0	4.0	ug/L	1	08/24/2020	08/26/2020	EPA 200.7
Selenium	4.0 U	4.0	16.0	ug/L	1	08/24/2020	08/26/2020	EPA 200.7
Silver	0.6 U	0.6	2.4	ug/L	1	08/24/2020	08/26/2020	EPA 200.7
Strontium	0.3 U	0.3	1.2	ug/L	1	08/24/2020	08/26/2020	EPA 200.7
Vanadium	3.0 U	3.0	12.0	ug/L	1	08/24/2020	08/26/2020	EPA 200.7
Zinc	2.1 U	2.1	8.4	ug/L	1	08/24/2020	08/26/2020	EPA 200.7
Mercury	0.100 U	0.100	0.400	ug/L	1	08/06/2020	08/06/2020	EPA 245.1



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

Project: Environmental  
Project Number: D20G025  
Project Manager: Jeff Boudreau

**Reported:**  
09/10/2020 8:49

### 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
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#### Batch B20H034 - MERCURY

##### Blank (B20H034-BLK1)

Prepared & Analyzed: 8/6/2020

Mercury 0.100 U 0.100 0.400 ug/L

##### LCS (B20H034-BS1)

Prepared & Analyzed: 8/6/2020

Mercury 2.07 0.100 0.400 ug/L 2.00 103 90-110

##### Duplicate (B20H034-DUP1)

Source: K20H007-01

Prepared & Analyzed: 8/6/2020

Mercury 0.100 U 0.100 0.400 ug/L ND NR

##### Duplicate (B20H034-DUP2)

Source: K20H007-11

Prepared & Analyzed: 8/6/2020

Mercury 0.100 U 0.100 0.400 ug/L ND NR

##### Matrix Spike (B20H034-MS1)

Source: K20H007-01

Prepared & Analyzed: 8/6/2020

Mercury 2.06 0.100 0.400 ug/L 2.00 ND 103 90-110

##### Matrix Spike (B20H034-MS2)

Source: K20H007-11

Prepared & Analyzed: 8/6/2020

Mercury 2.02 0.100 0.400 ug/L 2.00 ND 101 90-110

#### Batch B20H162 - EPA 200.7

##### Blank (B20H162-BLK1)

Prepared: 8/24/2020 Analyzed: 8/26/2020

Lead	3.0U	3.0	12.0	ug/L
Calcium	0.10U	0.10	0.40	mg/L
Manganese	1.0U	1.0	4.0	ug/L
Chromium	1.2U	1.2	4.8	ug/L
Selenium	4.0U	4.0	16.0	ug/L
Copper	1.5U	1.5	6.0	ug/L
Cobalt	1.0U	1.0	4.0	ug/L
Iron	4.2U	4.2	16.8	ug/L
Silver	0.6U	0.6	2.4	ug/L
Molybdenum	2.5U	2.5	10.0	ug/L
Magnesium	0.01U	0.01	0.04	mg/L
Nickel	1.0U	1.0	4.0	ug/L
Arsenic	2.5U	2.5	10.0	ug/L
Beryllium	0.10U	0.10	0.40	ug/L
Zinc	2.1U	2.1	8.4	ug/L
Strontium	0.3U	0.3	1.2	ug/L
Aluminum	5.0U	5.0	20.0	ug/L
Barium	0.2U	0.2	0.8	ug/L
Cadmium	0.3U	0.3	1.2	ug/L
Vanadium	3.0U	3.0	12.0	ug/L



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

Project: Environmental  
Project Number: D20G025  
Project Manager: Jeff Boudreau

**Reported:**  
09/10/2020 8:49

## 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
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### Batch B20H162 - EPA 200.7 (Continued)

#### Blank (B20H162-BLK1)

Prepared: 8/24/2020 Analyzed: 8/26/2020

#### LCS (B20H162-BS1)

Prepared: 8/24/2020 Analyzed: 8/26/2020

Magnesium	24.1				mg/L	24.8		97.2	90-110		
Lead	99.0				ug/L	100		99.0	90-110		
Aluminum	104				ug/L	100		104	90-110		
Iron	98.0				ug/L	100		98.0	90-110		
Cadmium	98.1				ug/L	101		97.1	90-110		
Arsenic	103				ug/L	100		103	90-110		
Cobalt	97.6				ug/L	101		96.7	90-110		
Barium	96.4				ug/L	100		96.4	90-110		
Chromium	94.8				ug/L	100		94.8	90-110		
Calcium	24.6				mg/L	25.0		98.4	90-110		
Beryllium	98.2				ug/L	100		98.2	90-110		
Copper	99.9				ug/L	101		98.9	90-110		
Selenium	93.4				ug/L	100		93.4	90-110		
Strontium	99.9				ug/L	100		99.9	90-110		
Manganese	100				ug/L	101		99.3	90-110		
Vanadium	102				ug/L	101		101	90-110		
Silver	50.8				ug/L	50.9		99.8	90-110		
Zinc	99.2				ug/L	101		98.2	90-110		
Nickel	97.3				ug/L	102		95.4	90-110		
Molybdenum	91.5				ug/L	100		91.5	90-110		

#### Duplicate (B20H162-DUP1)

Source: K20H007-05

Prepared: 8/24/2020 Analyzed: 8/26/2020

Magnesium	4.48		0.01	0.04	mg/L		4.48			0.0158	
Manganese	4.7		1.0	4.0	ug/L		4.7			0.514	
Molybdenum	2.5 U		2.5	10.0	ug/L		ND			NR	
Nickel	2.6 I		1.0	4.0	ug/L		2.5			1.98	
Lead	3.0 U		3.0	12.0	ug/L		ND			5.53	
Vanadium	3.0 U		3.0	12.0	ug/L		ND			24.7	
Selenium	4.0 U		4.0	16.0	ug/L		ND			79.0	
Zinc	2.1 U		2.1	8.4	ug/L		ND			7.05	
Silver	0.6 U		0.6	2.4	ug/L		ND			NR	
Aluminum	162		5.0	20.0	ug/L		163			0.459	
Strontium	74.1		0.3	1.2	ug/L		73.8			0.340	
Iron	602		4.2	16.8	ug/L		604			0.252	
Beryllium	0.10 U		0.10	0.40	ug/L		ND			3.01	
Cadmium	0.3 U		0.3	1.2	ug/L		ND			NR	
Arsenic	2.5 U		2.5	10.0	ug/L		ND			NR	
Calcium	11.7		0.10	0.40	mg/L		11.8			0.559	
Barium	26.3		0.2	0.8	ug/L		26.1			0.571	
Chromium	1.2 U		1.2	4.8	ug/L		ND			36.3	
Cobalt	1.0 U		1.0	4.0	ug/L		ND			12.3	



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

Project: Environmental  
Project Number: D20G025  
Project Manager: Jeff Boudreau

**Reported:**  
09/10/2020 8:49

### 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
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#### Batch B20H162 - EPA 200.7 (Continued)

Duplicate (B20H162-DUP1)	Source: K20H007-05				Prepared: 8/24/2020 Analyzed: 8/26/2020						
Copper	1.5 U		1.5	6.0	ug/L		ND			NR	

Duplicate (B20H162-DUP2)	Source: K20H010-01				Prepared: 8/24/2020 Analyzed: 8/26/2020						
Cobalt	1.0 U		1.0	4.0	ug/L		ND			5.41	
Arsenic	5.0 I		2.5	10.0	ug/L		3.9			18.2	
Vanadium	16.2		3.0	12.0	ug/L		16.6			1.51	
Barium	50.0		0.2	0.8	ug/L		49.3			1.12	
Silver	0.6 U		0.6	2.4	ug/L		ND			NR	
Manganese	74.3		1.0	4.0	ug/L		75.4			1.04	
Magnesium	145		0.01	0.04	mg/L		149			2.10	
Strontium	1420		0.3	1.2	ug/L		1410			0.521	
Cadmium	0.3 U		0.3	1.2	ug/L		ND			28.3	
Aluminum	32.7		5.0	20.0	ug/L		33.1			0.789	
Calcium	153		0.10	0.40	mg/L		150			1.44	
Selenium	4.0 U		4.0	16.0	ug/L		ND			6.21	
Chromium	6.4		1.2	4.8	ug/L		7.0			6.80	
Lead	3.0 U		3.0	12.0	ug/L		ND			NR	
Beryllium	0.10 U		0.10	0.40	ug/L		ND			9.82	
Molybdenum	27.4		2.5	10.0	ug/L		28.1			1.77	
Nickel	221		1.0	4.0	ug/L		225			1.33	
Iron	200		4.2	16.8	ug/L		204			1.49	
Copper	1.5 U		1.5	6.0	ug/L		ND			0.647	
Zinc	2.9 I		2.1	8.4	ug/L		3.0			0.936	

Matrix Spike (B20H162-MS1)	Source: K20H007-05				Prepared: 8/24/2020 Analyzed: 8/26/2020				
Vanadium	497		3.0	12.0	ug/L	500	ND	99.4	90-110
Zinc	188		2.1	8.4	ug/L	200	ND	94.0	90-110
Arsenic	190		2.5	10.0	ug/L	200	ND	94.8	90-110
Aluminum	639		5.0	20.0	ug/L	500	163	95.1	90-110
Strontium	559		0.3	1.2	ug/L	500	73.8	97.1	90-110
Lead	190		3.0	12.0	ug/L	200	ND	94.9	90-110
Copper	198		1.5	6.0	ug/L	200	ND	99.1	90-110
Silver	49.2		0.6	2.4	ug/L	50.0	ND	98.4	90-110
Chromium	186		1.2	4.8	ug/L	200	ND	93.2	90-110
Molybdenum	471		2.5	10.0	ug/L	500	ND	94.3	90-110
Calcium	36.3		0.10	0.40	mg/L	25.0	11.8	97.9	90-110
Selenium	46.8		4.0	16.0	ug/L	50.0	ND	93.5	90-110
Cobalt	194		1.0	4.0	ug/L	200	ND	96.9	90-110
Iron	1570		4.2	16.8	ug/L	1000	604	96.4	90-110
Nickel	194		1.0	4.0	ug/L	200	2.5	95.9	90-110
Cadmium	47.8		0.3	1.2	ug/L	50.0	ND	95.6	90-110
Beryllium	195		0.10	0.40	ug/L	200	ND	97.7	90-110
Manganese	198		1.0	4.0	ug/L	200	4.7	96.7	90-110



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

Project: Environmental  
Project Number: D20G025  
Project Manager: Jeff Boudreau

**Reported:**  
09/10/2020 8:49

### 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
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#### Batch B20H162 - EPA 200.7 (Continued)

Matrix Spike (B20H162-MS1)		Source: K20H007-05				Prepared: 8/24/2020 Analyzed: 8/26/2020					
Magnesium	29.0		0.01	0.04	mg/L	25.0	4.48	98.0	90-110		
Barium	502		0.2	0.8	ug/L	500	26.1	95.2	90-110		

Matrix Spike (B20H162-MS2)		Source: K20H010-01				Prepared: 8/24/2020 Analyzed: 8/26/2020					
Lead	209		3.0	12.0	ug/L	200	ND	105	90-110		
Manganese	265		1.0	4.0	ug/L	200	75.4	94.8	90-110		
Molybdenum	499		2.5	10.0	ug/L	500	28.1	94.2	90-110		
Copper	226 J		1.5	6.0	ug/L	200	ND	113	90-110		
Magnesium	173		0.01	0.04	mg/L	25.0	149	95.6	90-110		
Iron	1150		4.2	16.8	ug/L	1000	204	94.5	90-110		
Cobalt	197		1.0	4.0	ug/L	200	ND	98.5	90-110		
Zinc	191		2.1	8.4	ug/L	200	3.0	94.1	90-110		
Chromium	192		1.2	4.8	ug/L	200	7.0	92.6	90-110		
Arsenic	196		2.5	10.0	ug/L	200	3.9	95.9	90-110		
Calcium	178 J		0.10	0.40	mg/L	25.0	150	112	90-110		
Selenium	49.1		4.0	16.0	ug/L	50.0	ND	98.3	90-110		
Vanadium	491		3.0	12.0	ug/L	500	16.6	94.8	90-110		
Cadmium	47.4		0.3	1.2	ug/L	50.0	ND	94.7	90-110		
Beryllium	171 J		0.10	0.40	ug/L	200	ND	85.7	90-110		
Silver	54.3		0.6	2.4	ug/L	50.0	ND	109	90-110		
Aluminum	532		5.0	20.0	ug/L	500	33.1	99.8	90-110		
Strontium	1920		0.3	1.2	ug/L	500	1410	102	90-110		
Barium	539		0.2	0.8	ug/L	500	49.3	97.9	90-110		
Nickel	425		1.0	4.0	ug/L	200	225	100	90-110		



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

Project: Environmental  
Project Number: D20G025  
Project Manager: Jeff Boudreau

**Reported:**  
09/10/2020 8:49

### Notes and Definitions

<u>Qualifier</u>	<u>Description</u>
J	Estimated value. Quality control associated with the reported value failed to meet the established quality control criteria.
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**  
**D20G025**

Analysis	Expires	Laboratory ID	Comments
<b>Sample Name: MWI-4-5 (R4T5B)</b>			
<b>Sample ID: D20G025-04</b>	<b>Water</b>	<b>Sampled: 23-Jul-20 14:48</b>	<b>K20H007-04</b>
K_Iron	19-Jan-21 14:48		
K_Lead	19-Jan-21 14:48		
K_Magnesium	19-Jan-21 14:48		
K_Mercury, cold vapor	20-Aug-20 14:48		
K_Manganese	19-Jan-21 14:48		
K_Nickel	19-Jan-21 14:48		
K_Strontium	19-Jan-21 14:48		
K_Vanadium	19-Jan-21 14:48		
K_Copper	19-Jan-21 14:48		
K_Zinc	19-Jan-21 14:48		
K_Silver	19-Jan-21 14:48		
K_Cobalt	19-Jan-21 14:48		
K_Selenium	19-Jan-21 14:48		
K_Aluminum	19-Jan-21 14:48		
K_Arsenic	19-Jan-21 14:48		
K_Barium	19-Jan-21 14:48		
K_Beryllium	19-Jan-21 14:48		
K_Molybdenum	19-Jan-21 14:48		
K_Cadmium	19-Jan-21 14:48		
K_Calcium	19-Jan-21 14:48		
K_Chromium	19-Jan-21 14:48		
<i>Containers Supplied:</i>			
D_HDPE, HNO3 pH<2 - 500mL (E)			

<i>R. Brakefield</i>	<i>7/28/20</i>	<i>John M. DeW</i>	<i>07/28/20 1130</i>
Released By	Date	Received By	Date

Released By	Date	Received By	Date
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**SUBCONTRACT ORDER**  
**Deerhaven Generating Station**  
**D20G025**

Analysis	Expires	Laboratory ID	Comments
Sample Name: MWI-6-4 (R6T4B)		K20H007-06	
Sample ID: D20G025-06	Water		
K_Iron	17-Jan-21 10:38		
K_Strontium	17-Jan-21 10:38		
K_Silver	17-Jan-21 10:38		
K_Selenium	17-Jan-21 10:38		
K_Nickel	17-Jan-21 10:38		
K_Molybdenum	17-Jan-21 10:38		
K_Mercury, cold vapor	18-Aug-20 10:38		
K_Manganese	17-Jan-21 10:38		
K_Zinc	17-Jan-21 10:38		
K_Vanadium	17-Jan-21 10:38		
K_Aluminum	17-Jan-21 10:38		
K_Copper	17-Jan-21 10:38		
K_Cobalt	17-Jan-21 10:38		
K_Chromium	17-Jan-21 10:38		
K_Calcium	17-Jan-21 10:38		
K_Cadmium	17-Jan-21 10:38		
K_Beryllium	17-Jan-21 10:38		
K_Barium	17-Jan-21 10:38		
K_Arsenic	17-Jan-21 10:38		
K_Magnesium	17-Jan-21 10:38		
K_Lead	17-Jan-21 10:38		
<i>Containers Supplied:</i>			
D HDPE, HNO3 pH<2 - 500mL (E)			

Released By: R. Brakefield Date: 7/28/20 Received By: John M. Don Date: 07/28/20 1130

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



**SUBCONTRACT ORDER**  
**Deerhaven Generating Station**  
**D20G025**

Analysis	Expires	Laboratory ID	Comments
Sample Name: EBLANK			
Sample ID: D20G025-14	Water	Sampled: 22-Jul-20 09:45	K20H007-14
K_Magnesium	18-Jan-21 09:45		
K_Manganese	18-Jan-21 09:45		
K_Mercury, cold vapor	19-Aug-20 09:45		
K_Nickel	18-Jan-21 09:45		
K_Silver	18-Jan-21 09:45		
K_Strontium	18-Jan-21 09:45		
K_Lead	18-Jan-21 09:45		
K_Zinc	18-Jan-21 09:45		
K_Molybdenum	18-Jan-21 09:45		
K_Vanadium	18-Jan-21 09:45		
K_Aluminum	18-Jan-21 09:45		
K_Copper	18-Jan-21 09:45		
K_Cobalt	18-Jan-21 09:45		
K_Chromium	18-Jan-21 09:45		
K_Calcium	18-Jan-21 09:45		
K_Cadmium	18-Jan-21 09:45		
K_Beryllium	18-Jan-21 09:45		
K_Barium	18-Jan-21 09:45		
K_Arsenic	18-Jan-21 09:45		
K_Selenium	18-Jan-21 09:45		
K_Iron	18-Jan-21 09:45		
<i>Containers Supplied:</i>			
D_HDPE, HNO3 pH<2 - 500mL (E)			

<i>R. Brakefield</i>	<i>7/28/20</i>	<i>Jack M. Deh</i>	<i>07/28/20 1130</i>
Released By	Date	Received By	Date

Released By	Date	Received By	Date
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**SUBCONTRACT ORDER**  
**Deerhaven Generating Station**  
**D20G025**

Analysis	Expires	Laboratory ID	Comments
Sample Name: EBLANK			
Sample ID: D20G025-15	Water	Sampled: 23-Jul-20 18:27	K20H007-15
K_Manganese	19-Jan-21 18:27		
K_Mercury, cold vapor	20-Aug-20 18:27		
K_Molybdenum	19-Jan-21 18:27		
K_Nickel	19-Jan-21 18:27		
K_Selenium	19-Jan-21 18:27		
K_Silver	19-Jan-21 18:27		
K_Magnesium	19-Jan-21 18:27		
K_Vanadium	19-Jan-21 18:27		
K_Cadmium	19-Jan-21 18:27		
K_Strontium	19-Jan-21 18:27		
K_Lead	19-Jan-21 18:27		
K_Iron	19-Jan-21 18:27		
K_Copper	19-Jan-21 18:27		
K_Cobalt	19-Jan-21 18:27		
K_Calcium	19-Jan-21 18:27		
K_Beryllium	19-Jan-21 18:27		
K_Barium	19-Jan-21 18:27		
K_Arsenic	19-Jan-21 18:27		
K_Aluminum	19-Jan-21 18:27		
K_Zinc	19-Jan-21 18:27		
K_Chromium	19-Jan-21 18:27		
<i>Containers Supplied:</i>			
D_HDPE, HNO3 pH<2 - 500mL (E)			

<i>R. Braleyfield</i>	<i>7/28/20</i>	<i>John M. Dan</i>	<i>07/28/20 1130</i>
Released By	Date	Received By	Date

Released By	Date	Received By	Date
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August 13, 2020

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

RE: Project: D20G025  
Pace Project No.: 35566443

Dear Mr. Boudreau:

Enclosed are the analytical results for sample(s) received by the laboratory on July 29, 2020. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Ormond Beach
- Pace Analytical Services - Greensburg

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  
Kimberly Morrison, Deerhaven Labs  
Shelley Phillips, Deerhaven Lab



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: D20G025  
Pace Project No.: 35566443

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### **Pace Analytical Services Pennsylvania**

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  
Florida: Cert E871149 SEKS WET  
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

### **Pace Analytical Services Ormond Beach**

8 East Tower Circle, Ormond Beach, FL 32174  
Alaska DEC- CS/UST/LUST  
Alabama Certification #: 41320  
Arizona Certification# AZ0819  
Colorado Certification: FL NELAC Reciprocity  
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  
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  
Ohio DEP 87780  
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  
West Virginia Certification #: 9962C  
Wisconsin Certification #: 399079670

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## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: D20G025  
Pace Project No.: 35566443

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**Pace Analytical Services Ormond Beach**  
Wyoming (EPA Region 8): FL NELAC Reciprocity

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## REPORT OF LABORATORY ANALYSIS

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### SAMPLE SUMMARY

Project: D20G025

Pace Project No.: 35566443

Lab ID	Sample ID	Matrix	Date Collected	Date Received
35566443001	D20G025-01	Water	07/21/20 12:48	07/29/20 11:20
35566443002	D20G025-02	Water	07/20/20 18:06	07/29/20 11:20
35566443003	D20G025-03	Water	07/21/20 15:20	07/29/20 11:20
35566443004	D20G025-04	Water	07/23/20 14:48	07/29/20 11:20
35566443005	D20G025-05	Water	07/21/20 09:13	07/29/20 11:20
35566443006	D20G025-06	Water	07/21/20 10:38	07/29/20 11:20
35566443007	D20G025-07	Water	07/22/20 09:01	07/29/20 11:20
35566443008	D20G025-08	Water	07/22/20 10:40	07/29/20 11:20
35566443009	D20G025-09	Water	07/24/20 11:00	07/29/20 11:20
35566443010	D20G025-10	Water	07/23/20 17:24	07/29/20 11:20
35566443011	D20G025-11	Water	07/24/20 12:24	07/29/20 11:20
35566443012	D20G025-12	Water	07/24/20 13:40	07/29/20 11:20
35566443013	D20G025-13	Water	07/24/20 07:42	07/29/20 11:20
35566443014	D20G025-14	Water	07/22/20 09:45	07/29/20 11:20
35566443015	D20G025-15	Water	07/23/20 18:27	07/29/20 11:20

### REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: D20G025  
Pace Project No.: 35566443

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
35566443001	D20G025-01	EPA 200.7	LEC	2	PASI-O
		SM 7110C-11	CLA	1	PASI-PA
		EPA 300.0	YMP	2	PASI-O
		EPA 353.2	CLL	1	PASI-O
		SM 5310B	AGS	1	PASI-O
35566443002	D20G025-02	EPA 200.7	LEC	2	PASI-O
		SM 7110C-11	CLA	1	PASI-PA
		EPA 300.0	YMP	2	PASI-O
		EPA 353.2	CLL	1	PASI-O
		SM 5310B	AGS	1	PASI-O
35566443003	D20G025-03	EPA 200.7	LEC	2	PASI-O
		SM 7110C-11	CLA	1	PASI-PA
		EPA 300.0	YMP	2	PASI-O
		EPA 353.2	CLL	1	PASI-O
		SM 5310B	AGS	1	PASI-O
35566443004	D20G025-04	EPA 200.7	LEC	2	PASI-O
		SM 7110C-11	CLA	1	PASI-PA
		EPA 300.0	YMP	3	PASI-O
		EPA 353.2	CLL	1	PASI-O
		SM 5310B	AGS	1	PASI-O
35566443005	D20G025-05	EPA 200.7	LEC	2	PASI-O
		SM 7110C-11	CLA	1	PASI-PA
		EPA 300.0	YMP	2	PASI-O
		EPA 353.2	CLL	1	PASI-O
		SM 5310B	AGS	1	PASI-O
35566443006	D20G025-06	EPA 200.7	LEC	2	PASI-O
		SM 7110C-11	CLA	1	PASI-PA
		EPA 300.0	YMP	3	PASI-O
		EPA 353.2	CLL	1	PASI-O
		SM 5310B	AGS	1	PASI-O
35566443007	D20G025-07	EPA 200.7	LEC	2	PASI-O
		SM 7110C-11	CLA	1	PASI-PA
		EPA 300.0	YMP	2	PASI-O
		EPA 353.2	CLL	1	PASI-O
		SM 5310B	AGS	1	PASI-O
35566443008	D20G025-08	EPA 200.7	LEC	2	PASI-O
		SM 7110C-11	CLA	1	PASI-PA

### REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: D20G025  
Pace Project No.: 35566443

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
35566443009	D20G025-09	EPA 300.0	YMP	2	PASI-O
		EPA 353.2	CLL	1	PASI-O
		SM 5310B	AGS	1	PASI-O
		EPA 200.7	LEC	2	PASI-O
		SM 7110C-11	CLA	1	PASI-PA
		EPA 300.0	YMP	2	PASI-O
35566443010	D20G025-10	EPA 353.2	CLL	1	PASI-O
		SM 5310B	AGS	1	PASI-O
		EPA 200.7	KPP	2	PASI-O
		SM 7110C-11	CLA	1	PASI-PA
		EPA 300.0	YMP	3	PASI-O
		EPA 353.2	CLL	1	PASI-O
35566443011	D20G025-11	SM 5310B	AGS	1	PASI-O
		EPA 200.7	KPP	2	PASI-O
		SM 7110C-11	CLA	1	PASI-PA
		EPA 300.0	YMP	2	PASI-O
		EPA 353.2	CLL	1	PASI-O
		SM 5310B	AGS	1	PASI-O
35566443012	D20G025-12	EPA 200.7	KPP	2	PASI-O
		SM 7110C-11	ERT	1	PASI-PA
		EPA 300.0	YMP	2	PASI-O
		EPA 353.2	CLL	1	PASI-O
		SM 5310B	AGS	1	PASI-O
		EPA 200.7	KPP	2	PASI-O
35566443013	D20G025-13	SM 7110C-11	CLA	1	PASI-PA
		EPA 300.0	YMP	2	PASI-O
		EPA 353.2	CLL	1	PASI-O
		SM 5310B	AGS	1	PASI-O
		EPA 200.7	KPP	2	PASI-O
		SM 7110C-11	CLA	1	PASI-PA
35566443014	D20G025-14	EPA 300.0	YMP	3	PASI-O
		EPA 353.2	CLL	1	PASI-O
		SM 5310B	AGS	1	PASI-O
		EPA 200.7	KPP	2	PASI-O
		SM 7110C-11	CLA	1	PASI-PA
		EPA 300.0	YMP	3	PASI-O
35566443015	D20G025-15	EPA 353.2	CLL	1	PASI-O
		SM 5310B	AGS	1	PASI-O
		EPA 200.7	KPP	2	PASI-O
		SM 7110C-11	CLA	1	PASI-PA
		EPA 300.0	YMP	3	PASI-O
		EPA 353.2	CLL	1	PASI-O

### REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: D20G025  
Pace Project No.: 35566443

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		SM 5310B	AGS	1	PASI-O

PASI-O = Pace Analytical Services - Ormond Beach  
PASI-PA = Pace Analytical Services - Greensburg

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: D20G025  
Pace Project No.: 35566443

**Sample: D20G025-04**      **Lab ID: 35566443004**      Collected: 07/23/20 14:48      Received: 07/29/20 11:20      Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>200.7 MET ICP</b>									
Analytical Method: EPA 200.7    Preparation Method: EPA 200.7 Pace Analytical Services - Ormond Beach									
Potassium	<b>604 I</b>	ug/L	1000	270	1	07/30/20 02:17	07/30/20 14:58	7440-09-7	
Sodium	<b>8910</b>	ug/L	2000	540	1	07/30/20 02:17	07/30/20 14:58	7440-23-5	
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Pace Analytical Services - Ormond Beach									
Chloride	<b>4.0 I</b>	mg/L	5.0	2.5	1		08/12/20 03:27	16887-00-6	
Fluoride	<b>0.32</b>	mg/L	0.050	0.015	1		08/12/20 03:27	16984-48-8	
Sulfate	<b>2.5 U</b>	mg/L	5.0	2.5	1		08/12/20 03:27	14808-79-8	
<b>353.2 Nitrogen, NO2/NO3 pres.</b>									
Analytical Method: EPA 353.2 Pace Analytical Services - Ormond Beach									
Nitrogen, NO2 plus NO3	<b>0.041 I</b>	mg/L	0.050	0.033	1		08/04/20 09:36		
<b>5310B TOC</b>									
Analytical Method: SM 5310B Pace Analytical Services - Ormond Beach									
Total Organic Carbon	<b>30.0</b>	mg/L	1.0	0.50	1		08/06/20 07:00	7440-44-0	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: D20G025  
Pace Project No.: 35566443

**Sample: D20G025-06**      **Lab ID: 35566443006**      Collected: 07/21/20 10:38      Received: 07/29/20 11:20      Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>200.7 MET ICP</b>									
Analytical Method: EPA 200.7    Preparation Method: EPA 200.7									
Pace Analytical Services - Ormond Beach									
Potassium	2880	ug/L	1000	270	1	07/30/20 02:17	07/30/20 15:12	7440-09-7	
Sodium	4060	ug/L	2000	540	1	07/30/20 02:17	07/30/20 15:12	7440-23-5	
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0									
Pace Analytical Services - Ormond Beach									
Chloride	5.1	mg/L	5.0	2.5	1		08/12/20 04:11	16887-00-6	
Fluoride	0.12	mg/L	0.050	0.015	1		08/12/20 04:11	16984-48-8	
Sulfate	5.6	mg/L	5.0	2.5	1		08/12/20 04:11	14808-79-8	
<b>353.2 Nitrogen, NO2/NO3 pres.</b>									
Analytical Method: EPA 353.2									
Pace Analytical Services - Ormond Beach									
Nitrogen, NO2 plus NO3	0.033 U	mg/L	0.050	0.033	1		08/04/20 09:42		
<b>5310B TOC</b>									
Analytical Method: SM 5310B									
Pace Analytical Services - Ormond Beach									
Total Organic Carbon	11.5	mg/L	1.0	0.50	1		08/06/20 07:32	7440-44-0	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: D20G025  
Pace Project No.: 35566443

**Sample: D20G025-14**      **Lab ID: 35566443014**      Collected: 07/22/20 09:45      Received: 07/29/20 11:20      Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>200.7 MET ICP</b>									
Analytical Method: EPA 200.7    Preparation Method: EPA 200.7									
Pace Analytical Services - Ormond Beach									
Potassium	270 U	ug/L	1000	270	1	07/30/20 02:17	08/03/20 13:37	7440-09-7	
Sodium	540 U	ug/L	2000	540	1	07/30/20 02:17	08/03/20 13:37	7440-23-5	
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0									
Pace Analytical Services - Ormond Beach									
Chloride	2.5 U	mg/L	5.0	2.5	1		08/11/20 21:35	16887-00-6	
Fluoride	0.015 U	mg/L	0.050	0.015	1		08/11/20 21:35	16984-48-8	
Sulfate	2.5 U	mg/L	5.0	2.5	1		08/11/20 21:35	14808-79-8	
<b>353.2 Nitrogen, NO2/NO3 pres.</b>									
Analytical Method: EPA 353.2									
Pace Analytical Services - Ormond Beach									
Nitrogen, NO2 plus NO3	0.033 U	mg/L	0.050	0.033	1		08/04/20 09:57		
<b>5310B TOC</b>									
Analytical Method: SM 5310B									
Pace Analytical Services - Ormond Beach									
Total Organic Carbon	0.50 U	mg/L	1.0	0.50	1		08/06/20 11:16	7440-44-0	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: D20G025  
Pace Project No.: 35566443

**Sample: D20G025-15**      **Lab ID: 35566443015**      Collected: 07/23/20 18:27      Received: 07/29/20 11:20      Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>200.7 MET ICP</b>									
Analytical Method: EPA 200.7    Preparation Method: EPA 200.7									
Pace Analytical Services - Ormond Beach									
Potassium	270 U	ug/L	1000	270	1	07/30/20 02:17	08/03/20 13:40	7440-09-7	
Sodium	540 U	ug/L	2000	540	1	07/30/20 02:17	08/03/20 13:40	7440-23-5	
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0									
Pace Analytical Services - Ormond Beach									
Chloride	2.5 U	mg/L	5.0	2.5	1		08/11/20 21:57	16887-00-6	
Fluoride	0.015 U	mg/L	0.050	0.015	1		08/11/20 21:57	16984-48-8	
Sulfate	2.5 U	mg/L	5.0	2.5	1		08/11/20 21:57	14808-79-8	
<b>353.2 Nitrogen, NO2/NO3 pres.</b>									
Analytical Method: EPA 353.2									
Pace Analytical Services - Ormond Beach									
Nitrogen, NO2 plus NO3	0.033 U	mg/L	0.050	0.033	1		08/04/20 09:58		
<b>5310B TOC</b>									
Analytical Method: SM 5310B									
Pace Analytical Services - Ormond Beach									
Total Organic Carbon	0.50 U	mg/L	1.0	0.50	1		08/06/20 11:29	7440-44-0	

### REPORT OF LABORATORY ANALYSIS

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**QUALITY CONTROL DATA**

Project: D20G025  
Pace Project No.: 35566443

QC Batch: 652566      Analysis Method: EPA 200.7  
QC Batch Method: EPA 200.7      Analysis Description: 200.7 MET  
Laboratory: Pace Analytical Services - Ormond Beach  
Associated Lab Samples: 35566443001, 35566443002, 35566443003, 35566443004, 35566443005, 35566443006, 35566443007, 35566443008, 35566443009, 35566443010, 35566443011, 35566443012, 35566443013, 35566443014, 35566443015

METHOD BLANK: 3548170      Matrix: Water  
Associated Lab Samples: 35566443001, 35566443002, 35566443003, 35566443004, 35566443005, 35566443006, 35566443007, 35566443008, 35566443009, 35566443010, 35566443011, 35566443012, 35566443013, 35566443014, 35566443015

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Potassium	ug/L	270 U	1000	270	07/30/20 14:13	
Sodium	ug/L	540 U	2000	540	07/30/20 14:13	

LABORATORY CONTROL SAMPLE: 3548171

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Potassium	ug/L	12500	11800	95	85-115	
Sodium	ug/L	12500	12300	99	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3548172      3548173

Parameter	Units	35566271002		3548172		3548173		% Rec	% Rec	Limits	RPD	Max RPD	Qual
		MS Result	MSD Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Potassium	ug/L	1750	12500	12500	14400	14500	101	102	70-130	1	20		
Sodium	ug/L	79300	12500	12500	93100	92800	111	108	70-130	0	20		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3548174      3548175

Parameter	Units	35566443004		3548174		3548175		% Rec	% Rec	Limits	RPD	Max RPD	Qual
		MS Result	MSD Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Potassium	ug/L	604 I	12500	12500	12900	13000	99	99	70-130	0	20		
Sodium	ug/L	8910	12500	12500	21500	21600	101	101	70-130	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: D20G025  
Pace Project No.: 35566443

QC Batch: 656102	Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0	Analysis Description: 300.0 IC Anions
	Laboratory: Pace Analytical Services - Ormond Beach

Associated Lab Samples: 35566443010, 35566443011, 35566443012, 35566443013, 35566443014, 35566443015

METHOD BLANK: 3567592 Matrix: Water  
Associated Lab Samples: 35566443010, 35566443011, 35566443012, 35566443013, 35566443014, 35566443015

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	2.5 U	5.0	2.5	08/11/20 14:14	
Fluoride	mg/L	0.015 U	0.050	0.015	08/11/20 14:14	
Sulfate	mg/L	2.5 U	5.0	2.5	08/11/20 14:14	

LABORATORY CONTROL SAMPLE: 3567593

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	52.1	104	90-110	
Fluoride	mg/L	5	5.3	106	90-110	
Sulfate	mg/L	50	52.0	104	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3567594 3567595

Parameter	Units	3567594		3567595		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.						
Chloride	mg/L	28.1	50	84.8	50	113	113	90-110	0	20	J(M1)
Fluoride	mg/L	0.24	5	5.5	5	105	106	90-110	1	20	
Sulfate	mg/L	20.0	50	73.9	50	108	108	90-110	0	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3567596 3567597

Parameter	Units	3567596		3567597		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.						
Chloride	mg/L	8.2	50	61.1	50	106	106	90-110	0	20	
Fluoride	mg/L	0.084	5	5.4	5	107	107	90-110	0	20	
Sulfate	mg/L	56.7	50	117	50	120	120	90-110	0	20	J(M1), L

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: D20G025  
Pace Project No.: 35566443

QC Batch:	656103	Analysis Method:	EPA 300.0
QC Batch Method:	EPA 300.0	Analysis Description:	300.0 IC Anions
		Laboratory:	Pace Analytical Services - Ormond Beach

Associated Lab Samples: 35566443001, 35566443002, 35566443003, 35566443004, 35566443005, 35566443006, 35566443007, 35566443008, 35566443009

METHOD BLANK: 3567601 Matrix: Water  
Associated Lab Samples: 35566443001, 35566443002, 35566443003, 35566443004, 35566443005, 35566443006, 35566443007, 35566443008, 35566443009

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	2.5 U	5.0	2.5	08/12/20 01:15	
Fluoride	mg/L	0.015 U	0.050	0.015	08/12/20 01:15	
Sulfate	mg/L	2.5 U	5.0	2.5	08/12/20 01:15	

LABORATORY CONTROL SAMPLE: 3567602

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	51.8	104	90-110	
Fluoride	mg/L	5	5.3	106	90-110	
Sulfate	mg/L	50	51.8	104	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3567603 3567604

Parameter	Units	3567603		3567604		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Chloride	mg/L	39.2	50	50	97.2	98.1	116	118	90-110	1	20 J(M1)
Fluoride	mg/L	0.54	5	5	5.9	5.9	107	108	90-110	1	20
Sulfate	mg/L	45.0	50	50	103	104	116	118	90-110	1	20 J(M1), L

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## QUALIFIERS

Project: D20G025  
Pace Project No.: 35566443

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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.

### 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: D20G025  
Pace Project No.: 35566443

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
35566443001	D20G025-01	EPA 200.7	652566	EPA 200.7	652569
35566443002	D20G025-02	EPA 200.7	652566	EPA 200.7	652569
35566443003	D20G025-03	EPA 200.7	652566	EPA 200.7	652569
35566443004	D20G025-04	EPA 200.7	652566	EPA 200.7	652569
35566443005	D20G025-05	EPA 200.7	652566	EPA 200.7	652569
35566443006	D20G025-06	EPA 200.7	652566	EPA 200.7	652569
35566443007	D20G025-07	EPA 200.7	652566	EPA 200.7	652569
35566443008	D20G025-08	EPA 200.7	652566	EPA 200.7	652569
35566443009	D20G025-09	EPA 200.7	652566	EPA 200.7	652569
35566443010	D20G025-10	EPA 200.7	652566	EPA 200.7	652569
35566443011	D20G025-11	EPA 200.7	652566	EPA 200.7	652569
35566443012	D20G025-12	EPA 200.7	652566	EPA 200.7	652569
35566443013	D20G025-13	EPA 200.7	652566	EPA 200.7	652569
35566443014	D20G025-14	EPA 200.7	652566	EPA 200.7	652569
35566443015	D20G025-15	EPA 200.7	652566	EPA 200.7	652569
35566443001	D20G025-01	SM 7110C-11	408107		
35566443002	D20G025-02	SM 7110C-11	408107		
35566443003	D20G025-03	SM 7110C-11	408107		
35566443004	D20G025-04	SM 7110C-11	408107		
35566443005	D20G025-05	SM 7110C-11	408107		
35566443006	D20G025-06	SM 7110C-11	408107		
35566443007	D20G025-07	SM 7110C-11	408107		
35566443008	D20G025-08	SM 7110C-11	408107		
35566443009	D20G025-09	SM 7110C-11	408107		
35566443010	D20G025-10	SM 7110C-11	408107		
35566443011	D20G025-11	SM 7110C-11	408107		
35566443012	D20G025-12	SM 7110C-11	408722		
35566443013	D20G025-13	SM 7110C-11	408107		
35566443014	D20G025-14	SM 7110C-11	408107		
35566443015	D20G025-15	SM 7110C-11	408107		
35566443001	D20G025-01	EPA 300.0	656103		
35566443002	D20G025-02	EPA 300.0	656103		
35566443003	D20G025-03	EPA 300.0	656103		
35566443004	D20G025-04	EPA 300.0	656103		
35566443005	D20G025-05	EPA 300.0	656103		
35566443006	D20G025-06	EPA 300.0	656103		
35566443007	D20G025-07	EPA 300.0	656103		
35566443008	D20G025-08	EPA 300.0	656103		
35566443009	D20G025-09	EPA 300.0	656103		
35566443010	D20G025-10	EPA 300.0	656102		
35566443011	D20G025-11	EPA 300.0	656102		
35566443012	D20G025-12	EPA 300.0	656102		
35566443013	D20G025-13	EPA 300.0	656102		
35566443014	D20G025-14	EPA 300.0	656102		
35566443015	D20G025-15	EPA 300.0	656102		
35566443001	D20G025-01	EPA 353.2	653790		

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: D20G025  
Pace Project No.: 35566443

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
35566443002	D20G025-02	EPA 353.2	653790		
35566443003	D20G025-03	EPA 353.2	653790		
35566443004	D20G025-04	EPA 353.2	653790		
35566443005	D20G025-05	EPA 353.2	653790		
35566443006	D20G025-06	EPA 353.2	653790		
35566443007	D20G025-07	EPA 353.2	653790		
35566443008	D20G025-08	EPA 353.2	653790		
35566443009	D20G025-09	EPA 353.2	653790		
35566443010	D20G025-10	EPA 353.2	653790		
35566443011	D20G025-11	EPA 353.2	653790		
35566443012	D20G025-12	EPA 353.2	653790		
35566443013	D20G025-13	EPA 353.2	653790		
35566443014	D20G025-14	EPA 353.2	653790		
35566443015	D20G025-15	EPA 353.2	653790		
35566443001	D20G025-01	SM 5310B	654355		
35566443002	D20G025-02	SM 5310B	654355		
35566443003	D20G025-03	SM 5310B	654355		
35566443004	D20G025-04	SM 5310B	654355		
35566443005	D20G025-05	SM 5310B	654355		
35566443006	D20G025-06	SM 5310B	654355		
35566443007	D20G025-07	SM 5310B	654355		
35566443008	D20G025-08	SM 5310B	654355		
35566443009	D20G025-09	SM 5310B	654356		
35566443010	D20G025-10	SM 5310B	654356		
35566443011	D20G025-11	SM 5310B	654356		
35566443012	D20G025-12	SM 5310B	654356		
35566443013	D20G025-13	SM 5310B	654356		
35566443014	D20G025-14	SM 5310B	654356		
35566443015	D20G025-15	SM 5310B	654356		

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**SUBCONTRACT ORDER**  
**Deerhaven Generating Station**  
**D20G025**

Analysis	Expires	Laboratory ID	Comments
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**Sample Name: MWI-3-7 (R3T7)**

**Sample ID: D20G025-03      Water      Sampled:21-Jul-20 15:20**



D_Anions - Sulfates	18-Aug-20 15:20		
D_Gross Alpha	13-Jan-21 15:20		Cond = 762
K_Sodium	17-Jan-21 15:20		
K_Potassium	17-Jan-21 15:20		
D_NO3/NO2	18-Aug-20 15:20		
D_TOC	18-Aug-20 15:20		
D_Anions - Chlorides	18-Aug-20 15:20		

*Containers Supplied:*

- D\_HDPE, Chill @<6°C - 250mL (B)
- D\_HDPE, H2SO4 Chill @<6°C - pH<2 - 250mL (C)
- D\_HDPE, HNO3 pH<2 - 1000mL (D)
- D\_HDPE, HNO3 pH<2 - 250mL extra3 (F)

**Sample Name: MWI-4-5 (R4T5B)**

**Sample ID: D20G025-04      Water      Sampled:23-Jul-20 14:48**



K_Potassium	19-Jan-21 14:48		
D_Anions - Chlorides	20-Aug-20 14:48		
D_Anions - Fluoride	20-Aug-20 14:48		
D_Anions - Sulfates	20-Aug-20 14:48		
D_TOC	20-Aug-20 14:48		
D_NO3/NO2	20-Aug-20 14:48		
D_Gross Alpha	15-Jan-21 14:48		Cond = 751
K_Sodium	19-Jan-21 14:48		

*Containers Supplied:*

- D\_HDPE, Chill @<6°C - 250mL (B)
- D\_HDPE, H2SO4 Chill @<6°C - pH<2 - 250mL (C)
- D\_HDPE, HNO3 pH<2 - 1000mL (D)
- D\_HDPE, HNO3 pH<2 - 250mL extra3 (F)

*Shipped via FedEx*

<i>R. Brakewood</i>	<i>7/28/20</i>	<i>HW/Pan</i>	<i>7/28/20 1120 25.7°C</i>
Released By	Date	Received By	Date



**SUBCONTRACT ORDER**  
**Deerhaven Generating Station**  
**D20G025**

Analysis	Expires	Laboratory ID	Comments
<b>Sample Name: MWD-6-1 (R6T1B)</b>			
<b>Sample ID: D20G025-05</b>	<b>Water</b>	<b>Sampled:21-Jul-20 09:13</b>	
K_Sodium	17-Jan-21 09:13		
K_Potassium	17-Jan-21 09:13		
D_TOC	18-Aug-20 09:13		
D_Gross Alpha	13-Jan-21 09:13		Cond = 421
D_Anions - Chlorides	18-Aug-20 09:13		
D_NO3/NO2	18-Aug-20 09:13		
D_Anions - Sulfates	18-Aug-20 09:13		
<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)			
D_HDPE, HNO3 pH<2 - 250mL extra3 (F)			
<b>Sample Name: MWI-6-4 (R6T4B)</b>			
<b>Sample ID: D20G025-06</b>	<b>Water</b>	<b>Sampled:21-Jul-20 10:38</b>	
D_TOC	18-Aug-20 10:38		
K_Potassium	17-Jan-21 10:38		
D_NO3/NO2	18-Aug-20 10:38		
D_Gross Alpha	13-Jan-21 10:38		Cond = 389
D_Anions - Sulfates	18-Aug-20 10:38		
D_Anions - Fluoride	18-Aug-20 10:38		
D_Anions - Chlorides	18-Aug-20 10:38		
K_Sodium	17-Jan-21 10:38		
<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)			
D_HDPE, HNO3 pH<2 - 250mL extra3 (F)			

Shipped via FedEx

Released By: R Brakefield      Date: 7/28/20      Received By: Hmw/Rau      Date: 7/29/20 1120 25.7



**SUBCONTRACT ORDER**  
**Deerhaven Generating Station**  
**D20G025**

Analysis	Expires	Laboratory ID	Comments
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**Sample Name: MWC-DEEP (DEEP-1)**

**Sample ID: D20G025-13      Water      Sampled:24-Jul-20 07:42**



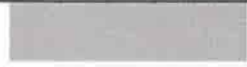
K_Potassium	20-Jan-21 07:42		
D_Anions - Chlorides	21-Aug-20 07:42		
D_TOC	21-Aug-20 07:42		
D_Gross Alpha	16-Jan-21 07:42		Cond = 479
K_Sodium	20-Jan-21 07:42		
D_Anions - Sulfates	21-Aug-20 07:42		
D_NO3/NO2	21-Aug-20 07:42		

*Containers Supplied:*

- D\_HDPE, Chill @<6°C - 250mL (B)
- D\_HDPE, H2SO4 Chill @<6°C - pH<2 - 250mL (C)
- D\_HDPE, HNO3 pH<2 - 1000mL (D)
- D\_HDPE, HNO3 pH<2 - 250mL extra3 (F)

**Sample Name: EBLANK**

**Sample ID: D20G025-14      Water      Sampled:22-Jul-20 09:45**



K_Potassium	18-Jan-21 09:45		
D_Anions - Sulfates	19-Aug-20 09:45		
D_Anions - Fluoride	19-Aug-20 09:45		
D_Anions - Chlorides	19-Aug-20 09:45		
D_Gross Alpha	14-Jan-21 09:45		Cond = 0.81
D_TOC	19-Aug-20 09:45		
D_NO3/NO2	19-Aug-20 09:45		
K_Sodium	18-Jan-21 09:45		

*Containers Supplied:*

- D\_HDPE, Chill @<6°C - 250mL (B)
- D\_HDPE, H2SO4 Chill @<6°C - pH<2 - 250mL (C)
- D\_HDPE, HNO3 pH<2 - 1000mL (D)
- D\_HDPE, HNO3 pH<2 - 250mL extra3 (F)

*Shipped via FedEx*

<i>R. Brakefield</i>	<i>7/28/20</i>	<i>HWS/Pace</i>	<i>7/29/20</i>	<i>U20 25.7°C</i>
Released By	Date	Received By	Date	





**SUBCONTRACT ORDER**  
**Deerhaven Generating Station**  
**D20G025**

Analysis	Expires	Laboratory ID	Comments
<b>Sample Name: EBLANK</b>			
<b>Sample ID: D20G025-15</b>	<b>Water</b>	<b>Sampled: 23-Jul-20 18:27</b>	
K_Potassium	19-Jan-21 18:27		
K_Sodium	19-Jan-21 18:27		
D_TOC	20-Aug-20 18:27		
D_NO3/NO2	20-Aug-20 18:27		
D_Gross Alpha	15-Jan-21 18:27		Cond = 0.71
D_Anions - Sulfates	20-Aug-20 18:27		
D_Anions - Chlorides	20-Aug-20 18:27		
D_Anions - Fluoride	20-Aug-20 18:27		
<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)			
D_HDPE, HNO3 pH<2 - 250mL extra3 (F)			

*Shipped via FedEx*

*R. Brakefield*      *7/28/20*      *Haw/Pave*      *7/29/20 1120 25.8°C*

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

**WO#: 35566443**  
 PM: JSB  
 CLIENT: DEELAB

Form (SCUR)

Project  
Project Manager  
Client:

Due Date: 08/14/20

Date and Initials of person:  
Examining contents:  
Label: HNA  
Deliver: HNA  
pH: \_\_\_\_\_

Thermometer Used: T349 Date: 7/29/20 Time: 1136 Initials: TMA

State of Origin: \_\_\_\_\_  For WV projects, all containers verified to  $\leq 6$  °C

Cooler #1 Temp. °C 0.4 (Visual) +0.1 (Correction Factor) 0.5 (Actual)  
 Cooler #2 Temp. °C 24.8 (Visual) \_\_\_\_\_ (Correction Factor) 24.9 (Actual)  
 Cooler #3 Temp. °C 25.6 (Visual) \_\_\_\_\_ (Correction Factor) 25.7 (Actual)  
 Cooler #4 Temp. °C 24.0 (Visual) \_\_\_\_\_ (Correction Factor) 24.1 (Actual)  
 Cooler #5 Temp. °C 23.8 (Visual) \_\_\_\_\_ (Correction Factor) 23.9 (Actual)  
 Cooler #6 Temp. °C 24.5 (Visual) \_\_\_\_\_ (Correction Factor) 24.6 (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 # 8139 3750 0340/8118 2198 6000/0328/0339/0317/02

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 type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Preservation Information: Preservative: _____ Lot #/Tracc #: _____ Date: _____ Time: _____ Initials: _____
All Containers needing preservation are found to be in compliance with EPA recommendation: 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):  
\_\_\_\_\_  
\_\_\_\_\_

November 03, 2020

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

RE: Project: October CCR  
Pace Project No.: 35585388

Dear Mr. Boudreau:

Enclosed are the analytical results for sample(s) received by the laboratory on October 16, 2020. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Asheville
- Pace Analytical Services - Ormond Beach
- Pace Analytical Services - Greensburg

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  
Kimberly Morrison, Deerhaven Labs  
Shelley Phillips, Deerhaven Lab



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: October CCR

Pace Project No.: 35585388

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### Pace Analytical Services Pennsylvania

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

Florida: Cert E871149 SEKS WET

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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### Pace Analytical Services Ormond Beach

8 East Tower Circle, Ormond Beach, FL 32174

Alaska DEC- CS/UST/LUST

Alabama Certification #: 41320

Arizona Certification# AZ0819

Colorado Certification: FL NELAC Reciprocity

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

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

Ohio DEP 87780

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

West Virginia Certification #: 9962C

Wisconsin Certification #: 399079670

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## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: October CCR

Pace Project No.: 35585388

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### **Pace Analytical Services Ormond Beach**

Wyoming (EPA Region 8): FL NELAC Reciprocity

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### **Pace Analytical Services Asheville**

2225 Riverside Drive, Asheville, NC 28804

Florida/NELAP Certification #: E87648

Massachusetts Certification #: M-NC030

North Carolina Drinking Water Certification #: 37712

North Carolina Wastewater Certification #: 40

South Carolina Certification #: 99030001

Virginia/VELAP Certification #: 460222

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: October CCR  
Pace Project No.: 35585388

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Lab ID	Sample ID	Matrix	Date Collected	Date Received
35585388001	D20J014-14 EQ Blank	Water	10/15/20 09:30	10/16/20 11:47
35585388002	D20J018-01 LF6	Water	10/15/20 11:00	10/16/20 11:47
35585388003	D20J018-03 LF5	Water	10/15/20 10:15	10/16/20 11:47

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: October CCR

Pace Project No.: 35585388

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
35585388001	D20J014-14 EQ Blank	EPA 200.7	KPP	2	PASI-O
		EPA 6020B	JOR	4	PASI-A
		SM 7110C-11	CLA	1	PASI-PA
		EPA 903.1	MK1	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		EPA 300.0	YMP	3	PASI-O
		EPA 353.2	CLL	1	PASI-O
		SM 5310B	AGS	1	PASI-O
		35585388002	D20J018-01 LF6	EPA 6020B	JOR
EPA 903.1	MK1			1	PASI-PA
EPA 904.0	VAL			1	PASI-PA
Total Radium Calculation	CMC			1	PASI-PA
EPA 300.0	YMP			3	PASI-O
35585388003	D20J018-03 LF5	EPA 6020B	JOR	4	PASI-A
		EPA 903.1	MK1	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		EPA 300.0	YMP	3	PASI-O

PASI-A = Pace Analytical Services - Asheville

PASI-O = Pace Analytical Services - Ormond Beach

PASI-PA = Pace Analytical Services - Greensburg

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: October CCR  
Pace Project No.: 35585388

**Sample: D20J014-14 EQ Blank**      **Lab ID: 35585388001**      Collected: 10/15/20 09:30      Received: 10/16/20 11:47      Matrix: Water

Comments: • Sample collection time on containers does not match COC; client was notified.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>200.7 MET ICP</b>									
Analytical Method: EPA 200.7    Preparation Method: EPA 200.7									
Pace Analytical Services - Ormond Beach									
Potassium	<b>270 U</b>	ug/L	1000	270	1	10/23/20 04:04	10/23/20 10:23	7440-09-7	
Sodium	<b>540 U</b>	ug/L	2000	540	1	10/23/20 04:04	10/23/20 10:23	7440-23-5	
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B    Preparation Method: EPA 3010A									
Pace Analytical Services - Asheville									
Antimony	<b>0.12 U</b>	ug/L	0.50	0.12	1	10/21/20 01:13	10/21/20 16:01	7440-36-0	
Boron	<b>6.4 I</b>	ug/L	25.0	6.2	1	10/21/20 01:13	10/21/20 16:01	7440-42-8	V
Lithium	<b>0.39 U</b>	ug/L	2.5	0.39	1	10/21/20 01:13	10/21/20 16:01	7439-93-2	
Thallium	<b>0.050 U</b>	ug/L	0.10	0.050	1	10/21/20 01:13	10/21/20 16:01	7440-28-0	
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0									
Pace Analytical Services - Ormond Beach									
Chloride	<b>2.5 U</b>	mg/L	5.0	2.5	1		10/27/20 22:04	16887-00-6	
Fluoride	<b>0.015 U</b>	mg/L	0.050	0.015	1		10/27/20 22:04	16984-48-8	
Sulfate	<b>2.5 U</b>	mg/L	5.0	2.5	1		10/27/20 22:04	14808-79-8	
<b>353.2 Nitrogen, NO2/NO3 pres.</b>									
Analytical Method: EPA 353.2									
Pace Analytical Services - Ormond Beach									
Nitrogen, NO2 plus NO3	<b>0.033 U</b>	mg/L	0.050	0.033	1		10/24/20 13:39		
<b>5310B TOC</b>									
Analytical Method: SM 5310B									
Pace Analytical Services - Ormond Beach									
Total Organic Carbon	<b>0.50 U</b>	mg/L	1.0	0.50	1		10/29/20 02:33	7440-44-0	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: October CCR

Pace Project No.: 35585388

**Sample: D20J018-01 LF6**      **Lab ID: 35585388002**      Collected: 10/15/20 11:00      Received: 10/16/20 11:47      Matrix: Water

Comments: • Sample collection time on containers does not match COC; client was notified.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6020 MET ICPMS</b>		Analytical Method: EPA 6020B    Preparation Method: EPA 3010A Pace Analytical Services - Asheville							
Antimony	<b>0.12 U</b>	ug/L	0.50	0.12	1	10/21/20 01:13	10/21/20 18:20	7440-36-0	
Boron	<b>1530</b>	ug/L	625	156	25	10/21/20 01:13	10/21/20 15:46	7440-42-8	V
Lithium	<b>5.8</b>	ug/L	2.5	0.39	1	10/21/20 01:13	10/21/20 18:20	7439-93-2	
Thallium	<b>0.16</b>	ug/L	0.10	0.050	1	10/21/20 01:13	10/21/20 18:20	7440-28-0	
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0 Pace Analytical Services - Ormond Beach							
Chloride	<b>5.6</b>	mg/L	5.0	2.5	1		10/23/20 06:20	16887-00-6	
Fluoride	<b>0.043 I</b>	mg/L	0.050	0.015	1		10/23/20 06:20	16984-48-8	
Sulfate	<b>50.5</b>	mg/L	5.0	2.5	1		10/23/20 06:20	14808-79-8	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: October CCR

Pace Project No.: 35585388

**Sample: D20J018-03 LF5**      **Lab ID: 35585388003**      Collected: 10/15/20 10:15      Received: 10/16/20 11:47      Matrix: Water

Comments: • Sample collection time on containers does not match COC; client was notified.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B    Preparation Method: EPA 3010A									
Pace Analytical Services - Asheville									
Antimony	<b>0.48 I</b>	ug/L	0.50	0.12	1	10/21/20 01:13	10/21/20 18:08	7440-36-0	
Boron	<b>125</b>	ug/L	50.0	12.5	2	10/21/20 01:13	10/21/20 15:50	7440-42-8	V
Lithium	<b>0.39 U</b>	ug/L	2.5	0.39	1	10/21/20 01:13	10/21/20 18:08	7439-93-2	
Thallium	<b>0.051 I</b>	ug/L	0.10	0.050	1	10/21/20 01:13	10/21/20 18:08	7440-28-0	
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0									
Pace Analytical Services - Ormond Beach									
Chloride	<b>46.0</b>	mg/L	10.0	5.0	2		10/23/20 06:42	16887-00-6	
Fluoride	<b>0.075 I</b>	mg/L	0.10	0.029	2		10/23/20 06:42	16984-48-8	D3
Sulfate	<b>382</b>	mg/L	50.0	25.0	10		10/23/20 13:18	14808-79-8	

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: October CCR  
Pace Project No.: 35585388

QC Batch: 676028	Analysis Method: EPA 200.7
QC Batch Method: EPA 200.7	Analysis Description: 200.7 MET
	Laboratory: Pace Analytical Services - Ormond Beach

Associated Lab Samples: 35585388001

METHOD BLANK: 3677608 Matrix: Water

Associated Lab Samples: 35585388001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Potassium	ug/L	270 U	1000	270	10/23/20 10:17	
Sodium	ug/L	540 U	2000	540	10/23/20 10:17	

LABORATORY CONTROL SAMPLE: 3677609

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Potassium	ug/L	12500	11700	94	85-115	
Sodium	ug/L	12500	12200	97	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3677610 3677611

Parameter	Units	35585829001		3677610		3677611		% Rec Limits	RPD	Max RPD	Qual	
		MS Result	MSD Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result					MS % Rec
Potassium	ug/L	1830	12500	12500	13900	14100	96	98	70-130	1	20	
Sodium	ug/L	6080	12500	12500	18800	19000	102	104	70-130	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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### QUALITY CONTROL DATA

Project: October CCR  
Pace Project No.: 35585388

QC Batch: 574581 Analysis Method: EPA 6020B  
QC Batch Method: EPA 3010A Analysis Description: 6020 MET  
Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 35585388001, 35585388002, 35585388003

METHOD BLANK: 3041812 Matrix: Water

Associated Lab Samples: 35585388001, 35585388002, 35585388003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	ug/L	0.12 U	0.50	0.12	10/21/20 15:54	
Boron	ug/L	7.5 I	25.0	6.2	10/21/20 15:54	
Lithium	ug/L	0.39 U	2.5	0.39	10/21/20 15:54	
Thallium	ug/L	0.050 U	0.10	0.050	10/21/20 15:54	

LABORATORY CONTROL SAMPLE: 3041813

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	50	50.6	101	80-120	
Boron	ug/L	50	48.7	97	80-120	
Lithium	ug/L	50	56.0	112	80-120	
Thallium	ug/L	10	10.4	104	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3041814 3041815

Parameter	Units	92501107001 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	MS Result	Spike Conc.	MSD Result						
Antimony	ug/L	ND	50	50	50.9	51.8	102	104	75-125	2	20	
Boron	ug/L	15.5 I	50	50	62.4	61.7	94	92	75-125	1	20	
Lithium	ug/L	0.52 I	50	50	50.1	51.5	99	102	75-125	3	20	
Thallium	ug/L	ND	10	10	10.4	10.6	104	106	75-125	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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### QUALITY CONTROL DATA

Project: October CCR  
Pace Project No.: 35585388

QC Batch: 675960	Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0	Analysis Description: 300.0 IC Anions
	Laboratory: Pace Analytical Services - Ormond Beach

Associated Lab Samples: 35585388002, 35585388003

METHOD BLANK: 3676864 Matrix: Water  
Associated Lab Samples: 35585388002, 35585388003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	2.5 U	5.0	2.5	10/23/20 01:59	
Fluoride	mg/L	0.015 U	0.050	0.015	10/23/20 01:59	
Sulfate	mg/L	2.5 U	5.0	2.5	10/23/20 01:59	

LABORATORY CONTROL SAMPLE: 3676865

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	47.0	94	90-110	
Fluoride	mg/L	5	4.9	98	90-110	
Sulfate	mg/L	50	47.6	95	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3676866 3676867

Parameter	Units	35585231009		3676866		3676867		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec						
Chloride	mg/L	14.2	50	50	62.2	63.7	96	99	90-110	2	20		
Fluoride	mg/L	0.030	5	5	4.7	4.9	94	97	90-110	3	20		
Sulfate	mg/L	8.9	50	50	55.1	56.6	92	95	90-110	3	20		

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: October CCR  
Pace Project No.: 35585388

QC Batch: 677027	Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0	Analysis Description: 300.0 IC Anions
	Laboratory: Pace Analytical Services - Ormond Beach

Associated Lab Samples: 35585388001

METHOD BLANK: 3682628 Matrix: Water  
Associated Lab Samples: 35585388001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	2.5 U	5.0	2.5	10/27/20 12:31	
Fluoride	mg/L	0.015 U	0.050	0.015	10/27/20 12:31	
Sulfate	mg/L	2.5 U	5.0	2.5	10/27/20 12:31	

LABORATORY CONTROL SAMPLE: 3682629

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	48.3	97	90-110	
Fluoride	mg/L	5	5.0	100	90-110	
Sulfate	mg/L	50	48.1	96	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3682630 3682631

Parameter	Units	35587415002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	30.2	50	50	83.1	84.6	106	109	90-110	2	20	
Fluoride	mg/L	0.14	5	5	5.1	5.2	99	102	90-110	3	20	
Sulfate	mg/L	41.6	50	50	94.4	96.0	106	109	90-110	2	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3682632 3682633

Parameter	Units	35587161008 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	66.7	50	50	122	123	111	113	90-110	1	20	J(M1), L
Fluoride	mg/L	0.15	5	5	5.1	5.2	99	101	90-110	1	20	
Sulfate	mg/L	2.7 I	50	50	49.8	50.3	94	95	90-110	1	20	

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: October CCR  
Pace Project No.: 35585388

QC Batch: 676362	Analysis Method: EPA 353.2
QC Batch Method: EPA 353.2	Analysis Description: 353.2 Nitrate + Nitrite, preserved
	Laboratory: Pace Analytical Services - Ormond Beach

Associated Lab Samples: 35585388001

METHOD BLANK: 3679729 Matrix: Water

Associated Lab Samples: 35585388001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	0.033 U	0.050	0.033	10/24/20 13:18	

LABORATORY CONTROL SAMPLE: 3679730

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 & MATRIX SPIKE DUPLICATE: 3679732 3679731

Parameter	Units	35586870007		3679731		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.						
Nitrogen, NO2 plus NO3	mg/L	0.36	2	2.4	2.4	104	101	90-110	2	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3679734 3679733

Parameter	Units	35585388001		3679733		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.						
Nitrogen, NO2 plus NO3	mg/L	0.033 U	2	2.2	2.1	108	105	90-110	2	20	

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: October CCR  
Pace Project No.: 35585388

QC Batch: 677283	Analysis Method: SM 5310B
QC Batch Method: SM 5310B	Analysis Description: 5310B TOC
	Laboratory: Pace Analytical Services - Ormond Beach

Associated Lab Samples: 35585388001

METHOD BLANK: 3684258 Matrix: Water  
Associated Lab Samples: 35585388001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Organic Carbon	mg/L	0.50 U	1.0	0.50	10/28/20 23:30	

LABORATORY CONTROL SAMPLE: 3684259

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	20	20.2	101	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3684260 3684261

Parameter	Units	35586917002		3684261		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.						
Total Organic Carbon	mg/L	0.84 I	20	20	25.6	25.6	124	124	80-120	0	20 J(M1)

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3684262 3684263

Parameter	Units	35586131021		3684263		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.						
Total Organic Carbon	mg/L	2.7	20	20	22.2	22.1	97	97	80-120	1	20

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### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: October CCR

Pace Project No.: 35585388

**Sample: D20J014-14 EQ Blank**      **Lab ID: 35585388001**      Collected: 10/15/20 09:30      Received: 10/16/20 11:47      Matrix: Water  
PWS:      Site ID:      Sample Type:

Comments: • Sample collection time on containers does not match COC; client was notified.

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Gross Alpha	SM 7110C-11	<b>3.62U ± 2.09 (3.62)</b> <b>C:NA T:NA</b>	pCi/L	10/28/20 07:28	12587-46-1	
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	<b>1.11U ± 0.490 (1.11)</b> <b>C:NA T:83%</b>	pCi/L	11/03/20 12:50	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	<b>1.10U ± 0.475 (1.10)</b> <b>C:70% T:74%</b>	pCi/L	11/02/20 12:17	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>2.21U ± 0.965 (2.21)</b>	pCi/L	11/03/20 14:23	7440-14-4	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: October CCR

Pace Project No.: 35585388

**Sample: D20J018-01 LF6**      **Lab ID: 35585388002**      Collected: 10/15/20 11:00      Received: 10/16/20 11:47      Matrix: Water

PWS:      Site ID:      Sample Type:

Comments: • Sample collection time on containers does not match COC; client was notified.

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	<b>3.65 ± 1.23 (0.974)</b> <b>C:NA T:79%</b>	pCi/L	11/03/20 12:50	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	<b>4.17 ± 1.10 (1.24)</b> <b>C:67% T:75%</b>	pCi/L	11/02/20 12:16	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>7.82 ± 2.33 (2.21)</b>	pCi/L	11/03/20 14:23	7440-14-4	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: October CCR

Pace Project No.: 35585388

**Sample: D20J018-03 LF5**      **Lab ID: 35585388003**      Collected: 10/15/20 10:15      Received: 10/16/20 11:47      Matrix: Water

PWS:      Site ID:      Sample Type:

Comments: • Sample collection time on containers does not match COC; client was notified.

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	<b>0.839 ± 0.624 (0.821)</b> <b>C:NA T:83%</b>	pCi/L	11/03/20 12:50	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	<b>0.971 ± 0.497 (0.871)</b> <b>C:69% T:82%</b>	pCi/L	11/02/20 12:17	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>1.81 ± 1.12 (1.69)</b>	pCi/L	11/03/20 14:23	7440-14-4	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: October CCR

Pace Project No.: 35585388

QC Batch: 419589

Analysis Method: EPA 903.1

QC Batch Method: EPA 903.1

Analysis Description: 903.1 Radium-226

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 35585388001, 35585388002, 35585388003

METHOD BLANK: 2028393

Matrix: Water

Associated Lab Samples: 35585388001, 35585388002, 35585388003

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.109 ± 0.338 (0.654) C:NA T:91%	pCi/L	11/03/20 12:50	

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: October CCR

Pace Project No.: 35585388

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QC Batch:	419591	Analysis Method:	EPA 904.0
QC Batch Method:	EPA 904.0	Analysis Description:	904.0 Radium 228
		Laboratory:	Pace Analytical Services - Greensburg

Associated Lab Samples: 35585388001, 35585388002, 35585388003

---

METHOD BLANK: 2028397 Matrix: Water

Associated Lab Samples: 35585388001, 35585388002, 35585388003

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.280 ± 0.391 (0.838) C:67% T:84%	pCi/L	11/02/20 12:16	

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: October CCR

Pace Project No.: 35585388

QC Batch: 419789

Analysis Method: SM 7110C-11

QC Batch Method: SM 7110C-11

Analysis Description: 7110C Gross Alpha

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 35585388001

METHOD BLANK: 2029311

Matrix: Water

Associated Lab Samples: 35585388001

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Gross Alpha	0.370 ± 0.859 (2.04) C:NA T:NA	pCi/L	10/28/20 10:39	

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### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: October CCR

Pace Project No.: 35585388

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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.

### 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.

D3 Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

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.

V Indicates that the analyte was detected in both the sample and the associated method blank.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: October CCR  
Pace Project No.: 35585388

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
35585388001	D20J014-14 EQ Blank	EPA 200.7	676028	EPA 200.7	676031
35585388001	D20J014-14 EQ Blank	EPA 3010A	574581	EPA 6020B	574604
35585388002	D20J018-01 LF6	EPA 3010A	574581	EPA 6020B	574604
35585388003	D20J018-03 LF5	EPA 3010A	574581	EPA 6020B	574604
35585388001	D20J014-14 EQ Blank	SM 7110C-11	419789		
35585388001	D20J014-14 EQ Blank	EPA 903.1	419589		
35585388002	D20J018-01 LF6	EPA 903.1	419589		
35585388003	D20J018-03 LF5	EPA 903.1	419589		
35585388001	D20J014-14 EQ Blank	EPA 904.0	419591		
35585388002	D20J018-01 LF6	EPA 904.0	419591		
35585388003	D20J018-03 LF5	EPA 904.0	419591		
35585388001	D20J014-14 EQ Blank	Total Radium Calculation	421377		
35585388002	D20J018-01 LF6	Total Radium Calculation	421377		
35585388003	D20J018-03 LF5	Total Radium Calculation	421377		
35585388001	D20J014-14 EQ Blank	EPA 300.0	677027		
35585388002	D20J018-01 LF6	EPA 300.0	675960		
35585388003	D20J018-03 LF5	EPA 300.0	675960		
35585388001	D20J014-14 EQ Blank	EPA 353.2	676362		
35585388001	D20J014-14 EQ Blank	SM 5310B	677283		

### REPORT OF LABORATORY ANALYSIS

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CHAIN-OF-CUSTODY Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

Company: Gainesville Regional Utilities

Address: 10001 NW 13th St

Report To: Jeff Boudreau

Copy To:

Email To: boudreaujp@gru.com

Site Collection Info/Address: 10001 NW 13th St

State: County/City: Time Zone Collected: FL / Gainesville [ ] PT [ ] MT [ ] CT [ ] ET

Customer Project Name/Number: October CCR

Phone: 3523936346

Site/Facility ID #: 35-000113

Collected By (print): Kim Morrison

Quote #: Turnaround Date Required: Normal

Sample Disposal: [ ] Dispose as appropriate [ ] Return [ ] Archive: [ ] Hold:

Rush: [ ] Same Day [ ] Next Day [ ] 3 Day [ ] 4 Day [ ] 5 Day (Expedite Charges Apply)

Field Filtered (if applicable): [ ] Yes [ ] No

Analysis:

\* Matrix Codes (Insert in Matrix box below): Drinking Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Table with columns: Customer Sample ID, Matrix \*, Comp / Grab, Collected (or Composite Start) Date, Time, Composite End Date, Time, Res CI, # of Ctns. Rows include D20J014-14 EQ Blank, D20J018-01 LF5, D20J018-03 LF6.

Customer Remarks / Special Conditions / Possible Hazards: Radium 226+228. Packing Material Used: Radchem sample(s) screened (<5000 cpm): Y N NA. Received by/Company: (Signature) [Signature] 10/15/20 @ 1520.

W0#: 35585388



35585388

Container Preservative Type \*\*

1 U 1 2 1 1 1

Lab Project Manager:

or List Pace Workorder Number or r Here

LAB USE ONLY

Lab Profile/Vine:

\*\* Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other

Analyses

Table with columns: Radium 226+228, Anions (Cl, SO4, F), Metals by 6020 (Sb, Tl, B, Li), TOC, NO2/NO3, Metals by 6010 (Na and K), Gross Alpha. Includes checkboxes and X marks.

Lab Sample Receipt Checklist:

- Custody Seals Present/Intact Y N NA
Custody Signatures Present Y N NA
Collector Signature Present Y N NA
Bottles Intact Y N NA
Correct Bottles Y N NA
Sufficient Volume Y N NA
Samples Received on Ice Y N NA
VQA - Headspace Acceptable Y N NA
USDA Regulated Soils Y N NA
Samples in Holding Time Y N NA
Residual Chlorine Present Y N NA
Cl Strips: Y N NA
Sample pH Acceptable Y N NA
pH Strips: Y N NA
Sulfide Present Y N NA
Lead Acetate Strips: Y N NA

LAB USE ONLY: Lab Sample # / Comments:

Lab Sample Temperature Info:

Temp Blank Received: Y N NA
Therm ID#:
Cooler 1 Temp Upon Receipt: oC
Cooler 1 Therm Corr. Factor: oC
Cooler 1 Corrected Temp: oC
Comments:

Trip Blank Received: Y N NA
HCL MeOH TSP Other

Non Conformance(s): YES / NO
Page: of:



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 #  
Project Manager:  
Client:

**WO# : 35585388**  
PM: JSB Due Date: 11/03/20  
CLIENT: DEELAB

Date and Initials of person:  
Examining contents:  
Label:  
Deliver:  
pH:

Thermometer Used: T-337 Date: 10-16-20 Time: 1146 Initials: CMS

State of Origin: \_\_\_\_\_  For WV projects, all containers verified to  $\leq 6^\circ\text{C}$

Cooler #1 Temp. °C 2.2 (Visual) +2 (Correction Factor) 2.4 (Actual)  Samples on ice, cooling process has begun  
Cooler #2 Temp. °C 21.4 (Visual) +2 (Correction Factor) 21.6 (Actual)  Samples on ice, cooling process has begun  
Cooler #3 Temp. °C \_\_\_\_\_ (Visual) \_\_\_\_\_ (Correction Factor) \_\_\_\_\_ (Actual)  Samples on ice, cooling process has begun  
Cooler #4 Temp. °C \_\_\_\_\_ (Visual) \_\_\_\_\_ (Correction Factor) \_\_\_\_\_ (Actual)  Samples on ice, cooling process has begun  
Cooler #5 Temp. °C \_\_\_\_\_ (Visual) \_\_\_\_\_ (Correction Factor) \_\_\_\_\_ (Actual)  Samples on ice, cooling process has begun  
Cooler #6 Temp. °C \_\_\_\_\_ (Visual) \_\_\_\_\_ (Correction Factor) \_\_\_\_\_ (Actual)  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 # Box = 8161 3074 2414 8161 3074 2425

Custody Seal on Cooler/Box Present:  Yes  No Seals intact:  Yes  No Ice:  Wet  Blue  Dry  None Box

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 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: Preservative: _____ Lot #/Trace #: _____ Date: _____ Time: _____ Initials: _____
All Containers needing preservation are found to be in compliance with EPA recommendation: 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):  
Received BRN for Gross Alpha JP

Project Manager Review: \_\_\_\_\_ Date: \_\_\_\_\_

December 11, 2020

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

RE: Project: D20K028  
Pace Project No.: 35593442

Dear Mr. Boudreau:

Enclosed are the analytical results for sample(s) received by the laboratory on November 19, 2020. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Asheville
- Pace Analytical Services - Ormond Beach
- Pace Analytical Services - Greensburg

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  
Kimberly Morrison, Deerhaven Labs  
Shelley Phillips, Deerhaven Lab



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: D20K028

Pace Project No.: 35593442

### Pace Analytical Services Pennsylvania

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

Florida: Cert E871149 SEKS WET

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

### Pace Analytical Services Ormond Beach

8 East Tower Circle, Ormond Beach, FL 32174

Alaska DEC- CS/UST/LUST

Alabama Certification #: 41320

Arizona Certification# AZ0819

Colorado Certification: FL NELAC Reciprocity

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

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

Ohio DEP 87780

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

West Virginia Certification #: 9962C

Wisconsin Certification #: 399079670

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## CERTIFICATIONS

Project: D20K028

Pace Project No.: 35593442

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### **Pace Analytical Services Ormond Beach**

Wyoming (EPA Region 8): FL NELAC Reciprocity

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### **Pace Analytical Services Asheville**

2225 Riverside Drive, Asheville, NC 28804

Florida/NELAP Certification #: E87648

North Carolina Drinking Water Certification #: 37712

North Carolina Wastewater Certification #: 40

South Carolina Certification #: 99030001

Virginia/VELAP Certification #: 460222

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: D20K028  
Pace Project No.: 35593442

Lab ID	Sample ID	Matrix	Date Collected	Date Received
35593442001	D20K028-01	Water	11/18/20 09:36	11/19/20 11:00
35593442002	D20K028-02	Water	11/18/20 08:42	11/19/20 11:00
35593442003	D20K028-03	Water	11/18/20 10:38	11/19/20 11:00

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: D20K028

Pace Project No.: 35593442

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
35593442001	D20K028-01	EPA 6020B	JOR	4	PASI-A
		EPA 903.1	MK1	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		EPA 300.0	YMP	3	PASI-O
35593442002	D20K028-02	EPA 6020B	JOR	4	PASI-A
		EPA 903.1	MK1	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		EPA 300.0	YMP	3	PASI-O
35593442003	D20K028-03	EPA 6020B	JOR	4	PASI-A
		EPA 903.1	MK1	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		EPA 300.0	YMP	3	PASI-O

PASI-A = Pace Analytical Services - Asheville

PASI-O = Pace Analytical Services - Ormond Beach

PASI-PA = Pace Analytical Services - Greensburg

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: D20K028

Pace Project No.: 35593442

**Sample: D20K028-01**      **Lab ID: 35593442001**      Collected: 11/18/20 09:36      Received: 11/19/20 11:00      Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B    Preparation Method: EPA 3010A									
Pace Analytical Services - Asheville									
Antimony	<b>0.57</b>	ug/L	0.50	0.12	1	12/08/20 01:34	12/10/20 18:26	7440-36-0	
Boron	<b>150</b>	ug/L	125	31.1	5	12/08/20 01:34	12/11/20 14:38	7440-42-8	J(M1)
Lithium	<b>0.39 U</b>	ug/L	2.5	0.39	1	12/08/20 01:34	12/10/20 18:26	7439-93-2	
Thallium	<b>0.050 I</b>	ug/L	0.10	0.050	1	12/08/20 01:34	12/10/20 18:26	7440-28-0	
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0									
Pace Analytical Services - Ormond Beach									
Chloride	<b>8.2</b>	mg/L	5.0	2.5	1		12/08/20 22:31	16887-00-6	
Fluoride	<b>0.057</b>	mg/L	0.050	0.015	1		12/08/20 22:31	16984-48-8	
Sulfate	<b>79.5</b>	mg/L	5.0	2.5	1		12/08/20 22:31	14808-79-8	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: D20K028

Pace Project No.: 35593442

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**Sample: D20K028-02**      **Lab ID: 35593442002**      Collected: 11/18/20 08:42      Received: 11/19/20 11:00      Matrix: Water

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Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B    Preparation Method: EPA 3010A									
Pace Analytical Services - Asheville									
Antimony	<b>0.12 U</b>	ug/L	0.50	0.12	1	12/08/20 01:34	12/11/20 14:42	7440-36-0	
Boron	<b>6.5 I</b>	ug/L	25.0	6.2	1	12/08/20 01:34	12/11/20 14:42	7440-42-8	
Lithium	<b>0.39 U</b>	ug/L	2.5	0.39	1	12/08/20 01:34	12/11/20 14:42	7439-93-2	
Thallium	<b>0.050 U</b>	ug/L	0.10	0.050	1	12/08/20 01:34	12/11/20 14:42	7440-28-0	
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0									
Pace Analytical Services - Ormond Beach									
Chloride	<b>2.5 U</b>	mg/L	5.0	2.5	1		12/08/20 22:53	16887-00-6	
Fluoride	<b>0.015 U</b>	mg/L	0.050	0.015	1		12/08/20 22:53	16984-48-8	
Sulfate	<b>2.5 U</b>	mg/L	5.0	2.5	1		12/08/20 22:53	14808-79-8	

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: D20K028

Pace Project No.: 35593442

**Sample: D20K028-03**      **Lab ID: 35593442003**      Collected: 11/18/20 10:38      Received: 11/19/20 11:00      Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B    Preparation Method: EPA 3010A									
Pace Analytical Services - Asheville									
Antimony	<b>0.24 I</b>	ug/L	0.50	0.12	1	12/08/20 01:34	12/11/20 15:28	7440-36-0	
Boron	<b>1030</b>	ug/L	500	125	20	12/08/20 01:34	12/11/20 14:46	7440-42-8	
Lithium	<b>4.2</b>	ug/L	2.5	0.39	1	12/08/20 01:34	12/11/20 15:28	7439-93-2	
Thallium	<b>0.14</b>	ug/L	0.10	0.050	1	12/08/20 01:34	12/11/20 15:28	7440-28-0	
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0									
Pace Analytical Services - Ormond Beach									
Chloride	<b>42.9</b>	mg/L	10.0	5.0	2		12/08/20 23:16	16887-00-6	
Fluoride	<b>0.029 U</b>	mg/L	0.10	0.029	2		12/08/20 23:16	16984-48-8	
Sulfate	<b>345</b>	mg/L	50.0	25.0	10		12/09/20 09:25	14808-79-8	

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: D20K028

Pace Project No.: 35593442

QC Batch: 585198

Analysis Method: EPA 6020B

QC Batch Method: EPA 3010A

Analysis Description: 6020 MET

Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 35593442001, 35593442002, 35593442003

METHOD BLANK: 3093318

Matrix: Water

Associated Lab Samples: 35593442001, 35593442002, 35593442003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	ug/L	0.12 U	0.50	0.12	12/10/20 18:11	
Boron	ug/L	9.7 I	25.0	6.2	12/09/20 12:32	
Lithium	ug/L	0.39 U	2.5	0.39	12/10/20 18:11	
Thallium	ug/L	0.050 U	0.10	0.050	12/10/20 18:11	

LABORATORY CONTROL SAMPLE: 3093319

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	50	54.5	109	80-120	
Boron	ug/L	50	56.3	113	80-120	
Lithium	ug/L	50	53.7	107	80-120	
Thallium	ug/L	10	10.3	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3093320 3093321

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		35593442001 Result	Spike Conc.	Spike Conc.	Result						
Antimony	ug/L	0.57	50	50	58.2	54.7	115	108	75-125	6	20
Boron	ug/L	150	50	50	181	196	61	91	75-125	8	20 J(M1)
Lithium	ug/L	0.39 U	50	50	52.6	53.0	105	106	75-125	1	20
Thallium	ug/L	0.050 I	10	10	11.4	10.7	113	107	75-125	6	20

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**QUALITY CONTROL DATA**

Project: D20K028  
Pace Project No.: 35593442

QC Batch: 687812 Analysis Method: EPA 300.0  
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions  
Laboratory: Pace Analytical Services - Ormond Beach  
Associated Lab Samples: 35593442001, 35593442002, 35593442003

METHOD BLANK: 3744655 Matrix: Water  
Associated Lab Samples: 35593442001, 35593442002, 35593442003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	2.5 U	5.0	2.5	12/08/20 13:55	
Fluoride	mg/L	0.015 U	0.050	0.015	12/08/20 13:55	
Sulfate	mg/L	2.5 U	5.0	2.5	12/08/20 13:55	

LABORATORY CONTROL SAMPLE: 3744656

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	100	90-110	
Sulfate	mg/L	50	47.8	96	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3744657 3744658

Parameter	Units	35595451001		3744657		3744658		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Chloride	mg/L	41.6	50	50	95.9	96.1	109	109	90-110	0	20		
Fluoride	mg/L	0.089	5	5	5.1	5.2	101	101	90-110	0	20		
Sulfate	mg/L	16.3	50	50	66.5	66.6	100	101	90-110	0	20		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3744659 3744660

Parameter	Units	35593325002		3744659		3744660		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Chloride	mg/L	10.4	50	50	59.2	59.6	97	98	90-110	1	20		
Fluoride	mg/L	0.13	5	5	4.5	4.6	87	89	90-110	1	20	J(M1)	
Sulfate	mg/L	4.2 I	50	50	50.6	51.0	93	94	90-110	1	20		

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**REPORT OF LABORATORY ANALYSIS**

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: D20K028

Pace Project No.: 35593442

**Sample: D20K028-01**      **Lab ID: 35593442001**      Collected: 11/18/20 09:36      Received: 11/19/20 11:00      Matrix: Water  
PWS:      Site ID:      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	<b>0.874U ± 0.544 (0.874)</b> <b>C:NA T:89%</b>	pCi/L	12/07/20 12:19	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	<b>1.16U ± 0.607 (1.16)</b> <b>C:59% T:82%</b>	pCi/L	12/07/20 15:41	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>2.03U ± 1.15 (2.03)</b>	pCi/L	12/09/20 14:33	7440-14-4	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: D20K028

Pace Project No.: 35593442

**Sample: D20K028-02**      **Lab ID: 35593442002**      Collected: 11/18/20 08:42      Received: 11/19/20 11:00      Matrix: Water  
PWS:      Site ID:      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	<b>0.833U ± 0.383 (0.833)</b> <b>C:NA T:94%</b>	pCi/L	12/07/20 12:19	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	<b>1.13U ± 0.511 (1.13)</b> <b>C:67% T:78%</b>	pCi/L	12/07/20 15:41	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>1.96U ± 0.894 (1.96)</b>	pCi/L	12/09/20 14:33	7440-14-4	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: D20K028

Pace Project No.: 35593442

**Sample: D20K028-03**      **Lab ID: 35593442003**      Collected: 11/18/20 10:38      Received: 11/19/20 11:00      Matrix: Water  
PWS:      Site ID:      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	<b>4.54 ± 1.32 (0.984)</b> <b>C:NA T:98%</b>	pCi/L	12/07/20 12:19	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	<b>3.85 ± 1.02 (1.09)</b> <b>C:62% T:78%</b>	pCi/L	12/07/20 15:43	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>8.39 ± 2.34 (2.07)</b>	pCi/L	12/09/20 14:33	7440-14-4	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: D20K028  
Pace Project No.: 35593442

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QC Batch: 425266	Analysis Method: EPA 903.1
QC Batch Method: EPA 903.1	Analysis Description: 903.1 Radium-226
	Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 35593442001, 35593442002, 35593442003

---

METHOD BLANK: 2055146 Matrix: Water

Associated Lab Samples: 35593442001, 35593442002, 35593442003

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.242 ± 0.379 (0.634) C:NA T:98%	pCi/L	12/07/20 11:58	

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: D20K028  
Pace Project No.: 35593442

---

QC Batch: 425270	Analysis Method: EPA 904.0
QC Batch Method: EPA 904.0	Analysis Description: 904.0 Radium 228
	Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 35593442001, 35593442002, 35593442003

---

METHOD BLANK: 2055153 Matrix: Water

Associated Lab Samples: 35593442001, 35593442002, 35593442003

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.751 ± 0.514 (0.991) C:65% T:75%	pCi/L	12/07/20 12:13	

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### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: D20K028

Pace Project No.: 35593442

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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.

### 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.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: D20K028  
Pace Project No.: 35593442

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
35593442001	D20K028-01	EPA 3010A	585198	EPA 6020B	585202
35593442002	D20K028-02	EPA 3010A	585198	EPA 6020B	585202
35593442003	D20K028-03	EPA 3010A	585198	EPA 6020B	585202
35593442001	D20K028-01	EPA 903.1	425266		
35593442002	D20K028-02	EPA 903.1	425266		
35593442003	D20K028-03	EPA 903.1	425266		
35593442001	D20K028-01	EPA 904.0	425270		
35593442002	D20K028-02	EPA 904.0	425270		
35593442003	D20K028-03	EPA 904.0	425270		
35593442001	D20K028-01	Total Radium Calculation	426450		
35593442002	D20K028-02	Total Radium Calculation	426450		
35593442003	D20K028-03	Total Radium Calculation	426450		
35593442001	D20K028-01	EPA 300.0	687812		
35593442002	D20K028-02	EPA 300.0	687812		
35593442003	D20K028-03	EPA 300.0	687812		

### REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.



**SUBCONTRACT ORDER**  
**Deerhaven Generating Station**  
**D20K028**

**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) 672-4001

**WO# : 35593442**



**35593442**

<b>Analysis</b>	<b>Expires</b>	<b>Labor</b>
-----------------	----------------	--------------

**Sample Name: LF-6**

<b>Sample ID: D20K028-01</b>	<b>Water</b>	<b>Sampled: 18-Nov-20 09:36</b>
------------------------------	--------------	---------------------------------

- |                          |                 |
|--------------------------|-----------------|
| D_Anions - Fluoride      | 16-Dec-20 09:36 |
| D_Anions - Sulfates      | 16-Dec-20 09:36 |
| D_Antimony by 6020       | 17-May-21 09:36 |
| D_Boron by 6020          | 17-May-21 09:36 |
| D_Lithium by 6020        | 17-May-21 09:36 |
| D_Radium226+228_Combined | 13-May-21 09:36 |
| D_Thallium by 6020       | 17-May-21 09:36 |
| D_Anions - Chlorides     | 16-Dec-20 09:36 |

*Containers Supplied:*

- D\_HDPE, HNO3 pH<2 - 250mL extra (B)
- D\_HDPE, Chill @<6\*C - 250mL (C)
- D\_HDPE, HNO3 pH<2 - 2000mL (D)

**Sample Name: EBLANK**

<b>Sample ID: D20K028-02</b>	<b>Water</b>	<b>Sampled: 18-Nov-20 08:42</b>
------------------------------	--------------	---------------------------------

- |                          |                 |
|--------------------------|-----------------|
| D_Boron by 6020          | 17-May-21 08:42 |
| D_Anions - Chlorides     | 16-Dec-20 08:42 |
| D_Anions - Fluoride      | 16-Dec-20 08:42 |
| D_Antimony by 6020       | 17-May-21 08:42 |
| D_Thallium by 6020       | 17-May-21 08:42 |
| D_Lithium by 6020        | 17-May-21 08:42 |
| D_Radium226+228_Combined | 13-May-21 08:42 |
| D_Anions - Sulfates      | 16-Dec-20 08:42 |

*Containers Supplied:*

- D\_HDPE, HNO3 pH<2 - 250mL extra (B)
- D\_HDPE, Chill @<6\*C - 250mL (C)
- D\_HDPE, HNO3 pH<2 - 2000mL (D)

*Shipped via Fed-Ex*

<i>K. Brakefield</i>	<i>11-18-20</i>	<i>SPW BGC</i>	<i>11-19-20 11:00</i>
Released By	Date	Received By	Date

Released By	Date	Received By	Date
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**SUBCONTRACT ORDER**  
**Deerhaven Generating Station**  
**D20K028**

Analysis	Expires	Laboratory ID	Comments
<b>Sample Name: LF-5</b>			
<b>Sample ID: D20K028-03</b>	<b>Water</b>	<b>Sampled:18-Nov-20 10:38</b>	
D_Thallium by 6020	17-May-21 10:38		
D_Radium226+228_Combined	13-May-21 10:38		
D_Lithium by 6020	17-May-21 10:38		
D_Anions - Chlorides	16-Dec-20 10:38		
D_Anions - Fluoride	16-Dec-20 10:38		
D_Anions - Sulfates	16-Dec-20 10:38		
D_Antimony by 6020	17-May-21 10:38		
D_Boron by 6020	17-May-21 10:38		
<i>Containers Supplied:</i>			
D_HDPE, HNO3 pH<2 - 250mL extra (B)			
D_HDPE, Chill @<6*C - 250mL (C)			
D_HDPE, HNO3 pH<2 - 2000mL (D)			

*Shipped Via Fed-Ex*

<i>R. Brookfield</i>	<i>11-18-20</i>	<i>SRW HGL</i>	<i>11-19-20 1700</i>
Released By	Date	Received By	Date

Released By	Date	Received By	Date
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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

**WO#: 35593442**

**(SCUR)**

**Project #**  
**Project Manager:**  
**Client:**

**PM: JSB**      **Due Date: 12/09/20**  
**CLIENT: DEELAB**

**Date and Initials of person:**  
**Examining contents:** SAW  
**Label:** \_\_\_\_\_  
**Deliver:** 1  
**pH:** \_\_\_\_\_

Thermometer Used: T-337      Date: 11-19-20      Time: 11:35      Initials: CEJ

State of Origin: \_\_\_\_\_  For WV projects, all containers verified to ≤6 °C

Cooler #1 Temp. °C 17.3 (Visual) .0 (Correction Factor) 17.3 (Actual)  
Cooler #2 Temp. °C 1.3 (Visual) \_\_\_\_\_ (Correction Factor) 1.3 (Actual)  
Cooler #3 Temp. °C \_\_\_\_\_ (Visual) \_\_\_\_\_ (Correction Factor) \_\_\_\_\_ (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 # 8161 3074 2480

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	<b>Preservation Information:</b> Preservative: _____ Lot #/Trace #: _____ Date: _____ Time: _____ Initials: _____
All Containers needing preservation are found to be in compliance with EPA recommendation: 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 checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Trip Blank Present:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	

**Client Notification/ Resolution:**  
Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

**Comments/ Resolution (use back for additional comments):**  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Project Manager Review: \_\_\_\_\_ Date: \_\_\_\_\_



# *Kanapaha Laboratory*

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

Florida Department of Health Certification E52099

November 25, 2020

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 10/19/2020. 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: D20J018  
Project Manager: Jeff Boudreau

**Reported:**  
11/25/2020 8:29

**ANALYTICAL REPORT FOR SAMPLES**

<b>Laboratory ID</b>	<b>Sample ID</b>	<b>Matrix</b>	<b>Date Sampled</b>	<b>Date Received</b>
K20J063-01	D20J018-01 (LF-6)	Groundwater	10/15/2020 11:00	10/19/2020 15:10
K20J063-02	D20J018-03 (LF-5)	Groundwater	10/15/2020 09:30	10/19/2020 15:10





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

Project: Environmental  
Project Number: D20J018  
Project Manager: Jeff Boudreau

**Reported:**  
11/25/2020 8:29

**D20J018-01 (LF-6)**  
**K20J063-01 (Groundwater, Grab)**  
Collected: 10/15/2020 11:00 am

Analyte	Result Qual	MDL	PQL	Units	Dil	Prepared	Analyzed	Method
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**Laboratory: Kanapaha Laboratory**

**Metals by EPA 200 Series Methods**

Arsenic	2.5 U	2.5	10.0	ug/L	1	11/02/2020	11/10/2020	EPA 200.7
Barium	19.9	0.2	0.8	ug/L	1	11/02/2020	11/10/2020	EPA 200.7
Beryllium	0.10 U	0.10	0.40	ug/L	1	11/02/2020	11/10/2020	EPA 200.7
Cadmium	0.3 U	0.3	1.2	ug/L	1	11/02/2020	11/10/2020	EPA 200.7
Calcium	56.0	0.10	0.40	mg/L	1	11/02/2020	11/10/2020	EPA 200.7
Chromium	3.5 I	1.2	4.8	ug/L	1	11/02/2020	11/10/2020	EPA 200.7
Cobalt	1.0 U	1.0	4.0	ug/L	1	11/02/2020	11/10/2020	EPA 200.7
Lead	3.0 U	3.0	12.0	ug/L	1	11/02/2020	11/10/2020	EPA 200.7
Molybdenum	19.6	2.5	10.0	ug/L	1	11/02/2020	11/10/2020	EPA 200.7
Selenium	4.0 U	4.0	16.0	ug/L	1	11/02/2020	11/10/2020	EPA 200.7
Mercury	0.100 U	0.100	0.400	ug/L	1	11/09/2020	11/09/2020	EPA 245.1

**Wet Chemistry by APHA/EPA Methods**

Total Dissolved Solids	260	10	40	mg/L	1	10/20/2020	10/20/2020	SM 2540C
TSS	4	1	4	mg/L	1	10/20/2020	10/20/2020	SM 2540D



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

Project: Environmental  
Project Number: D20J018  
Project Manager: Jeff Boudreau

**Reported:**  
11/25/2020 8:29

**D20J018-03 (LF-5)**  
**K20J063-02 (Groundwater, Grab)**  
Collected: 10/15/2020 9:30 am

Analyte	Result	Qual	MDL	PQL	Units	Dil	Prepared	Analyzed	Method
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**Laboratory: Kanapaha Laboratory**

**Metals by EPA 200 Series Methods**

Arsenic	2.5	U	2.5	10.0	ug/L	1	11/02/2020	11/10/2020	EPA 200.7
Barium	63.4		0.2	0.8	ug/L	1	11/02/2020	11/10/2020	EPA 200.7
Beryllium	0.10	U	0.10	0.40	ug/L	1	11/02/2020	11/10/2020	EPA 200.7
Cadmium	0.3	U	0.3	1.2	ug/L	1	11/02/2020	11/10/2020	EPA 200.7
Calcium	72.7		0.10	0.40	mg/L	1	11/02/2020	11/10/2020	EPA 200.7
Chromium	1.3	I	1.2	4.8	ug/L	1	11/02/2020	11/10/2020	EPA 200.7
Cobalt	5.1		1.0	4.0	ug/L	1	11/02/2020	11/10/2020	EPA 200.7
Lead	3.0	U	3.0	12.0	ug/L	1	11/02/2020	11/10/2020	EPA 200.7
Molybdenum	20.5		2.5	10.0	ug/L	1	11/02/2020	11/10/2020	EPA 200.7
Selenium	4.0	U	4.0	16.0	ug/L	1	11/02/2020	11/10/2020	EPA 200.7
Mercury	0.100	U	0.100	0.400	ug/L	1	11/09/2020	11/09/2020	EPA 245.1

**Wet Chemistry by APHA/EPA Methods**

Total Dissolved Solids	792		10	40	mg/L	1	10/20/2020	10/20/2020	SM 2540C
TSS	1	U	1	4	mg/L	1	10/20/2020	10/20/2020	SM 2540D



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

Project: Environmental  
Project Number: D20J018  
Project Manager: Jeff Boudreau

**Reported:**  
11/25/2020 8:29

## 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
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### Batch B20J216 - EPA 200.7

#### Blank (B20J216-BLK1)

Prepared: 11/2/2020 Analyzed: 11/10/2020

Arsenic	2.5 U		2.5	10.0	ug/L						
Lead	3.0 U		3.0	12.0	ug/L						
Chromium	1.2 U		1.2	4.8	ug/L						
Barium	0.2 U		0.2	0.8	ug/L						
Cobalt	1.0 U		1.0	4.0	ug/L						
Beryllium	0.10 U		0.10	0.40	ug/L						
Selenium	4.0 U		4.0	16.0	ug/L						
Calcium	0.10 U		0.10	0.40	mg/L						
Molybdenum	2.5 U		2.5	10.0	ug/L						
Cadmium	0.3 U		0.3	1.2	ug/L						

#### LCS (B20J216-BS1)

Prepared: 11/2/2020 Analyzed: 11/10/2020

Barium	102				ug/L	100		102	90-110		
Cobalt	100				ug/L	100		100	90-110		
Molybdenum	101				ug/L	99.2		102	90-110		
Lead	98.8				ug/L	100		98.8	90-110		
Beryllium	99.3				ug/L	99.9		99.4	90-110		
Selenium	95.9				ug/L	100		95.9	90-110		
Chromium	97.0				ug/L	100		97.0	90-110		
Calcium	25.9				mg/L	25.2		103	90-110		
Arsenic	107				ug/L	100		107	90-110		
Cadmium	104				ug/L	99.8		104	90-110		

#### Duplicate (B20J216-DUP1)

Source: K20J063-02

Prepared: 11/2/2020 Analyzed: 11/10/2020

Cobalt	5.0		1.0	4.0	ug/L		5.1			0.978	
Chromium	1.5 I		1.2	4.8	ug/L		1.3			5.79	
Cadmium	0.3 U		0.3	1.2	ug/L		ND			NR	
Beryllium	0.10 U		0.10	0.40	ug/L		ND			NR	
Calcium	72.7		0.10	0.40	mg/L		72.7			0.00389	
Molybdenum	20.8		2.5	10.0	ug/L		20.5			1.06	
Barium	62.7		0.2	0.8	ug/L		63.4			0.757	
Selenium	4.0 U		4.0	16.0	ug/L		ND			13.9	
Arsenic	2.5 U		2.5	10.0	ug/L		ND			NR	
Lead	3.0 U		3.0	12.0	ug/L		ND			62.5	

#### Duplicate (B20J216-DUP2)

Source: K20J077-04

Prepared: 11/2/2020 Analyzed: 11/10/2020

Beryllium	0.10 U		0.10	0.40	ug/L		ND			50.7	
Calcium	32.6		0.10	0.40	mg/L		32.8			0.429	
Cadmium	0.3 U		0.3	1.2	ug/L		ND			NR	
Barium	8.0		0.2	0.8	ug/L		8.1			0.299	
Arsenic	2.5 U		2.5	10.0	ug/L		ND			NR	
Molybdenum	2.5 U		2.5	10.0	ug/L		ND			3.95	



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

Project: Environmental  
Project Number: D20J018  
Project Manager: Jeff Boudreau

**Reported:**  
11/25/2020 8:29

## 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
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#### Batch B20J216 - EPA 200.7 (Continued)

##### Duplicate (B20J216-DUP2)

Source: K20J077-04

Prepared: 11/2/2020 Analyzed: 11/10/2020

Chromium	1.2U		1.2	4.8	ug/L		ND			2.68	
Selenium	4.0U		4.0	16.0	ug/L		ND			NR	
Cobalt	1.0U		1.0	4.0	ug/L		ND			37.0	
Lead	3.0U		3.0	12.0	ug/L		ND			107	

##### Matrix Spike (B20J216-MS1)

Source: K20J063-02

Prepared: 11/2/2020 Analyzed: 11/10/2020

Selenium	51.8		4.0	16.0	ug/L	50.0	ND	104	90-110		
Arsenic	202		2.5	10.0	ug/L	200	ND	101	90-110		
Calcium	97.1		0.10	0.40	mg/L	25.0	72.7	97.4	90-110		
Barium	560		0.2	0.8	ug/L	500	63.4	99.3	90-110		
Lead	196		3.0	12.0	ug/L	200	ND	98.1	90-110		
Beryllium	190		0.10	0.40	ug/L	200	ND	95.1	90-110		
Cobalt	203		1.0	4.0	ug/L	200	5.1	98.8	90-110		
Molybdenum	514		2.5	10.0	ug/L	500	20.5	98.8	90-110		
Chromium	199		1.2	4.8	ug/L	200	1.3	98.7	90-110		
Cadmium	48.8		0.3	1.2	ug/L	50.0	ND	97.5	90-110		

##### Matrix Spike (B20J216-MS2)

Source: K20J077-04

Prepared: 11/2/2020 Analyzed: 11/10/2020

Arsenic	202		2.5	10.0	ug/L	200	ND	101	90-110		
Selenium	46.9		4.0	16.0	ug/L	50.0	ND	93.8	90-110		
Calcium	57.2		0.10	0.40	mg/L	25.0	32.8	97.6	90-110		
Beryllium	194		0.10	0.40	ug/L	200	ND	97.2	90-110		
Cadmium	49.5		0.3	1.2	ug/L	50.0	ND	98.9	90-110		
Barium	502		0.2	0.8	ug/L	500	8.1	98.7	90-110		
Lead	195		3.0	12.0	ug/L	200	ND	97.7	90-110		
Chromium	198		1.2	4.8	ug/L	200	ND	99.2	90-110		
Cobalt	198		1.0	4.0	ug/L	200	ND	99.0	90-110		
Molybdenum	494		2.5	10.0	ug/L	500	ND	98.9	90-110		

#### Batch B20K069 - MERCURY

##### Blank (B20K069-BLK1)

Prepared & Analyzed: 11/9/2020

Mercury	0.100 U		0.100	0.400	ug/L						
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##### LCS (B20K069-BS1)

Prepared & Analyzed: 11/9/2020

Mercury	2.03		0.100	0.400	ug/L	2.00		101	90-110		
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##### Duplicate (B20K069-DUP1)

Source: K20J063-01

Prepared & Analyzed: 11/9/2020

Mercury	0.100 U		0.100	0.400	ug/L		ND			5.66	
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Deerhaven Laboratory  
Station D-38  
Gainesville, FL/USA 32614-7117

Project: Environmental  
Project Number: D20J018  
Project Manager: Jeff Boudreau

**Reported:**  
11/25/2020 8:29

**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
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**Batch B20K069 - MERCURY (Continued)**

**Matrix Spike (B20K069-MS1)**

**Source: K20J063-01**

Prepared & Analyzed: 11/9/2020

Mercury	2.02		0.100	0.400	ug/L	2.00	ND	101	90-110		
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Deerhaven Laboratory  
Station D-38  
Gainesville, FL/USA 32614-7117

Project: Environmental  
Project Number: D20J018  
Project Manager: Jeff Boudreau

**Reported:**  
11/25/2020 8:29

### Wet Chemistry by APHA/EPA Methods - Quality Control Laboratory: Kanapaha Laboratory

Analyte	Result	Qual	MDL	PQL	Units	Spike Level	Source Result	%REC	% REC Limits	RSD	RSD Limit
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#### Batch B20J148 - DEFAULT PREP - Wet Chem

##### Blank (B20J148-BLK1)

Prepared & Analyzed: 10/20/2020

TSS 1 U 1 4 mg/L

##### LCS (B20J148-BS1)

Prepared & Analyzed: 10/20/2020

TSS 93 mg/L 100 93.0 77.1-110

##### Duplicate (B20J148-DUP1)

Source: K20J060-02

Prepared & Analyzed: 10/20/2020

TSS 250 1 4 mg/L 242 2.30

##### Duplicate (B20J148-DUP2)

Source: K20J041-13

Prepared & Analyzed: 10/20/2020

TSS 1 U 1 4 mg/L ND NR

#### Batch B20J151 - DEFAULT PREP - Wet Chem

##### Blank (B20J151-BLK1)

Prepared & Analyzed: 10/20/2020

Total Dissolved Solids 10 U 10 40 mg/L

##### Duplicate (B20J151-DUP1)

Source: K20J063-02

Prepared & Analyzed: 10/20/2020

Total Dissolved Solids 798 10 40 mg/L 792 0.534

##### Reference (B20J151-SRM1)

Prepared & Analyzed: 10/20/2020

Total Dissolved Solids 239 mg/L 240 99.6 90-110



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

Project: Environmental  
Project Number: D20J018  
Project Manager: Jeff Boudreau

**Reported:**  
11/25/2020 8:29

### 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**  
**D20J018**

**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: LF-6			
Sample ID: D20J018-01	Water	Sampled: 15-Oct-20 11:00	K20J018-01
K_TSS	22-Oct-20 11:00		
K_Barium	13-Apr-21 11:00		
K_Beryllium	13-Apr-21 11:00		
K_Cadmium	13-Apr-21 11:00		
K_Calcium	13-Apr-21 11:00		
K_Chromium	13-Apr-21 11:00		
K_Cobalt	13-Apr-21 11:00		
K_Lead	13-Apr-21 11:00		
K_Mercury, cold vapor	12-Nov-20 11:00		
K_Molybdenum	13-Apr-21 11:00		
K_Selenium	13-Apr-21 11:00		
K_Arsenic	13-Apr-21 11:00		
K_Total Dissolved Solids	22-Oct-20 11:00		
<i>Containers Supplied:</i>			
D_HDPE, HNO3 pH<2 - 500mL (A)			
D_HDPE, Chill @<6*C - 1 Gal (E)			

Released By R. Bradfield      Date 10/19/20      Received By Patricia Epler      Date 10/19/20 @ 1510

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





**SUBCONTRACT ORDER**  
**Deerhaven Generating Station**  
**D20J018**

Analysis	Expires	Laboratory ID	Comments
Sample Name: LF-5			
Sample ID: D20J018-03	Water	Sampled: 15-Oct-20 <del>11:00</del> <sup>09:30</sup> (JMD) <span style="border: 1px solid black; padding: 2px;">K20J063-02</span>	
K_TSS	22-Oct-20 11:00		
K_Barium	13-Apr-21 11:00		
K_Beryllium	13-Apr-21 11:00		
K_Cadmium	13-Apr-21 11:00		
K_Calcium	13-Apr-21 11:00		
K_Chromium	13-Apr-21 11:00		
K_Cobalt	13-Apr-21 11:00		
K_Lead	13-Apr-21 11:00		
K_Mercury, cold vapor	12-Nov-20 11:00		
K_Molybdenum	13-Apr-21 11:00		
K_Selenium	13-Apr-21 11:00		
K_Total Dissolved Solids	22-Oct-20 11:00		
K_Arsenic	13-Apr-21 11:00		
<i>Containers Supplied:</i>			
D_HDPE, HNO3 pH<2 - 500mL (A)			
D_HDPE, Chill @<6*C - 1 Gal (E)			

<i>R. Brakefield</i>	<i>10/19/20</i>	<i>Patricia Epbe</i>	<i>10/19/20 @ 1510</i>
Released By	Date	Received By	Date

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

December 30, 2020

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

RE: Project: ENV  
Pace Project No.: 35598400

Dear Mr. Boudreau:

Enclosed are the analytical results for sample(s) received by the laboratory on December 11, 2020. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Asheville
- Pace Analytical Services - Ormond Beach
- Pace Analytical Services - Greensburg

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  
Kimberly Morrison, Deerhaven Labs  
Shelley Phillips, Deerhaven Lab



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: ENV  
Pace Project No.: 35598400

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### Pace Analytical Services Pennsylvania

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  
Florida: Cert E871149 SEKS WET  
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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### Pace Analytical Services Ormond Beach

8 East Tower Circle, Ormond Beach, FL 32174  
Alaska DEC- CS/UST/LUST  
Alabama Certification #: 41320  
Arizona Certification# AZ0819  
Colorado Certification: FL NELAC Reciprocity  
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  
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  
Ohio DEP 87780  
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  
West Virginia Certification #: 9962C  
Wisconsin Certification #: 399079670

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## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: ENV  
Pace Project No.: 35598400

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### **Pace Analytical Services Ormond Beach**

Wyoming (EPA Region 8): FL NELAC Reciprocity

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### **Pace Analytical Services Asheville**

2225 Riverside Drive, Asheville, NC 28804

Florida/NELAP Certification #: E87648

North Carolina Drinking Water Certification #: 37712

North Carolina Wastewater Certification #: 40

South Carolina Certification #: 99030001

Virginia/VELAP Certification #: 460222

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: ENV  
Pace Project No.: 35598400

Lab ID	Sample ID	Matrix	Date Collected	Date Received
35598400001	D20L017-01	Water	12/09/20 12:43	12/11/20 12:45
35598400002	D20L017-02	Water	12/09/20 14:28	12/11/20 12:45
35598400003	D20L017-03	Water	12/09/20 13:17	12/11/20 12:45

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: ENV  
Pace Project No.: 35598400

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
35598400001	D20L017-01	EPA 6020B	JOR	4	PASI-A
		EPA 903.1	MK1	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		EPA 300.0	NMT	3	PASI-O
35598400002	D20L017-02	EPA 6020B	JOR	4	PASI-A
		EPA 903.1	MK1	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		EPA 300.0	NMT	3	PASI-O
35598400003	D20L017-03	EPA 6020B	JOR	4	PASI-A
		EPA 903.1	MK1	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		EPA 300.0	NMT	3	PASI-O

PASI-A = Pace Analytical Services - Asheville  
PASI-O = Pace Analytical Services - Ormond Beach  
PASI-PA = Pace Analytical Services - Greensburg

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: ENV  
Pace Project No.: 35598400

**Sample: D20L017-01**      **Lab ID: 35598400001**      Collected: 12/09/20 12:43      Received: 12/11/20 12:45      Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B    Preparation Method: EPA 3010A									
Pace Analytical Services - Asheville									
Antimony	<b>0.16 I</b>	ug/L	0.50	0.12	1	12/17/20 09:24	12/28/20 16:37	7440-36-0	
Boron	<b>1270</b>	ug/L	500	125	20	12/17/20 09:24	12/29/20 10:30	7440-42-8	M6
Lithium	<b>3.6</b>	ug/L	2.5	0.39	1	12/17/20 09:24	12/28/20 16:37	7439-93-2	
Thallium	<b>0.12</b>	ug/L	0.10	0.050	1	12/17/20 09:24	12/28/20 16:37	7440-28-0	
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0									
Pace Analytical Services - Ormond Beach									
Chloride	<b>54.0</b>	mg/L	5.0	2.5	1		12/29/20 14:23	16887-00-6	
Fluoride	<b>0.091</b>	mg/L	0.050	0.015	1		12/29/20 14:23	16984-48-8	
Sulfate	<b>428</b>	mg/L	25.0	12.5	5		12/29/20 07:24	14808-79-8	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: ENV  
Pace Project No.: 35598400

**Sample: D20L017-02**      **Lab ID: 35598400002**      Collected: 12/09/20 14:28      Received: 12/11/20 12:45      Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B    Preparation Method: EPA 3010A									
Pace Analytical Services - Asheville									
Antimony	<b>0.28 I</b>	ug/L	0.50	0.12	1	12/17/20 09:24	12/28/20 17:08	7440-36-0	
Boron	<b>159</b>	ug/L	50.0	12.5	2	12/17/20 09:24	12/29/20 10:53	7440-42-8	
Lithium	<b>0.39 U</b>	ug/L	2.5	0.39	1	12/17/20 09:24	12/28/20 17:08	7439-93-2	
Thallium	<b>0.050 I</b>	ug/L	0.10	0.050	1	12/17/20 09:24	12/28/20 17:08	7440-28-0	
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0									
Pace Analytical Services - Ormond Beach									
Chloride	<b>8.4</b>	mg/L	5.0	2.5	1		12/29/20 07:46	16887-00-6	
Fluoride	<b>0.033 I</b>	mg/L	0.050	0.015	1		12/29/20 07:46	16984-48-8	
Sulfate	<b>125</b>	mg/L	10.0	5.0	2		12/29/20 14:45	14808-79-8	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: ENV  
Pace Project No.: 35598400

**Sample: D20L017-03**      **Lab ID: 35598400003**      Collected: 12/09/20 13:17      Received: 12/11/20 12:45      Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B    Preparation Method: EPA 3010A									
Pace Analytical Services - Asheville									
Antimony	<b>0.12 U</b>	ug/L	0.50	0.12	1	12/17/20 09:24	12/28/20 17:12	7440-36-0	
Boron	<b>6.2 U</b>	ug/L	25.0	6.2	1	12/17/20 09:24	12/29/20 11:01	7440-42-8	
Lithium	<b>0.39 U</b>	ug/L	2.5	0.39	1	12/17/20 09:24	12/28/20 17:12	7439-93-2	
Thallium	<b>0.050 U</b>	ug/L	0.10	0.050	1	12/17/20 09:24	12/28/20 17:12	7440-28-0	
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0									
Pace Analytical Services - Ormond Beach									
Chloride	<b>2.5 U</b>	mg/L	5.0	2.5	1		12/29/20 08:08	16887-00-6	
Fluoride	<b>0.015 U</b>	mg/L	0.050	0.015	1		12/29/20 08:08	16984-48-8	
Sulfate	<b>2.5 U</b>	mg/L	5.0	2.5	1		12/29/20 08:08	14808-79-8	

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: ENV  
Pace Project No.: 35598400

QC Batch: 587716 Analysis Method: EPA 6020B  
QC Batch Method: EPA 3010A Analysis Description: 6020 MET  
Laboratory: Pace Analytical Services - Asheville  
Associated Lab Samples: 35598400001, 35598400002, 35598400003

METHOD BLANK: 3105850 Matrix: Water  
Associated Lab Samples: 35598400001, 35598400002, 35598400003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	ug/L	0.12 U	0.50	0.12	12/28/20 15:08	
Boron	ug/L	6.2 U	25.0	6.2	12/29/20 10:22	
Lithium	ug/L	0.39 U	2.5	0.39	12/29/20 10:22	
Thallium	ug/L	0.050 U	0.10	0.050	12/28/20 15:08	

LABORATORY CONTROL SAMPLE: 3105851

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	50	51.4	103	80-120	
Boron	ug/L	50	53.8	108	80-120	
Lithium	ug/L	50	52.5	105	80-120	
Thallium	ug/L	10	10.1	101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3105852 3105853

Parameter	Units	35598400001 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	MS Result	Spike Conc.	MSD Result						
Antimony	ug/L	0.16 I	50	52.7	50	52.5	105	105	75-125	0	20	
Boron	ug/L	1270	50	1370	50	1330	207	139	75-125	3	20	M6
Lithium	ug/L	3.6	50	58.2	50	59.0	109	111	75-125	1	20	
Thallium	ug/L	0.12	10	10.4	10	10.4	103	103	75-125	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: ENV  
Pace Project No.: 35598400

QC Batch: 692863	Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0	Analysis Description: 300.0 IC Anions
	Laboratory: Pace Analytical Services - Ormond Beach

Associated Lab Samples: 35598400001, 35598400002, 35598400003

METHOD BLANK: 3771303 Matrix: Water  
Associated Lab Samples: 35598400001, 35598400002, 35598400003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	2.5 U	5.0	2.5	12/29/20 04:50	
Fluoride	mg/L	0.015 U	0.050	0.015	12/29/20 04:50	
Sulfate	mg/L	2.5 U	5.0	2.5	12/29/20 04:50	

LABORATORY CONTROL SAMPLE: 3771304

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	51.9	104	90-110	
Fluoride	mg/L	5	5.3	106	90-110	
Sulfate	mg/L	50	51.7	103	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3771305 3771306

Parameter	Units	35598814002		3771305		3771306		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec						
Chloride	mg/L	12.7	50	50	68.5	67.9	112	110	90-110	1	20	J(M1)	
Fluoride	mg/L	0.54	5	5	6.0	6.0	110	109	90-110	1	20		
Sulfate	mg/L	33.6	50	50	91.6	91.1	116	115	90-110	1	20	J(M1)	

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: ENV  
Pace Project No.: 35598400

**Sample: D20L017-01**      **Lab ID: 35598400001**      Collected: 12/09/20 12:43      Received: 12/11/20 12:45      Matrix: Water  
PWS:      Site ID:      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	<b>4.74 ± 1.36 (1.06)</b> <b>C:NA T:95%</b>	pCi/L	12/28/20 14:51	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	<b>4.34 ± 1.06 (0.996)</b> <b>C:74% T:75%</b>	pCi/L	12/28/20 11:56	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>9.08 ± 2.42 (2.06)</b>	pCi/L	12/29/20 13:38	7440-14-4	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: ENV  
Pace Project No.: 35598400

**Sample: D20L017-02**      **Lab ID: 35598400002**      Collected: 12/09/20 14:28      Received: 12/11/20 12:45      Matrix: Water  
PWS:      Site ID:      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	<b>1.22U ± 0.685 (1.22)</b> <b>C:NA T:82%</b>	pCi/L	12/28/20 15:10	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	<b>1.26 ± 0.676 (1.22)</b> <b>C:77% T:81%</b>	pCi/L	12/28/20 15:10	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>2.44U ± 1.36 (2.44)</b>	pCi/L	12/29/20 13:38	7440-14-4	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: ENV  
Pace Project No.: 35598400

**Sample: D20L017-03**      **Lab ID: 35598400003**      Collected: 12/09/20 13:17      Received: 12/11/20 12:45      Matrix: Water  
PWS:      Site ID:      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	<b>0.200U ± 0.338 (0.200)</b> <b>C:NA T:92%</b>	pCi/L	12/28/20 15:10	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	<b>0.927U ± 0.467 (0.927)</b> <b>C:69% T:89%</b>	pCi/L	12/28/20 11:56	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>1.13U ± 0.805 (1.13)</b>	pCi/L	12/29/20 13:38	7440-14-4	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: ENV  
Pace Project No.: 35598400

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QC Batch: 428229	Analysis Method: EPA 903.1
QC Batch Method: EPA 903.1	Analysis Description: 903.1 Radium-226
	Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 35598400001, 35598400002, 35598400003

---

METHOD BLANK: 2069341 Matrix: Water

Associated Lab Samples: 35598400001, 35598400002, 35598400003

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	-0.0602 ± 0.312 (0.723) C:NA T:86%	pCi/L	12/28/20 14:24	

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: ENV  
Pace Project No.: 35598400

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QC Batch: 428230	Analysis Method: EPA 904.0
QC Batch Method: EPA 904.0	Analysis Description: 904.0 Radium 228
	Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 35598400001, 35598400003

---

METHOD BLANK: 2069342 Matrix: Water

Associated Lab Samples: 35598400001, 35598400003

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.693 ± 0.404 (0.742) C:70% T:89%	pCi/L	12/28/20 12:06	

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: ENV  
Pace Project No.: 35598400

QC Batch: 428273	Analysis Method: EPA 904.0
QC Batch Method: EPA 904.0	Analysis Description: 904.0 Radium 228
	Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 35598400002

METHOD BLANK: 2069466 Matrix: Water

Associated Lab Samples: 35598400002

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.216 ± 0.333 (0.721) C:75% T:98%	pCi/L	12/28/20 12:06	

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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## QUALIFIERS

Project: ENV  
Pace Project No.: 35598400

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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.

### 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.
M6	Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: ENV  
Pace Project No.: 35598400

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
35598400001	D20L017-01	EPA 3010A	587716	EPA 6020B	587740
35598400002	D20L017-02	EPA 3010A	587716	EPA 6020B	587740
35598400003	D20L017-03	EPA 3010A	587716	EPA 6020B	587740
35598400001	D20L017-01	EPA 903.1	428229		
35598400002	D20L017-02	EPA 903.1	428229		
35598400003	D20L017-03	EPA 903.1	428229		
35598400001	D20L017-01	EPA 904.0	428230		
35598400002	D20L017-02	EPA 904.0	428273		
35598400003	D20L017-03	EPA 904.0	428230		
35598400001	D20L017-01	Total Radium Calculation	429009		
35598400002	D20L017-02	Total Radium Calculation	429009		
35598400003	D20L017-03	Total Radium Calculation	429009		
35598400001	D20L017-01	EPA 300.0	692863		
35598400002	D20L017-02	EPA 300.0	692863		
35598400003	D20L017-03	EPA 300.0	692863		

### REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
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**SUBCONTRACT ORDER**  
**Deerhaven Generating Station**  
**D20L017**

**WO# : 35598400**



35598400

**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: LF-5</b>			
<b>Sample ID: D20L017-01</b>	<b>Water</b>	<b>Sampled:09-Dec-20 12:43</b>	
D_Anions - Fluoride	06-Jan-21 12:43		
D_Anions - Sulfates	06-Jan-21 12:43		
D_Antimony by 6020	07-Jun-21 12:43		
D_Boron by 6020	07-Jun-21 12:43		
D_Lithium by 6020	07-Jun-21 12:43		
D_Radium226+228_Combined	03-Jun-21 12:43		
D_Thallium by 6020	07-Jun-21 12:43		
D_Anions - Chlorides	06-Jan-21 12:43		
<i>Containers Supplied:</i>			
D_HDPE, HNO3 pH<2 - 250mL extra (B)			
D_HDPE, Chill @<6*C - 250mL (C)			
D_HDPE, HNO3 pH<2 - 2000mL (D)			
<b>Sample Name: LF-6</b>			
<b>Sample ID: D20L017-02</b>	<b>Water</b>	<b>Sampled:09-Dec-20 14:28</b>	
D_Boron by 6020	07-Jun-21 14:28		
D_Anions - Chlorides	06-Jan-21 14:28		
D_Anions - Fluoride	06-Jan-21 14:28		
D_Antimony by 6020	07-Jun-21 14:28		
D_Thallium by 6020	07-Jun-21 14:28		
D_Lithium by 6020	07-Jun-21 14:28		
D_Radium226+228_Combined	03-Jun-21 14:28		
D_Anions - Sulfates	06-Jan-21 14:28		
<i>Containers Supplied:</i>			
D_HDPE, HNO3 pH<2 - 250mL extra (B)			
D_HDPE, Chill @<6*C - 250mL (C)			
D_HDPE, HNO3 pH<2 - 2000mL (D)			

*Shipped via FedEx*

<i>R Branfield</i>	<i>12/10/20</i>		
Released By	Date	Received By	Date
		<i>GRU 12/10/20</i>	<i>12/10/20 12:25</i>
Released By	Date	Received By	Date

*RG*



**SUBCONTRACT ORDER**  
**Deerhaven Generating Station**  
**D20L017**

Analysis	Expires	Laboratory ID	Comments
<b>Sample Name: EBLANK</b>			
<b>Sample ID: D20L017-03</b>	<b>Water</b>	<b>Sampled:09-Dec-20 13:17</b>	
D_Thallium by 6020	07-Jun-21 13:17		
D_Anions - Chlorides	06-Jan-21 13:17		
D_Anions - Fluoride	06-Jan-21 13:17		
D_Anions - Sulfates	06-Jan-21 13:17		
D_Antimony by 6020	07-Jun-21 13:17		
D_Boron by 6020	07-Jun-21 13:17		
D_Lithium by 6020	07-Jun-21 13:17		
D_Radium226+228_Combined	03-Jun-21 13:17		
<i>Containers Supplied:</i>			
D_HDPE, HNO3 pH<2 - 250mL extra (B)			
D_HDPE, Chill @<6*C - 250mL (C)			
D_HDPE, HNO3 pH<2 - 2000mL (D)			

*Shipped via FedEx*

<i>K. Brakefield</i>	<i>12/10/20</i>		
Released By	Date	Received By	Date

		<i>5020 1/21</i>	<i>12.11.20 1245</i>
Released By	Date	Received By	Date

*.6*

**Sample Condition Upon Receipt Form (SCUR)**

**Project #**  
**Project Manager:**  
**Client:**

**WO# : 35598400**  
PM: JSB      Due Date: 12/30/20  
CLIENT: DEELAB

**Date and Initials of person:**  
Examining contents: JSB  
Label: \_\_\_\_\_  
Deliver: \_\_\_\_\_  
pH: \_\_\_\_\_

Thermometer Used: T349      Date: 12/11/20      Time: 1257      Initials: JSB

State of Origin: \_\_\_\_\_  For WW projects, all containers verified to ≤6 °C

- |  |  |
|--|--|
| Cooler #1 Temp. °C <u>0.9</u> (Visual) <u>-0.3</u> (Correction Factor) <u>0.6</u> (Actual) | <input type="checkbox"/> Samples on ice, cooling process has begun |
| Cooler #2 Temp. °C _____ (Visual) _____ (Correction Factor) _____ (Actual)                 | <input type="checkbox"/> Samples on ice, cooling process has begun |
| Cooler #3 Temp. °C _____ (Visual) _____ (Correction Factor) _____ (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 # 8161 30742566

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	<b>Preservation Information:</b> Preservative: _____ Lot #/Trace #: _____ Date: _____ Time: _____ Initials: _____
All Containers needing preservation are found to be in compliance with EPA recommendation: 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: \_\_\_\_\_



*Kanapaha Laboratory*

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

Florida Department of Health Certification E52099

January 06, 2021

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 11/18/2020. 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: D20K028  
Project Manager: Jeff Boudreau

**Reported:**  
01/06/2021 9:24

**ANALYTICAL REPORT FOR SAMPLES**

<b>Laboratory ID</b>	<b>Sample ID</b>	<b>Matrix</b>	<b>Date Sampled</b>	<b>Date Received</b>
K20K064-01	D20K028-01 (LF-6)	Groundwater	11/18/2020 10:38	11/18/2020 16:20
K20K064-02	D20K028-02 (EBLANK)	Groundwater	11/18/2020 08:42	11/18/2020 16:20
K20K064-03	D20K028-03 (LF-5)	Groundwater	11/18/2020 09:36	11/18/2020 16:20





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

Project: Environmental  
Project Number: D20K028  
Project Manager: Jeff Boudreau

**Reported:**  
01/06/2021 9:24

**D20K028-01 (LF-6)**  
**K20K064-01 (Groundwater, Grab)**  
Collected: 11/18/2020 10:38 am

Analyte	Result Qual	MDL	PQL	Units	Dil	Prepared	Analyzed	Method
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**Laboratory: Kanapaha Laboratory**

**Metals by EPA 200 Series Methods**

Arsenic	2.5 U	2.5	10.0	ug/L	1	12/01/2020	12/10/2020	EPA 200.7
Barium	21.3	0.2	0.8	ug/L	1	12/01/2020	12/10/2020	EPA 200.7
Beryllium	0.10 U	0.10	0.40	ug/L	1	12/01/2020	12/10/2020	EPA 200.7
Cadmium	0.3 U	0.3	1.2	ug/L	1	12/01/2020	12/10/2020	EPA 200.7
Calcium	54.0	0.10	0.40	mg/L	1	12/01/2020	12/10/2020	EPA 200.7
Chromium	4.1 I	1.2	4.8	ug/L	1	12/01/2020	12/10/2020	EPA 200.7
Cobalt	1.0 U	1.0	4.0	ug/L	1	12/01/2020	12/10/2020	EPA 200.7
Lead	3.0 U	3.0	12.0	ug/L	1	12/01/2020	12/10/2020	EPA 200.7
Molybdenum	12.6	2.5	10.0	ug/L	1	12/01/2020	12/10/2020	EPA 200.7
Selenium	4.0 U	4.0	16.0	ug/L	1	12/01/2020	12/10/2020	EPA 200.7
Mercury	0.100 U	0.100	0.400	ug/L	1	11/30/2020	11/30/2020	EPA 245.1

**Wet Chemistry by APHA/EPA Methods**

Total Dissolved Solids	255	10	40	mg/L	1	11/20/2020	11/20/2020	SM 2540C
TSS	11	1	4	mg/L	1	11/19/2020	11/19/2020	SM 2540D

**D20K028-02 (EBLANK)**  
**K20K064-02 (Groundwater, Grab)**  
Collected: 11/18/2020 8:42 am

Analyte	Result Qual	MDL	PQL	Units	Dil	Prepared	Analyzed	Method
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**Laboratory: Kanapaha Laboratory**

**Metals by EPA 200 Series Methods**

Arsenic	2.5 U	2.5	10.0	ug/L	1	12/01/2020	12/10/2020	EPA 200.7
Barium	0.2 U	0.2	0.8	ug/L	1	12/01/2020	12/10/2020	EPA 200.7
Beryllium	0.10 U	0.10	0.40	ug/L	1	12/01/2020	12/10/2020	EPA 200.7
Cadmium	0.3 U	0.3	1.2	ug/L	1	12/01/2020	12/10/2020	EPA 200.7
Calcium	0.10 U	0.10	0.40	mg/L	1	12/01/2020	12/10/2020	EPA 200.7
Chromium	1.2 U	1.2	4.8	ug/L	1	12/01/2020	12/10/2020	EPA 200.7
Cobalt	1.0 U	1.0	4.0	ug/L	1	12/01/2020	12/10/2020	EPA 200.7
Lead	3.0 U	3.0	12.0	ug/L	1	12/01/2020	12/10/2020	EPA 200.7
Molybdenum	2.5 U	2.5	10.0	ug/L	1	12/01/2020	12/10/2020	EPA 200.7
Selenium	4.0 U	4.0	16.0	ug/L	1	12/01/2020	12/10/2020	EPA 200.7
Mercury	0.100 U	0.100	0.400	ug/L	1	11/30/2020	11/30/2020	EPA 245.1



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

Project: Environmental  
Project Number: D20K028  
Project Manager: Jeff Boudreau

**Reported:**  
01/06/2021 9:24

**D20K028-03 (LF-5)**  
**K20K064-03 (Groundwater, Grab)**  
Collected: 11/18/2020 9:36 am

Analyte	Result Qual	MDL	PQL	Units	Dil	Prepared	Analyzed	Method
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**Laboratory: Kanapaha Laboratory**

**Metals by EPA 200 Series Methods**

Arsenic	2.5 U	2.5	10.0	ug/L	1	12/01/2020	12/10/2020	EPA 200.7
Barium	54.2	0.2	0.8	ug/L	1	12/01/2020	12/10/2020	EPA 200.7
Beryllium	0.10 U	0.10	0.40	ug/L	1	12/01/2020	12/10/2020	EPA 200.7
Cadmium	0.3 U	0.3	1.2	ug/L	1	12/01/2020	12/10/2020	EPA 200.7
Calcium	79.0	0.10	0.40	mg/L	1	12/01/2020	12/10/2020	EPA 200.7
Chromium	1.2 I	1.2	4.8	ug/L	1	12/01/2020	12/10/2020	EPA 200.7
Cobalt	4.4	1.0	4.0	ug/L	1	12/01/2020	12/10/2020	EPA 200.7
Lead	3.0 U	3.0	12.0	ug/L	1	12/01/2020	12/10/2020	EPA 200.7
Molybdenum	25.0	2.5	10.0	ug/L	1	12/01/2020	12/10/2020	EPA 200.7
Selenium	4.0 U	4.0	16.0	ug/L	1	12/01/2020	12/10/2020	EPA 200.7
Mercury	0.100 U	0.100	0.400	ug/L	1	11/30/2020	11/30/2020	EPA 245.1

**Wet Chemistry by APHA/EPA Methods**

Total Dissolved Solids	755	10	40	mg/L	1	11/20/2020	11/20/2020	SM 2540C
TSS	1 U	1	4	mg/L	1	11/19/2020	11/19/2020	SM 2540D



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

Project: Environmental  
Project Number: D20K028  
Project Manager: Jeff Boudreau

**Reported:**  
01/06/2021 9:24

## 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
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#### Batch B20K187 - MERCURY

##### Blank (B20K187-BLK1)

Prepared & Analyzed: 11/30/2020

Mercury 0.100 U 0.100 0.400 ug/L

##### LCS (B20K187-BS1)

Prepared & Analyzed: 11/30/2020

Mercury 2.01 0.100 0.400 ug/L 2.00 100 90-110

##### Duplicate (B20K187-DUP1)

Source: K20K048-04

Prepared & Analyzed: 11/30/2020

Mercury 0.100 U 0.100 0.400 ug/L ND NR

##### Matrix Spike (B20K187-MS1)

Source: K20K048-04

Prepared & Analyzed: 11/30/2020

Mercury 2.00 0.100 0.400 ug/L 2.00 ND 99.9 90-110

#### Batch B20L007 - EPA 200.7

##### Blank (B20L007-BLK1)

Prepared: 12/1/2020 Analyzed: 12/10/2020

Cobalt 1.0 U 1.0 4.0 ug/L  
 Lead 3.0 U 3.0 12.0 ug/L  
 Chromium 1.2 U 1.2 4.8 ug/L  
 Calcium 0.10 U 0.10 0.40 mg/L  
 Arsenic 2.5 U 2.5 10.0 ug/L  
 Molybdenum 2.5 U 2.5 10.0 ug/L  
 Cadmium 0.3 U 0.3 1.2 ug/L  
 Selenium 4.0 U 4.0 16.0 ug/L  
 Beryllium 0.10 U 0.10 0.40 ug/L  
 Barium 0.2 U 0.2 0.8 ug/L

##### LCS (B20L007-BS1)

Prepared: 12/1/2020 Analyzed: 12/10/2020

Calcium 26.1 mg/L 25.2 104 90-110  
 Cobalt 101 ug/L 100 101 90-110  
 Cadmium 104 ug/L 99.8 104 90-110  
 Chromium 98.5 ug/L 100 98.5 90-110  
 Molybdenum 99.3 ug/L 99.2 100 90-110  
 Arsenic 106 ug/L 100 106 90-110  
 Beryllium 102 ug/L 99.9 102 90-110  
 Selenium 96.0 ug/L 100 96.0 90-110  
 Barium 102 ug/L 100 102 90-110  
 Lead 99.1 ug/L 100 99.1 90-110

##### Duplicate (B20L007-DUP1)

Source: K20K064-01

Prepared: 12/1/2020 Analyzed: 12/10/2020

Arsenic 2.5 U 2.5 10.0 ug/L ND 5.26  
 Calcium 54.4 0.10 0.40 mg/L 54.0 0.490



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

Project: Environmental  
Project Number: D20K028  
Project Manager: Jeff Boudreau

**Reported:**  
01/06/2021 9:24

## 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
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#### Batch B20L007 - EPA 200.7 (Continued)

Duplicate (B20L007-DUP1)		Source: K20K064-01				Prepared: 12/1/2020		Analyzed: 12/10/2020	
Barium	21.5		0.2	0.8	ug/L		21.3		0.597
Beryllium	0.10 U		0.10	0.40	ug/L		ND		15.7
Cadmium	0.3 U		0.3	1.2	ug/L		ND		NR
Selenium	4.0 U		4.0	16.0	ug/L		ND		40.8
Chromium	4.1 I		1.2	4.8	ug/L		4.1		0.465
Cobalt	1.0 U		1.0	4.0	ug/L		ND		8.76
Lead	3.0 U		3.0	12.0	ug/L		ND		NR
Molybdenum	13.0		2.5	10.0	ug/L		12.6		1.91

Duplicate (B20L007-DUP2)		Source: K20L005-06				Prepared: 12/1/2020		Analyzed: 12/10/2020	
Lead	3.0 U		3.0	12.0	ug/L		ND		NR
Cadmium	0.3 U		0.3	1.2	ug/L		ND		NR
Cobalt	1.0 U		1.0	4.0	ug/L		ND		NR
Chromium	1.2 U		1.2	4.8	ug/L		ND		16.9
Beryllium	0.10 U		0.10	0.40	ug/L		ND		1.70
Calcium	32.2		0.10	0.40	mg/L		32.0		0.421
Selenium	4.0 U		4.0	16.0	ug/L		ND		NR
Arsenic	2.5 U		2.5	10.0	ug/L		ND		NR
Barium	6.4		0.2	0.8	ug/L		6.4		0.0444
Molybdenum	2.5 U		2.5	10.0	ug/L		ND		91.9

Matrix Spike (B20L007-MS1)		Source: K20K064-01				Prepared: 12/1/2020		Analyzed: 12/10/2020	
Arsenic	195		2.5	10.0	ug/L	200	ND	97.3	90-110
Selenium	47.8		4.0	16.0	ug/L	50.0	ND	95.7	90-110
Cobalt	199		1.0	4.0	ug/L	200	ND	99.6	90-110
Chromium	202		1.2	4.8	ug/L	200	4.1	99.0	90-110
Lead	197		3.0	12.0	ug/L	200	ND	98.6	90-110
Molybdenum	500		2.5	10.0	ug/L	500	12.6	97.4	90-110
Calcium	78.9		0.10	0.40	mg/L	25.0	54.0	99.6	90-110
Cadmium	49.5		0.3	1.2	ug/L	50.0	ND	99.1	90-110
Beryllium	197		0.10	0.40	ug/L	200	ND	98.3	90-110
Barium	520		0.2	0.8	ug/L	500	21.3	99.7	90-110

Matrix Spike (B20L007-MS2)		Source: K20L005-06				Prepared: 12/1/2020		Analyzed: 12/10/2020	
Cadmium	49.5		0.3	1.2	ug/L	50.0	ND	99.0	90-110
Calcium	57.0		0.10	0.40	mg/L	25.0	32.0	100	90-110
Selenium	46.8		4.0	16.0	ug/L	50.0	ND	93.7	90-110
Cobalt	197		1.0	4.0	ug/L	200	ND	98.5	90-110
Arsenic	190		2.5	10.0	ug/L	200	ND	94.8	90-110
Lead	196		3.0	12.0	ug/L	200	ND	98.0	90-110
Beryllium	199		0.10	0.40	ug/L	200	ND	99.6	90-110
Barium	491		0.2	0.8	ug/L	500	6.4	97.0	90-110



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

Project: Environmental  
Project Number: D20K028  
Project Manager: Jeff Boudreau

**Reported:**  
01/06/2021 9:24

**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
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**Batch B20L007 - EPA 200.7 (Continued)**

**Matrix Spike (B20L007-MS2)**

**Source: K20L005-06**

Prepared: 12/1/2020 Analyzed: 12/10/2020

Chromium	196		1.2	4.8	ug/L	200	ND	97.8	90-110		
Molybdenum	481		2.5	10.0	ug/L	500	ND	96.2	90-110		



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

Project: Environmental  
Project Number: D20K028  
Project Manager: Jeff Boudreau

**Reported:**  
01/06/2021 9:24

## Wet Chemistry by APHA/EPA Methods - Quality Control Laboratory: Kanapaha Laboratory

Analyte	Result	Qual	MDL	PQL	Units	Spike Level	Source Result	%REC	% REC Limits	RSD	RSD Limit
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### Batch B20K144 - DEFAULT PREP - Wet Chem

#### Blank (B20K144-BLK1)

Prepared & Analyzed: 11/19/2020

TSS 1 U 1 4 mg/L

#### LCS (B20K144-BS1)

Prepared & Analyzed: 11/19/2020

TSS 96 mg/L 100 96.0 77.1-110

#### Duplicate (B20K144-DUP1)

Source: K20K066-01

Prepared & Analyzed: 11/19/2020

TSS 235 1 4 mg/L 230 1.52

### Batch B20K149 - DEFAULT PREP - Wet Chem

#### Blank (B20K149-BLK1)

Prepared & Analyzed: 11/20/2020

Total Dissolved Solids 10 U 10 40 mg/L

#### Duplicate (B20K149-DUP1)

Source: K20K048-02

Prepared & Analyzed: 11/20/2020

Total Dissolved Solids 347 10 40 mg/L 356 1.81

#### Duplicate (B20K149-DUP2)

Source: K20K064-03

Prepared & Analyzed: 11/20/2020

Total Dissolved Solids 750 10 40 mg/L 755 0.470

#### Reference (B20K149-SRM1)

Prepared & Analyzed: 11/20/2020

Total Dissolved Solids 238 mg/L 240 99.2 90-110



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

Project: Environmental  
Project Number: D20K028  
Project Manager: Jeff Boudreau

**Reported:**  
01/06/2021 9:24

### 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**  
**D20K028**

**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: LF-6			
Sample ID: D20K028-01	Water	1038 18-Nov-20 09:36	K20K064-01
K_Beryllium	17-May-21 09:36		
K_Barium	17-May-21 09:36		
K_Total Dissolved Solids	25-Nov-20 09:36		
K_Selenium	17-May-21 09:36		
K_Molybdenum	17-May-21 09:36		
K_Mercury, cold vapor	16-Dec-20 09:36		
K_Arsenic	17-May-21 09:36		
K_Lead	17-May-21 09:36		
K_Cobalt	17-May-21 09:36		
K_Chromium	17-May-21 09:36		
K_Calcium	17-May-21 09:36		
K_Cadmium	17-May-21 09:36		
K_TSS	25-Nov-20 09:36		
<i>Containers Supplied:</i>			
D_HDPE, HNO3 pH<2 - 500mL (A)			
D_HDPE, Chill @<6*C - 1 Gal (E)			

<i>R Brakefield</i>	<i>11/18/20</i>	<i>John M. DeH</i>	<i>11/18/20 @ 1620</i>
Released By	Date	Received By	Date
Released By	Date	Received By	Date





**SUBCONTRACT ORDER**  
**Deerhaven Generating Station**  
**D20K028**

Analysis	Expires	Laboratory ID	Comments
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<b>Sample Name: EBLANK</b>			
<b>Sample ID: D20K028-02</b>	<b>Water</b>	<b>Sampled: 18-Nov-20 08:42</b>	<i>K20K064-02</i>
K_Barium		17-May-21 08:42	
K_Beryllium		17-May-21 08:42	
K_Cadmium		17-May-21 08:42	
K_Calcium		17-May-21 08:42	
K_Chromium		17-May-21 08:42	
K_Cobalt		17-May-21 08:42	
K_Lead		17-May-21 08:42	
K_Mercury, cold vapor		16-Dec-20 08:42	
K_Molybdenum		17-May-21 08:42	
K_Selenium		17-May-21 08:42	
K_Arsenic		17-May-21 08:42	

Containers Supplied:

D\_HDPE, HNO3 pH<2 - 500mL (A)

<b>Sample Name: LF-5</b>			
<b>Sample ID: D20K028-03</b>	<b>Water</b>	<b>Sampled: 18-Nov-20 10:38</b>	<i>0936 K20K064-03</i>
K_Cobalt		17-May-21 10:38	<i>11/18/20</i>
K_Arsenic		17-May-21 10:38	
K_Barium		17-May-21 10:38	
K_Beryllium		17-May-21 10:38	
K_Cadmium		17-May-21 10:38	
K_Chromium		17-May-21 10:38	
K_TSS		25-Nov-20 10:38	
K_Lead		17-May-21 10:38	
K_Mercury, cold vapor		16-Dec-20 10:38	
K_Molybdenum		17-May-21 10:38	
K_Selenium		17-May-21 10:38	
K_Total Dissolved Solids		25-Nov-20 10:38	
K_Calcium		17-May-21 10:38	

Containers Supplied:

D\_HDPE, HNO3 pH<2 - 500mL (A)

D\_HDPE, Chill @<6\*C - 1 Gal (E)

<i>R Brakefield</i>	<i>11/18/20</i>	<i>John M Deh</i>	<i>11/18/20 @ 1620</i>
Released By	Date	Received By	Date

Released By	Date	Received By	Date
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Attachment B  
Sampling Field and Calibration Logs

## CCR Assessment January 2020 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 since depth meter not used.
- CCR Well sampling was performed in conjunction with the Quarterly Groundwater Well sampling that sampling began Monday, January 13, 2020 and was completed on Saturday January 18, 2020 by Kimberly Morrison and Charles Davis. The Equipment Blank associated with this event was collected on Thursday, January 16, 2020 9 at Groundwater SIS-3.
- All the water elevations for all the Quarterly GW wells and CCR wells were taken on the first day of GW sampling, (Monday, January 13, 2020). These are not the depths to water reported on the field logs.
- All wells were found secured with a lock upon arrival and left locked upon departure.
- All samples collected for 6020 Metals were preserved in the field.
- Weather:
  1. Tuesday (01-14-20) temperatures were in the low 60s up to 80 degrees, southwest winds of 6-7 mph and overcast the majority of the day.
  2. Wednesday (01-15-20) weather had temperatures in the high 60s to high 70s, with west winds between 5-10mph and partly cloudy skies.
  3. Thursday (01-16-20) weather had temperatures ranging from mid-60s to high-70s, winds between 7-10 mph and cloudy skies.
  4. Friday (01-17-20) weather had temperatures ranging from low to mid 60s, northeast winds around 16 mph and clear skies most of the day.
  5. Saturday (01-18-20) weather had temperatures ranging from low 50s to upper 70s, east winds from 2-8 mph and partly cloudy skies.
- SIS-4 and LF-2: Observed orange colored floaters during the initial purge.
- LF1-: During sampling wood chip trucks were passing by.
- LF-3: The water level for this well was above the screened interval and remained there. Two equipment volumes were purged and then sample parameters were taken every three minutes.
- LF-4: The turbidity at this well was high and required extra parameters. Parameters were collected every five minutes until turbidity fell below 20%. Samples were then collected.
- Equipment Blank: The Equipment Blank was collected at SIS-3. The depth meter sensor was dipped into the Equipment Blank container prior to sampling.
- Instruments: Calibration verifications were performed on all instruments and passed.

## CCR Assessment January 2020 Field and Analytical Narrative

### Analytical Narrative: Internal Analysis

- TSS and TDS were performed by Deerhaven Laboratory with satisfactory results.

### Analytical Narrative: External Laboratories

- Kanapaha Laboratory analyzed samples for Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Cobalt, Lead, Molybdenum, and Selenium by Method 200.7. All results were satisfactory.  
**Note:** The Equipment Blank collected for the GW/CCR sampling event had a detectable hit for Barium that was above the MDL, but was less than the PQL. The previous 2 quarters (3Q19 and 4Q19), barium was also detected in the Equipment Blank and our Barnstead water (source water), even though the cartridges for it were changed prior to the 4Q19 sampling event. For this sampling event, we did not send a Barnstead sample (source water) for analysis.
- PACE Analytical Services analyzed samples for the following metals: Antimony, Lithium, Boron, and Thallium by Method 6020. All other results were satisfactory.  
**Note:** The Equipment Blank collected for the event had a detectable hit for Boron that was above the MDL, but was less than the PQL. For this sampling event, we did not send a Barnstead sample (source water) for analysis.
- PACE Analytical Services analyzed samples for Chloride, Sulfate, Fluoride and Radium 226 +228 combined. All results are satisfactory.

### Contract Laboratories Used:

- PACE Analytical Services, Inc.
- Kanapaha Laboratory

Submitted by: Shelley Phillips, QAO

# DGS Groundwater Sampling Log



**WELL ID: R4T5**    Location:    Latitude: **29°45'52.14"**    Longitude: **-82°23'33.18"**    MSL @ TOC Date In Service: **187.46 7-93**  
**Quarter:** 1020    **Date:** 1-15-2000    **Well Type:** I

### Purging Data

Diameter(in)	<b>2</b>	Total well depth(ft)	<b>15.08</b>	Depth to water(ft)	<b>10.49</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: <u>15:00</u>			
<b>Well Vol = ( 15.08 - 10.49 ) X 0.6 =</b>				<b>2.75 L</b> 1/4 well vol. = <b>0.7</b>			
Init Tubing Dpth(ft):	<u>11'</u>	Final Tube Dept(ft):	<u>11'</u>	Purge Start Time:	<u>15:10</u>	Purge Stop time:	<u>15:37</u>
						Total Volume Purged	<u>5.3 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§		
15:25	3.7	3.7	240	10.96	6.16	22.6	804.5	0.37	0.33	192.6	Yellow
15:32	0.8	4.5	240	10.99	6.15	22.6	804.7	0.30	0.28	200.9	Clear
15:36	0.8	5.3	240	10.99	6.16	22.6	804.1	0.29	0.32	232.1	Sulfur 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): K. Womser, J.C. Davis    Sampler(s) Signatures: [Signatures]

Sampling Method:	PP	Tube Material:	PP/S	Sampling Started Tube Dpth(ft):	<u>11.49</u>	Time:	<u>15:37</u>	Sampling completed Tube Dpth(ft):	<u>11.49</u>	Time:	<u>16:20</u>
Field Decon:	NO	Field Filtered:	NO	Duplicate:	YES	<input checked="" type="checkbox"/> NO	Acid ID#	HNO3: <u>DH92805</u>	H2SO4: <u>DC 2802</u>		

Sample Container Specification			Sample Preservation			Intended Analysis or method
ID:	Material	Volume(mL)	Preservative	Volume added	final pH	
<u>D20A09-04 A</u>	PE	4000	Chill <6 deg	none	n/a	Physical Analysis
<u>D20A09-04 B</u>	PE	250	Chill 6 deg C	none	n/a	Anions
<u>D20A09-04 C</u>	PE	250	Chill + H2SO	0.5 mL	<u>1.4</u>	Demand-NPDOC and NO3+NO2
<u>D20A09-04 D</u>	PE	1000	HNO3	2 mL	<u>1.3</u>	Radiological-GA
<u>D20A09-04 E</u>	PE	500	HNO3	1 mL	<u>1.3</u>	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: W 6 mph    Cloud Cover: partly cloudy    Precip: N/A  
 Remarks:

# DGS Groundwater Sampling Log



**WELL ID: R6T4**      Location:      Latitude: **29°46'00.90"**      Longitude: **-82°23'40.20"**      MSL @ TOC Date In Service: **183.6**      **7-93**

**Quarter: 1Q20**      **Date: 1/14/20**      Well Type: **I**

### Purging Data 3.87

Diameter(in) **2**      Total well depth(ft) **14.13**      Depth to water(ft) **4.87**      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: **08:09:25**

**Well Vol = ( 14.13 - 3.87 ) X 0.6 = 6.16 L**      1/4 well vol. = **1.5**

Init Tubing Dpth(ft): <b>4.4</b>		Final Tube Dept(ft): <b>4.5</b>		Purge Start Time: <b>09:28</b>		Purge Stop time: <b>09:50</b>		Total Volume Purged: <b>8.2 L</b>		Observed odor or color	
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)
					± 0.2§	± 0.2§	± 5%§	20% sat§	20 max§		
09:42	6.2	6.2	500	4.03	6.97	19.8	403.1	0.22	0.36	4.2	Clear
09:45	1.5	6.7	500	4.03	6.97	19.9	397.2	0.23	0.50	-18.1	NO odor
09:49	1.5	8.2	500	4.03	6.97	19.9	389.2	0.20	0.36	-31.0	Yellowish 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): **K. Merson**      Sampler(s) Signatures: **K. Merson**

Sampling Method: **PP**      Tube Material: **PP/S**      Sampling Started Tube Dpth(ft): **4.5**      Time: **09:51**      Sampling completed Tube Dpth(ft): **4.5**      Time: **10:08**

Field Decon: **NO**      Field Filtered: **NO**      Duplicate: **YES**      **NO**      Acid ID# **HNO3: DH92805**      **H2SO4: DC92802**

Sample Container Specification			Sample Preservation			Intended Analysis or method
ID:	Material	Volume(mL)	Preservative	Volume added	final pH	
D20A09-06A	PE	4000	Chill <6 deg	none	n/a	Physical Analysis
D20A09-06B	PE	250	Chill 6 deg C	none	n/a	Anions
D20A09-06C	PE	250	Chill + H2SO	0.5 mL	1.3	Demand-NPDOC and NO3+NO2
D20A09-06D	PE	1000	HNO3	2 mL	1.3	Radiological-GA
D20A09-06E	EPE	500	HNO3	1 mL	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: **68° F**      Winds: **SWE 7 mph**      Cloud Cover: **SUNNY**      Precip: **N/A**

Remarks:

Codes: PP/S + Polypropylene+Silcone tubing    PP: Peristaltic Pump    PE: Polyethylene B

# DGS Groundwater Sampling Log



WELL ID <b>EBLANK</b> Location:	Latitude: <b>na</b>	Longitude: <b>na</b>	MSL @ TOC	Date In Service
Quarter: <b>1Q20</b>	Date: <b>1/16/20</b>	Well Type: <b>na</b>	<b>0</b>	<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>10:09</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>10:12</b>	Purge Stop time: <b>10:30</b>
			Total Volume Purged <b>N/A</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§		
10:20	N/A	N/A	500	N/A	6.45	19.4	0.994	8.20	0.13	259.8	Clear
10:23	N/A	N/A	500	N/A	6.32	19.5	0.844	8.18	0.15	260.0	NO color
10:25	N/A	N/A	500	N/A	6.12	19.5	1.034	8.18	0.15	274.4	NO odor
10:27	N/A	N/A	500	N/A	6.07	19.5	1.030	8.19	0.18	272.0	
10:29	N/A	N/A	500	N/A	6.01	19.5	0.959	8.20	0.16	281.0	

◆ 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>K. Monser, J. Davis</b>			Sampler(s) Signatures: <i>K Monser, J Davis</i>		
Sampling Method: <b>PP</b>	Tube Material: <b>PP/S</b>	Sampling Started Tube Dpth(ft): <b>N/A</b>	Time: <b>10:31</b>	Sampling completed Tube Dpth(ft): <b>N/A</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>D492805</b>	H2SO4: <b>D492802</b>	

Sample Container Specification			Sample Preservation			Intended Analysis or method
ID:	Material	Volume(mL)	Preservative	Volume added	final pH	
D20A09-14 A	PE	4000	Chill <6 deg	none	n/a	Physical Analysis
D20A09-14 B	PE	250	Chill 6 deg C	none	n/a	Anions
D20A09-14 C	PE	250	Chill + H2SO	0.5 mL	1.3	Demand-NPDOC and NO3+NO2
D20A09-14 D	PE	1000	HNO3	2 mL	1.3	Radiological-GA
D20A09-14 E	PE	500	HNO3	1 mL	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: **66°F** Winds: **NNW 7mph** Cloud Cover: **Cloudy** Precip: **N/A**  
 Remarks:

# 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:** Jan 2020 gdw ~~HQ 20~~ ~~15-20~~      **Date:** 1/15/2020      **Well Type:** U

### Purging Data

Diameter(in)	2	Total well depth(ft)	13.92	Depth to water(ft)	4.78	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 - 4.78 ) X 0.6 = 5.5 L</b>				1/4 well vol. = N/A			
Init Tubing Dpth(ft):	9'	Final Tube Dept(ft):	9'	Purge Start Time:	1347	Purge Stop time:	1430
						Total Volume Purged	2.9 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§		
1423	6.5	6.5	230	5.13	6.43	19.3	374.8	2.00	7.85	292.9	Cloudy yellow Odorless Floaters
1426	0.7	7.2	230	5.13	6.43	19.3	375.1	1.97	6.38	290.8	
1429	0.7	7.9	230	5.13	6.43	19.3	375.0	1.90	4.99	292.2	

◆ 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):** JCDunn K. Morrison      **Sampler(s) Signatures:** *JCDunn K Morrison*

**Sampling Method:** PP      **Tube Material:** PP/S      **Sampling Started:** Tube Dpth(ft): 9'      Time: 1432      **Sampling completed:** Tube Dpth(ft): 9'      Time: 1456

**Field Decon:** NO      **Field Filtered:** NO      **Duplicate:** YES  NO      **Acid ID# HNO3:** DM92805      **H2SO4:** N/A

Sample Container Specification			Sample Preservation			Intended Analysis or method
ID:	Material	Volume(mL)	Preservative	Volume added	final pH	
D20A020-05A	PE	500	HNO3	1.0 mL	1.3	Metals: As,Ba, Be,Ca,Cd,Cr,Co,Mo,Pb,Se
D20A020-05B	PE	250	HNO3	0.5 mL	1.3	Metals: Sb,Tl,B,Li
D20A020-05C	PE	250	Chill <6 deg	n/a	n/a	Anions: F, Cl, SO4
D20A020-05D	PE	2000	HNO3	4 mL	1.3	Radium 226+228 Combined
D20A020-05E	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:** WNW 9 mph      **Cloud Cover:** partly cloudy      **Precip:** 0  
**Remarks:**

Codes: PP/S + Polypropylene+Silcone tubing    PP: Peristaltic Pump    PE: Polyethylene B



# DGS Groundwater Sampling Log



**WELL ID:** SIS-2      **Location:**      **Latitude:** 29°45'53.4672"      **Longitude:** -82°23'31.5096"      **MSL @ TOC Date In Service:** 183.3      2017

**Quarter:** January 2020      **Date:** 1-16-2020      **Well Type:** D

### Purging Data

Diameter(in)	2	Total well depth(ft)	14.22	Depth to water(ft)	6.08	Well capacity(L/ft)	0.6
Distance from TOC to top of screen	4.22	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 = ( 14.22 - 6.08 ) X 0.6 =</b>				<b>4.88 L</b> 1/4 well vol. = <u>N/A</u>			
Init Tubing Dpth(ft):	9'	Final Tube Dept(ft):	9'	Purge Start Time:	1238	Purge Stop time:	1310
						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§		
1303	2.9	2.9	210	6.30	7.06	20.5	469.0	1.74	8.47	261.2	Clear Colorless odorless
1306	0.63	3.53	210	6.30	7.05	20.5	469.1	1.74	6.98	260.9	
1309	0.63	4.16	210	6.30	7.06	20.5	469.6	1.72	5.34	261.1	

◆ 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):** JC Davis      *K. Mansa*      **Sampler(s) Signatures:** *JC Davis & Mansa*

**Sampling Method:** PP      **Tube Material:** PP/S      **Sampling Started Tube Dpth(ft):** 9'      **Time:** 1312      **Sampling completed Tube Dpth(ft):** 9'      **Time:** 1337

**Field Decon:** NO      **Field Filtered:** NO      **Duplicate:** YES (NO)      **Acid ID# HNO3:** DH9280      **H2SO4:**

Sample Container Specification			Sample Preservation			Intended Analysis or method
ID:	Material	Volume(mL)	Preservative	Volume added	final pH	
D20A020-06A	PE	500	HNO3	1.0 mL	1.3	Metals: As, Ba, Be, Ca, Cd, Cr, Co, Mo, Pb, Se
D20A020-06B	PE	250	HNO3	0.5 mL	1.3	Metals: Sb, Ti, B, Li
D20A020-06C	PE	250	Chill <6 deg	n/a	n/a	Anions: F, Cl, SO4
D20A020-06D	PE	2000	HNO3	4 mL	1.3	Radium 226+228 Combined
D20A020-06E	PE	2000	Chill <6 deg	n/a	n/a	Solids: TSS, TDS

Well found locked on arrival       Well left locked on departure

**Temperature:** 70°F      **Winds:** WSW 8 mph      **Cloud Cover:** Cloudy      **Precip:** 0

**Remarks:**

# DGS Groundwater Sampling Log



**WELL ID:** SIS-3      **Location:**      **Latitude:** 29°45'51.8472"      **Longitude:** -82°23'35.5632"      **MSL @ TOC** 183.11      **Date In Service** 2017  
**Quarter:** 1Q20      **Date:** 1/16/20      **Well Type:** D

### Purging Data

Diameter(in)	2	Total well depth(ft)	13.38	Depth to water(ft)	3.49	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:			
<b>Well Vol = ( 13.38 - 3.49 ) X 0.6 = 5.93 L</b>				1/4 well vol. = N/A			
Init Tubing Dpth(ft):	9'	Final Tube Dept(ft):	9'	Purge Start Time:	0822	Purge Stop time:	0945
						Total Volume Purged	6.5 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§		
0935	6.0	6.0	75	4.79	6.44	20.0	410.0	0.67	1.91	253.5	Floaters slight yellow Sulphur odor
0938	0.225	6.225	75	4.80	6.42	20.0	409.4	0.64	2.86	254.5	
0941	0.225	6.5	75	4.83	6.42	20.0	409.3	0.96	2.22	249.5	

◆ 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):** JC Davis      **K. Manis**      **Sampler(s) Signatures:** *John Davis*      *Manis*

**Sampling Method:** PP      **Tube Material:** PP/S      **Sampling Started Tube Dpth(ft):** 9'      **Time:** 0948      **Sampling completed Tube Dpth(ft):** 9'      **Time:** 1128

**Field Decon:** NO      **Field Filtered:** NO      **Duplicate:** YES (NO)      **Acid ID# HNO3:** DH9205      **H2SO4:** N/A

Sample Container Specification			Sample Preservation			Intended Analysis or method
ID:	Material	Volume(mL)	Preservative	Volume added	final pH	
D20A020-07	A PE	500	HNO3	1.0 mL	1.3	Metals: As, Ba, Be, Ca, Cd, Cr, Co, Mo, Pb, Se
D20A020-07	B PE	250	HNO3	0.5 mL	1.3	Metals: Sb, Ti, B, Li
D20A020-07	C PE	250	Chill <6 deg	n/a	n/a	Anions: F, Cl, SO4
D20A020-07	D PE	2000	HNO3	4 mL	1.3	Radium 226+228 Combined
D20A020-07	E PE	2000	Chill <6 deg	n/a	n/a	Solids: TSS, TDS

Well found locked on arrival       Well left locked on departure  
**Temperature:** 66°F      **Winds:** WNW 7 mph      **Cloud Cover:** Cloudy      **Precip:** 0  
**Remarks:**

Codes: PP/S + Polypropylene+Silicone tubing    PP: Peristaltic Pump    PE: Polyethylene B

# DGS Groundwater Sampling Log



**WELL ID:** SIS-4      **Location:**      **Latitude:** 29°45'54.144"      **Longitude:** -82°23'38.4108"      **MSL @ TOC Date In Service:** 183.87      2017

**Quarter:** 1Q20      **Date:** 1/16/20      **Well Type:** D

### Purging Data

Diameter(in)	2	Total well depth(ft)	13.7	Depth to water(ft)	5.48	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 - 5.48 ) X 0.6 = 4.9 L</b>				1/4 well vol. = N/A			
Init Tubing Dpth(ft):	10'	Final Tube Dept(ft):	10'	Purge Start Time:	11:10	Purge Stop time:	11:38
						Total Volume Purged	7.0 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§		
11:30	5.0	5.0	330	5.77	6.55	19.9	566.7	0.23	11.2	264.1	Clear
11:33	1.0	6.0	330	5.77	6.55	19.9	566.1	0.21	7.05	259.4	Yellowish
11:36	1.0	7.0	330	5.77	6.55	20.0	566.0	0.19	5.06	252.9	Color
											Floaters

◆ 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. Mornson, JCD      **Sampler(s) Signatures:** K. Mornson, JCD

**Sampling Method:** PP      **Tube Material:** PP/S      **Sampling Started Tube Dpth(ft):**      **Time:** 11:40      **Sampling completed Tube Dpth(ft):**      **Time:** 11:58

**Field Decon:** NO      **Field Filtered:** NO      **Duplicate:** YES (NO)      **Acid ID# HNO3:** DH9280      **H2SO4:** N/A

Sample Container Specification			Sample Preservation			Intended Analysis or method
ID:	Material	Volume(mL)	Preservative	Volume added	final pH	
D20A020-08 A	PE	500	HNO3	1.0 mL	1.3	Metals: As, Ba, Be, Ca, Cd, Cr, Co, Mo, Pb, Se
D20A020-08 B	PE	250	HNO3	0.5 mL	1.3	Metals: Sb, Tl, B, Li
D20A020-08 C	PE	250	Chill <6 deg	n/a	n/a	Anions: F, Cl, SO4
D20A020-08 D	PE	2000	HNO3	4 mL	1.3	Radium 226+228 Combined
D20A020-08 E	PE	2000	Chill <6 deg	n/a	n/a	Solids: TSS, TDS

Well found locked on arrival       Well left locked on departure

**Temperature:** 70°F      **Winds:** WNW 8 mph      **Cloud Cover:** Cloudy      **Precip:** N/A

**Remarks:**

# 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
Quarter: <b>1Q20</b>	Date: <b>01/15/20</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>5.9</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>09:10</b>	
<b>Well Vol = ( 14.88 - 5.9 ) X 0.6 = 5.39 L</b>		1/4 well vol. = <b>N/A</b>	
Init Tubing Dpth(ft): <b>10'</b>	Final Tube Dept(ft):	Purge Start Time: <b>09:17</b>	Purge Stop time: <b>09:44</b>
		Total Volume Purged <b>7.9</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§		
09:35	5.9	5.9	320	5.98	5.91	20.0	272.3	1.23	0.81	300.0	Clear Colorless
09:38	1.0	6.9	320	5.98	5.88	19.9	267.3	1.12	0.39	299.9	
09:41	1.0	7.9	320	5.98	5.80	20.0	261.1	1.07	0.39	299.6	

◆ 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): <b>K. Mansin</b>				Sampler(s) Signatures: <b>K. Mansin</b>			
Sampling Method: <b>PP</b>	Tube Material: <b>PP/S</b>	Sampling Started Tube Dpth(ft): <b>10'</b>	Time: <b>09:45</b>	Sampling completed Tube Dpth(ft): <b>10'</b>	Time: <b>10:03</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: DH 92805</b>	<b>H2SO4: N/A</b>		
Sample Container Specification		Sample Preservation			Intended Analysis or method		
ID:	Material	Volume(mL)	Preservative	Volume added		final pH	
<b>D20A020-01 A</b>	<b>PE</b>	<b>500</b>	<b>HNO3</b>	<b>1.0 mL</b>	<b>1.6</b>	<b>Metals: As, Ba, Be, Ca, Cd, Cr, Co, Mo, Pb, Se</b>	
<b>D20A020-01 B</b>	<b>PE</b>	<b>250</b>	<b>HNO3</b>	<b>0.5 mL</b>	<b>1.6</b>	<b>Metals: Sb, Ti, B, Li</b>	
<b>D20A020-01 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>D20A020-01 D</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>D20A020-01 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>	

Well found locked on arrival      Well left locked on departure  
 Temperature: **69°F**     Winds: **SW @ 5 mph**     Cloud Cover: **Sunny**     Precip: **N/A**  
 Remarks: **During sampling wood chip trucks were passing by.**

Codes: PP/S + Polypropylene+Silcone tubing    PP: Peristaltic Pump    PE: Polyethylene B

# DGS Groundwater Sampling Log



WELL ID: <b>LF-2</b>	Location:	Latitude: <b>29°45'50.46"</b>	Longitude: <b>-82°23'47.40"</b>	MSL @ TOC Date In Service: <b>182.33 2019</b>
Quarter: <u>January 2020</u>	Date: <u>1-16-2020</u>	Well Type: <b>D</b>		

### Purging Data

Diameter(in) <b>2</b>	Total well depth(ft) <b>15.36</b>	Depth to water(ft) <b>4.45</b>	Well capacity(L/ft) <b>0.6</b>
Distance from TOC to top of screen <b>5.36</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>4-1352</u>	
<b>Well Vol = ( 15.36 - 4.45 ) X 0.6 = 6.55 L</b>		1/4 well vol. = <u>N/A</u>	
Init Tubing Dpth(ft): <u>9'</u>	Final Tube Dept(ft): <u>9'</u>	Purge Start Time: <u>1352</u>	Purge Stop time: <u>1429</u>
			Total Volume Purged <u>7.85 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§		
<u>1423</u>	<u>6.6</u>	<u>6.6</u>	<u>225</u>	<u>4.69</u>	<u>5.22</u>	<u>19.4</u>	<u>370.7</u>	<u>0.20</u>	<u>4.60</u>	<u>184.0</u>	<u>Yellowish color</u>
<u>1426</u>	<u>0.675</u>	<u>7.275</u>	<u>225</u>	<u>4.69</u>	<u>5.21</u>	<u>19.4</u>	<u>375.6</u>	<u>0.20</u>	<u>4.78</u>	<u>181.1</u>	<u>Floaters</u>
<u>1429</u>	<u>0.675</u>	<u>7.95</u>	<u>225</u>	<u>4.69</u>	<u>5.19</u>	<u>19.4</u>	<u>379.9</u>	<u>0.19</u>	<u>2.16</u>	<u>176.3</u>	<u>Slight sulfur color</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>JC Davis, K Morrison</u>				Sampler(s) Signatures: <u>JC Davis, K Morrison</u>			
Sampling Method: <b>PP</b>	Tube Material: <b>PP/S</b>	Sampling Started Tube Dpth(ft): <u>9'</u>	Time: <u>1432</u>	Sampling completed Tube Dpth(ft): <u>9'</u>	Time: <u>1454</u>		
Field Decon: <b>NO</b>	Field Filtered: <b>NO</b>	Duplicate: <b>YES</b> <input checked="" type="checkbox"/>	Acid ID# <b>HNO3: <u>D1192805</u></b>	<b>H2SO4: <u>N/A</u></b>			
Sample Container Specification		Sample Preservation			Intended Analysis or method		
ID:	Material	Volume(mL)	Preservative	Volume added	final pH		
<u>D20A020-02 A</u>	<u>PE</u>	<u>500</u>	<u>HNO3</u>	<u>1.0 mL</u>	<u>1.3</u>	<u>Metals: As, Ba, Be, Ca, Cd, Cr, Co, Mo, Pb, Se</u>	
<u>D20A020-02 B</u>	<u>PE</u>	<u>250</u>	<u>HNO3</u>	<u>0.5 mL</u>	<u>1.3</u>	<u>Metals: Sb, Ti, B, Li</u>	
<u>D20A020-02 C</u>	<u>PE</u>	<u>250</u>	<u>Chill &lt;6 deg</u>	<u>n/a</u>	<u>n/a</u>	<u>Anions: F, Cl, SO4</u>	
<u>D20A020-02 P</u>	<u>PE</u>	<u>2000</u>	<u>HNO3</u>	<u>4 mL</u>	<u>1.3</u>	<u>Radium 226+228 Combined</u>	
<u>D20A020-02 E</u>	<u>PE</u>	<u>2000</u>	<u>Chill &lt;6 deg</u>	<u>n/a</u>	<u>n/a</u>	<u>Solids: TSS, TDS</u>	

Well found locked on arrival      Well left locked on departure  
 Temperature: 78°F     Winds: WNW 9 mph     Cloud Cover: partly cloudy     Precip: 0  
 Remarks:

Codes: PP/S + Polypropylene+Silicone tubing    PP: Peristaltic Pump    PE: Polyethylene B

# DGS Groundwater Sampling Log



**WELL ID:** **LF-3**      **Location:**      **Latitude:** **29°45'50.38"**      **Longitude:** **-82°23'52.30"**      **MSL @ TOC Date In Service:** **183.7      2019**  
**Quarter:** January 2020      **Date:** 1/16/20      **Well Type:** **D**  
QC'd 1-17-2020

**Purging Data**

**Diameter(in):** **2**      **Total well depth(ft):** **16.29**      **Depth to water(ft):** 4.34      **Well capacity(L/ft):** **0.6**  
**Distance from TOC to top of screen:** **6.29**      **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:** 14:44  
**Well Vol = ( 16.29 - 4.34 ) X 0.6 = 7.2 L**      **1/4 well vol. = N/A**

**Init Tubing Dpth(ft):** 9'      **Final Tube Dept(ft):** 9'      **Purge Start Time:** 14:45      **Purge Stop time:** 15:31      **Total Volume Purged:** 8.4 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§		
15:23	7.2	7.2	200	4.58	5.81	19.2	474.4	0.19	3.00	-28.1	Yellowish- Color Clear
15:26	0.6	7.8	200	4.58	5.80	19.3	476.5	0.19	2.40	-41.6	
15:29	0.6	8.4	200	4.58	5.80	19.3	474.8	0.18	2.75	-57.0	

**◆ 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):** K Morrison, Jc Davis      **Sampler(s) Signatures:** [Signatures]

**Sampling Method:** **PP**      **Tube Material:** **PP/S**      **Sampling Started Tube Dpth(ft):** 9'      **Time:** 15:32      **Sampling completed Tube Dpth(ft):** 9'      **Time:** 15:59

**Field Decon:** **NO**      **Field Filtered:** **NO**      **Duplicate:** **YES** **(NO)**      **Acid ID# HNO3:** DH92805      **H2SO4:** 10/18

Sample Container Specification			Sample Preservation			Intended Analysis or method
ID:	Material	Volume(mL)	Preservative	Volume added	final pH	
<u>D20A030-03 A</u>	<u>PE</u>	<u>500</u>	<u>HNO3</u>	<u>1.0 mL</u>	<u>1.3</u>	<u>Metals: As, Ba, Be, Ca, Cd, Cr, Co, Mo, Pb, Se</u>
<u>D20A030-03 B</u>	<u>PE</u>	<u>250</u>	<u>HNO3</u>	<u>0.5 mL</u>	<u>1.3</u>	<u>Metals: Sb, Ti, B, Li</u>
<u>D20A030-03 c</u>	<u>PE</u>	<u>250</u>	<u>Chill &lt;6 deg</u>	<u>n/a</u>	<u>n/a</u>	<u>Anions: F, Cl, SO4</u>
<u>D20A030-03 D</u>	<u>PE</u>	<u>2000</u>	<u>HNO3</u>	<u>4 mL</u>	<u>1.3</u>	<u>Radium 226+228 Combined</u>
<u>D20A030-03 E</u>	<u>PE</u>	<u>2000</u>	<u>Chill &lt;6 deg</u>	<u>n/a</u>	<u>n/a</u>	<u>Solids: TSS, TDS</u>
<u>D20A030 Km</u>						

Well found locked on arrival       Well left locked on departure  
**Temperature:** 78°F      **Winds:** WNW 8 mph      **Cloud Cover:** partly cloudy      **Precip:** 0  
**Remarks:**

Codes: PP/S + Polypropylene+Silicone tubing      PP: Peristaltic Pump      PE: Polyethylene B

# DGS Groundwater Sampling Log



**WELL ID:** **LF-4**      **Location:**      **Latitude:** **29°45'50.43"**      **Longitude:** **-82°23'58.46"**      **MSL @ TOC** **184.83**      **Date In Service** **2019**  
**Quarter:** 1Q20      **Date:** 1/17/20      **Well Type:** **D**

### Purging Data

Diameter(in)	<b>2</b>	Total well depth(ft)	<b>16.06</b>	Depth to water(ft)	<b>4.82</b>	Well capacity(L/ft)	<b>0.6</b>
Distance from TOC to top of screen	<b>6.06</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 = ( 16.06 - 4.82 ) X 0.6 = 6.74 L</b>				<b>07:55</b>			
1/4 well vol. = <b>N/A</b>							
Init Tubing Dpth(ft):	<b>9'</b>	Final Tube Dept(ft):	<b>9'</b>	Purge Start Time:	<b>0802</b>	Purge Stop time:	<b>0835</b>
				Total Volume Purged		<b>4.4 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§		
0829	2.9	2.9	250	5.15	5.12	18.3	208.7	0.22	9.37	308.2	orange floater.s
0832	0.75	3.65	250	5.15	5.12	18.3	208.8	0.21	16.6	309.6	slight sulfur odor
0835	0.75	4.40	250	5.15	5.12	18.3	207.9	0.20	8.58	310.8	clear

### Sampling Data

**◆ FDEP SOP Section 2212.3**      **Decon Depth Mtr - rinse with analyte free water**  
**§Purge method FDEP-SOP 2212.3.1**

**Sampled By(Print):** JC Davis      K Morrison      **Sampler(s) Signatures:** JC Davis      K Morrison

**Sampling Method:** **PP**      **Tube Material:** **PP/S**      **Sampling Started**      **Sampling completed**  
**Tube Dpth(ft):** **9'**      **Time:** **0837**      **Tube Dpth(ft):** **9'**      **Time:** **0857**

**Field Decon:** **NO**      **Field Filtered:** **NO**      **Duplicate:** **YES**      **(NO)**      **Acid ID#** **HNO3: D119805**      **H2SO4:** **N/A**

Sample Container Specification			Sample Preservation			Intended Analysis or method
ID:	Material	Volume(mL)	Preservative	Volume added	final pH	
<u>D20A020-04A</u>	<u>PE</u>	<u>500</u>	<u>HNO3</u>	<u>1.0 mL</u>	<u>1.3</u>	<u>Metals: As,Ba, Be,Ca,Cd,Cr,Co,Mo,Pb,Se</u>
<u>D20A020-04B</u>	<u>PE</u>	<u>250</u>	<u>HNO3</u>	<u>0.5 mL</u>	<u>1.3</u>	<u>Metals: Sb,Tl,B,Li</u>
<u>D20A020-04C</u>	<u>PE</u>	<u>250</u>	<u>Chill &lt;6 deg</u>	<u>n/a</u>	<u>n/a</u>	<u>Anions: F1, Cl, SO4</u>
<u>D20A020-04D</u>	<u>PE</u>	<u>2000</u>	<u>HNO3</u>	<u>4 mL</u>	<u>1.3</u>	<u>Radium 226+228 Combined</u>
<u>D20A020-04E</u>	<u>PE</u>	<u>2000</u>	<u>Chill &lt;6 deg</u>	<u>n/a</u>	<u>n/a</u>	<u>Solids: TSS, TDS</u>

**Well found locked on arrival**       **Well left locked on departure**  
**Temperature:** 57°F      **Winds:** NE 12 mph      **Cloud Cover:** clear      **Precip:** 0  
**Remarks:**

Codes: PP/S + Polypropylene+Silicone tubing    PP: Peristaltic Pump    PE: Polyethylene B

# DGS Groundwater Sampling Log



**WELL ID: R6T4 (CCR)** Location: Latitude: Longitude: MSL @ TOC Date In Service  
 29°46'00.90" -82°23'40.20" 183.6 7-93  
 Quarter: Jan. 2020 Date: \_\_\_\_\_ Well Type: **U**

### 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: _____	
<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 <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§		
<p><i>X See 1020 for data from Sampling logs →</i></p>											

◆ FDEP SOP Section 2212.3

### Sampling Data

Decon Depth Mtr - rinse with \_\_\_\_\_ water  
 §Purge method FDEP-SC \_\_\_\_\_

Sampled By(Print): K. Morrison Sampler(s) Signatures: [Signature] NO

Sampling Method: <b>PP</b>	Tube Material: <b>PP/S</b>	Sampling Started Tube Dpth(ft):	Time:	Tube Dpth(ft):	Completed Time:
Field Decon: <b>NO</b>	Field Filtered: <b>NO</b>	Duplicate: <b>YES</b> <b>NO</b>	Acid ID#	<b>HNO3: D192805</b>	<b>H2SO4:</b>

Sample Container Specification			Sample Preservation			Intended Analysis or method
ID:	Material	Volume(mL)	Preservative	Volume added	final pH	
	PE	500	HNO3	1.0 mL		Metals: As, Ba, Be, Ca, Cd, Cr, Co, Mo, Pb, Se
<u>D20A020-100</u>	PE	250	HNO3	0.5 mL	<u>1.3</u>	Metals: Sb, Ti, B, Li <u>Acid ID# D</u>
	PE	250	Chill <6 deg	n/a	n/a	Anions: F, Cl, SO4 <u>✓</u>
<u>D20A020-100</u>	PE	2000	HNO3	4 mL <u>D20A020-100</u>	<u>1.3</u>	Radium 226+228 Combined <u>✓</u>
	PE	2000	Chill <6 deg	n/a	n/a	Solids: TSS, TDS <u>✓</u>

*H 92805 exp 11-14-20*

\_\_\_ Well found locked on arrival \_\_\_ Well left locked on departure  
 Temperature: \_\_\_\_\_ Winds: \_\_\_\_\_ Cloud Cover: \_\_\_\_\_ Precip: \_\_\_\_\_  
 Remarks: \_\_\_\_\_



# DGS Groundwater Sampling Log



**WELL ID: R4T5**      Location:      Latitude: **29°45'52.14"**      Longitude: **-82°23'33.18"**      MSL @ TOC Date In Service: **187.46**      7-93

**Quarter:** 1020      **Date:** 1-15-2020      **Well Type:** I

### Purging Data

Diameter(in)	<b>2</b>	Total well depth(ft)	<b>15.08</b>	Depth to water(ft)	<b>10.49</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: <u>15:06</u>			
<b>Well Vol = ( 15.08 - 10.49 ) X 0.6 = 2.75 L</b>				1/4 well vol. = <u>0.7</u>			
Init Tubing Dpth(ft):	<u>11'</u>	Final Tube Dept(ft):	<u>11'</u>	Purge Start Time:	<u>15:10</u>	Purge Stop time:	<u>15:37</u>
						Total Volume Purged	<u>5.3 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§		
15:25	3.7	3.7	240	10.96	6.16	22.6	804.5	0.37	0.33	192.6	Yellow
15:32	0.8	4.5	240	10.99	6.15	22.6	804.4	0.30	0.28	200.9	Clear
15:36	0.8	5.3	240	10.99	6.16	22.6	804.1	0.29	0.32	232.1	Sulfur 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): K. Womser, J.C. Davis      Sampler(s) Signatures: [Signatures]

Sampling Method: PP      Tube Material: PP/S      Sampling Started Tube Dpth(ft): 11.49 Time: 15:37      Sampling completed Tube Dpth(ft): 11.49 Time: 16:20

Field Decon: NO      Field Filtered: NO      Duplicate: YES  NO      Acid ID# HNO3: DH92805 H2SO4: DC 2802

Sample Container Specification			Sample Preservation			Intended Analysis or method
ID:	Material	Volume(mL)	Preservative	Volume added	final pH	
<u>D20A09-04 A</u>	<u>PE</u>	<u>4000</u>	<u>Chill &lt;6 deg</u>	<u>none</u>	<u>n/a</u>	<u>Physical Analysis</u>
<u>D20A09-04 B</u>	<u>PE</u>	<u>250</u>	<u>Chill 6 deg C</u>	<u>none</u>	<u>n/a</u>	<u>Anions</u>
<u>D20A09-04 C</u>	<u>PE</u>	<u>250</u>	<u>Chill + H2SO</u>	<u>0.5 mL</u>	<u>1.4</u>	<u>Demand-NPDOC and NO3+NO2</u>
<u>D20A09-04 D</u>	<u>PE</u>	<u>1000</u>	<u>HNO3</u>	<u>2 mL</u>	<u>1.3</u>	<u>Radiological-GA</u>
<u>D20A09-04 E</u>	<u>EPE</u>	<u>500</u>	<u>HNO3</u>	<u>1 mL</u>	<u>1.3</u>	<u>Metals</u>

Tubing depth is 0.5 ft below depth to water for every instance.       Well found locked on arrival       Well left locked on departure

Temperature: 28°F      Winds: W 6mph      Cloud Cover: Partly Cloudy      Precip: N/A

Remarks:

Codes: PP/S + Polypropylene+Silicone tubing    PP: Peristaltic Pump    PE: Polyethylene B

# Deerhaven Generating Station Water Elevations

Date: January 13, 2020

Well	Time	MSL @TOC	Depth to Water	Time Depth Mtr Cleared	Locked Arrival	Locked Depart.
R1T6	07:39	188.95	4.45	07:42	✓	✓
R2T1	08:01	185.19	4.98	08:02	✓	✓
R3T7	09:52	182.55	3.70	09:53	✓	✓
R4T5	09:45	187.46	10.59	09:45	✓	✓
R6T1	08:53	185.28	5.80	08:54	✓	✓
R6T4	09:30	183.60	3.85	09:32	✓	
R6T8	08:09	177.97	2.82	08:10	✓	✓
R6T12	08:19	173.38	<sup>from 11/13/20</sup> <del>08</del> 3.66	08:20	✓	✓
R8T10	08:25	177.40	4.38	08:27	✓	✓
R9T5	09:24	184.64	5.77	09:25	✓	✓
R10T8	08:37	181.42	6.16	08:38	✓	✓
R11T4	08:43	178.76	3.68	08:45	✓	✓
SIS1	09:38	185.11	4.66	09:39	✓	✓
SIS2	09:41	183.30	5.94	09:41	✓	✓
SIS3	09:59	183.11	3.28	10:01	✓	✓
SIS4	10:03	183.87	5.36	10:04	✓	✓
LF1	09:27	185.76	<sup>from 11/13/20</sup> <del>09</del> 5.83	09:27	✓	✓
LF2	09:07	182.33	4.37	09:08	✓	✓
LF3	09:12	183.70	4.40	09:13	✓	✓
LF4	09:15	184.83	4.58	09:16	✓	✓

## CCR Assessment July 2020 Field and Analytical Narrative

### Field Narrative:

- The pH, conductivity, RDO, and depth meter sensors were verified against the NIST reference thermometer/probe (CP 346548 & CP346549), 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 the depth meter is not used for sampling them; however, we do dip the depth meter into the Equipment Blank to confirm adequate cleaning of probe.
- Quarterly well sampling began on Tuesday, July 21, 2020, and was completed on Thursday July 23, 2020 Shelley Phillips and Kent Brakefield.
- All wells were found secured with a lock upon arrival and left locked upon departure.
- All the water elevations for all the Quarterly GW wells and CCR wells were taken on the first day of GW sampling, (Monday, July 20, 2020). These are not the depths to water reported on the field logs.
- All samples collected for 6020 Metals were preserved in the field.
- Weather: Tuesday (7-21-20) temperatures ranged from 81°F to 92°F, ESE wind of 7 mph and partly to mostly cloudy skies. Following the R3T7 collection, thunderstorms started about 1535 and we ended sampling for the day. Wednesday (7-22-20) in the morning, temperatures ranged from 78°F to 85°F with NE winds at 4 mph becoming ESE at 10 mph and clear skies. In the afternoon, temperature started out at 89°F with SE wind at 8 mph and slight rain. A storm came through from 1345 to 1435 and we stopped sampling. At 1447 sampling resumed and the temperature was 77°F to 79°F wind ENE at 5-7 mph, overcast skies and some light precipitation. Thursday (7-23-20) temperatures ranged from 7°F to 80°F with variable winds of 4 to 8 mph and mostly cloudy to overcast skies all day.
- SIS-3, LF-2, LF-3, & LF-4: The water level for these wells were above the screened interval and remained there; therefore, the minimal purge method was used.
- Equipment Blanks: The Equipment Blanks were collected at R6T8 and R9T5, after those wells were sampled. Prior to sampling the equipment blanks and following the decontamination of the depth meter probe, it was dipped into each of the Equipment Blanks.
- Instruments: Calibration verifications were performed on all instruments and passed.

### Analytical Narrative: Internal Analysis

- TSS and TDS were performed by Deerhaven Laboratory with satisfactory results.

### Analytical Narrative: External Laboratories

- Kanapaha Laboratory analyzed samples for Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Cobalt, Lead, Molybdenum, and Selenium by Method 200.7. An analysis on the CCR well samples was performed separately from the analysis for the supporting GW wells and the Equipment Blanks. No sample hits were detected in the Equipment Blanks or in the Barnstead (source water) sample. All results were satisfactory.
- PACE Analytical Services analyzed samples for the following metals: Antimony, Lithium, Boron, and Thallium by Method 6020. All results were satisfactory.

**CCR Assessment July 2020**  
**Field and Analytical Narrative**

- PACE Analytical Services analyzed samples for Chloride, Sulfate, Fluoride and Radium 226 +228 combined. Sample D20G028-04 (SIS-4) had the following qualifier for Sulfate:

J(M1) – “Estimated Value. Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS)”.

All other results are satisfactory.

**Contract Laboratories Used:**

- PACE Analytical Services, Inc.
- Kanapaha Laboratory

Submitted by: Kent Brakefield, QAO

# DGS Groundwater Sampling Log



**WELL ID: R4T5**      Location:      Latitude: **29°45'52.14"**      Longitude: **-82°23'33.18"**      MSL @ TOC Date In Service: **187.46**      **7-93**

Quarter: **3Q20**      Date: **7/23/20**      Well Type: **I**

**Purging Data**

Diameter(in) **2**      Total well depth(ft) **15.08**      Depth to water(ft) **10.00**      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: **1414**

**Well Vol = ( 15.08 - 10.00 ) X 0.6 = 3.1 L**      1/4 well vol.= 0.8 L

Init Tubing Dpth(ft): **3.7**      Final Tube Dept(ft): **10.9**      Purge Start Time: **1416**      Purge Stop time: **1446**      Total Volume Purged **4.7 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§		
1435	3.1	3.1	180	10.32	6.03	26.6	752	0.24	1.08	-99.8	Yellowish color Clear Sulfur odor
1440	0.8	3.9	180	10.32	6.03	26.5	750	0.23	0.32	-115.1	
1446	0.8	4.7	180	10.32	6.03	26.4	751	0.22	0.30	-127.3	

◆ FDEP SOP Section 2212.3      **Sampling Data**      Decon Mtr - rinse with analyte free water §Purge method FDEP-SOP 2212.3.1

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): **10.9**      Time: **1448**      Sampling completed Tube Dpth(ft): **10.9**      Time: **1530**

Field Decon: **NO**      Field Filtered: **NO**      Duplicate: **YES**  **NO**       Acid ID# HNO3: **DC01003**      H2SO4: **DC92802**

Sample Container Specification			Sample Preservation			Intended Analysis or method
ID:	Material	Volume(mL)	Preservative	Volume added	final pH	
D20G025-04A	PE	2000	Chill <6 deg	none	n/a	Physical Analysis
D20G025-04B	PE	250	Chill 6 deg C	none	n/a	Anions
D20G025-04C	PE	250	Chill + H2SO	0.5 mL	1.3	Demand-NPDOC and NO3+NO2
D20G025-04D	PE	1000	HNO3	2 mL	1.3	Radiological-GA
D20G025-04E	PE	500	HNO3	1 mL	1.3	Metals
D20G025-04F	PE	250	HNO3	0.5 mL	1.3	Metals: K, Na

Tubing depth is **0.1** ft below depth to water for every instance.      Well found locked on arrival      Well left locked on departure

Temperature: **75°F**      Winds: **SE 9 mph**      Cloud Cover: **overcast**      Precip: **light drizzle/sprinkles**

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 Date In Service: **183.6 7-93**

Quarter: **3Q20** Date: **7-21-20** Well Type: **I**

### Purging Data

Diameter(in)	<b>2</b>	Total well depth(ft)	<b>14.13</b>	Depth to water(ft)	<b>3.40</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>1008</b>							
<b>Well Vol = ( 14.13 - 3.40 ) X <sup>10.73</sup> 0.6 =</b>				<b>6.44 L</b> 1/4 well vol. = <b>1.6</b>							
Init Tubing Dpth(ft):	<b>4.0</b>	Final Tube Dept(ft):	<b>4.3</b>	Purge Start Time:	<b>1012</b>	Purge Stop time:	<b>1036</b>				
						Total Volume Purged <b>9.7 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§		
1027	6.5	6.5	500	3.68	6.95	28.4	392.2	0.34	0.52	789.2	Sulfur odor clear yellow-green color
1031	1.6	8.1	500	3.68	6.95	28.4	390.4	0.34	0.54	789.5	
1035	1.6	9.7	500	3.68	6.94	28.4	389.0	0.32	0.54	789.7	

◆ 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>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>4.3</b>	Time: <b>1038</b>	Sampling completed Tube Dpth(ft): <b>4.3</b>	Time: <b>1054</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>DC01003</b>	H2SO4: <b>DC92802</b>	
Sample Container Specification		Sample Preservation			Intended Analysis or method	
ID:	Material	Volume(mL)	Preservative	Volume added		final pH
<b>D20G025-06A</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>D20G025-06B</b>	<b>PE</b>	<b>250</b>	<b>Chill 6 deg C</b>	<b>none</b>	<b>n/a</b>	<b>Anions</b>
<b>D20G025-06C</b>	<b>PE</b>	<b>250</b>	<b>Chill + H2SO</b>	<b>0.5 mL</b>	<b>1.3</b>	<b>Demand-NPDOC and NO3+NO2</b>
<b>D20G025-06D</b>	<b>PE</b>	<b>1000</b>	<b>HNO3</b>	<b>2 mL</b>	<b>1.3</b>	<b>Radiological-GA</b>
<b>D20G025-06E</b>	<b>PE</b>	<b>500</b>	<b>HNO3</b>	<b>1 mL</b>	<b>1.3</b>	<b>Metals</b>
<b>D20G025-06F</b>	<b>PE</b>	<b>250</b>	<b>HNO3</b>	<b>0.5 mL</b>	<b>1.3</b>	<b>Metals: K, Na</b>

Tubing depth is **0.1** ft below depth to water for every instance.  Well found locked on arrival  Well left locked on departure  
 Temperature: **88°F** Winds: **SE 8 mph** Cloud Cover: **mostly cloudy** Precip: **0**  
 Remarks:

RUT12

**Procedure/Checklist for Sampling Historically Dry Well**

(As per FDEP SOP FS2212 section 3.7)

If the well is expected to purge dry, position the tubing within the screened interval and purge at  $\leq 100$  mL/minute until 2 equipment volumes are removed. Collect one set of parameters prior to sampling. Use the same pump for purging and sampling.

If the well purges dry at the lowest achievable flow rate, then after a sufficient amount of water recharges in the well, collect one set of parameters and then collect the samples.

The following must be adhered to (use as checklist):

1.  Used small diameter tubing that meets FDEP material criteria
2.  Tubing placed within the screened interval (6')
3.  Position of tubing intake was maintained during sampling (so place it deep enough within the screened interval to start)
4.  Pump rate adjusted to minimize drawdown
5.  Pumping rate  $\leq 100$  mL/minute
6.  Same pump rate maintained throughout sample collection
7.  A minimum of 2 equipment volumes (1500mL) purged before stabilization parameters are measured and samples are collected
8.  One set of stabilization parameters measured immediately before collecting samples
9.  N/A If applicable, the dry-purged well allowed to recharge before measuring stabilization parameters and collecting sample
10.  Samples collected within 6 hours of purge completion
11.  Same pump used to purge well and collect samples

# DGS Groundwater Sampling Log



**WELL ID** **EBLANK** **Location:** Latitude: na Longitude: na MSL @ TOC Date In Service: 0 na  
**Quarter:** 3Q20 **Date:** 7/22/20 **Well Type:** na

### Purging Data

Diameter(in) <u>na</u>	Total well depth(ft) <u>0</u>	Depth to water(ft) <u>N/A</u>	Well capacity(L/ft) <u>0</u>
Distance from TOC to top of screen <u>0</u> ft.	Purging Method: <u>PP</u>		Equipment Volume = <u>750 mL</u>
1 WELL VOLUME(L)=(Total Well Depth-Depth to water)X Well Capacity		Time of Depth Meter Decon: <u>0934</u> *	
<b>Well Vol = ( 0 - N/A ) X 0 = N/A L</b>		1/4 well vol. = <u>N/A</u>	
Init Tubing Dpth(ft): <u>N/A</u>	Final Tube Dept(ft): <u>N/A</u>	Purge Start Time: <u>0936</u>	Purge Stop time: <u>0943</u>
			Total Volume Purged <u>N/A</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§		
0939	N/A	N/A	500	N/A	6.04	27.9	0.99	7.58	0.15	177.7	Clear No color No odor
0941	N/A	N/A	500	N/A	5.99	27.9	0.86	7.60	0.14	196.0	
0943	N/A	N/A	500	N/A	5.96	28.0	0.81	7.61	0.16	195.2	

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): K. Brakefield, S. Phillips Sampler(s) Signatures: J. Phillips, K. Brakefield

Sampling Method: <u>PP</u>	Tube Material: <u>PP/S</u>	Tube Dpth(ft): <u>N/A</u>	Sampling Started Time: <u>0945</u>	Sampling completed Tube Dpth(ft): <u>N/A</u>	Time: <u>1000</u>
Field Decon: <u>NO</u>	Field Filtered: <u>NO</u>	Duplicate: <u>YES</u> ( <u>NO</u> )	Acid ID#	HNO3: <u>DC01003</u>	H2SO4: <u>DC92802</u>

Sample Container Specification			Sample Preservation			Intended Analysis or method
ID:	Material	Volume(mL)	Preservative	Volume added	final pH	
<u>D20G025-14A</u>	<u>PE</u>	<u>2000</u>	<u>Chill &lt;6 deg</u>	<u>none</u>	<u>n/a</u>	<u>Physical Analysis</u>
<u>D20G025-14B</u>	<u>PE</u>	<u>250</u>	<u>Chill 6 deg C</u>	<u>none</u>	<u>n/a</u>	<u>Anions</u>
<u>D20G025-14C</u>	<u>PE</u>	<u>250</u>	<u>Chill + H2SO</u>	<u>0.5 mL</u>	<u>1.3</u>	<u>Demand-NPDOC and NO3+NO2</u>
<u>D20G-025-14D</u>	<u>PE</u>	<u>1000</u>	<u>HNO3</u>	<u>2 mL</u>	<u>1.3</u>	<u>Radiological-GA</u>
<u>D20G025-14E</u>	<u>PE</u>	<u>500</u>	<u>HNO3</u>	<u>1 mL</u>	<u>1.3</u>	<u>Metals</u>
<u>D20G025-14F</u>	<u>PE</u>	<u>250</u>	<u>HNO3</u>	<u>0.5mL</u>	<u>1.3</u>	<u>Metals: K, Na</u>

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: 78°F Winds: NE @ 4 mph Cloud Cover: Clear Precip: 0  
 Remarks: Equipment blank collected at well R6T8.  
\* Depth meter was deconned and dipped into sample before collection.

Codes: PP/S + Polypropylene+Silicone tubing PP: Peristaltic Pump PE: Polyethylene B



# DGS Groundwater Sampling Log



WELL ID **EBLANK** Location: Latitude: na Longitude: na MSL @ TOC Date In Service: 0 na

Quarter: 3Q20 Date: 7-23-20 Well Type: na

### Purging Data

Diameter(in)	<u>na</u>	Total well depth(ft)	<u>0</u>	Depth to water(ft)	<u>NA</u>	Well capacity(L/ft)	<u>0</u>
Distance from TOC to top of screen	<u>0</u>	ft.		Purging Method:	<u>PP</u>	Equipment Volume =	<u>750 mL</u>
1 WELL VOLUME(L)=(Total Well Depth-Depth to water)X Well Capacity						Time of Depth Meter Decon: <u>1812</u>	
<b>Well Vol = ( 0 - NA ) X 0 = NA L</b>						1/4 well vol. =	
Init Tubing Dpth(ft):	<u>NA</u>	Final Tube Dept(ft):	<u>NA</u>	Purge Start Time:	<u>1813</u>	Purge Stop time:	<u>1826</u>
						Total Volume Purged <u>NA</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§		
<u>1819</u>	<u>NA</u>	<u>NA</u>	<u>480</u>	<u>NA</u>	<u>5.97</u>	<u>28.9</u>	<u>0.87</u>	<u>7.80</u>	<u>0.14</u>	<u>160.9</u>	<u>NA</u>
<u>1822</u>	<u>NA</u>	<u>NA</u>	<u>480</u>	<u>NA</u>	<u>5.93</u>	<u>28.9</u>	<u>0.74</u>	<u>7.80</u>	<u>0.19</u>	<u>169.5</u>	
<u>1825</u>	<u>NA</u>	<u>NA</u>	<u>480</u>	<u>NA</u>	<u>5.88</u>	<u>28.9</u>	<u>0.71</u>	<u>7.79</u>	<u>0.18</u>	<u>172.1</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): S. Phillips, K. Brakefield Sampler(s) Signatures: S. Phillips, K. Brakefield

Sampling Method: PP Tube Material: PP/S Tube Dpth(ft): NA Sampling Started Time: 1827 Tube Dpth(ft): NA Sampling completed Time: 1841

Field Decon: NO Field Filtered: NO Duplicate: YES  NO Acid ID# HNO3: DC01003 H2SO4: DC92802

Sample Container Specification			Sample Preservation			Intended Analysis or method
ID:	Material	Volume(mL)	Preservative	Volume added	final pH	
<u>D206025-15A</u>	<u>PE</u>	<u>2000</u>	<u>Chill &lt;6 deg</u>	<u>none</u>	<u>n/a</u>	<u>Physical Analysis</u>
<u>D206025-15B</u>	<u>PE</u>	<u>250</u>	<u>Chill 6 deg C</u>	<u>none</u>	<u>n/a</u>	<u>Anions</u>
<u>D206025-15C</u>	<u>PE</u>	<u>250</u>	<u>Chill + H2SO</u>	<u>0.5 mL</u>	<u>1.3</u>	<u>Demand-NPDOC and NO3+NO2</u>
<u>D206025-15D</u>	<u>PE</u>	<u>1000</u>	<u>HNO3</u>	<u>2 mL</u>	<u>1.3</u>	<u>Radiological-GA</u>
<u>D206025-15E</u>	<u>PE</u>	<u>500</u>	<u>HNO3</u>	<u>1 mL</u>	<u>1.3</u>	<u>Metals</u>
<u>D206025-15EFE</u>	<u>PE</u>	<u>250</u>	<u>HNO3</u>	<u>0.5 mL</u>	<u>1.3</u>	<u>metals: K, Na</u>

Tubing depth is NA ft below depth to water for every instance. NA Well found locked on arrival NA Well left locked on departure  
 Temperature: 79°F Winds: 5 @ 4 mph Cloud Cover: overcast Precip: 0

Remarks: collected at R9T5

Codes: PP/S + Polypropylene+Silicone tubing PP: Peristaltic Pump PE: Polyethylene B

# 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: <b>185.11</b>	Date In Service: <b>2017</b>
Quarter: <b>July 2020</b>	Date: <b>7/22/20</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>4.00</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>1232</b>
<b>Well Vol = ( 13.92 - 4.00 ) X 0.6 = 6.0 L</b>			1/4 well vol. = <b>N/A</b>
Init Tubing Dpth(ft): <b>9'</b>	Final Tube Dept(ft): <b>9'</b>	Purge Start Time: <b>1235</b>	Purge Stop time: <b>1309</b>
			Total Volume Purged <b>7.5 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§		
1301	6.0	6.0	240	4.30	6.31	28.2	365	0.32	1.48	44.7	Yellowish color No odor Particulates
1304	0.75	6.75	240	4.30	6.31	28.2	366	0.31	0.68	39.1	
1308	0.75	7.50	240	4.30	6.31	28.2	371	0.30	0.73	34.4	

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. Brakefield, S. Phillips</b>				Sampler(s) Signatures: <b>K. Brakefield, S. Phillips</b>			
Sampling Method: <b>PP</b>	Tube Material: <b>PP/S</b>	Sampling Started Tube Dpth(ft): <b>9'</b>	Time: <b>1311</b>	Sampling completed Tube Dpth(ft): <b>9'</b>	Time: <b>1333</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: DC 01003</b>	<b>H2SO4: NA</b>			

Sample Container Specification			Sample Preservation			Intended Analysis or method
ID:	Material	Volume(mL)	Preservative	Volume added	final pH	
D20G028-05A	PE	500	HNO3	1.0 mL	1.3	Metals: As, Ba, Be, Ca, Cd, Cr, Co, Mo, Pb, Se
D20G028-05B	PE	250	HNO3	0.5 mL	1.3	Metals: Sb, Tl, B, Li (preserved in field)
D20G028-05C	PE	250	Chill <6 deg	n/a	n/a	Anions: F, Cl, SO4
D20G028-05D	PE	2000	HNO3	4 mL	1.3	Radium 226+228 Combined
D20G028-05E	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>89°F</b> Winds: <b>SSE @ 8mph</b> Cloud Cover: <b>Cloudy</b> Precip: <b>Slight rain.</b> Remarks: <b>A slight rainfall fell during sample collection. All samples and equipment were protected.</b>
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Codes: PP/S + Polypropylene+Silicone tubing    PP: Peristaltic Pump    PE: Polyethylene B

# 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: <u>July 2020</u>	Date: <u>7-23-20</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>5.30</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>1251</u>	
<b>Well Vol = ( 14.22 - 5.30 ) X <sup>0.6</sup> = 5.35 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>1254</u>	Purge Stop time: <u>1334</u>
		Total Volume Purged: <u>6.6</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§		
1327	5.4	5.4	200	5.38	6.90	28.9	459	3.11	2.04	60.2	No odor yellowish brown color no particles seen
1330	0.6	6.0	200	5.40	6.91	28.9	459	3.08	2.14	61.7	
1333	0.6	6.6	200	5.40	6.91	28.9	461	3.09	2.02	59.7	

◆ 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>1336</u>	Sampling completed Tube Dpth(ft): <u>9'</u> Time: <u>1408</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>DC01003</u> H2SO4: <u>NA</u>

Sample Container Specification			Sample Preservation			Intended Analysis or method
ID:	Material	Volume(mL)	Preservative	Volume added	final pH	
<u>D20G028-06</u>	<u>PE</u>	<u>500</u>	<u>HNO3</u>	<u>1.0 mL</u>	<u>1.3</u>	<u>Metals: As, Ba, Be, Ca, Cd, Cr, Co, Mo, Pb, Se</u>
<u>D20G028-06</u>	<u>PE</u>	<u>250</u>	<u>HNO3</u>	<u>0.5 mL</u>	<u>1.3</u>	<u>Metals: Sb, Ti, B, Li (preserved in field)</u>
<u>D20G028-06</u>	<u>PE</u>	<u>250</u>	<u>Chill &lt;6 deg</u>	<u>n/a</u>	<u>n/a</u>	<u>Anions: F, Cl, SO4</u>
<u>D20G028-06</u>	<u>PE</u>	<u>2000</u>	<u>HNO3</u>	<u>4 mL</u>	<u>1.3</u>	<u>Radium 226+228 Combined</u>
<u>D20G028-06</u>	<u>PE</u>	<u>2000</u>	<u>Chill &lt;6 deg</u>	<u>n/a</u>	<u>n/a</u>	<u>Solids: TSS, TDS</u>

<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>ESE @ 14 mph</u>	Cloud Cover: <u>overcast</u> Precip: <u>0</u>
Remarks:	

# DGS Groundwater Sampling Log



**WELL ID:** SIS-3      **Location:**      **Latitude:** 29°45'51.8472"      **Longitude:** -82°23'35.5632"      **MSL @ TOC** 183.11      **Date In Service** 2017  
**Quarter:** July 2020      **Date:** 7-22-20      **Well Type:** D

**Purging Data**

Diameter(in)	2	Total well depth(ft)	13.38	Depth to water(ft)	2.53	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:				1444	
<b>Well Vol = ( 13.38 - 2.53 ) X 11.35 0.6 = 6.8 L</b>				L				1/4 well vol. = NA	
Init Tubing Dpth(ft):	9'	Final Tube Dept(ft):	9'	Purge Start Time:	1447	Purge Stop time:	1511	Total Volume Purged	2.1 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§		
1504	1.5	1.5	110	2.94	6.82	30.1	340	0.53	1.56	72.3	No odor
1507	0.3	1.8	110	2.94	6.83	30.1	341	0.48	1.38	59.9	Yellow/brown color
1510	0.3	2.1	110	2.94	6.83	30.1	342	0.45	1.31	44.4	clear. few floaters

◆ 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 Brakfield			Sampler(s) Signatures: S. Phillips, K Brakfield		
Sampling Method: PP	Tube Material: PP/S	Sampling Started Tube Dpth(ft): 9'	Time: 1572	Sampling completed Tube Dpth(ft): 9'	Time: 1559
Field Decon: NO	Field Filtered: NO	Duplicate: YES	<input checked="" type="radio"/> NO	Acid ID# HNO3: DCO1003	H2SO4: NA

Sample Container Specification			Sample Preservation			Intended Analysis or method
ID:	Material	Volume(mL)	Preservative	Volume added	final pH	
D20G028-07A	PE	500	HNO3	1.0 mL	1.3	Metals: As, Ba, Be, Ca, Cd, Cr, Co, Mo, Pb, Se
D20G028-07B	PE	250	HNO3	0.5 mL	1.3	Metals: Sb, Ti, B, Li (preserved in field)
D20G028-07C	PE	250	Chill <6 deg	n/a	n/a	Anions: F, Cl, SO4
D20G028-07D	PE	2000	HNO3	4 mL	1.6	Radium 226+228 Combined
D20G028-07E	PE	2000	Chill <6 deg	n/a	n/a	Solids: TSS, TDS

Well found locked on arrival       Well left locked on departure  
 Temperature: 79      Winds: ENE @ 7mph      Cloud Cover: overcast      Precip: 0  
 Remarks: Rained before came to this well between 1345 and 1435 8/1-22-20 but no rain during sampling; Screen fully submerged and remained submerged.

Codes: PP/S + Polypropylene+Silicone tubing    PP: Peristaltic Pump    PE: Polyethylene B

# DGS Groundwater Sampling Log



**WELL ID:** SIS-4      **Location:**      **Latitude:** 29°45'54.144"      **Longitude:** -82°23'38.4108"      **MSL @ TOC Date In Service:** 183.87      2017  
**Quarter:** 7-22-20 (July 2020)      **Date:** 7-22-20      **Well Type:** D

### Purging Data

Diameter(in)	2	Total well depth(ft)	13.7	Depth to water(ft)	4.30	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 - 4.30 ) X 0.6 = 5.6 L</b>				1604			
Init Tubing Dpth(ft): 9'				Final Tube Dept(ft):		Purge Start Time: 1607	
						Purge Stop time: 1651	
				Total Volume Purged 6.6 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§		
1644	5.6	5.6	170	4.85	6.65	28.3	420	3.01	0.94	154.8	No odor
1647	0.5	6.1	170	4.85	6.65	28.4	420	2.99	0.94	157.3	Brownish color
1650	0.5	6.6	170	4.85	6.65	28.4	422	3.04	1.08	157.0	clear

◆ 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. Brakefield      **Sampler(s) Signatures:** *S. Phillips, K. Brakefield*

Sampling Method: PP	Tube Material: PP/S	Sampling Started Tube Dpth(ft): 9'	Time: 1652	Sampling completed Tube Dpth(ft): 9'	Time: 1725
Field Decon: NO	Field Filtered: NO	Duplicate: YES (NO)	Acid ID# HNO3: DCO1003	H2SO4: NA	

Sample Container Specification			Sample Preservation			Intended Analysis or method
ID:	Material	Volume(mL)	Preservative	Volume added	final pH	
D20G028-08A	PE	500	HNO3	1.0 mL	1.3	Metals: As, Ba, Be, Ca, Cd, Cr, Co, Mo, Pb, Se
D20G028-08B	PE	250	HNO3	0.5 mL	1.3	Metals: Sb, Ti, B, Li (preserved in field)
D20G028-08C	PE	250	Chill <6 deg	n/a	n/a	Anions: F, Cl, SO4
D20G028-08D	PE	2000	HNO3	4 mL	1.3	Radium 226+228 Combined
D20G028-08E	PE	2000	Chill <6 deg	n/a	n/a	Solids: TSS, TDS

Well found locked on arrival       Well left locked on departure  
**Temperature:** 77°F      **Winds:** E @ 5 mph      **Cloud Cover:** overcast      **Precip:** rain during purge only; able to protect well and containers  
**Remarks:**

# 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
Quarter: <b>July 2020</b>	Date: <b>7/23/20</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>4.93</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>0737</b>
<b>Well Vol = ( 14.88 - 4.93 ) X 0.6 = 6.0 L</b>			1/4 well vol. = <b>N/A</b>
Init Tubing Dpth(ft): <b>9'</b>	Final Tube Dept(ft): <b>9'</b>	Purge Start Time: <b>0739</b>	Purge Stop time: <b>0810</b>
			Total Volume Purged <b>7.5 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§		
0804	6.0	6.0	270	5.03	6.51	26.7	619	2.74	0.37	220.7	Clear No color No odor
0807	0.75	6.75	270	5.03	6.50	26.7	610	2.64	0.23	220.9	
0810	0.75	7.50	270	5.03	6.49	26.7	600	2.53	0.25	221.3	

>20% 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): <b>K. Brakefield, S. Phillips</b>				Sampler(s) Signatures: <b>K. Brakefield, S. Phillips</b>			
Sampling Method: <b>PP</b>	Tube Material: <b>PP/S</b>	Sampling Started Tube Dpth(ft): <b>9'</b>	Time: <b>0812</b>	Sampling completed Tube Dpth(ft): <b>9'</b>	Time: <b>0831</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#	HNO3: <b>DC01003</b>	H2SO4: <b>N/A</b>		

Sample Container Specification			Sample Preservation			Intended Analysis or method
ID:	Material	Volume(mL)	Preservative	Volume added	final pH	
D20G028-01A	PE	500	HNO3	1.0 mL	1.3	Metals: As, Ba, Be, Ca, Cd, Cr, Co, Mo, Pb, Se
D20G028-01B	PE	250	HNO3	0.5 mL	1.3	Metals: Sb, Ti, B, Li (preserved in field)
D20G028-01C	PE	250	Chill <6 deg	n/a	n/a	Anions: F, Cl, SO4
D20G028-01D	PE	2000	HNO3	4 mL	1.3	Radium 226+228 Combined
D20G028-01E	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>77°F</b> Winds: <b>ENE @ 4 mph</b> Cloud Cover: <b>overcast</b> Precip: <b>Ø</b> Remarks:
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# DGS Groundwater Sampling Log



**WELL ID:** **LF-2**      **Location:**      **Latitude:** **29°45'50.46"**      **Longitude:** **-82°23'47.40"**      **MSL @ TOC Date In Service:** **182.33**      **2019**  
**Quarter:** July 2020      **Date:** 7-23-20      **Well Type:** **D**

### Purging Data

<b>Diameter(in)</b>	<b>2</b>	<b>Total well depth(ft)</b>	<b>15.36</b>	<b>Depth to water(ft)</b>	<b>4.53</b>	<b>Well capacity(L/ft)</b>	<b>0.6</b>
<b>Distance from TOC to top of screen</b>		<b>5.36</b>	<b>ft.</b>	<b>Purging Method: PP</b>		<b>Equipment Volume = 750 mL</b>	
<b>1 WELL VOLUME(L)=(Total Well Depth-Depth to water)X Well Capacity</b>						<b>Time of Depth Meter Decon:</b> <u>1141</u>	
<b>Well Vol = ( 15.36 - 4.53 ) X 0.6 = 6.5 L</b>						<b>1/4 well vol. = NA</b>	
<b>Init Tubing Dpth(ft):</b>	<u>9'</u>	<b>Final Tube Dept(ft):</b>	<u>9'</u>	<b>Purge Start Time:</b>	<u>1144</u>	<b>Purge Stop time:</b>	<u>1202</u>
						<b>Total Volume Purged</b> <u>2.6 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§		
1155	1.8	1.8	140	4.74	5.19	27.8	250	0.34	1.93	-142.0	Sulfur Odor yellow color <del>class SP</del> some 7-23-20 particulate floating
1158	0.4	2.2	140	4.74	5.18	27.8	250	0.33	1.50	-144.3	
1201	0.4	2.6	140	4.74	5.18	27.8	250	0.34	1.92	-148.5	

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

<b>Sampling Method:</b> PP	<b>Tube Material:</b> PP/S	<b>Tube Dpth(ft):</b> <u>9'</u>	<b>Sampling Started Time:</b> <u>1204</u>	<b>Tube Dpth(ft):</b> <u>9'</u>	<b>Sampling completed Time:</b> <u>1247</u>
<b>Field Decon:</b> NO	<b>Field Filtered:</b> NO	<b>Duplicate:</b> YES <input type="radio"/> NO <input checked="" type="radio"/>	<b>Acid ID#</b> HNO3: <u>0c01003</u>	<b>H2SO4:</b> <u>NA</u>	

Sample Container Specification			Sample Preservation			Intended Analysis or method
ID:	Material	Volume(mL)	Preservative	Volume added	final pH	
<u>D20G028-01</u>	<u>PE</u>	500	HNO3	1.0 mL	<u>1.3</u>	Metals: As, Ba, Be, Ca, Cd, Cr, Co, Mo, Pb, Se
<u>D20G028-02</u>	<u>PE</u>	250	HNO3	0.5 mL	<u>1.3</u>	Metals: Sb, Ti, B, Li (preserved in field)
<u>D20G028-03</u>	<u>PE</u>	250	Chill <6 deg	n/a	n/a	Anions: F, Cl, SO4
<u>D20G028-04</u>	<u>PE</u>	2000	HNO3	4 mL	<u>1.3</u>	Radium 226+228 Combined
<u>D20G028-05</u>	<u>PE</u>	2000	Chill <6 deg	n/a	n/a	Solids: TSS, TDS

Well found locked on arrival       Well left locked on departure  
**Temperature:** 88°F      **Winds:** SE @ 9mph      **Cloud Cover:** Mostly Cloudy      **Precip:** 0  
**Remarks:** Well screen submerged entire time so used minimal purge

Codes: PP/S + Polypropylene+Silicone tubing    PP: Peristaltic Pump    PE: Polyethylene B

# DGS Groundwater Sampling Log



**WELL ID:** LF-3      **Location:**      **Latitude:** 29°45'50.38"      **Longitude:** -82°23'52.30"      **MSL @ TOC:** 183.7      **Date In Service:** 2019  
**Quarter:** July 2020      **Date:** 7-23-20      **Well Type:** D

### Purging Data

Diameter(in)	2	Total well depth(ft)	16.29	Depth to water(ft)	4.14	Well capacity(L/ft)	0.6		
Distance from TOC to top of screen	6.29	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:		1045	
<b>Well Vol = ( 16.29 - 4.14 ) X 0.6 = 7.3 L</b>						1/4 well vol. =		NA	
Init Tubing Dpth(ft):	9'	Final Tube Dept(ft):	9'	Purge Start Time:	1048	Purge Stop time:	1105	Total Volume Purged	2.9 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§		
1058	1.7	1.7	210	4.28	5.70	28.3	522	0.31	1.59	242.5	Sulfur odor yellow color few particulate floating
1101	0.6	2.3	210	4.28	5.71	28.3	534	0.29	1.87	249.8	
1104	0.6	2.9	210	4.28	5.73	28.2	543	0.30	1.60	253.2	

### Sampling Data

◆ FDEP SOP Section 2212.3

Decon Depth Mtr - rinse with analyte free water  
\$Purge method FDEP-SOP 2212.3.1

**Sampled By(Print):** S. Phillips, K. Brakefield      **Sampler(s) Signatures:** *S. Phillips, K. Brakefield*

**Sampling Method:** PP      **Tube Material:** PP/S      **Tube Dpth(ft):** 9'      **Time:** 1106      **Sampling Started**  
**Sampling completed**      **Tube Dpth(ft):** 9'      **Time:** 1134

**Field Decon:** NO      **Field Filtered:** NO      **Duplicate:** YES (NO)      **Acid ID# HNO3:** DCO1003      **H2SO4:** NA

Sample Container Specification			Sample Preservation			Intended Analysis or method
ID:	Material	Volume(mL)	Preservative	Volume added	final pH	
D20G028-03A	PE	500	HNO3	1.0 mL	1.3	Metals: As, Ba, Be, Ca, Cd, Cr, Co, Mo, Pb, Se
D20G028-03B	PE	250	HNO3	0.5 mL	1.3	Metals: Sb, Ti, B, Li (preserved in field)
D20G028-03C	PE	250	Chill <6 deg	n/a	n/a	Anions: F, Cl, SO4
D20G028-03D	PE	2000	HNO3	4 mL	1.3	Radium 226+228 Combined
D20G028-03E	PE	2000	Chill <6 deg	n/a	n/a	Solids: TSS, TDS

Well found locked on arrival       Well left locked on departure  
**Temperature:** 84°F      **Winds:** ESE @ 12mph      **Cloud Cover:** Mostly Cloudy      **Precip:** 0  
**Remarks:** Screen totally submerged throughout so used minimal purge

Codes: PP/S + Polypropylene+Silicone tubing    PP: Peristaltic Pump    PE: Polyethylene B



# DGS Groundwater Sampling Log



**WELL ID:** LF-4      **Location:**      **Latitude:** 29°45'50.43"      **Longitude:** -82°23'58.46"      **MSL @ TOC:** 184.83      **Date In Service:** 2019  
**Quarter:** July 2020      **Date:** 7-23-20      **Well Type:** D

### Purging Data

Diameter(in)	2	Total well depth(ft)	16.06	Depth to water(ft)	4.03	Well capacity(L/ft)	0.6
Distance from TOC to top of screen	6.06	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 = ( 16.06 - 4.03 ) X 0.6 = 7.2 L</b>				1/4 well vol. = NA			
Init Tubing Dpth(ft):	9'	Final Tube Dept(ft):	9'	Purge Start Time:	0950	Purge Stop time:	1009
						Total Volume Purged	2.9 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§		
1002	1.7	1.7	190	4.20	5.11	28.8	192	0.86	22.2	144.4	No odor No color particulates floating
1005	.6	2.3	190	4.20	5.08	28.8	190	0.55	10.4	145.0	
1008	.6	2.9	190	4.20	5.05	28.7	189	0.53	5.97	145.2	

◆ 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):** S. Phillips, K. Bratefield      **Sampler(s) Signatures:** S. Phillips, K. Bratefield

Sampling Method: PP	Tube Material: PP/S	Sampling Started Tube Dpth(ft): 9	Time: 1010	Sampling completed Tube Dpth(ft): 9'	Time: 1040
Field Decon: NO	Field Filtered: NO	Duplicate: YES (NO)	Acid ID# HNO3: DC01003	H2SO4: NA	

Sample Container Specification			Sample Preservation			Intended Analysis or method
ID:	Material	Volume(mL)	Preservative	Volume added	final pH	
D20G028-04A	PE	500	HNO3	1.0 mL	1.3	Metals: As, Ba, Be, Ca, Cd, Cr, Co, Mo, Pb, Se
D20G028-04B	PE	250	HNO3	0.5 mL	1.3	Metals: Sb, Ti, B, Li (preserved in field)
D20G028-04C	PE	250	Chill <6 deg	n/a	n/a	Anions: F, Cl, SO4
D20G028-04D	PE	2000	HNO3	4 mL	1.3	Radium 226+228 Combined
D20G028-04E	PE	2000	Chill <6 deg	n/a	n/a	Solids: TSS, TDS

Well found locked on arrival       Well left locked on departure  
 Temperature: 81°F      Winds: SE @ 8mph      Cloud Cover: Mostly Cloudy      Precip: 0  
 Remarks: Water level remained above screen used minimum purge method

# DGS Groundwater Sampling Log



**WELL ID: R4T5 (CCR)** Location: Latitude: **29°45'52.14"** Longitude: **-82°23'33.18"** MSL @ TOC Date In Service: **187.46 7-93**  
 Quarter: **July 2020** Date: **7-23-20** Well Type: **D**

### 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: <b>1414</b>			
<b>Well Vol = ( 15.08 - ) X 0.6 =</b>				1/4 well vol. =			
Init Tubing Dpth(ft): 10.9	Final Tube Dept(ft): 10.9	Purge Start Time: 1416	Purge Stop time: 1448	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§		
See 3Q20 G.W Sample log 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): **S. Phillips, K. Brakefield** Sampler(s) Signatures: *S. Phillips, K. Brakefield*

Sampling Method: PP	Tube Material: PP/S	Sampling Started Tube Dpth(ft): 10.9	Time: 1448	Sampling completed Tube Dpth(ft): 10.9	Time: 1530
Field Decon: NO	Field Filtered: NO	Duplicate: YES	<input checked="" type="radio"/> NO	Acid ID# HNO3: DC01003	H2SO4: NA

Sample Container Specification			Sample Preservation			Intended Analysis or method
ID:	Material	Volume(mL)	Preservative	Volume added	final pH	
<del>2020028-09B</del>	<del>PE</del>	<del>500</del>	<del>HNO3</del>	<del>1.0 mL</del>		<del>Metals: As, Ba, Be, Ca, Cd, Cr, Co, Mo, Pb, Se</del>
<del>2020028-09C</del>	<del>PE</del>	<del>250</del>	<del>HNO3</del>	<del>0.5 mL</del>	<del>1.3</del>	<del>Metals: Sb, Ti, B, Li (preserved in field)</del>
<del>2020028-09D</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>
<del>2020028-09E</del>	<del>PE</del>	<del>2000</del>	<del>HNO3</del>	<del>4 mL</del>	<del>1.6</del>	<del>Radium 226+228 Combined</del>
<del>2020028-09F</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>

Well found locked on arrival     Well left locked on departure  
 Temperature: **75°F** Winds: **SE @ 9mph** Cloud Cover: **overcast** Precip: **light drizzle/sprinkles**  
 Remarks:

Codes: PP/S + Polypropylene+Silicone tubing    PP: Peristaltic Pump    PE: Polyethylene B

# DGS Groundwater Sampling Log



**WELL ID: R6T4 (CCR)** Location: Latitude: Longitude: MSL @ TOC Date In Service  
 29°46'00.90" -82°23'40.20" 183.6 7-93  
 Quarter: July 2020 Date: 7-21-20 Well Type: **U**

### Purging Data

Diameter(in)	<b>2</b>	Total well depth(ft)	<b>14.13</b>	Depth to water(ft)	<u>3.40</u>	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>1008</u>							
<b>Well Vol = ( 14.13 - 3.40 ) X 0.6 = 6.44 L</b>				1/4 well vol. =							
Init Tubing Dpth(ft):	<u>4.0</u>	Final Tube Dept(ft):	<u>4.3</u>	Purge Start Time:	<u>1012</u>	Purge Stop time:	<u>1036</u>				
						Total Volume Purged <u>9.7</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§		
<p style="font-size: 2em; opacity: 0.5;">See 3020 GW Sampling Logsheet for data</p>											

◆ 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>Shelly Phillips</u>			
Sampling Method:	<b>PP</b>	Tube Material:	<b>PP/S</b>	Sampling Started Tube Dpth(ft):	<u>4.3</u>	Time:	<u>1038</u>
		Sampling completed Tube Dpth(ft):	<u>4.3</u>	Time:	<u>1054</u>		
Field Decon:	<b>NO</b>	Field Filtered:	<b>NO</b>	Duplicate:	<b>YES</b> (NO)	Acid ID# HNO3:	<u>DC01803</u>
		H2SO4:	<u>NA</u>				
Sample Container Specification			Sample Preservation			Intended Analysis or method	
ID:	Material	Volume(mL)	Preservative	Volume added	final pH		
	<del>PE</del>	<del>500</del>	<del>HNO3</del>	<del>1.0 mL</del>		<del>Metals: As, Ba, Be, Ca, Cd, Cr, Co, Mo, Pb, Se</del>	
<u>D20G028-103</u>	PE	250	HNO3	0.5 mL	<u>1.3</u>	<u>Metals: Sb, Ti, B, Li (preserved in field)</u>	
	<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>	
<u>D20G028-100</u>	PE	2000	HNO3	4 mL	<u>1.3</u>	<u>Radium 226+228 Combined</u>	
	<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>	

Well found locked on arrival     Well left locked on departure  
 Temperature: 98° F    Winds: SE 4 mph    Cloud Cover: mostly cloudy    Precip: 0  
 Remarks:

Codes: PP/S + Polypropylene+Silicone tubing    PP: Peristaltic Pump    PE: Polyethylene B

# DGS Groundwater Sampling Log



**WELL ID:** **EBLANK** <sup>(CCR)</sup> **Location:** Latitude: **na** Longitude: **na** MSL @ TOC Date In Service: **0 na**  
**Quarter:** **July 2020** **Date:** **7/22/20** **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>0934</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>0936</b>	Purge Stop time: <b>0943</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§		
See <sup>3020</sup> GW Sampling log for data for 7/22/20											

◆ 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. Brakefield, S. Phillips** **Sampler(s) Signatures:** *S. Phillips, K. Brakefield*

Sampling Method: <b>PP</b>	Tube Material: <b>PP/S</b>	Sampling Started Tube Dpth(ft): <b>N/A</b>	Time: <b>0945</b>	Sampling completed Tube Dpth(ft): <b>N/A</b>	Time: <b>1000</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: D001003</b>	<b>H2SO4: NA</b>	

Sample Container Specification			Sample Preservation			Intended Analysis or method
ID:	Material	Volume(mL)	Preservative	Volume added	final pH	
<del>20G028-11B</del>	<del>PE</del>	<del>500</del>	<del>HNO3</del>	<del>1.0 mL</del>	<del>n/a</del>	<del>Metals: As, Ba, Be, Ca, Cd, Cr, Co, Mo, Pb, Se</del>
<del>20G028-11B</del>	<del>PE</del>	<del>250</del>	<del>HNO3</del>	<del>0.5 mL</del>	<del>1.3</del>	<del>Metals: Sb, TI, B, Li (preserved in field)</del>
<del>20G028-11D</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>
<del>20G028-11D</del>	<del>PE</del>	<del>2000</del>	<del>HNO3</del>	<del>4 mL</del>	<del>1.3</del>	<del>Radium 226+228 Combined</del>
<del>20G028-11D</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>

**NA** Well found locked on arrival **NA** Well left locked on departure  
 Temperature: **78°F** Winds: **NE @ 4 mph** Cloud Cover: **Clear** Precip: **0**  
 Remarks: **Collected @ RUTS see 3020 Eblank**

Codes: PP/S + Polypropylene+Silicone tubing PP: Peristaltic Pump PE: Polyethylene B

# DGS Groundwater Sampling Log



**WELL ID: EBLANK**      **Location:** Latitude: **na**      Longitude: **na**      **MSL @ TOC** **Date In Service** **0**      **na**  
**Quarter:** July 2020      **Date:** 7-23-20      **Well Type:** **na**

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: <u>1812</u>								
<b>Well Vol = ( 0 - ) X 0 = _____ L</b> 1/4 well vol. = _____														
Init Tubing Dpth(ft):	<u>NA</u>		Final Tube Dept(ft):	<u>NA</u>		Purge Start Time:	<u>1813</u>		Purge Stop time:	<u>1826</u>		Total Volume Purged <u>NA</u> L		
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			
see 3Q20 GW Sample Log on 7/23/20 for Data												NA		

◆ 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. Brakefield, S. Phillips      **Sampler(s) Signatures:** K. Brakefield, S. Phillips

**Sampling Method:** **PP**      **Tube Material:** **PP/S**      **Sampling Started** Tube Dpth(ft): NA      Time: 1827      **Sampling completed** Tube Dpth(ft): NA      Time: 1841

**Field Decon:** **NO**      **Field Filtered:** **NO**      **Duplicate:** **YES** (**NO**)      **Acid ID#** **HNO3:** DC01003      **H2SO4:** NA

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>_____</del>	<del>Metals: As, Ba, Be, Ca, Cd, Cr, Co, Mo, Pb, Se</del>
<u>D206.028-14B</u>	<u>PE</u>	<u>250</u>	<u>HNO3</u>	<u>0.5 mL</u>	<u>1.3</u>	<u>Metals: Sb, Ti, B, Li (preserved in field)</u>
<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>
<u>D206.028-14D</u>	<u>PE</u>	<u>2000</u>	<u>HNO3</u>	<u>4 mL</u>	<u>1.3</u>	<u>Radium 226+228 Combined</u>
<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>

**NA** Well found locked on arrival      **NA** Well left locked on departure  
 Temperature: 79 F      Winds: SE @ 4 mph      Cloud Cover: overcast      Precip: 0  
 Remarks: collected @ R9TS



# 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: 3Q20 :used Manufacturer SOP for calibrations and FDEP 1100 SOP for verifications

	Standard Concentration, ID#, Expiration Date	Unit
Standard A	7.00, ID# DL91301, exp. 6/30/21	SU
Standard B	4.00, ID# DC01301, exp. 8/31/21	SU
Standard C	10.00, ID# DL91701, exp. 6/30/21	SU

QC ID# DG01404, Phenova WP pH lot 8202-15, exp. 4/30/22

+/- 0.2

Date	Time	STD A,B,C	STD Value	Instrument Response	Dev./ P or F	Calibrated (Yes/No)	Type (Int/Cont)	Sampler Initials
7/14/20	1252	A	7.00	7.01	+0.01 / P	Yes	Int	KSB
7/14/20	1254	B	4.00	4.01	+0.01 / P	Yes	Int	KSB
7/14/20	1256	C	10.00	10.06	+0.06 / P	Yes	Int	KSB
7/14/20	1300	QC	6.29	6.27	Pass <sup>SP</sup>			
7/20/20	1815	A	7.00	7.00	Pass	NO	Cont	SP
7/21/20	1556	A	7.00	7.01	+0.01 / Pass	NO	Cont	SP
7/22/20	1703	A	7.00	7.02	+0.02 / P	NO	Cont	SP
7/23/20	1840	A	7.00	7.00	0 / P	NO	Cont	SP
7/24/20	1348	B	4.00	4.04	+0.04 / P	NO	Cont	SP
7/24/20	1350	C	10.00	9.90	-0.1 / P	NO	Cont	SP

Slope = 99.9%  
range 6.09 to 6.49 SP

# 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: 3Q20 :used Manufacturer SOP for calibrations and FDEP 1200 SOP for verifications

	Standard Concentration, ID#, Expiration Date	Unit
Standard A	100, ID# DA00701, exp. 12/31/20	µS/cm
Standard B	1413, ID# DL91602, exp. 10/31/21	µS/cm
Standard C	10,000, ID# DI92501, exp. 7/31/21	µS/cm
QC ID#	DG01403, Phenova WP conductivity, Lot: 8206-72, exp. 7/31/22	

+/- 5%

Date	Time	STD A,B,C	STD Value	Instrument Response	Dev./ P or F	Calibrated (Yes/No)	Type (Int/Cont)	Sampler Initials
7/14/20	1316	A	100	100.2	+0.2% P	No	Cont	KSB
7/14/20	1318	B	1413	1429	+1.1% P	No	Cont	KSB
7/14/20	1320	C	10,000	9990	-0.1% P	No	Cont	KSB
7/14/20	1324	QC	1010	1017	Pass	No	Cont	KSB
7/20/20	1817	A	100	97.7	2.3% P	No	Cont	SP
7/21/20	1558	B	1413	1437	1.70% P	No	Cont	SP
7/22/20	1703	B	1413	1410	0.21% P	No	Cont	SP
7/23/20	1841	B	1413	1393	1.4% P	No	Cont	SP
7/24/20	1347	B	1413	1382	2.2% P	No	Cont	SP

Range 910-1110 (SP)



# Instrument Calibration Log

Model 2100Q

Serial Number 14100C035914

Manufacturer: Hach

Date Purchased 11-2014

Parameter: Turbidity

GRU Prop Tag# none

QTR: 3Q20 :used Manufacturer SOP for calibrations and FDEP 1600 SOP for verifications

	Standard Concentration, ID#, Expiration Date	Unit
Standard A	2° Gelex Std, 5.54	NTU
Standard B	2° Gelex Std, 51.2	NTU
Standard C	2° Gelex Std, 522	NTU
Std D	Calibration verification Std. 0.1 NTU, ID# <u>DB00602</u> , exp. <u>12/31/21</u>	

QC ID# DG01405, Phenova WP Turbidity, Lot: 8192-20, exp. 6/30/21

Date	Time	STD A,B,C	STD Value	Instrument Response	Dev./ P or F	Calibrated (Yes/No)	Type (Int/Cont)	Sampler Initials
7/13/20	1438	A	5.54	5.49	-0.91% P	Yes	Int	KSB
7/13/20	1441	B	51.2	51.4	0.39% P	Yes	Int	KSB
7/13/20	1445	C	522	518	0.74% P	Yes	Int	KSB
7/13/20	1450	-	10 NTU Std.	9.8	-2.09% P	No	Cont	KSB
7/14/20	1504	D	<0.1	0.09	P	No	Cont	KSB
7/14/20	1515	QC	19.4	17.9	Pass <u>90</u>	No	Cont	KSB
7/20/20	1809	A	5.54	5.52	0.36% P	No	Cont	SP
7/21/20	1617	A	5.54	5.75	3.79% P	No	Cont	SP
7/22/20	1700	B	51.2	52.0	1.56% P	No	Cont	SP
7/23/20	1844	B	51.2	51.8	1.17% P	No	Cont	SP
7/24/20	1349	A	5.54	5.78	4.33% P	No	Cont	SP

Range 14.2 - 22.7

**\*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# DE92701, exp. 12/31/20  
 20 NTU, ID# DE92702, exp. 12/31/20  
 100 NTU, ID# DE92703, exp. 12/31/20  
 800 NTU, ID# DE92704, exp. 12/31/20





# Deerhaven Generating Station Water Elevations

Date: 07/20/2020

<u>Well</u>	<u>Time</u>	<u>MSL @TOC</u>	<u>Depth to Water</u>	<u>Time Depth Mtr Cleaned</u>	<u>Locked Arrival</u>	<u>Locked Depart.</u>
R1T6	9:12	188.95	5.02	9:10	Y	Y
R2T1	8:55	185.19	3.85	8:50	Y	Y
R3T7	10:23	182.55	4.32	10:21	Y	Y
R4T5	9:29	187.46	10.16	9:27	Y	Y
R6T1	11:25	185.28	4.49	11:24	Y	Y
R6T4	11:32	183.60	3.03	11:30	Y	Y
R6T8	11:16	177.97	3.57	11:15	Y	Y
R6T12	10:32	173.38	3.55	10:31	Y	Y
R8T10	10:41	177.40	5.32	10:40	Y	Y
R9T5	9:51	184.64	5.2	9:50	Y	Y
R10T8	11:03	181.42	6.7	11:01	Y	Y
R11T4	10:55	178.76	3.38	10:53	Y	Y
SIS1	9:18	185.11	4.39	9:17	Y	Y
SIS2	9:24	183.30	5.64	9:22	Y	Y
SIS3	9:34	183.11	3	9:32	Y	Y
SIS4	9:38	183.87	4.98	9:37	Y	Y
LF1	9:44	185.76	5.05	9:42	Y	Y
LF2	10:15	182.33	4.61	10:13	Y	Y
LF3	10:10	183.70	4.4	10:09	Y	Y
LF4	10:06	184.83	4.53	10:04	Y	Y

LF5	10:01	184.33	4.92	9:59	Y	Y
LF6	9:55	184.59	4.94	9:53	Y	Y
LF7	9:48	185.74	5.82	9:47	Y	Y

# DGS Groundwater Sampling Log



WELL ID: <b>LF-6</b>	Location: <b>CCR</b>	Latitude: <b>29°45'56.71"</b>	Longitude: <b>-82°23'59.75"</b>	MSL @ TOC	Date In Service: <b>2020</b>
Quarter: <b>4Q20</b>	Date: <b>10/15/20</b>	Well Type: <b>D</b>			

### Purging Data

Diameter(in) <b>2</b>	Total well depth(ft) <b>14.52</b>	Depth to water(ft) <b>5.00</b>	Well capacity(L/ft) <b>0.6</b>
Distance from TOC to top of screen <b>4.04</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>10:25</b>	
<b>Well Vol = ( 14.52 - 5.00 ) X 0.6 = 5.8 L</b>		1/4 well vol. = <b>1.5</b>	
Init Tubing Dpth(ft): <b>9.6'</b>	Final Tube Dept(ft): <b>9.6'</b>	Purge Start Time: <b>10:30</b>	Purge Stop time: <b>10:58</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§		
10:46	5.8	5.8	340	5.57	6.54	26.2	345.3	0.92	9.80	21.8	Cloudy slight yellow color but then turned clear before sampling
10:52	1.8	7.6	340	5.57	6.51	26.2	351.5	0.79	8.29	83.4	
10:57	1.5	9.1	340	5.57	6.48	26.2	357.2	0.62	8.96	52.1	

### 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. Mornson</b>			Sampler(s) Signatures: <i>[Signature]</i>		
Sampling Method: <b>PP</b>	Tube Material: <b>PP/S</b>	Sampling Started Tube Dpth(ft): <b>9.0'</b>	Time: <b>11:00</b>	Sampling completed Tube Dpth(ft): <b>9.0'</b>	Time: <b>11:25</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: DC01003</b>	<b>H2SO4: N/A</b>	

Sample Container Specification			Sample Preservation			Intended Analysis or method
ID:	Material	Volume(mL)	Preservative	Volume added	final pH	
<b>D20J018-01A</b>	<b>PE</b>	<b>500</b>	<b>HNO3</b>	<b>1.0 mL</b>	<b>1.3</b>	Metals: As, Ba, Be, Ca, Cd, Cr, Co, Mo, Pb, Se
<b>D20J018-01B</b>	<b>PE</b>	<b>250</b>	<b>HNO3</b>	<b>0.5 mL</b>	<b>1.3</b>	Metals: Sb, Ti, B, Li
<b>D20J018-01C</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>D20J018-01D</b>	<b>PE</b>	<b>2000</b>	<b>HNO3</b>	<b>4 mL</b>	<b>1.6</b>	Radium 226+228 Combined
<b>D20J018-01E</b>	<b>PE</b>	<b>2000</b>	<b>Chill &lt;6 deg</b>	<b>n/a</b>	<b>n/a</b>	Solids: TSS, TDS

<input checked="" type="checkbox"/> Well found locked on arrival Temperature: <b>81°F</b> Winds: <b>SSE 4mph</b> Remarks:	<input checked="" type="checkbox"/> Well left locked on departure Cloud Cover: <b>Partly cloudy</b> Precip: <b>N/A</b>
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# DGS Groundwater Sampling Log



WELL ID: <b>LF-5</b>	Location: <b>CCR</b>	Latitude: <b>29°45'53.70"</b>	Longitude: <b>-82°23'59.83"</b>	MSL @ TOC: <b>184.33</b>	Date In Service: <b>2020</b>
Quarter: <b>4Q 20</b>	Date: <b>10/15/20</b>	Well Type: <b>D</b>			

### Purging Data

Diameter(in): <b>2</b>	Total well depth(ft): <b>14.52</b>	Depth to water(ft): <b>4.99</b>	Well capacity(L/ft): <b>0.6</b>
Distance from TOC to top of scree: <b>4.04</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>08:35</b>	
<b>Well Vol = (14.52 - 4.99) X 0.6 = 5.72 L</b>		1/4 well vol. = <b>1.5</b>	
Init Tubing Dpth(ft): <b>9.0'</b>	Final Tube Dept(ft): <b>9.0'</b>	Purge Start Time: <b>08:46</b>	Purge Stop time: <b>09:29</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§		
09:11	6.8	6.8	375	5.18	5.75	26.1	968.8	0.20	12.4	45.6	Clear (slightly) orange particles very slight yellow color
09:15	1.5	8.3	375	5.18	5.71	26.1	1003	0.18	10.2	42.7	
09:19	1.6	9.9	375	5.18	5.68	26.2	1036	0.18	7.26	39.5	
09:23	1.5	11.4	375	5.18	5.66	26.2	1060	0.17	6.69	37.1	
09:27	1.5	12.9	375	5.18	5.64	26.2	1078	0.17	6.01	34.9	

◆ 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. Morrison DC Davis</b>				Sampler(s) Signatures: <i>[Signatures]</i>			
Sampling Method: <b>PP</b>	Tube Material: <b>PP/S</b>	Sampling Started Tube Dpth(ft): <b>9.0'</b>	Time: <b>09:30</b>	Sampling completed Tube Dpth(ft): <b>9.0'</b>	Time: <b>09:50</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: DC01003</b>	<b>H2SO4: N/A</b>			

Sample Container Specification			Sample Preservation			Intended Analysis or method
ID:	Material	Volume(mL)	Preservative	Volume added	final pH	
<b>D20J018-03-A</b>	PE	500	HNO3	1.0 mL	<b>1.3</b>	Metals: As, Ba, Be, Ca, Cd, Cr, Co, Mo, Pb, S
<b>D20J018-03-B</b>	PE	250	HNO3	0.5 mL	<b>1.3</b>	Metals: Sb, Ti, B, Li
<b>D20J018-03-C</b>	PE	250	Chill <6 deg	n/a	n/a	Anions: F, Cl, SO4
<b>D20J018-03-D</b>	PE	2000	HNO3	4 mL	<b>1.3</b>	Radium 226+228 Combined
<b>D20J018-03-E</b>	PE	<del>2000</del> 4000 10-15-20	Chill <6 deg	n/a	n/a	Solids: TSS, TDS

Well found locked on arrival      Well left locked on departure  
 Temperature: **76°F**     Winds: **ESE 2mph**     Cloud Cover: **Partly Sunny**     Precip: **N/A**  
 Remarks:

# haven Generating Station Water Elevations

D205024

Date: 10-9-2020

~~9-20~~  
10:24 - 12:24

Well	Time	MSL @ TOC	Depth to Water	Time Depth Mtr Cleaned	Locked Arrival	Locked Depart.
R1T6	12:24	188.95	4.95	12:24	✓	✓
R2T1	12:20	185.19	4.13	12:19	✓	✓
R3T7	10:41	182.55	4.75	10:40	✓	✓
R4T5	12:06	187.46	10:58	12:05	✓	✓
R6T1	11:19	185.28	5.11	11:18	✓	✓
R6T4	11:12	183.60	3.93	11:12	✓	✓
R6T8	10:36	177.97	<del>3.81</del> 3.71	10:35	✓	✓
R6T12	10:28	173.38	<del>3.85</del> 3.75 4.85	10:24	✓	✓
R8T10	11:47	177.40	5.33	11:46	✓	✓
R9T5	11:00	184.64	5.66	10:59	✓	✓
R10T8	11:35	181.42	6.92	11:34	✓	✓
R11T4	11:28	178.76	3.79	11:27	✓	✓
SIS1	12:13	185.11	4.69	12:12	✓	✓
SIS2	12:08	183.30	6.08	12:08	✓	✓
SIS3	12:00	183.11	<del>4.</del> 3.53	11:59	✓	✓
SIS4	12:03	183.87	5.37	12:02	✓	✓
LF1	11:07	185.76	5.54	11:06	✓	✓
LF2	10:46	182.33	4.07	10:46	✓	✓
LF3	10:51	183.70	4.44	10:50	✓	✓
LF4	10:53	184.83	4.63	10:52	✓	✓
LF5	10:55	184.33	5.31	10:55	✓	✓
LF6	10:58	184.59	5.50	10:58	✓	✓
LF7	11:03	185.74	6.67	11:02	✓	✓



# DGS Groundwater Sampling Log



WELL ID: <b>LF-5</b>	Location:	Latitude: <b>29°45'53.70"</b>	Longitude: <b>-82°23'59.83"</b>	MSL @ TOC	Date In Service: <b>2020</b>
Quarter: <b>4Q20 CCR</b>	Date: <b>11/18/20</b>	Well Type: <b>D</b>			

### Purging Data

Diameter(in) <b>2</b>	Total well depth(ft) <b>14.52</b>	Depth to water(ft) <b>5.47</b>	Well capacity(L/ft) <b>0.6</b>
Distance from TOC to top of scree <b>4.04</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>08:55</b>
<b>Well Vol = ( 14.52 - 5.47 ) X 0.6 = 5.5 L</b>			1/4 well vol. = <b>1.4 L</b>
Init Tubing Dpth(ft): <b>10'</b>	Final Tube Dept(ft): <b>10'</b>	Purge Start Time: <b>09:01</b>	Purge Stop time: <b>09:34</b> Total Volume Purged <b>11.8L</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§		
09:17	6.2	6.2	400	5.64	5.90	23.26	977.9	0.40	37.4	47.1	Orange color Brown floaters Salt water odor < 20 NTU
09:21	1.4	7.6	400	5.64	5.87	23.40	1007	0.42	26.9	43.9	
09:25	1.4	9.0	400	5.64	5.85	23.43	1018	0.41	19.8	41.5	
09:29	1.4	10.4	400	5.64	5.81	23.38	1037	0.43	13.2	38.4	
09:32	1.4	11.8	400	5.64	5.79	23.48	1043	0.40	9.67	38.3	

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. Momen, J.C. Davis</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>09:36</b>	Sampling completed Tube Dpth(ft): <b>10'</b> Time: <b>09:55</b>		
Field Decon: <b>NO</b>	Field Filtered: <b>NO</b>	Duplicate: <b>YES</b> (NO)	Acid ID# <b>HNO3: DI01801</b>	<b>H2SO4: —</b>	

Sample Container Specification			Sample Preservation			Intended Analysis or method
ID:	Material	Volume(mL)	Preservative	Volume added	final pH	
<b>D20K028-03A</b>	PE	500	HNO3	1.0 mL	<b>1.3</b>	Metals: As, Ba, Be, Ca, Cd, Cr, Co, Mo, Pb, S
<b>D20K028-03B</b>	PE	250	HNO3	0.5 mL	<b>1.3</b>	Metals: Sb, Ti, B, Li
<b>D20K028-03C</b>	PE	250	Chill <6 deg	n/a	n/a	Anions: F, Cl, SO4
<b>D20K028-03D</b>	PE	2000	HNO3	4 mL	<b>1.3</b>	Radium 226+228 Combined
<b>D20K028-03E</b>	PE	<b>2000</b> <del>4000</del>	Chill <6 deg	n/a	n/a	Solids: TSS, TDS

Well found locked on arrival       Well left locked on departure  
 Temperature: **59°F**      Winds: **NNE 13 mph**      Cloud Cover: **0**      Precip: **0**  
 Remarks: **Strong Odor from wood pile @ DHR + Dust**

# DGS Groundwater Sampling Log



WELL ID: <b>LF-6</b>	Location:	Latitude: <b>29°45'56.71"</b>	Longitude: <b>-82°23'59.75"</b>	MSL @ TOC: <b>184.59</b>	Date In Service: <b>2020</b>
Quarter: <u>1/200 resample</u>	Date: <u>11-18-2020</u>	Well Type: <b>D</b>			

### Purging Data

Diameter(in): <b>2</b>	Total well depth(ft): <b>14.52</b>	Depth to water(ft): <u>5.81</u>	Well capacity(L/ft): <b>0.6</b>
Distance from TOC to top of scree: <b>4.04</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>10:04</u>
<b>Well Vol = ( 14.52 - 5.81 ) X 0.6 = 5.3 L</b>			1/4 well vol. = <u>1.35</u>
Init Tubing Dpth(ft): <u>10'</u>	Final Tube Dept(ft): <u>10'</u>	Purge Start Time: <u>10:08</u>	Purge Stop time: <u>10:36</u>
			Total Volume Purged <u>10.7</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§		
<u>10:21</u>	<u>5.3</u>	<u>5.3</u>	<u>420</u>	<u>6.21</u>	<u>6.53</u>	<u>23.58</u>	<u>322.6</u>	<u>1.34</u>	<u>64.3</u>	<u>77.7</u>	Cloudy No Color No Odor
<u>10:24</u>	<u>1.35</u>	<u>6.65</u>	<u>420</u>	<u>6.21</u>	<u>6.48</u>	<u>23.65</u>	<u>335.0</u>	<u>1.06</u>	<u>34.6</u>	<u>65.9</u>	
<u>10:28</u>	<u>1.35</u>	<u>8.00</u>	<u>420</u>	<u>6.21</u>	<u>6.43</u>	<u>23.72</u>	<u>344.5</u>	<u>0.93</u>	<u>24.9</u>	<u>54.4</u>	
<u>10:31</u>	<u>1.35</u>	<u>9.35</u>	<u>420</u>	<u>6.21</u>	<u>6.41</u>	<u>23.76</u>	<u>350.5</u>	<u>0.79</u>	<u>21.8</u>	<u>45.4</u>	
<u>10:34</u>	<u>1.35</u>	<u>10.70</u>	<u>420</u>	<u>6.21</u>	<u>6.38</u>	<u>23.79</u>	<u>357.8</u>	<u>0.68</u>	<u>20.1</u>	<u>36.0</u>	

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>JC Davis / K Morrison</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>10:38</u>		Sampling completed Tube Dpth(ft): <u>10'</u> Time: <u>10:54</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>D101801</u> H2SO4: <u>—</u>	
Sample Container Specification			Sample Preservation			Intended Analysis or method	
ID:	Material	Volume(mL)	Preservative	Volume added	final pH		
<u>D20K028-01A</u>	<u>PE</u>	<u>500</u>	<u>HNO3</u>	<u>1.0 mL</u>	<u>1.3</u>	<u>Metals: As, Ba, Be, Ca, Cd, Cr, Co, Mo, Pb, S</u>	
<u>D20K028-01B</u>	<u>PE</u>	<u>250</u>	<u>HNO3</u>	<u>0.5 mL</u>	<u>1.3</u>	<u>Metals: Sb, Tl, B, Li</u>	
<u>D20K028-01C</u>	<u>PE</u>	<u>250</u>	<u>Chill &lt;6 deg</u>	<u>n/a</u>	<u>n/a</u>	<u>Anions: F, Cl, SO4</u>	
<u>D20K028-01D</u>	<u>PE</u>	<u>2000</u>	<u>HNO3</u>	<u>4 mL</u>	<u>1.3</u>	<u>Radium 226+228 Combined</u>	
<u>D20K028-01E</u>	<u>PE</u>	<u>2000-4000</u>	<u>Chill &lt;6 deg</u>	<u>n/a</u>	<u>n/a</u>	<u>Solids: TSS, TDS</u>	

Well found locked on arrival     Well left locked on departure  
 Temperature: 60°F    Winds: WNE 14 mph    Cloud Cover: 0    Precip: 0  
 Remarks: Strong odor from DHR wood pile + dust



# Instrument Calibration Log

NIST RTD meter  
 Model # 91428-07

Serial Number 4013055  
 CP 346548 / CP 346549  
 Date Purchased unk 06/2020

Manufacturer: Diigi-Sense

Parameter: Temperature

GRU Prop Tag# none

QTR: 4Q20 : used Manufacturer SOP for calibrations and FDEP 1400 SOP for verifications

	Standard Concentration, ID#, Expiration Date	Unit
Standard A	Conductivity <u>Orion Star A329</u> SN <u>509761</u> , <u>Probe</u> SN <u>VQ1-19425</u>	°C
Standard B	RDO - <u>Orion Star A329</u> SN# <u>509761</u> , <u>Probe</u> SN# <u>DS7010.MD</u>	°C
Standard C	Depth Meter - Solinst Model <u>201</u> SN <u>335840</u>	°C

Date	Time	STD A,B,C	STD Value	Instrument Response	Dev/ P or F	Calibrated (Yes/No)	Type (Int/Cont)	Sampler Initials
10/07/20	09:44	A	20.3	20.3	P	NO	Cont	Km
10/07/20	09:44	B	20.3	20.5	P	NO	Cont	Km
10/07/20	09:44	C	20.3	20.3	P	NO	Cont	Km
10/07/20	09:50	A	25.0	25.0	P	NO	Cont	Km
10/07/20	09:50	B	25.0	25.1	P	NO	Cont	Km
10/07/20	09:50	C	25.0	24.9	P	NO	Cont	Km
10/07/20	09:53	A	<del>25.0</del> <sup>27.8</sup> <sub>10/21/20</sub>	27.7	<del>P</del> <sup>P</sup>	<del>NO</del> <sup>NO</sup>	<del>Cont</del> <sup>Cont</sup>	<del>Km</del> <sup>Km</sup>
10/07/20	09:53	B	27.8	27.8	P	NO	Cont	Km
10/07/20	09:53	C	27.8	27.7	P	NO	Cont	Km
					<del>P</del>	<del>NO</del>	<del>Cont</del>	<del>Km</del>
10/09/20	15:19	A	32.5	32.5	P	NO	Cont	Km
10/09/20	15:19	B	32.5	32.5	P	NO	Cont	Km
10/09/20	15:19	C	32.5	32.3	P	NO	Cont	Km
10/21/20	13:25	A	26.9	26.9	P	NO	Cont	Km
10/21/20	13:25	B	26.9	27.0	P	NO	Cont	Km
10/21/20	13:27	B	26.9	26.9	P	NO	Cont	Km

km  
10/07/20

# Instrument Calibration Log

Model NIST RTD Meter  
# 91428-07

Serial Number 4013055

Manufacturer: Digi Sense

CP 346548 / CP 346549  
Date Purchased ~~UNK~~ 0612020

Parameter: Temperature

GRU Prop Tag# none

QTR: 4Q20 : used Manufacturer SOP for calibrations and FDER 1400 SOP for verifications

	Standard Concentration, ID#, Expiration Date	Unit
Standard A	<u>Conductivity</u> SN <u>509761</u> Probe SN <u>19425</u>	<u>°C</u>
Standard B	<u>RDO</u> - <u>Green Star A324</u> Probe SN <u>087010</u> SN # <u>509761</u>	<u>°C</u>
Standard C	<u>Depth Meter</u> - <u>Stinst Model 201</u> SN <u>335840</u>	<u>°C</u>

Date	Time	STD A,B,C	STD Value	Instrument Response	Dev/ P or F	Calibrated (Yes/No)	Type (Int/Cont)	Sampler Initials
11/16/20	14:37	A	19.8	19.8	P	NO	Cont	Km
11/16/20	14:37	B	19.8	22.1	P	NO	Cont	Km
11/16/20	14:37	C	19.8	19.8	P	NO	Cont	Km
11/16/20	14:42	A	25.6	25.6	P	NO	Cont	Km
11/16/20	14:42	B	25.6	25.6	P	NO	Cont	Km
	14:42	C	25.6	25.6	P	NO	Cont	Km
11/16/20	14:48	A	29.0	28.9	P	NO	Cont	Km
11/16/20	14:48	B	29.0	29.0	P	NO	Cont	Km
11/16/20	14:48	C	29.0	29.0	P	NO	Cont	Km
11/19/20	13:10	A	25.2	25.1	P	NO	Cont	Km
11/19/20	13:10	B	25.2	25.2	P	NO	Cont	Km
11/19/20	13:10	C	25.2	25.2	P	NO	Cont	Km

# 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: 4Q20 : used Manufacture SOP for calibrations and FOEP 110 SOP for verifications

Standard	Concentration	ID#	Expiration Date	Unit
Standard A	7.00	DL91301	exp 6/30/2021	Su
Standard B	4.00	DC0301	exp 8/31/2021	Su
Standard C	10.00	DL91701	exp 6/30/2021	Su
QC	DA01301	Lot #8198-15	exp 11/30/2021	

Date	Time	STD A,B,C	STD Value	Instrument Response	Dev./ P or F	Calibrated (Yes/No)	Type (Int/Cont)	Sampler Initials
10/06/20	13:45	A	7.00	7.01	+0.01 P	+0.01 yes	Int	Km
10/06/20	13:49	B	4.00	4.00	+0.02 P	yes	Int	Km
10/06/20	13:51	C	10.00	10.07	+0.07 P	yes	Int	Km
10/06/20	13:52	C	10.00	10.09	+0.09 P	NO	Cont	Km
10/06/20	13:54	A	7.00	7.03	+0.03 P	NO	Cont	Km
10/06/20	13:58	B	4.00	3.99	-0.01 P	NO	Cont	Km
10/06/20	14:36	QC	8.3	8.26	-0.04 P	NO	Cont	Km
10/12/20	06:45	A	7.00	7.03	+0.03 P	NO	Cont	Km
10/12/20	06:47	B	4.00	4.00	0.00 P	NO	Cont	Km
10/12/20	06:50	C	10.00	10.11	+0.11 P	NO	Cont	Km
10/12/20	14:16	A	7.00	7.01	+0.01 P	NO	Cont	Km
10/12/20	15:50	A	7.00	7.01	+0.01 P	NO	Cont	gjd
10/13/20	07:34	A	7.00	7.03	+0.03 P	NO	Cont	Km
10/13/20	07:34	B	4.00	3.97	-0.03 P	NO	Cont	Km
10/13/20	07:38	C	10.00	10.11	+0.11 P	NO	Cont	Km
10/13/20	16:03	A	7.00	6.99	-0.01 P	NO	Cont	gjd
10/14/20	07:28	A	7.00	7.02	+0.02 P	NO	Cont	Km
10/14/20	07:28	B	4.00	3.99	-0.01 P	NO	Cont	Km
10/14/20	15:11	A	7.00	7.00	0.00 P	NO	Cont	gjd
10/15/20	08:08	A	7.00	7.01	+0.01 P	NO	Cont	Km
10/15/20		B	4.00	3.99	-0.01 P	NO	Cont	Km
10/15/20		A	7.00	7.04	+0.04 P	NO	Cont	Km

Slope 98.

Range 8.11 - 8.5

# 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: 4Q20 : used Manufacturer SOP for calibrations and FDEP 1100 SOP for verifications

	Standard Concentration, ID#, Expiration Date	Unit
Standard A	7.00 DL91301, exp 6/30/2021	SU
Standard B	4.00 DC01301, exp 8/31/2021	SU
Standard C	10.00 DL91701, exp 6/30/2021	SU

+/- 0.2

Date	Time	STD A,B,C	STD Value	Instrument Response	Dev./ P or F	Calibrated (Yes/No)	Type (Int/Cont)	Sampler Initials
10/19/20	07:31	B	4.00	3.98	P	NO	Cont	KM
10/19/20	13:26	A	7.00	6.99	P	NO	Cont	KM
<i>Resample</i> 11/16/20	12:56	A	7.00	7.01	P	yes	<del>Int</del> Int	KM
11/16/20	12:56	B	4.00	4.01	P	yes	Int	11-16-20 KM
11/16/20	12:56	C	10.00	10.00	P	yes	Int	KM
11/16/20	14:24	QC	6.00	5.98	P	NO	Cont	KM
11/17/20	15:35	A	7.00	7.00	P	NO	Cont	KM
11/18/20	11:15	A	7.00	7.00	P	NO	Cont	KM

Slope 99.10%

# 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: 4 Q 20 : used manufacture SOP for calibrations and FDEP 1200 SOP for verifications

	Standard Concentration, ID#, Expiration Date	Unit
Standard A	100 ID# DA00701, exp 12/31/20	uS/cm
Standard B	1413 ID# DL91602, exp 10/31/20	uS/cm
Standard C	10,000 ID# DI92501, exp 7/31/21	uS/cm
QC	DA0302, exp 4/30/2021 Lot# 8191-72	

+/- 5%

Date	Time	STD A,B,C	STD Value	Instrument Response	Dev./ P or F	Calibrated (Yes/No)	Type (Int/Cont)	Sampler Initials
10/06/20	14:00	A	100	101.7	+1.7% P	NO	Cont	Km
10/06/20	14:02	B	1413	1444	2.2% P	NO	Cont	Km
10/06/20	14:32	C	10,000	10130	+1.3% P	NO	Cont	Km
10/06/20	14:55	QC	270	276.4	P	NO	Cont	Km
Range 243-297								
10/12/20	06:46	A	100	101.4	+1.4% P	NO	Cont	Km
10/12/20	06:50	B	1413	1439	+1.8% P	NO	Cont	Km
10/12/20	15:53	B	1413	1426	+0.9% P	NO	Cont	QC
10/13/20	07:38	A	100	100.6	+0.4% P	NO	Cont	Km
10/13/20	07:40	B	1413	1424	0.7% P	NO	Cont	Km
10/13/20	16:06	B	1413	1420	0.5% P	NO	Cont	QC
10/13/20	07:25	B	1413	1427	0.9% P	NO	Cont	Km
10/14/20	15:15	A	100	100.5	0.5% P	NO	Cont	QC
10/14/20	15:17	B	1413	1424	P	NO	Cont	QC
10/15/20	08:07	B	1413	1434	+1.5% P	NO	Cont	Km
10/16/20		B	1413	1429	+1.1% P	NO	Cont	Km
10/19/20	07:34	A	100	100.8	+0.8% P	NO	Cont	Km
10/19/20	07:36	B	1413	1437	+1.1% P	NO	Cont	Km
10/19/20	13:26	B	1413	1423	+0.7% P	NO	Cont	Km/CS
11/17/20	15:36	A	1413	1414	P	NO	Cont	Km





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# Instrument Calibration Log

Model 2100Q

Serial Number 14100C035914

Manufacturer: Hach

Date Purchased 11-2014

Parameter: Turbidity

GRU Prop Tag# none

QTR: 4Q30 :used Manufacture SOP for calibrations and FDEP 1600 SOP for verifications

Standard	Standard Concentration, ID#, Expiration Date	Unit
Standard A	20 Gelex Std, 5.82 <sup>um</sup> 5.82	NTU
Standard B	20 Gelex Std, 51.7 <sup>10/06/20</sup>	NTU
Standard C	20 Gelex Std, 515	NTU
Standard D	<0.1 ID: D800602 exp 12/31/2021 Calibration verification Std. 0.1 NTU, ID#	NTU

QC ID D5 01405 Phenomena w/p turbidity lot# 8192-20 exp 6/30/21

Date	Time	STD A,B,C	STD Value	Instrument Response	Dev./ P or F	Calibrated (Yes/No)	Type (Int/Cont)	Sampler Initials
10/07/20	10:04	A	5.82	5.81	P.0.2%	yes	Int	km
10/07/20	10:06	B	51.7	51.8	P	yes	Int	km
10/07/20	10:07	C	515	515	P	yes	Int	km
10/07/20	10:08	D	<0.1	0.08	P	yes	Int	km
10/07/20	10:11	QC	19.4	17.6	P	NO	Cont	km
								Range 10.2-22.5
10/12/20	06:54	D	<0.1	0.07	P	NO	Cont	km
10/12/20	06:54	A	5.82	5.83	P	NO	Cont	km
10/12/20	14:11	A	5.82	5.75	1.20% P	NO	Cont	km
10/12/20	15:59	A	5.82	5.75	1.10% P	NO	Cont	km
			90% 5.82					
10/13/20	07:52	D	<0.1	0.08	P	NO	Cont	km
10/13/20	07:53	P	5.82	5.87	+0.86% P	NO	Cont	km
10/13/20	15:55	A	5.82	5.80	-0.34% P	NO	Cont	km
10/14/20	07:31	D	<0.1	0.10	P	NO	Cont	km
10/14/20	07:32	A	5.82	5.82	P	NO	Cont	km
10/14/20	15:21	A	5.82	5.82	P	NO	Cont	km
10/15/20	09:05	D	<0.1	0.10	P	NO	Cont	km
10/15/20	09:05	A	5.82	5.79	-0.50% P	NO	Cont	km
10/15/20	11:13	B	51.7	54.3	5.00% P	NO	Cont	km

**\*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# 92701, exp. 12/31/20  
 20 NTU, ID# 92702, exp. 12/31/20  
 100 NTU, ID# 92703, exp. 12/31/20  
 800 NTU, ID# 92704, exp. 12/31/20

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# Instrument Calibration Log

Model 2100Q

Serial Number 14100C035914

Manufacturer: Hach

Date Purchased 11-2014

Parameter: Turbidity

GRU Prop Tag# none

QTR: HQ 20 : used manufacture SOP for calibrations and \_\_\_\_\_ SOP for verifications

	Standard Concentration, ID#, Expiration Date	Unit
Standard A	20 Gelex Std, 5.82	NTU
Standard B	20 Gelex std 5.7	NTU
Standard C	20 Gelex Std 5.15	NTU

Date	Time	STD A,B,C	STD Value	Instrument Response	Dev./ P or F	Calibrated (Yes/No)	Type (Int/Cont)	Sampler Initials
10/19/20	07:40	D	<0.1	0.10	P	NO	<del>NO</del> Cont	Km
10/19/20	12:31	A	5.82	5.76	-1.5% P	NO	Cont	Km 10/19/20
Resample HQ 20								
11/16/20	13:01	A	5.82	5.88	P	NO	Cont	Km
11/16/20	13:03	B	5.7	5.20	P	NO	Cont	Km
11/16/20	13:05	C	5.15	5.12	P	NO	Cont	Km
11/16/20	13:30	D	<0.1	0.07	P	NO	Cont	Km
11/18/20	14:29	QC	20	20.8	P	NO	Cont	Km
11/17/20	15:35	A	5.82	5.87	P	NO	Cont	Km
11/18/20	11:19	C	5.15	5.13	P	NO	Cont	Km

DK01601

Acceptance Criteria  
0.1 to 10.0 NTU = +/- 10%

see page 1 for primary standard info.

# Instrument Calibration Log

Model Star A321

Serial Number G04430

Manufacturer: Thermo Orion

Date Purchased 11-2014

Parameter: pH/Redox/Cond

GRU Prop Tag# none

QTR: 4Q20 :used Manufacturer SOP for calibrations and \_\_\_\_\_ SOP for verifications

	Standard Concentration, ID#, Expiration Date	Unit
Standard A	<u>220 +/- 3mV, ID D192502, exp 5/31/2021</u>	<u>mV</u>
Standard B		
Standard C		

Date	Time	STD A,B,C	STD Value	Instrument Response	Dev./ P or F	Calibrated (Yes/No)	Type (Int/Cont)	Sampler Initials
10/06/20	14:50	A	220	221.0	+1.0/P	NO	Cont	Km
10/12/20	06:44	A	220	221.6	+1.6/P	NO	Cont	Km
10/12/20	14:19	A	220	220.9	+0.9/P	NO	Cont	Km
10/12/20	16:00	A	220	221.4	+1.4/P	NO	Cont	Jed
10/13/20	07:41	A	220	221.0	+1.0/P	NO	Cont	Fm
10/13/20	16:07	A	220	221.2	+1.2/P	NO	Cont	Jed
10/14/20	07:29	A	220	221.5	+1.5/P	NO	Cont	Km
10/14/20	15:22	A	220	220.7	+0.7/P	NO	Cont	Jed
10/15/20	08:07	A	220	221.3	+1.3/P	NO	Cont	Km
10/15/20	11:15	A	220	221.1	+1.1/P	NO	Cont	Km
10/19/20	07:33	A	220	221.9	+1.9/P	NO	Cont	Km
10/19/20	13:25	A	220	221.1	+1.1/P	NO	Cont	Km/d J
11/16/20	12:54	A	220	219.7	-0.3/P	NO	Cont	Km
11/17/20	15:20	A	220	<del>220.8</del>	P	NO	Cont	Km
				220.8 Km	11/19/20			
11/18/20		A	220	221.0	P	NO	Cont	Km
11/18/20	11:31	A	220	221.9	P	NO	Cont	Km

Resample  
4Q20

# 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: 4Q20 : used Manufacture SOP for calibrations and FDEP1500 SOP for verifications

	Standard Concentration, ID#, Expiration Date	Unit
Standard A	Saturation Table	mg/L
Standard B		
Standard C		

+/- 0.3 mg/L

Date	Time	STD A,B,C	STD Value	Instrument Response	Dev./ P or F	Calibrated (Yes/No)	Type (Int/Cont)	Sampler Initials
10/06/20	14:59	A	<del>21.0</del> 8.915	<del>8.59</del> 8.8	<del>0.05</del> 0.05 P	NO	cont	km
10/12/20	06:50	A	<del>18.5</del> 9.371	<del>8.29</del> 9.29	<del>0.08</del> 0.08 P	NO	cont	km
10/12/20	16:01	A	<del>30.1</del> 7.546	<del>7.47</del> 7.47	<del>-0.076</del> 0.076 P	NO	cont	km
10/13/20	07:42	A	<del>23.1</del> 8.562	<del>8.52</del> 8.52	<del>-0.04</del> 0.04 P	NO	cont	km
10/14/20	15:25	A	<del>26.5</del> 7.65	<del>7.65</del> 7.65	<del>P</del> P	NO	cont	km
10/15/20	08:08	A	<del>21.9</del> 8.74	<del>8.75</del> 8.75	<del>0.01</del> 0.01 P	NO	cont	km
10/15/20	11:16	A	<del>28.7</del> 7.732	<del>7.71</del> 7.71	<del>-0.03</del> 0.03 P	NO	cont	km
10/16/20	07:37	A	<del>23.9</del> 8.43	<del>8.44</del> 8.44	<del>0.01</del> 0.01 P	NO	cont	km
10/19/20	13:21	A	<del>28.8</del> 7.719	<del>7.75</del> 7.75	<del>0.03</del> 0.03 P	NO	cont	km / cy
Resample 4Q20								
11/16/20	13:42	A	<del>21.3</del> 8.62	<del>8.88</del> 8.88	<del>-0.26</del> 0.26 P	NO	cont	km
11/17/20	15:37	A	<del>25.9</del> 8.128	<del>8.02</del> 8.02	<del>P</del> P	NO	cont	km
11/18/20	11:23	A	<del>17.9</del> 9.53	<del>9.53</del> 9.53	<del>P</del> P	NO	cont	km
9.486 km 11/8/20								

# Deerhaven Generating Station Water Elevations

Date: 11/17/20

<u>Well</u>	<u>Time</u>	<u>MSL @TOC</u>	<u>Depth to Water</u>	<u>Time Depth Mtr Cleaned</u>	<u>Locked Arrival</u>	<u>Locked Depart.</u>
R1T6	07:46	188.95	5.28	07:45	✓	
R2T1	08:02	185.19	4.50	08:01 <sup>8 km</sup>	✓	✓
R3T7	10:02	182.55	4.68	10:02	✓	✓
R4T5	10:21	187.46	<del>10.45</del> <sup>km</sup> 10.45	10:20	✓	✓
R6T1	9:14	185.28	5.39	9:13	✓	
R6T4	8:25	183.60	3.88	8:24 <sup>8 km</sup>	✓	✓
R6T8	9:57	177.97	3.64	9:56	✓	✓
R6T12	9:49	173.38	3.61	9:48	✓	✓
R8T10	10:44	177.40	5.12	10:43 <sup>9</sup>	✓	✓
R9T5	10:30 <sup>km</sup>	184.64	5.82	10:30 <sup>km</sup>	✓	✓
R10T8	9:35	181.42	6.96	9:34	✓	✓
R11T4	9:26	178.76	4.33	9:26 <sup>9</sup>	✓	✓
SIS1	9:20 <sup>8</sup>	185.11	4.67	9:19 <sup>8</sup>	✓	✓
SIS2	10:23	183.30	5.77	10:22 <sup>km</sup>	✓	✓
SIS3	10:12	183.11	3.54	10:11	✓	✓
SIS4	10:14	183.87	5.07	10:13	✓	
LF1	8:35	185.76	5.67	8:34	✓	✓
LF2	10:05	182.33	4.37	10:04	✓	✓
LF3	9:01	183.70	4.64	10:00 <sup>km</sup>	✓	
LF4	8:59	184.83	4.87	8:58	✓	✓
LF5	8:53	184.33	5.24	8:53	✓	✓
LF6	9:46	184.59	5.63	9:45	✓	✓
LF7	8:39	185.74	6.87	8:40	✓	✓

# DGS Groundwater Sampling Log



WELL ID: <b>LF-5</b>	Location:	Latitude: <b>29°45'53.70"</b>	Longitude: <b>-82°23'59.83"</b>	MSL @ TOC Date In Service: <b>184.33 2020</b>
Quarter: <b>CCR - Dec. 2020</b>	Date: <b>12/9/20</b>	Well Type: <b>D</b>		

### Purging Data

Diameter(in) <b>2</b>	Total well depth(ft) <b>14.52</b>	Depth to water(ft) <b>5.55</b>	Well capacity(L/ft) <b>0.6</b>
Distance from TOC to top of scree <b>4.04</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>11:58</b>	
<b>Well Vol = ( 14.52 - 5.55 ) X 0.6 = 5.4 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>12:01</b>	Purge Stop time: <b>12:40</b>
			Total Volume Purged <b>13.5 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§		
1220	5.6	5.6	380	5.68	5.79	20.0	922	0.88	61.6	66.9	
1223	1.2	6.8	380	5.68	5.76	20.0	947	0.76	48.2	54.0	Yellowish/orange in color
1229	2.4	9.2	380	5.68	5.71	20.1	996	0.54	30.6	38.0	
1234	<del>1.5</del> 5.19	<del>10.7</del> 11.1	380	5.68	5.68	20.2	1021	0.43	<del>30</del> 19.3	30.8	Sulfur odor
1237	1.2	12.3	380	5.68	5.67	20.2	1036	0.41	17.3	26.2	
1240	1.2	13.5	380	5.68	5.63	20.2	1058	0.39	12.5	23.7	Turbid-particulates

◆ 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>R. Brakefield, K. Morrison</b>				Sampler(s) Signatures: <i>R. Brakefield, K. Morrison</i>			
Sampling Method: <b>PP</b>	Tube Material: <b>PP/S</b>	Sampling Started Tube Dpth(ft): <b>10'</b>	Time: <b>1243</b>	Sampling completed Tube Dpth(ft): <b>10'</b>	Time: <b>13:01</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>D20103</b> H2SO4: <b>N/A</b>				
Sample Container Specification			Sample Preservation			Intended Analysis or method	
ID:	Material	Volume(mL)	Preservative	Volume added	final pH		
D20L017-01A	PE	500	HNO3	1.0 mL	1.6	Metals: As, Ba, Be, Ca, Cd, Cr, Co, Mo, Pb, S	
D20L017-01B	PE	250	HNO3	0.5 mL	1.6	Metals: Sb, Ti, B, Li (preserved in field) *	
D20L017-01C	PE	250	Chill <6 deg	n/a	n/a	Anions: F, Cl, SO4	
D20L017-01D	PE	2000	HNO3	4 mL	1.3	Radium 226+228 Combined	
D20L017-01E	PE	<del>2000</del>	Chill <6 deg	n/a	n/a	Solids: TSS, TDS	
		<b>4000 mL</b>					

<input checked="" type="checkbox"/> Well found locked on arrival	<input checked="" type="checkbox"/> Well left locked on departure		
Temperature: <b>51° F</b>	Winds: <b>NW @ 8.1 mph</b>	Cloud Cover: <b>Clear</b>	Precip: <b>∅</b>
Remarks: <b>ACID ID# D20103 used for D20L017-01B only</b>			

# DGS Groundwater Sampling Log



WELL ID: <b>LF-6</b>	Location:	Latitude: <b>29°45'56.71"</b>	Longitude: <b>-82°23'59.75"</b>	MSL @ TOC <b>184.59</b>	Date In Service <b>2020</b>
Quarter: <b>CCR- December 2020</b>	Date: <b>12/9/20</b>	Well Type: <b>D</b>			

### Purging Data

Diameter(in) <b>2</b>	Total well depth(ft) <b>14.52</b>	Depth to water(ft) <b>5.90</b>	Well capacity(L/ft) <b>0.6</b>
Distance from TOC to top of scree <b>4.04</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>1323</b>	
<b>Well Vol = ( 14.52 - 5.90 ) 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>13:25</b>	Purge Stop time: <b>13:58</b>
			Total Volume Purged <b>12.4</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§		
13:51	9.0	9.0	380	6.23	6.23	20.8	427.8	0.87	15.1	32.6	Cloudy - Milky Sulfur Odor
13:54	1.2	11.2	380	6.23	6.21	20.8	432.4	0.74	12.1	26.4	
13:57	1.2	12.4	380	6.23	6.20	20.7	437.4	0.67	10.9	23.2	

◆ 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. 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>13:59</b>	Sampling completed Tube Dpth(ft): <b>10'</b>	Time: <b>14:28</b>		
Field Decon: <b>NO</b>	Field Filtered: <b>NO</b>	Duplicate: <b>YES NO</b>	Acid ID# <b>HNO3: D201003</b>	<b>H2SO4: _____</b>			
Sample Container Specification			Sample Preservation			Intended Analysis or method	
ID:	Material	Volume(mL)	Preservative	Volume added	final pH		
<b>D20L017-02A</b>	PE	500	HNO3	1.0 mL	<b>1.3</b>	Metals: As, Ba, Be, Ca, Cd, Cr, Co, Mo, Pb, S	
<b>D20L017-02B</b>	PE	250	HNO3	0.5 mL	<b>1.3</b>	Metals: Sb, Ti, B, Li <i>Preserved in field</i>	
<b>D20L017-02C</b>	PE	250	Chill <6 deg	n/a	n/a	Anions: F, Cl, SO4	
<b>D20L017-02D</b>	PE	2000	HNO3	4 mL		Radium 226+228 Combined	
<b>D20L017-02E</b>	<del>EPE</del>	<del>2000</del>	Chill <6 deg	n/a	n/a	Solids: TSS, TDS	
		<b>4000 mL</b>					
		<b>12/9/20</b>					

<input checked="" type="checkbox"/> Well found locked on arrival	<input checked="" type="checkbox"/> Well left locked on departure	Temperature: <b>62°F</b>	Winds: <b>10 mph</b>	Cloud Cover: <b>N/A</b>	Precip: <b>N/A</b>
Remarks: <b>ACID # D101801 used for D20L017-02B only</b>					



# 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>CCR - December 2020</b>	Date: <b>12/9/20</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>1305</b>	
<b>Well Vol = ( 0 - N/A ) X 0 = N/A L</b> 1/4 well vol. =			
Init Tubing Dpth(ft):	Final Tube Dept(ft):	Purge Start Time:	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§		

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. Brakefield, K. Morrison</b>				Sampler(s) Signatures: <i>K. Brakefield, Morrison</i>			
Sampling Method: <b>PP</b>	Tube Material: <b>PP/S</b>	Tube Dpth(ft): <b>N/A</b>	Sampling Started Time: <b>1308</b>	Tube Dpth(ft): <b>N/A</b>	Sampling completed Time: <b>1317</b>		
Field Decon: <b>NO</b>	Field Filtered: <b>NO</b>	Duplicate: <b>YES</b> (NO)	Acid ID# <b>HNO3: DC01003</b>	<b>H2SO4: N/A</b>			
Sample Container Specification			Sample Preservation			Intended Analysis or method	
ID:	Material	Volume(mL)	Preservative	Volume added	final pH		
<b>D20L017-03A</b>	<b>PE</b>	<b>500</b>	<b>HNO3</b>	<b>1.0 mL</b>	<b>1.6</b>	<b>Metals: As, Ba, Be, Ca, Cd, Cr, Co, Mo, Pb, Se</b>	
<b>D20L017-03B</b>	<b>PE</b>	<b>250</b>	<b>HNO3</b>	<b>0.5 mL</b>	<b>1.3</b>	<b>Metals: Sb, Ti, B, Li</b>	
<b>D20L017-03C</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 (preserved in field)*</b>	
<b>D20L017-03D</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>N/A</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>	

N/A Well found locked on arrival    N/A Well left locked on departure  
 Temperature: **57°F**    Winds: **NW @ 8.1 mph**    Cloud Cover: **clear**    Precip: **Ø**  
 Remarks: **EQ Blank collected @ LFS. Depth probe dipped in EQ BLK before collection. Acid ID# D20L017-03B only**  
**DIO1801 used for ↑**

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 <sup>km, 12/04/20</sup>

GRU Prop Tag# none

QTR: 4Q20 : used Manufacture SOP for calibrations and FOEP 1100 SOP for verifications

CCR LF596

	Standard Concentration, ID#, Expiration Date	Unit
Standard A	7.00, ID# DL91301, exp 6/30/21	Su
Standard B	4.00, ID# DC01301, exp 8/31/21	Su
Standard C	10.00, ID# DL91701, exp 6/30/21	Su

+/- 0.2

Date	Time	STD A,B,C	STD Value	Instrument Response	Dev./ P or F	Calibrated (Yes/No)	Type (Int/Cont)	Sampler Initials
12/04/20	13:43	A	7.00	7.01	P	yes	Int	Km
12/04/20	13:43	B	4.00	4.01	P	yes	Int	Km
12/04/20	13:43	C	10.00	10.06	P	yes	Int	Km
12/04/20	13:46	A	7.00	7.02	P	NO	Cont	Km
12/04/20	13:47	C	10.00	10.05	P	NO	Cont	Km
12/04/20	13:50	B	4.00	3.91	P	NO	Cont	Km
12/09/20	09:30	A	7.00	7.01	P	NO	Cont	Km
12/09/20	09:38	B	4.00	3.94	P	NO	Cont	Km
12/09/20	09:41	C	6.00	5.94	P	NO	Cont	Km
12/09/20	15:00	A	7.00	6.99	P	NO	Cont	Km

Stope 98.7%

DK01601



# Instrument Calibration Log

Model 2100Q

Serial Number 14100C035914

Manufacturer: Hach

Date Purchased 11-2014

Parameter: Turbidity

GRU Prop Tag# none

QTR: 4070 :used Manufacture SOP for calibrations and \_\_\_\_\_ SOP for verifications  
 CCR LF 586

	Standard Concentration, ID#, Expiration Date	Unit
Standard A	<u>2<sup>nd</sup> Gelex 5.80</u>	NTU
Standard B	<u>2<sup>nd</sup> Gelex Standard, 54.0</u>	NTU
Standard C	<u>2<sup>nd</sup> Gelex Std, 518</u>	NTU

Calibration verification Std. 0.1 NTU, ID# \_\_\_\_\_ exp. \_\_\_\_\_

Date	Time	STD A,B,C	STD Value	Instrument Response	Dev./ P or F	Calibrated (Yes/No)	Type (Int/Cont)	Sampler Initials
12/04/20	14:23	D	<0.1	0.08	P	yes	Int	Km
12/04/20	14:32	A	5.80	5.92	P	yes	Int	Km
12/04/20	14:34	B	54.0	54.0	P	yes	Int	Km
12/04/20	14:35	C	518	517	P	yes	Int	Km
12/04/20	14:35	D	<0.1	0.09	P	yes	Int	Km
12/09/20	09:32	A	5.80	5.83	P	NO	Cont	Km
12/09/20	09:33	D	<0.1	0.07	P	NO	Cont	Km
12/09/20	09:40	QC	20	20.8	P	NO	Cont	Km
12/09/20	15:07	B	54.0	54.2	P	NO	Cont	Km

12/09/20

DK01602

**\*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# DI92701, exp. 12/31/20  
 20 NTU, ID# DI92702, exp.    
 100 NTU, ID# DI92703, exp.    
 800 NTU, ID# DI92704, exp.





# Deerhaven Generating Station Water Elevations

D20L020

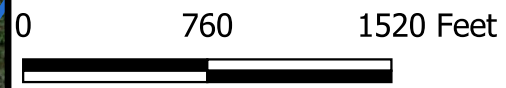
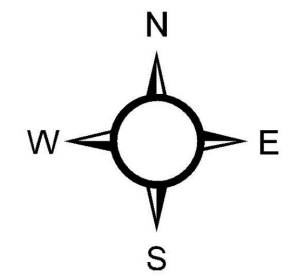
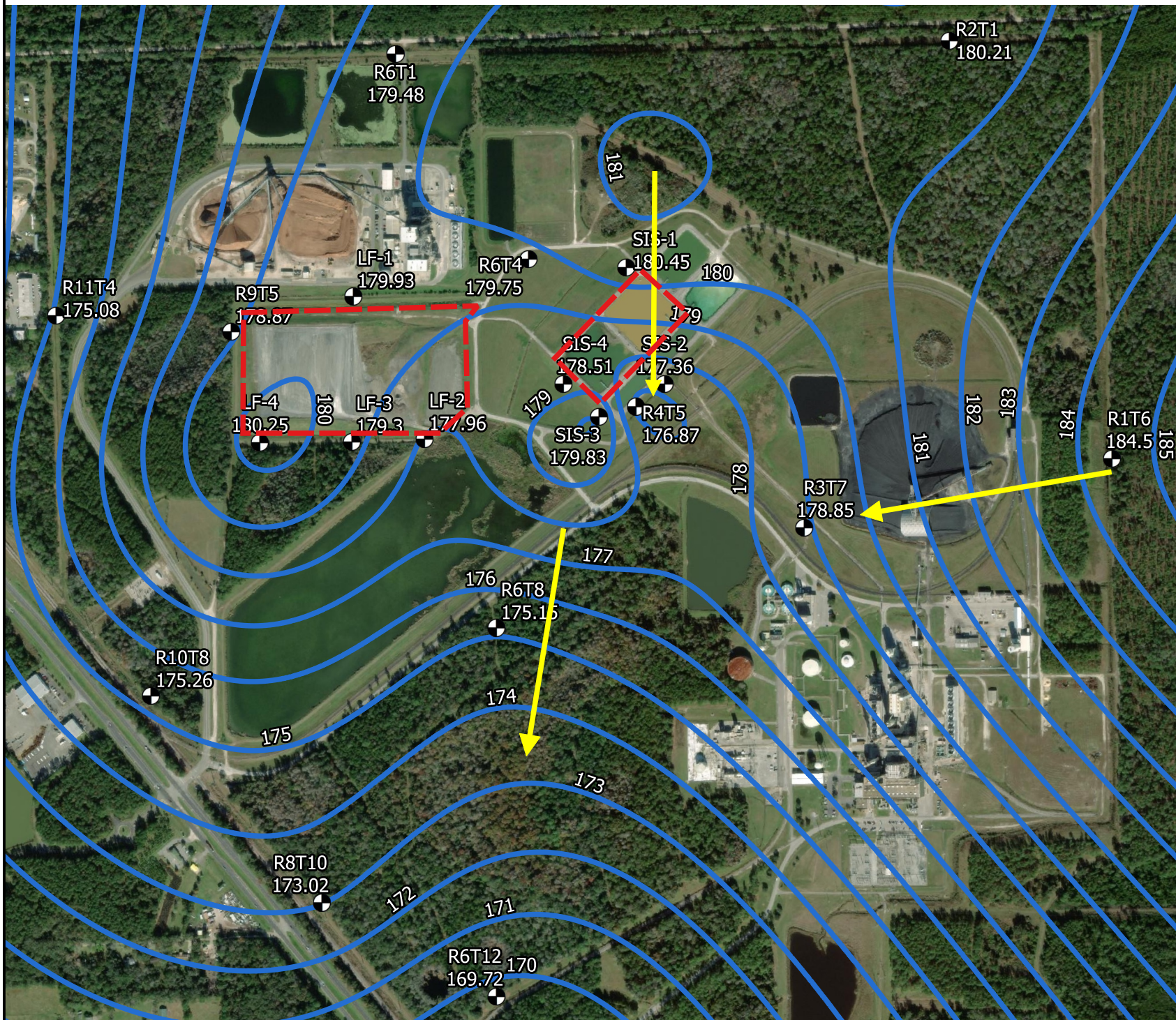
Date: 12/09/20

<u>Well</u>	<u>Time</u>	<u>MSL @TOC</u>	<u>Depth to Water</u>	<u>Time Depth Mtr Cleaned</u>	<u>Locked Arrival</u>	<u>Locked Depart.</u>
R1T6		188.95				
R2T1		185.19				
R3T7		182.55				
R4T5		187.46				
R6T1	0956	185.28	5.70	0955	✓	✓
R6T4	0948	183.60	4.19	0947	✓	✓
R6T8	0915	177.97	3.80	0914	✓	✓
R6T12		173.38				
R8T10		177.40				
R9T5	1017	184.64	6.10	1016	✓	✓
R10T8	0937	181.42	7.09	0936	✓	✓
R11T4	0929	178.76	4.83	0928	✓	✓
SIS1		185.11				
SIS2		183.30				
SIS3		183.11				
SIS4		183.87				
LF1	1010	185.76	6.17	1009	✓	✓
LF2	1033	182.33	4.62	1032	✓	✓
LF3	1025	183.70	4.83	1024	✓	✓
LF4	1021	184.83	5.06	1020	✓	✓
LF5	1200	184.33	5.55	1158	✓	✓
LF6	1324	184.59	5.90	1323	✓	✓
LF7	1014	185.74	7.28	1013	✓	✓



Attachment C  
Potentiometric Contours and Site-Wide  
Groundwater Flow Direction, January  
2020 and July 2020

# CCR Units January 2020 Annual Groundwater Monitoring and Corrective Action Report



## Legend

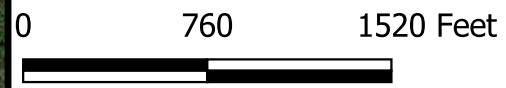
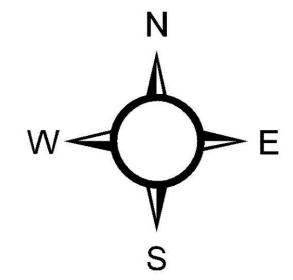
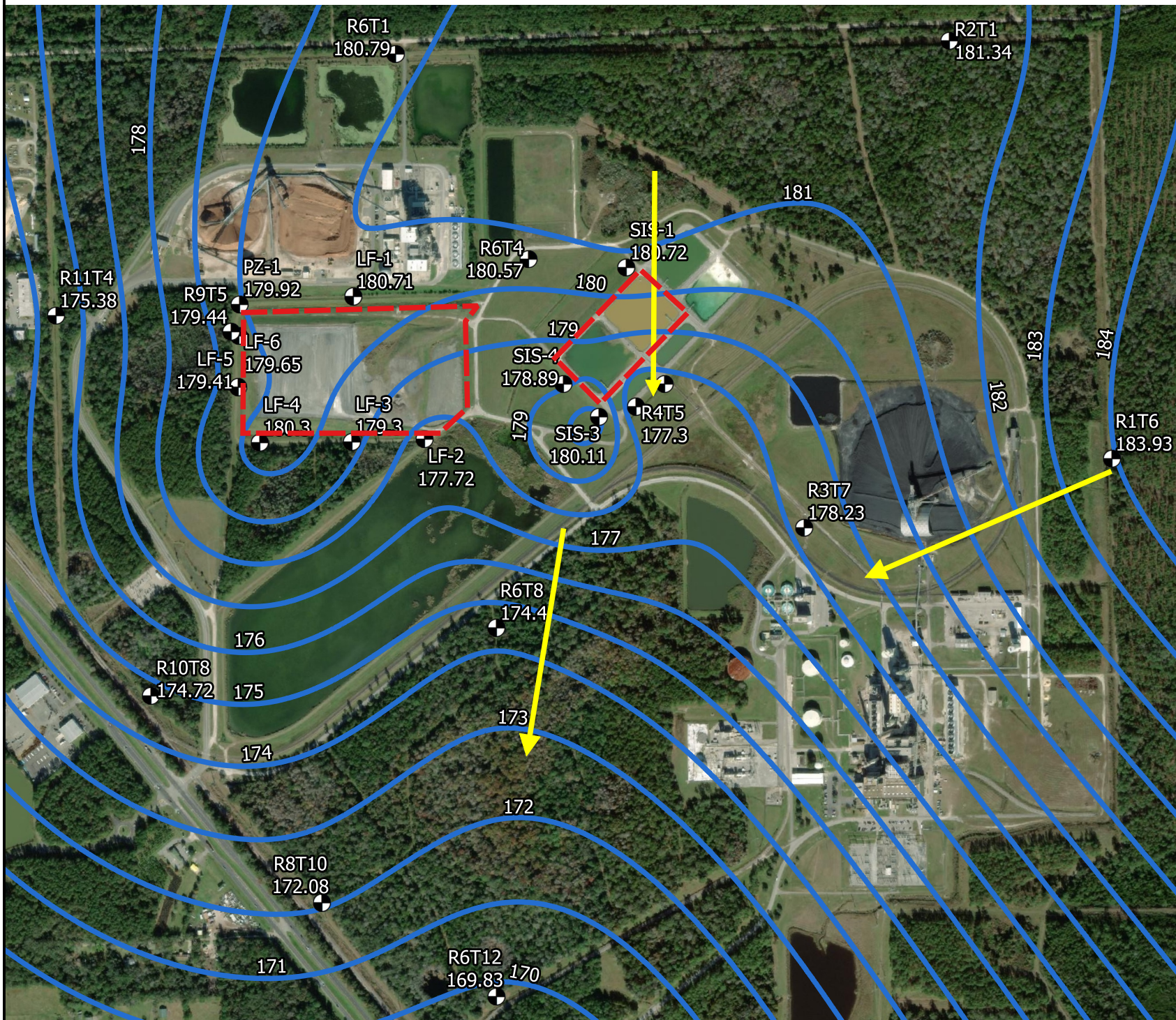
- Groundwater Wells
- Groundwater Contours
- Groundwater Flow Direction

## Approximate Groundwater Flow Direction January 13, 2020

- 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 LINER - 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 EXTENT OF THE CCR UNITS
  2. 2014 AERIAL IMAGERY FROM FLORIDA DEPARTMENT OF ENVIRONMENTAL PROJECTION LAND BOUNDARY INFORMATION SYSTEM
  3. GROUNDWATER ELEVATIONS REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988
  4. EXTENTS OF CCR UNITS ARE APPROXIMATE.

Drawn by: AD

# CCR Units July 2020 Annual Groundwater Monitoring and Corrective Action Report



## Legend

- Groundwater Wells
- Groundwater Contours
- Groundwater Flow Direction

## Approximate Groundwater Flow Direction July 20, 2020

- 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 LINER - 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 EXTENT OF THE CCR UNITS
  2. 2014 AERIAL IMAGERY FROM FLORIDA DEPARTMENT OF ENVIRONMENTAL PROJECTION LAND BOUNDARY INFORMATION SYSTEM
  3. GROUNDWATER ELEVATIONS REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988
  4. EXTENTS OF CCR UNITS ARE APPROXIMATE.

Drawn by: AD