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2021 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT

BYPRODUCT STORAGE AREA, C.D. MCINTOSH POWER PLANT

Prepared for

Lakeland Electric

501 East Lemon Street Lakeland, Florida 33801

Prepared by

Geosyntec Consultants, Inc. 12802 Tampa Oaks Blvd Suite 151 Tampa, Florida 33637

Project FR3715B

January 27, 2022



2021 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT

Byproduct Storage Area, C.D. Mcintosh Power Plants

This 2021 Annual Groundwater Monitoring and Corrective Action Report for the Byproduct Storage Area at C.D. McIntosh Power Plant has been prepared to meet the requirements of 40 Code of Federal Regulations §257.90(e)

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Lane Dorman, P.G. Principal Hydrogeologist Todd K. Kafka, P.G. Senior Principal Hydrogeologist

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EXECUTIVE SUMMARY

In accordance with the United States Environmental Protection Agency ("USEPA") coal combustion residuals ("CCR") rule (40 Code of Federal Regulations ("CFR") Part 257, Subpart D: Standards for the Disposal of Coal Combustion Residuals in Landfills and Surface Impoundments) ("CCR Rule"), this 2021 Annual Groundwater Monitoring and Corrective Action Report documents CCR unit groundwater monitoring activities completed in 2021 at the Lakeland Electric ("LE") C.D. McIntosh Power Plant ("MPP") Byproduct Storage Area ("BSA").

LE established a CCR unit groundwater monitoring well network to monitor groundwater quality within the uppermost aquifer in the vicinity of the BSA. Monitoring wells currently in the CCR unit groundwater monitoring well network are listed below:

- background wells (2): CCR-1 and CCR-2;
- downgradient wells (9): CCR-4, CCR-5, CCR-6, CCR-7, CCR-8, CCR-9, CCR-11, CCR-12, and CCR-13.

Statistical evaluation of CCR unit groundwater monitoring data collected through October 2017 identified statistically significant increases ("SSIs") of certain CCR Rule Appendix III groundwater monitoring constituents above background concentrations [boron, calcium, fluoride, pH, sulfate, and total dissolved solids ("TDS")]. In accordance with the CCR Rule, LE initiated an assessment monitoring program for the BSA in April 2018 and continued assessment monitoring activities through 2021 and conducted an alternate source demonstration ("ASD") for total radium in June 2019 to document that total radium SSLs are not associated with a release from the BSA. As a result of the ASD, groundwater samples have not been analyzed for total radium thereafter. Semi-annual assessment monitoring was conducted in January and July 2021 and included CCR Rule Appendix III and Appendix IV constituents.

Appendix IV analytical data from the January and July 2021 sampling events were evaluated in accordance with the *Statistical Analysis Plan* (Golder, 2017b). The analyses indicated statistically significant levels ("SSLs") of the following Appendix IV constituents above applicable groundwater protection standards:

CCI Comptitue	Semi-annual assessment monitoring event								
SSL Constituent	Janua	ary 2021	July 2021						
Arsenic	CCR-11	CCR-12	CCR-11	CCR-12					
Lithium	CCR-5 CCR-6	CCR-9 CCR-13	CCR-5 CCR-6	CCR-9 CCR-13					

Geosyntec consultants

LE initiated assessment of corrective measures ("ACM") in January 2019 which was completed in June 2019. In 2021, LE continued to evaluate groundwater corrective measures to support remedy selection for groundwater downgradient of the BSA. LE conducted the public meeting required in 40 CFR §257.96(e) on February 3, 2021. Following receipt of public input, LE finalized the remedy selection report for the BSA on March 31, 2021, which documented a remedy consisting of source control, including beneficial off-site use of CCR, and capping and closing the BSA in place following shutdown of Unit No. 3. Until the remedy is in place, LE will continue cleaning and maintaining the perimeter stormwater ditch to remove residual CCR; these activities continued in 2021. LE has been moving forward with an evaluation of various closure options for eventual design and implementation.

LE continued evaluating the nature and extent of arsenic and lithium SSLs in groundwater downgradient of the BSA. Delineation activities completed in 2021 included January and July sampling of delineation monitoring wells CCR-15 through CCR-23 and property boundary well SW-106. The extent of these SSLs was previously delineated to the GWPS and State of Florida surface water standards in 2019 at the nearest surface water bodies, specifically Lakes B, C, and D for lithium, and Fish Lake for arsenic. Furthermore, arsenic and lithium have not been detected in 2021 groundwater samples collected at monitoring well SW-106 located at the downgradient MPP property boundary.

In 2022, the BSA will remain in assessment monitoring.



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1. INTRODUCTION

1.1 Overview

On behalf of Lakeland Electric ("LE"), Geosyntec Consultants, Inc. ("Geosyntec") prepared this 2021 Annual Groundwater Monitoring and Corrective Action Report for the Byproduct Storage Area ("BSA") at the C.D. McIntosh Jr. Power Plant ("MPP" or "Site"). The purpose of this report is to present a summary of coal combustion residual ("CCR") unit groundwater monitoring activities conducted in 2021 in accordance with the annual reporting requirements of the United States Environmental Protection Agency ("USEPA") coal combustion residuals ("CCR") rule (40 Code of Federal Regulations Part 257 ("CFR"), Subpart D: Standards for the Disposal of Coal Combustion Residuals in Landfills and Surface Impoundments) ("CCR Rule"), Section 257.90(e).

The Site is located at 3030 East Lake Parker Drive in Lakeland, Florida. A Site location map is provided as **Figure 1**. The Site is bordered by undeveloped lakes and marsh land to the north and east and Lake Parker to the south and west. The undeveloped lakes and marsh land were created from phosphate mining in the late 1960's to early 1970's. The BSA is in the eastern portion of the Site and encompasses approximately 44 acres.

1.2 Regional Geology & Hydrogeologic Setting

The regional geology and hydrogeology were presented in the 2019 Assessment of Corrective Measures Report and 2019 Annual Groundwater Monitoring and Corrective Action Report (Golder, 2019a and b). A brief summary is included here. Geologic units present near the MPP include (in descending order; youngest to oldest):

- Holocene to Pliocene-age sands and clays up to 25 feet thick occur in the Lakeland area (Florida Geological Survey, 1991);
- The clayey-sand soils of the Miocene to Oligocene-age Hawthorn Group underly the Holocene to Pliocene sands with an approximate thickness of 40 to 60 ft in the vicinity of the MPP (Cathcart, 1964); and
- Older units, comprised primarily of limestone and/or dolostone, underlying the Hawthorn group in the region include the Suwannee Limestone, Ocala Limestone, Avon Park Formation, and Oldsmar Formation.

The regional and Site-specific hydrogeology is comprised of three major hydrostratigraphic units: the unconfined surficial aquifer, the intermediate aquifer/confining unit, and the Floridan aquifer. The surficial aquifer represents the "uppermost aquifer" as defined in the CCR Rule. Groundwater flow in the surficial aquifer at the Site generally flows from topographic highs to topographic lows discharging to the numerous lakes surrounding the Site (Golder, 2005). Groundwater in the vicinity of the BSA has been observed to flow radially away from the BSA, with flow to the north toward Lake B, to the west toward Fish Lake, and to the east toward Lakes C and D. There is a smaller component of groundwater flow in the surficial aquifer that is vertically downgradient toward the intermediate confining unit and Floridan aquifer. This vertical flow component is restricted by the clayey materials of the intermediate confining unit.

1.3 CCR Unit and Groundwater Monitoring System Descriptions

The BSA CCR unit encompasses approximately 44 acres and receives CCR generated by Unit 3. Pursuant to the CCR Rule, LE installed a CCR unit groundwater monitoring system around the BSA to monitor groundwater within the uppermost aquifer at the Site (Golder, 2017a). Background monitoring wells were installed upgradient of the Site to establish Site-wide background water quality. The downgradient monitoring well network was installed at the waste boundary. The BSA groundwater monitoring network is comprised of the following wells:

- background wells (2): CCR-1 and CCR-2;
- downgradient wells (9): CCR-4, CCR-5, CCR-6, CCR-7, CCR-8, CCR-9, CCR-11, CCR-12, and CCR-13.

CCR constituent concentrations at CCR-3, CCR-10, and CCR-14 have been below CCR Rule groundwater protection standards ("GWPS") for at least the past five semi-annual groundwater monitoring events, and these wells are not needed to evaluate the nature and extent of CCR constituent detections at other wells. Therefore, following the January 2021 sampling event, CCR-3, CCR-10, and CCR-14 were removed from the CCR unit monitoring well network and will be utilized moving forward as piezometers to supplement groundwater flow interpretations.

As previously reported in February 2019, LE installed vertical and horizontal delineation wells (CCR-15 through CCR-23) to evaluate the nature and extent of identified statistically significant levels ("SSLs") of CCR Rule Appendix IV constituents (Golder, 2019b). In 2021, LE sampled the vertical and horizontal delineation wells around the BSA and the additional downgradient property boundary well SW-106. These samples were analyzed for select CCR Rule Appendix IV constituents.

Monitoring well details, including installation dates, coordinates, elevations, screen intervals, and designations are summarized in **Table 1**. The CCR unit groundwater monitoring network and delineation wells for the BSA are depicted on **Figure 2**.

2. GROUNDWATER MONITORING AND OTHER ACTIVITIES

Groundwater samples were collected in 2021 from monitoring wells in the CCR unit groundwater monitoring network and delineation wells (**Figure 2**). A summary of these groundwater sampling events is provided in **Table 2**. Analytical data associated with these events are summarized in **Table 3** and laboratory analytical reports are included in **Appendix A**.

2.1 Monitoring Well Installation and Maintenance

No additional monitoring wells or piezometers were installed at the BSA in 2021. Monitoring well conditions were adequate for their intended purpose in 2021.

2.2 Monitoring Well Abandonment

No monitoring well abandonment activities were completed at the BSA in 2021.

2.3 Semi-Annual Assessment Monitoring Events

Semi-annual assessment monitoring events were conducted in January and July 2021. During the 2021 semi-annual assessment monitoring events, groundwater samples were collected from CCR unit monitoring wells and analyzed for Appendix III and Appendix IV constituents. A groundwater sample was collected from CCR-3 during the January 2021 monitoring event; based on the analytical results, CCR-3 was removed from the CCR unit monitoring well network prior to the July 2021 CCR unit monitoring event and therefore was not sampled in July 2021. Groundwater samples were collected from select delineation wells (CCR-15 through CCR-23 and SW-106) and analyzed for a subset of the Appendix III and Appendix IV constituents. Groundwater samples were collected from monitoring well locations shown on **Figure 2**.

2.4 CCR Unit Maintenance Activities

In addition to completing two semi-annual groundwater assessment monitoring events, LE continued to maintain the BSA perimeter ditch by removing accumulated CCR.

2.5 Corrective Measures and Remedy Design

LE completed an assessment of corrective measures ("ACM") in June 2019 in accordance with 40 CFR §257.96(a). LE continued to evaluate groundwater corrective measures to support remedy selection for groundwater downgradient of the BSA in 2020 and 2021. LE conducted the public meeting required in 40 CFR §257.96(e) on February 3, 2021. Following receipt of public input, LE submitted the *Remedy Selection Report Byproduct Storage Area* to document a remedy consisting of source control, including beneficial off-site use of CCR material and capping and closing the BSA in place following the shutdown of Unit No. 3 (Geosyntec, 2021). LE has been moving forward with an evaluation of various closure options for eventual design and implementation in addition to performing maintenance and cleanout activities in the perimeter ditch as needed.

3. SAMPLE METHODOLOGY & RESULTS

The following section describes the methods used to conduct CCR unit groundwater monitoring at the BSA, including groundwater level gauging and delineation well sampling. Results for Appendix IV constituents are discussed in Section 4.

3.1 Groundwater Elevation Measurement

During CCR unit groundwater sampling events, depth to groundwater measurements were recorded from the CCR unit groundwater monitoring wells, delineation wells, and piezometers. These measurements were converted to elevations and are summarized in **Table 4**. Site-wide groundwater elevation contour maps developed for the first and second semi-annual assessment monitoring events in January and July 2021 are presented on **Figure 3** and **Figure 4**, respectively. Shallow groundwater beneath the BSA generally flows in a semi-radial pattern towards the surrounding lakes. Shallow groundwater flow patterns observed during 2021 assessment monitoring events were generally consistent with historical observations.

3.2 Groundwater Sampling

Groundwater samples were collected in general accordance with the CCR Rule. Water quality parameters (pH, conductivity, dissolved oxygen, temperature, and turbidity) were documented during well purging to evaluate stabilization prior to sampling. Following sample collection, samples were placed in ice-packed coolers and submitted for laboratory analysis following chain-of-custody protocol. Field sampling data sheets are provided in **Appendix A**.

3.3 Nature and Extent Sampling

Groundwater samples were collected from relevant nature and extent ("N&E") wells during semi-annual assessment monitoring events to assess the nature and extent of lithium and arsenic (i.e., constituents with SSLs).

During the January and July 2021 semi-annual assessment monitoring events:

- LE sampled N&E wells CCR-20 and CCR-21 to assess the horizontal extent of arsenic at CCR-11 and CCR-12, respectively.
- LE sampled N&E wells CCR-16, CCR-17, CCR-19, and CCR-22 to assess the horizontal extent of lithium at CCR-5, CCR-6, CCR-9, and CCR-13, respectively.
- LE sampled N&E well SW-106 to evaluate GWPS compliance at the downgradient property boundary.

Lithium and arsenic concentrations at N&E wells CCR-16, CCR-20, and CCR-22 were delineated in 2019 at the nearest surface water bodies, specifically Lakes B, C, and D for lithium, and Fish Lake for arsenic, and have not been detected at the downgradient MPP property boundary well SW-106 during either January or July 2021 semi-annual assessment monitoring events.

3.4 Laboratory Analyses

Laboratory analyses for groundwater samples collected during the January and July 2021 semiannual assessment monitoring events included both Appendix III and Appendix IV constituents. Applicable constituents and analytical methods are provided in laboratory reports in **Appendix A**.

3.5 Quality Assurance & Quality Control Summary

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

Groundwater quality data from July 2021 in this report were independently validated in accordance with USEPA guidance (USEPA, 2011) and the analytical methods. Data validation generally consisted of reviewing sample integrity, holding times, laboratory method blanks, laboratory control samples, matrix spikes/matrix spike duplicate recoveries and relative percent differences ("RPDs"), laboratory duplicate RPDs, equipment blanks, and reporting limits. Where appropriate, validation qualifiers and flags are applied to the data using USEPA procedures as guidance (USEPA, 2017). Data validation reports for the January and July 2021 semi-annual assessment monitoring events are included in **Appendix A**.

4. STATISTICAL ANALYSIS

The following section describes the statistical methods and analyses performed in 2021.

4.1 Statistical Methods

Statistical analysis of Appendix IV constituents was performed on CCR unit groundwater monitoring data collected during the January and July 2021 semi-annual assessment monitoring events in accordance with the *Statistical Analysis Plan* (Golder, 2017b). The *Statistical Analysis Plan* describes Site-specific statistical methods that were used to evaluate CCR unit groundwater data. In accordance with the CCR Rule, GWPS for Appendix IV constituents were established and are presented in **Table 5**.

To evaluate SSLs of Appendix IV constituents, a confidence interval approach was used to evaluate if downgradient groundwater concentrations in January and July 2021 were above the GWPS at statistically significant levels. As recommended in the *Statistical Analysis of Groundwater Data at RCRA Facilities, Unified Guidance*, a confidence interval around the mean was employed for normal or normalized data (USEPA, 2009). If the downgradient well data is not normally distributed and cannot be transformed to a normal distribution, the non-parametric confidence interval around the median was employed. There is evidence of an SSL if the lower confidence limit ("LCL") exceeds the GWPS at the 95% confidence level.

4.2 Appendix IV Constituents Statistical Analysis Results

Analytical data from the January and July 2021 semi-annual assessment monitoring events were analyzed in accordance with the *Statistical Analysis Plan*. Appendix IV constituent data collected in January and July 2021 were evaluated statistically to evaluate exceedances of the established GWPS. Statistical results associated with the January and July 2021 data are included in **Appendix B** and **Appendix C**, respectively.

Based on the statistical analysis of Appendix IV constituents, the following CCR unit monitoring wells exhibited SSLs for arsenic or lithium:

SSL Constituent	Semi-annual assessment monitoring event						
	January 2021	July 2021					
A	CCR-11	CCR-11					
Arsenic	CCR-12	CCR-12					
	CCR-5	CCR-5					
	CCR-6	CCR-6					
Lithium	CCR-7	CCR-7					
	CCR-9	CCR-9					
	CCR-13	CCR-13					

5. ALTERNATE SOURCE DEMONSTRATION

In accordance with the CCR Rule, LE prepared an alternate source demonstration ("ASD") for total radium (**Appendix D**). The key conclusions of the ASD are briefly summarized below:

- Radionuclides including radium-226 and radium-228 (total radium) are naturally occurring in the study area and are associated with minerals in the phosphate matrix that was mined by the phosphate mining industry during the 1970s at the BSA prior to its construction:
- Uranium concentrations in phosphate-bearing rocks exhibit typical uranium concentrations of up to 300 parts per million, which is approximately 1 to 2 orders of magnitude higher than U.S. coals and fly ash, respectively (USGS, 1997); and
- Detailed mineralogical assessment of the underlying soils conducted by Petrologic Solutions, Inc. revealed significant uranium and other accessory constituents associated with the phosphate ore mined at and near the BSA.

Due to the abundance of naturally occurring uranium in sediments underlying the MPP, LE ceased analysis of total radium in CCR unit groundwater samples collected following 2019.

6. CONCLUSIONS AND FUTURE ACTIONS

In accordance with the CCR Rule, LE continued assessment monitoring in 2021. Statistical analysis identified SSLs of arsenic and lithium downgradient of the BSA. An ASD was prepared in 2019 for total radium SSLs, which documents that a source other than the BSA caused the total radium SSLs. Monitoring well data collected in 2021 indicated SSLs remain in groundwater for arsenic (CCR-11 and CCR-12) and lithium (CCR-5, CCR-6, CCR-9, and CCR-13). The extent of these SSLs was previously delineated to the GWPS and State of Florida surface water standards in 2019 at the nearest surface water bodies, specifically Lakes B, C, and D for lithium, and Fish Lake for arsenic. Furthermore, arsenic and lithium have not been detected in 2021 groundwater samples collected at monitoring well SW-106 located at the downgradient MPP property boundary.

In 2021, LE continued to evaluate groundwater corrective measures to support remedy selection for groundwater downgradient of the BSA. LE conducted the public meeting required in 40 CFR §257.96(e) on February 3, 2021. Following receipt of public input, LE submitted the *Remedy Selection Report Byproduct Storage Area* to document a remedy consisting of source control, including beneficial off-site use of CCR, and capping and closing the BSA in place following the shutdown of Unit No. 3 (Geosyntec, 2021). LE has been moving forward with an evaluation of various closure options for eventual design and implementation and performing maintenance and cleanout activities in the perimeter ditch on an as-needed basis in 2021 in the interim.

Assessment monitoring will continue in 2022. Evaluation of BSA closure options is ongoing and is expected to be finalized in 2022 followed by closure design.

7. REFERENCES

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TABLE 1: GROUNDWATER MONITORING LOCATION DETAILS Lakeland Electric - C.D. McIntosh Power Plant, Polk County, Florida

Monitoring Location	Installation Date	Northing	Easting	Ground Elevation	Top of Casing Elevation	Top of Screen Elevation	Bottom of Screen Elevation	Designation
	•		CCR Gro	undwater Mor		rk		
CCR-1	6/24/2016	1362405.2	681287.2	138.3	141.30	122.6	113.1	Background
CCR-2	6/23/2016	1362203.9	681787.6	137.6	140.57	121.9	112.4	Background
CCR-4	6/24/2016	1362450.0	683042.7	140.3	143.13	124.7	115.2	Monitoring
CCR-5	6/22/2016	1362716.0	683376.9	138.6	141.07	122.4	112.9	Monitoring
CCR-6	6/22/2016	1363168.4	683578.6	138.5	141.34	122.8	113.3	Monitoring
CCR-7	6/22/2016	1363631.9	683772.2	139.1	142.10	123.4	113.9	Monitoring
CCR-8	6/22/2016	1363917.6	683411.6	139.4	142.12	123.5	114.0	Monitoring
CCR-9	6/21/2016	1364085.2	683045.3	138.6	141.67	123.1	113.6	Monitoring
CCR-11	6/20/2016	1363835.5	682577.2	134.3	137.12	118.7	109.2	Monitoring
CCR-12	6/20/2016	1363353.1	682430.5	134.1	136.99	118.4	108.9	Monitoring
CCR-13	6/21/2016	1362936.6	682164.1	135.0	137.95	119.4	109.9	Monitoring
		Gro	undwater Mon	itoring Location	ons for Nature	and Extent	•	
CCR-15	2/18/2019	1362341.3	683123.5	141.8	144.65	126.4	116.8	Delineation
CCR-16	2/18/2019	1362533.2	683385.6	141.2	144.10	125.9	116.3	Delineation
CCR-17	2/19/2019	1363019.9	683712.7	142.9	145.80	127.5	117.9	Delineation
CCR-18	2/18/2019	1363631.1	683869.7	138.2	140.81	122.6	113.0	Delineation
CCR-19	2/15/2019	1364205.4	683064.5	133.8	136.47	118.3	108.7	Delineation
CCR-20	2/14/2019	1363855.5	682474.9	133.1	136.05	118.2	108.6	Delineation
CCR-21	2/13/2019	1363454.0	682331.4	134.5	137.12	118.9	109.3	Delineation
CCR-22	2/13/2019	1363017.4	682078.7	134.0	137.51	119.2	109.6	Delineation
CCR-23	2/12/2019	1362812.1	681744.7	136.2	135.78	121.1	111.5	Delineation
SW-106								Delineation
MW-24S								Delineation
MW-25S								Delineation
			Gı	roundwater Pic	ezometers			
CCR-3	6/23/2016	1362334.6	682451.3	137.5	137.04	121.6	112.2	Piezometer
CCR-10R	3/13/2018	1364262.1	682706.3	133.8	133.56	119.2	109.7	Piezometer
CCR-14	6/21/2016	1362771.1	681761.2	135.8	138.70	120.4	110.9	Piezometer

- 1. Northing and easting are in feet relative to the State Plane Florida North Datum of 1983.
- 2. Elevations are in feet relative to the North American Vertical Datum of 1988.
- 3. "--" indicates not available.

TABLE 2: SUMMARY OF 2021 GROUNDWATER SAMPLING EVENTS Lakeland Electric - C.D. McIntosh Power Plant, Polk County, Florida

Monitoring Location	2021 Semi-Annual Assessment Monitoring Event 1	2021 Semi-Annual Assessment Monitoring Event 2
	CCR Groundwater Monitorin	ng Network
CCR-1	1/25/2021	7/22/2021
CCR-2	1/25/2021	7/22/2021
CCR-3	1/25/2021	NS
CCR-4	1/25/2021	7/22/2021
CCR-5	1/25/2021	7/27/2021
CCR-6	1/25/2021	7/27/2021
CCR-7	1/26/2021	7/27/2021
CCR-8	1/26/2021	7/28/2021
CCR-9	1/26/2021	7/28/2021
CCR-11	1/26/2021	7/29/2021
CCR-12	1/26/2021	7/28/2021
CCR-13	1/26/2021	7/28/2021
Groundw	ater Monitoring Locations fo	r Nature and Extent
CCR-15	1/28/2021	7/22/2021
CCR-16	1/28/2021	7/22/2021
CCR-17	1/28/2021	7/26/2021
CCR-18	1/27/2021	7/26/2021
CCR-19	1/27/2021	7/26/2021
CCR-20	1/27/2021	7/26/2021
CCR-21	1/27/2021	7/26/2021
CCR-22	1/27/2021	7/26/2021
CCR-23	1/28/2021	7/29/2021
SW-106	1/28/2021	7/29/2021
MW-24S	1/13/2021	7/14/2021
MW-25S	1/13/2021	7/13/2021

Notes:

1. "NS" indicates not sampled

TABLE 3: SUMMARY OF 2021 GROUNDWATER LABORATORY ANALYTICAL DATA Lakeland Electric - C.D. McIntosh Power Plant, Polk County, Florida

Monitoring Location	Well Designation	Sample Date	Antimony (mg/L)	Arsenic (mg/L)	Barium (mg/L)	Beryllium (mg/L)	Boron (mg/L)	Cadmium (mg/L)	Calcium (mg/L)	Chloride (mg/L)	Chromiu m (mg/L)	Cobalt (mg/L)	Combined Radium (pCi/L)	Fluoride (mg/L)	Lead (mg/L)	Lithium (mg/L)	Mercury (mg/L)	Molybdenum (mg/L)	pH (SU)	Selenium (mg/L)	Sulfate (mg/L)	TDS (mg/L)	Thallium (mg/L)
CCD 1	D . 1 1	1/25/2021	0.00511.11	0.00221.11	0.00002.1	0.00202.11	0.0515	0.0020 11	20.6		_		,	0.066	0.00415.11	0.00272.11	0.00012.11	0.00672.1	6.20	0.0024611	26.4	1.62	0.000025.11
CCR-1	Background	1/25/2021	0.00511 U	0.00221 U	0.00893 J	0.00283 U	0.0515	0.0028 U	39.6	3.12	0.0037 U	0.000361 U	NA	0.066	0.00415 U	0.00272 U	0.00012 U	0.00672 J	6.30	0.00346 U	36.4	163	0.000925 U
CCR-2	Background	1/25/2021	0.00511 U	0.00221 U	0.0206	0.00283 U	0.065	0.0028 U	60.2	16.5	0.0037 U	0.000361 U	NA	0.112	0.00415 U	0.00272 U	0.00012 U	0.00591 J	5.30	0.00346 U	128	308	0.000925 U
CCR-3	Monitoring	1/25/2021	0.00511 U	0.00221 U	0.0235	0.00283 U	0.788	0.0028 U	485	15.9 J	0.0037 U	0.000361 U	NA	0.232	0.00415 U	0.00272 U	0.00012 U	0.0134	5.45	0.00346 U	1080	1840	0.000925 U
CCR-4	Monitoring	1/25/2021	0.00511 U	0.00221 U	0.311	0.00283 U	0.647	0.00366 J	1550	3930	0.0037 U	0.0027	NA	0.325	0.00415 U	0.135	0.00012 U	0.0161	3.84	0.00346 U	929	8380	0.000925 U
CCR-5	Monitoring	1/25/2021	0.00511 U	0.00221 U	0.0753	0.00283 U	0.648	0.0028 U	2090	5430 J	0.0037 U	0.000361 U	NA	0.145	0.00415 U	4.09	0.00012 U	0.0234	5.10	0.00346 U	556	972	0.000925 U
CCR-6	Monitoring	1/25/2021	0.00511 U	0.00221 U	0.0306	0.00283 U	0.580	0.0028 U	547	966	0.0037 U	0.000361 U	NA	0.266	0.00415 U	0.784	0.00012 U	0.0234	6.02	0.00346 U	654	2780	0.000925 U
CCR-7	Monitoring	1/26/2021	0.00511 U	0.00221 U	0.0161 J	0.00283 U	0.747	0.0028 U	165	107	0.0037 U	0.000361 U	NA	0.174	0.00415 U	0.0537	0.00012 U	0.0858 J	4.74	0.00346 U	460	939	0.000925 U
CCR-8	Monitoring	1/26/2021	0.00511 U	0.0079	0.0329	0.00283 U	0.119	0.0028 U	118	3.71 J	0.0037 U	0.0012	NA	0.298	0.00415 U	0.0491	0.00012 U	0.0238	6.40	0.00346 U	156	393	0.000925 U
CCR-9	Monitoring	1/26/2021	0.00511 U	0.0056	0.062	0.00283 U	0.429	0.0028 U	677	886	0.0037 U	0.000361 U	NA	0.236	0.00415 U	0.0705	0.00012 U	0.013	5.03	0.00346 U	1110	3210	0.000925 U
CCR-11	Monitoring	1/26/2021	0.00511 U	0.0544	0.0525	0.00283 U	0.374	0.0028 U	631	833	0.0037 U	0.000361 U	NA	1.04	0.00415 U	0.00272 U	0.00012 U	0.0132	4.35	0.00346 U	1530	3720	0.000925 U
CCR-12	Monitoring	1/26/2021	0.00511 U	0.199	0.0216	0.00283 U	0.423	0.0028 U	675	26.2	0.0037 U	0.000361 U	NA	0.716	0.00415 U	0.00272 U	0.00012 U	0.0368	6.50	0.00346 U	1520	2570	0.000925 U
CCR-13	Monitoring	1/26/2021	0.00511 U	0.00221 U	0.0461	0.00283 U	0.201	0.0028 U	517	315	0.0037 U	0.0034	NA	1.59	0.00415 U	0.222	0.00012 U	0.0109	3.99	0.00346 U	1410	2710	0.000925 U
CCR-15	Delineation	1/28/2021	0.00511 U	0.00221 U	0.0603	0.00283 U	0.087	0.0028 U	95.6	72.8	0.0037 U	0.000361 U	NA	0.093	0.00415 U	0.00272 U	0.00012 U	0.00706 J	3.84	0.00346 U	176	366	0.000925 U
CCR-16	Delineation	1/28/2021	0.00511 U	0.00221 U	0.124	0.00283 U	0.545	0.0028 U	890	2440	0.0037 U	0.000361 U	NA	0.017 U	0.00415 U	0.0453	0.00012 U	0.0161	3.77	0.00346 U	1170	6050	0.000925 U
CCR-17	Delineation	1/28/2021	0.00511 U	0.00900	0.00503 U	0.00283 U	0.148	0.0028 U	162	68.1	0.0037 U	0.000361 U	NA	0.042	0.00415 U	0.00272 U	0.00012 U	0.0115	6.36	0.00346 U	229	680	0.000925 U
CCR-18	Delineation	1/27/2021	0.00511 U	0.00221 U	0.00503 U	0.00283 U	0.0447	0.0028 U	73.3	2.02	0.0037 U	0.000361 U	NA	0.307	0.00415 U	0.00272 U	0.00012 U	0.00982 J	6.43	0.00346 U	21.6	274	0.000925 U
CCR-19	Delineation	1/27/2021	0.00511 U	0.00221 U	0.113	0.00283 U	0.325	0.0028 U	695	1230	0.0037 U	0.000361 U	NA	1.74	0.00415 U	0.00272 U	0.00012 U	0.0119	4.21	0.00346 U	1200	4040	0.000925 U
CCR-20	Delineation	1/27/2021	0.00511 U	0.0715	0.0632	0.00283 U	0.604	0.0028 U	506	511	0.0037 U	0.000361 U	NA	0.242	0.00415 U	0.00272 U	0.00012 U	0.0126	4.78	0.00346 U	1610	3310	0.000925 U
CCR-21	Delineation	1/27/2021	0.00511 U	0.00221 U	0.0455	0.00283 U	0.385	0.0028 U	464	27.6	0.0037 U	0.000361 U	NA	0.698	0.00415 U	0.0368	0.00012 U	0.0364	6.20	0.00346 U	861	1660	0.000925 U
CCR-22	Delineation	1/27/2021	0.00511 U	0.00221 U	0.0252	0.00283 U	0.418	0.0028 U	342	71.1	0.0037 U	0.000361 U	NA	0.704	0.00415 U	0.0993	0.00012 U	0.0118	4.38	0.00346 U	982	1630	0.000925 U
CCR-23	Delineation	1/28/2021	0.00511 U	0.00221 U	0.009 J	0.00283 U	0.770	0.0028 U	314	67	0.0037 U	0.000361 U	NA	0.4	0.00415 U	0.00272 U	0.00012 U	0.00848 J	5.12	0.00346 U	774	1260	0.000925 U
SW-106	Delineation	1/28/2021	0.00511 U	0.00221 U	0.0173 J	0.00283 U	0.0329	0.0028 U	14	1.75	0.0037 U	0.000361 U	NA	0.011	0.00415 U	0.00272 U	0.00012 U	0.00595 J	5.70	0.00346 U	10.1	106	0.000925 U
MW-24S	Delineation	1/13/2021	NA	0.00221 U	NA	NA	NA	0.0028 U	NA	12.7	0.0037 U	NA	NA	NA	NA	NA	NA	NA	6.11	0.00346 U	39	229	NA
MW-25S	Delineation	1/13/2021	NA	0.00221 U	NA	NA	NA	0.0028 U	NA	44.8	0.0037 U	NA	NA	NA	NA	NA	NA	NA	5.79	0.00346 U	405	750	NA
										Semi-Ann	ual Assessmo	ent Monitoring	Event 2										
CCR-1	Background	7/22/2021	0.00511 U	0.00221 U	0.00730	0.000101 U	0.0434	0.000181 U	53.3	3.13	0.00120 J	0.000361 U	NA	0.0950	0.00119 U	0.00272 U	0.000120 U	0.00200 J	5.81	0.00346 U	56.7	210	0.000925 U
CCR-2	Background	7/22/2021	0.00511 U	0.00221 U	0.0117	0.000101 U	0.0427	0.000181 U	65.6	25.3	0.00120 J	0.000361 U	NA	0.163	0.00119 U	0.00272 U	0.000120 U	0.00117 U	5.6	0.00346 U	105	326	0.000925 U
CCR-4	Monitoring	7/22/2021	0.00511 U	0.00221 U	0.289	0.000101 U	0.643	0.000181 U	1670	4240	0.00170 J	0.000361 U	NA	0.915	0.00119 U	0.239	0.000120 U	0.00117 U	4.04	0.00346 U	937	9480	0.000925 U
CCR-5	Monitoring	7/27/2021	0.00511 U	0.00221 U	0.0694	0.000101 U	0.612	0.000181 U	2090	5550	0.000800 J	0.000361 U	NA	0.835	0.00119 U	3.640	0.000120 U	0.00117 U	5.19	0.00346 U	625	12800	0.000925 U
CCR-6	Monitoring	7/27/2021	0.00511 U	0.00221 U	0.0358	0.000101 U	0.595	0.000181 U	721	1200	0.00100 J	0.000361 U	NA	0.535	0.00119 U	1.120	0.000120 U	0.0135	6.13	0.00346 U	788	4400	0.000925 U
CCR-7	Monitoring	7/27/2021	0.00511 U	0.00221 U	0.0160	0.000101 U	0.815	0.000181 U	229	156	0.00220 J	0.000361 U	NA	0.540	0.00119 U	0.0447	0.000120 U	0.00117 U	4.82	0.00346 U	651	1250	0.000925 U
CCR-8	Monitoring	7/28/2021	0.00511 U	0.00221 U	0.0342	0.000101 U	0.103	0.000181 U	114	4.62	0.000800 J	0.000361 U	NA	0.348	0.00119 U	0.00272 U	0.000120 U	0.0133	6.32	0.00346 U	144	390	0.000925 U
CCR-9	Monitoring	7/28/2021	0.00511 U	0.00370 J	0.0542	0.000101 U	0.494	0.000181 U	681	692	0.00110 J	0.000361 U	NA	0.580	0.00119 U	0.00272 U	0.000120 U	0.00117 U	5.14	0.00346 U	1250	3400	0.000925 U
CCR-11	Monitoring	7/29/2021	0.00511 U	0.0632	0.0483	0.000101 U	0.369	0.000181 U	621	818	0.00180 J	0.000361 U	NA	1.46	0.00119 U	0.00272 U	0.000120 U	0.00117 U	4.13	0.00346 U	1580	3550	0.000925 U
CCR-12	Monitoring	7/28/2021	0.00511 U	0.196	0.0224	0.000101 U	0.504	0.000181 U	720	28.4	0.000800 J	0.000361 U	NA	1.44	0.00119 U	0.00272 U	0.000120 U	0.0214	6.59	0.00346 U	1580	2600	0.000925 U
CCR-13	Monitoring	7/28/2021	0.00511 U	0.00221 U	0.0367	0.000101 U	0.297	0.000181 U	534	282	0.00180 J	0.00260	NA	1.31	0.00119 U	0.157	0.000120 U	0.00117 U	4.30	0.00346 U	1420	2530	0.000925 U
CCR-15	Delineation	7/22/2021	0.00511 U	0.00221 U	0.0299	0.000101 U	0.0236	0.000181 U	15.4	7.31	0.00240 J	0.000361 U	NA	0.162	0.00119 U	0.00272 U	0.000120 U	0.00117 U	4.07	0.00346 U	50.4	102	0.000925 U
CCR-16	Delineation	7/22/2021	0.00511 U	0.00221 U	0.136	0.000101 U	0.514	0.000181 U		2780	+	0.000361 U	NA	0.609	0.00119 U	0.0622	0.000120 U	0.00117 U		0.00346 U	1070	6960	0.000925 U
CCR-17	Delineation	7/26/2021	0.00511 U	0.00820 J	0.00470	0.000101 U	0.162	0.000181 U		220		0.000361 U	NA	0.405	0.00119 U		0.000120 U	0.00490 J	6.06	0.00346 U	282	1320	0.000925 U
CCR-18	Delineation	7/26/2021	0.00511 U	0.00221 U	0.00130	0.000101 U	0.0437	0.000181 U		2.83	0.00130 J	0.000361 U	NA	0.322	0.00119 U	_	0.000120 U	0.00440 J	6.46	0.00346 U	31.4	238	0.000925 U
CCR-19	Delineation	7/26/2021	0.00511 U	0.00221 U	0.103	0.000101 U	0.310	0.000181 U	1 1	1200	0.00140 J	0.000361 U	NA	1.44	0.00119 U		0.000120 U	0.00117 U	4.78	0.00346 U	1080	4450	0.000925 U
CCR-20	Delineation	7/26/2021	0.00511 U	0.0679	0.0668	0.000101 U	0.548	0.000181 U	1	555	0.00170 J	0.000361 U	NA	0.520	0.00119 U	1	0.000120 U	0.00170 J	4.97	0.00346 U	1650	3280	0.000925 U
CCR-21	Delineation	7/26/2021	0.00511 U	0.00221 U	0.0443	0.000101 U	0.362	0.000181 U	1	22.8	0.000700 J	0.000361 U	NA	0.766	0.00119 U		0.000120 U	0.0289	6.46	0.00346 U	815	1550	0.000925 U
CCR-22	Delineation	7/26/2021	0.00511 U	0.00221 U	0.0273	0.000101 U	0.460	0.000181 U	365	74.0	0.00180 J	0.000361 U	NA	1.37	0.00119 U	0.0811	0.000120 U	0.00117 U	4.68	0.00346 U	1090	1740	0.000925 U
CCR-23	Delineation	7/29/2021	0.00511 U	0.00221 U	0.0126	0.000101 U	0.806	0.000181 U	303	136	0.00230 J	0.000361 U	NA	0.715	0.00119 U	0.00272 U		0.00117 U	5.16	0.00346 U	723	1340	0.000925 U
SW-106	Delineation	7/29/2021	0.00511 U	0.00221 U	0.0120	0.000101 U	0.0379	0.000181 U	12	1.43	0.00230 J	0.000361 U	NA	0.0760	0.00119 U	0.00272 U		0.00117 U	5.59	0.00346 U	13.2	58.0 J	0.000925 U
MW-24S	Delineation	7/14/2021	NA	0.00221 U	NA	NA	NA	0.000181 U	NA	15.4	0.00170 I	NA	NA	NA	0.00119 U	NA	NA	NA	NA	0.00346 U	37.7	260	NA
MW-25S	Delineation	7/13/2021	NA NA	0.00221 U	NA NA	NA NA	NA NA	0.000181 U		7.93	0.00170 I	NA NA	NA	NA NA	0.00119 U	NA NA	NA NA	NA NA		0.00346 U	36.2	216	NA NA
Notes:	Denneanon	1/13/2021	IM	0.00221 U	11/1	11/1	1414	0.000161 U	11/1	1.73	0.001401	INA	14/1	11/1	0.00119 0	11/1	11/1	11/1	11/1	0.00340 U	30.2	210	11/1

- 1. "mg/L" indicates milligrams per liter, "pCi/L" indicates picocuries per liter, "SU" indicates standard units.
- 2. "TDS" indicates Total Dissolved Solids.
- 3. "U" indicates analyte was analyzed but not detected.
- 5. "J" indicates an estimated value; Quality control does not meet criteria.
- 6. "NA" indicates not analyzed or not available.
- 7. "NS" indicates not sampled.
- $8. \ Where \ duplicates \ were \ collected, \ the \ higher \ analyte \ concentration \ of \ the \ two \ samples \ is \ reported.$
- # bold, highlighted text indicates concentrations above the Groundwater Protection Standard.

TABLE 4: SUMMARY OF 2021 GROUNDWATER ELEVATIONS Lakeland Electric - C.D. McIntosh Power Plant, Polk County, Florida

Monitoring Location	Northing	Easting	Top of Casing Elevation	Date	Depth to Water	Groundwater Elevation
CCR-1	1362405.2	681287.1	141.30	1/25/2021	11.31	129.99
CCR-2	1362203.9	681787.6	140.57	1/25/2021	10.25	130.32
CCR-3	1362334.6	682451.3	137.04	1/25/2021	6.94	130.10
CCR-4	1362450.0	683042.7	143.13	1/25/2021	14.36	128.77
CCR-5	1362716.0	683376.9	141.07	1/25/2021	10.51	130.56
CCR-6	1363168.4	683578.6	141.34	1/25/2021	8.82	132.52
CCR-7	1363631.9	683772.2	142.10	1/26/2021	9.25	132.85
CCR-8	1363917.6	683411.6	142.12	1/26/2021	8.64	133.48
CCR-9	1364085.2	683045.3	141.67	1/26/2021	9.37	132.30
CCR-10R	1364262.1	682706.3	133.56	NM	NM	NA
CCR-11	1363835.4	682577.2	137.12	1/26/2021	5.55	131.57
CCR-12	1363353.1	682430.5	136.99	1/26/2021	5.58	131.41
CCR-13	1362936.6	682164.1	137.95	1/26/2021	6.70	131.25
CCR-14	1362771.1	681761.2	138.70	NM	NM	NA
CCR-15	1362341.3	683123.5	144.65	1/28/2021	16.75	127.90
CCR-16	1362533.2	683385.6	144.10	1/28/2021	15.79	128.31
CCR-17	1363019.9	683712.7	145.80	1/28/2021	14.01	131.79
CCR-18	1363631.1	683869.7	140.81	1/27/2021	8.19	132.62
CCR-19	1364205.4	683064.5	136.47	1/27/2021	4.51	131.96
CCR-20	1363855.5	687474.9	136.05	1/27/2021	4.71	131.34
CCR-21	1363454.0	682331.4	137.12	1/27/2021	5.65	131.47
CCR-22	1363017.4	682078.7	137.51	1/27/2021	6.45	131.06
CCR-23	1362812.1	681744.7	135.78	1/28/2021	5.48	130.30
MW-24S			143.91	NM	NM	NA
MW-25S			144.40	NM	NM	NA

- 1. Northing and easting are in feet relative to the State Plane Florida North Datum of 1983.
- 2. Elevations are in feet relative to the North American Vertical Datum of 1988.
- 3. Depth to water measurements are in feet below top of casing.
- 4."NM" indicates not measured.
- 5. "NA" indicates not applicable.
- 6. "--" indicates this information is not available.

TABLE 4: SUMMARY OF 2021 GROUNDWATER ELEVATIONS Lakeland Electric - C.D. McIntosh Power Plant, Polk County, Florida

Monitoring Location	Northing	Easting	Top of Casing Elevation	Date	Depth to Water	Groundwater Elevation
CCR-1	1362405.2	681287.1	141.30	7/22/2021	11.48	129.82
CCR-2	1362203.9	681787.6	140.57	7/22/2021	10.47	130.10
CCR-3	1362334.6	682451.3	137.04	NM	NM	NM
CCR-4	1362450.0	683042.7	143.13	7/22/2021	14.60	128.53
CCR-5	1362716.0	683376.9	141.07	7/27/2021	10.57	130.50
CCR-6	1363168.4	683578.6	141.34	7/27/2021	9.50	131.84
CCR-7	1363631.9	683772.2	142.10	7/27/2021	9.73	132.37
CCR-8	1363917.6	683411.6	142.12	7/28/2021	9.48	132.64
CCR-9	1364085.2	683045.3	141.67	7/28/2021	10.18	131.49
CCR-10R	1364262.1	682706.3	133.56	NM	NM	NM
CCR-11	1363835.4	682577.2	137.12	7/29/2021	6.65	130.47
CCR-12	1363353.1	682430.5	136.99	7/28/2021	6.62	130.37
CCR-13	1362936.6	682164.1	137.95	7/28/2021	7.74	130.21
CCR-14	1362771.1	681761.2	138.70	NM	NM	NM
CCR-15	1362341.3	683123.5	144.65	7/22/2021	16.89	127.76
CCR-16	1362533.2	683385.6	144.10	7/22/2021	15.39	128.71
CCR-17	1363019.9	683712.7	145.80	7/26/2021	14.47	131.33
CCR-18	1363631.1	683869.7	140.81	7/26/2021	8.58	132.23
CCR-19	1364205.4	683064.5	136.47	7/26/2021	5.20	131.27
CCR-20	1363855.5	687474.9	136.05	7/26/2021	5.85	130.20
CCR-21	1363454.0	682331.4	137.12	7/26/2021	7.17	129.95
CCR-22	1363017.4	682078.7	137.51	7/26/2021	7.47	130.04
CCR-23	1362812.1	681744.7	135.78	7/29/2021	6.03	129.75
MW-24S			143.91	NM	NM	NM
MW-25S			144.40	NM	NM	NM

- 1. Northing and easting are in feet relative to the State Plane Florida North Datum of 1983.
- 2. Elevations are in feet relative to the North American Vertical Datum of 1988.
- 3. Depth to water measurements are in feet below top of casing.
- 4."NM" indicates not measured.
- 5. "NA" indicates not applicable.
- 6. "--" indicates this information is not available.

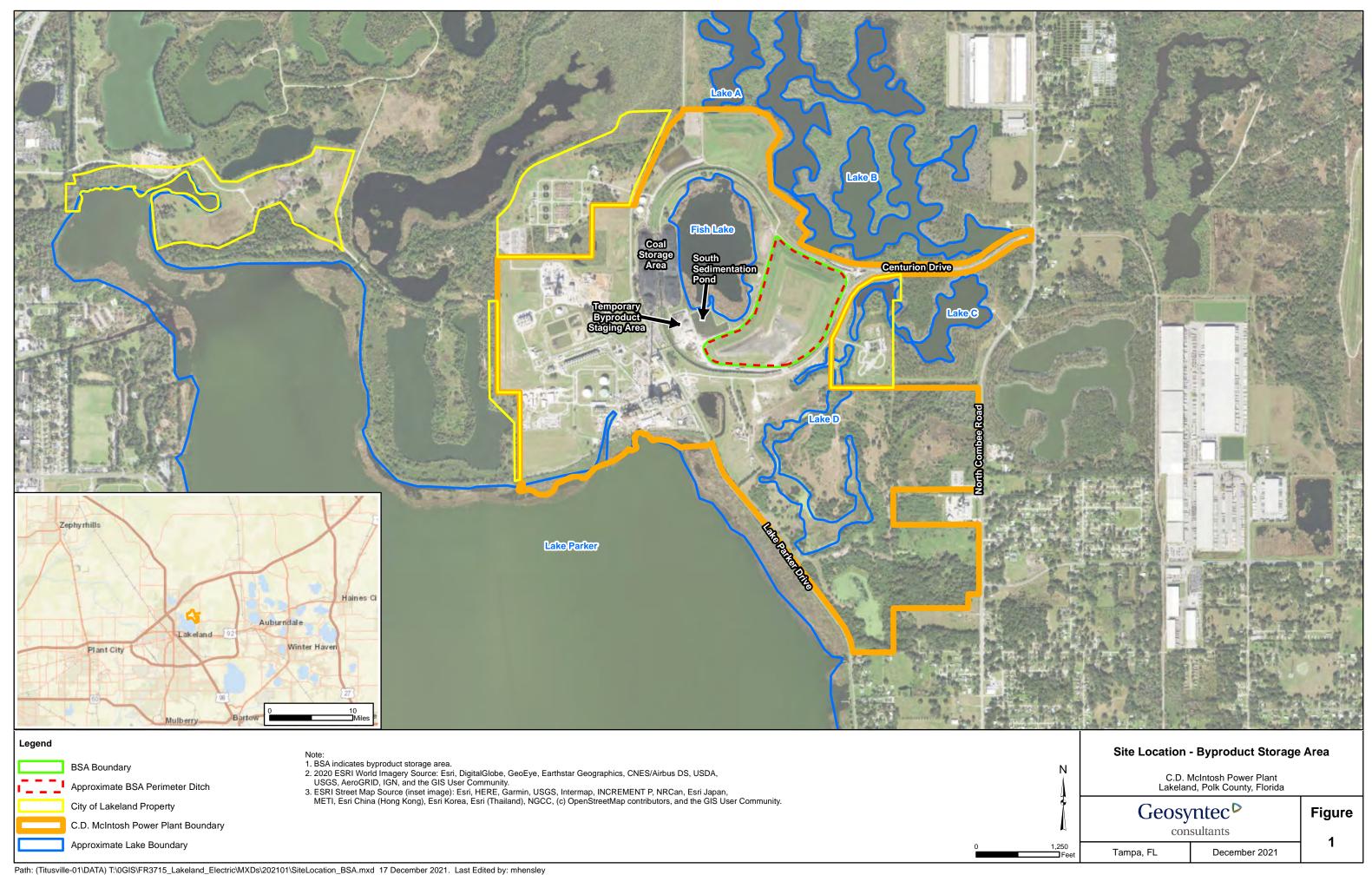
TABLE 5: SUMMARY OF BACKGROUND LIMITS AND GROUNDWATER PROTECTION STANDARDS

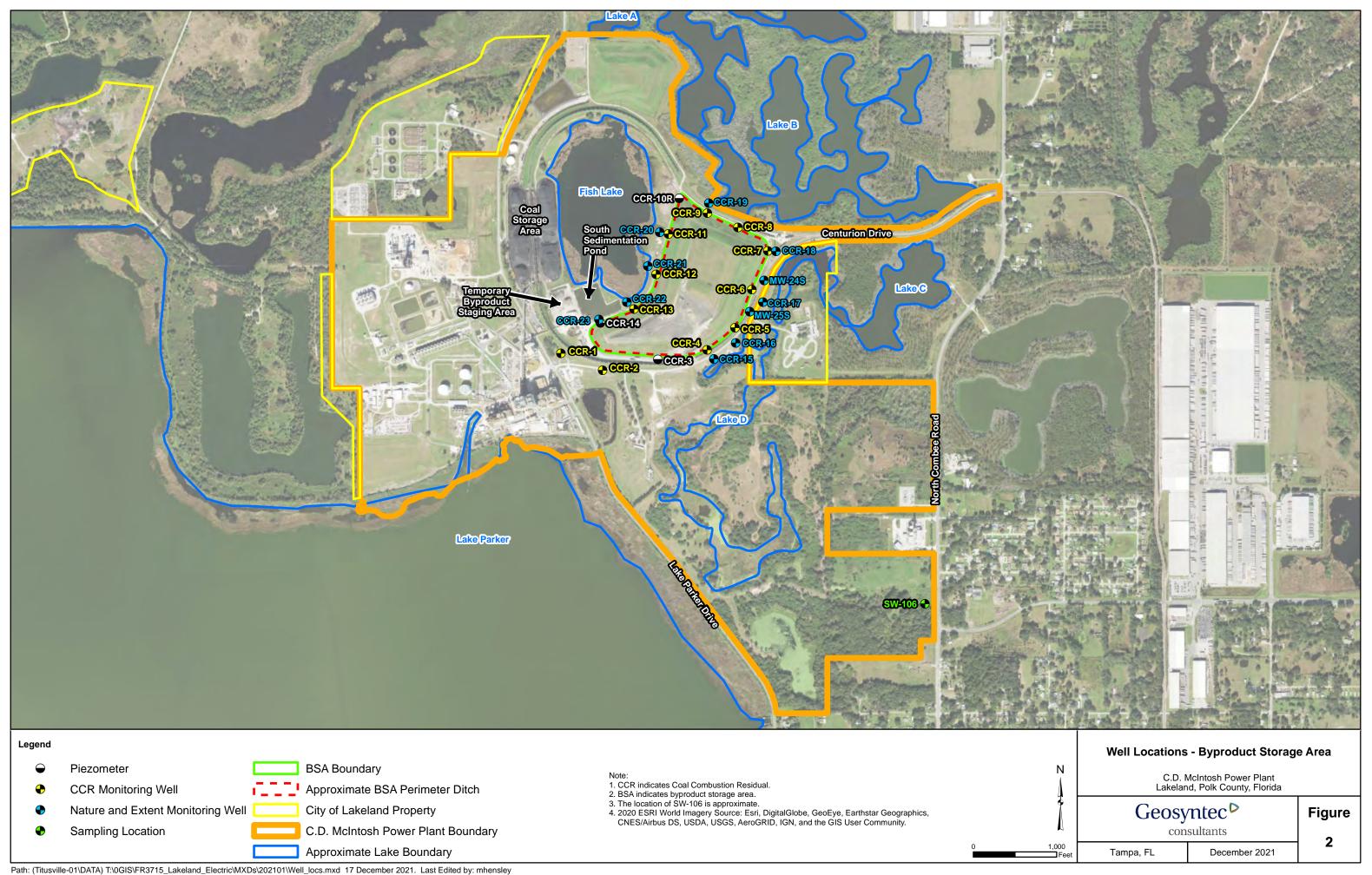
Lakeland Electric - C.D. McIntosh Power Plant, Polk County, Florida

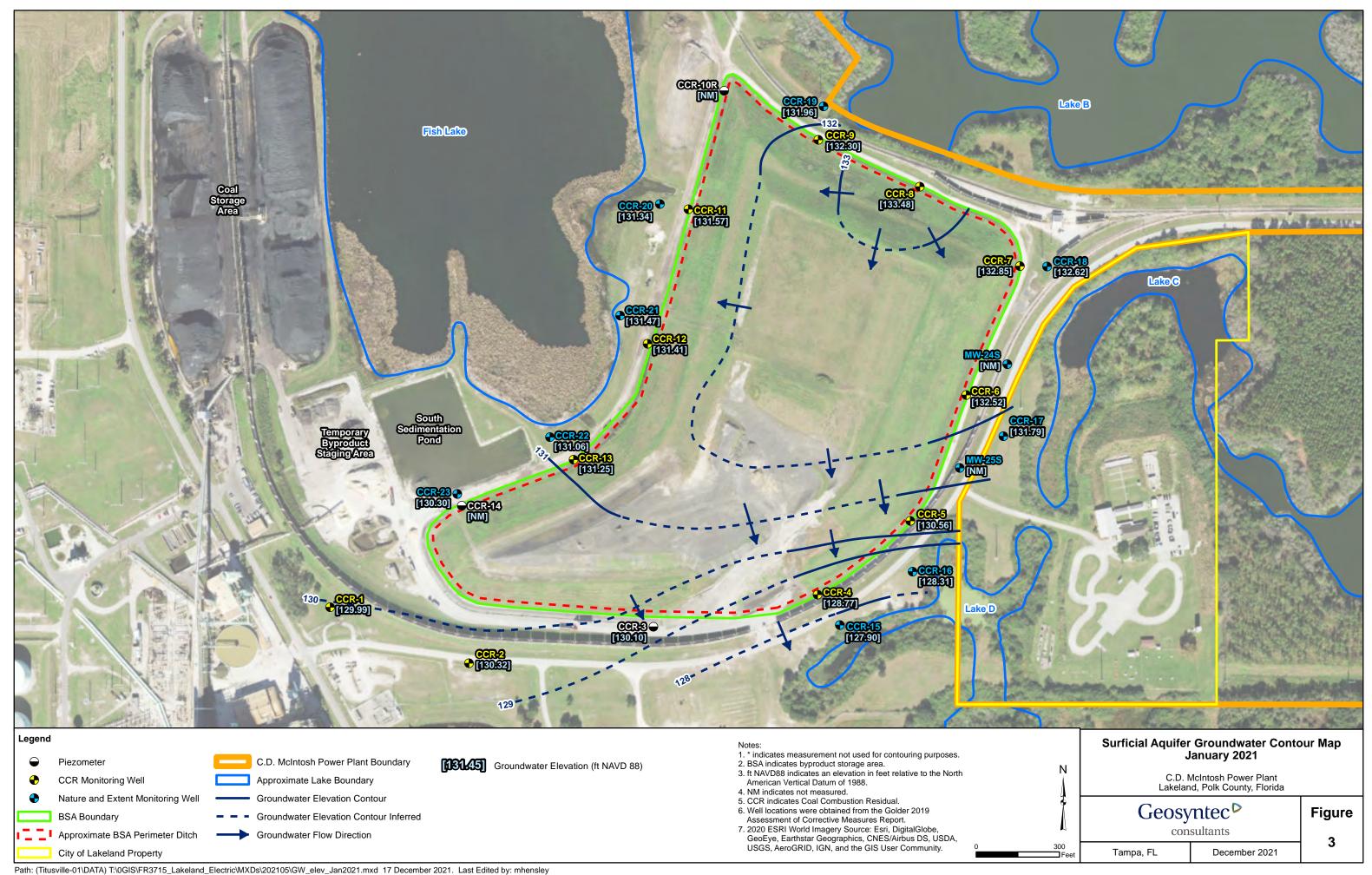
Analyte	Units	USEPA CCR Rule Specified Limit	Background ³	Site-Specific GWPS ⁴
Antimony	mg/L	0.006	NC	0.006
Arsenic	mg/L	0.01	NC	0.01
Barium	mg/L	2	NC	2
Beryllium	mg/L	0.004	NC	0.004
Cadmium	mg/L	0.005	NC	0.005
Chromium	mg/L	0.1	NC	0.1
Cobalt ²	mg/L	0.006	NC	0.006
Fluoride	mg/L	4	NC	4
Lead ²	mg/L	0.015	NC	0.015
Lithium ²	mg/L	0.04	NC	0.04
Mercury	mg/L	0.002	NC	0.002
Molybdenum ²	mg/L	0.1	NC	0.1
Selenium	mg/L	0.05	NC	0.05
Thallium	mg/L	0.002	NC	0.002
Combined Radium - 226+228	pCi/L	5	7.94	7.94

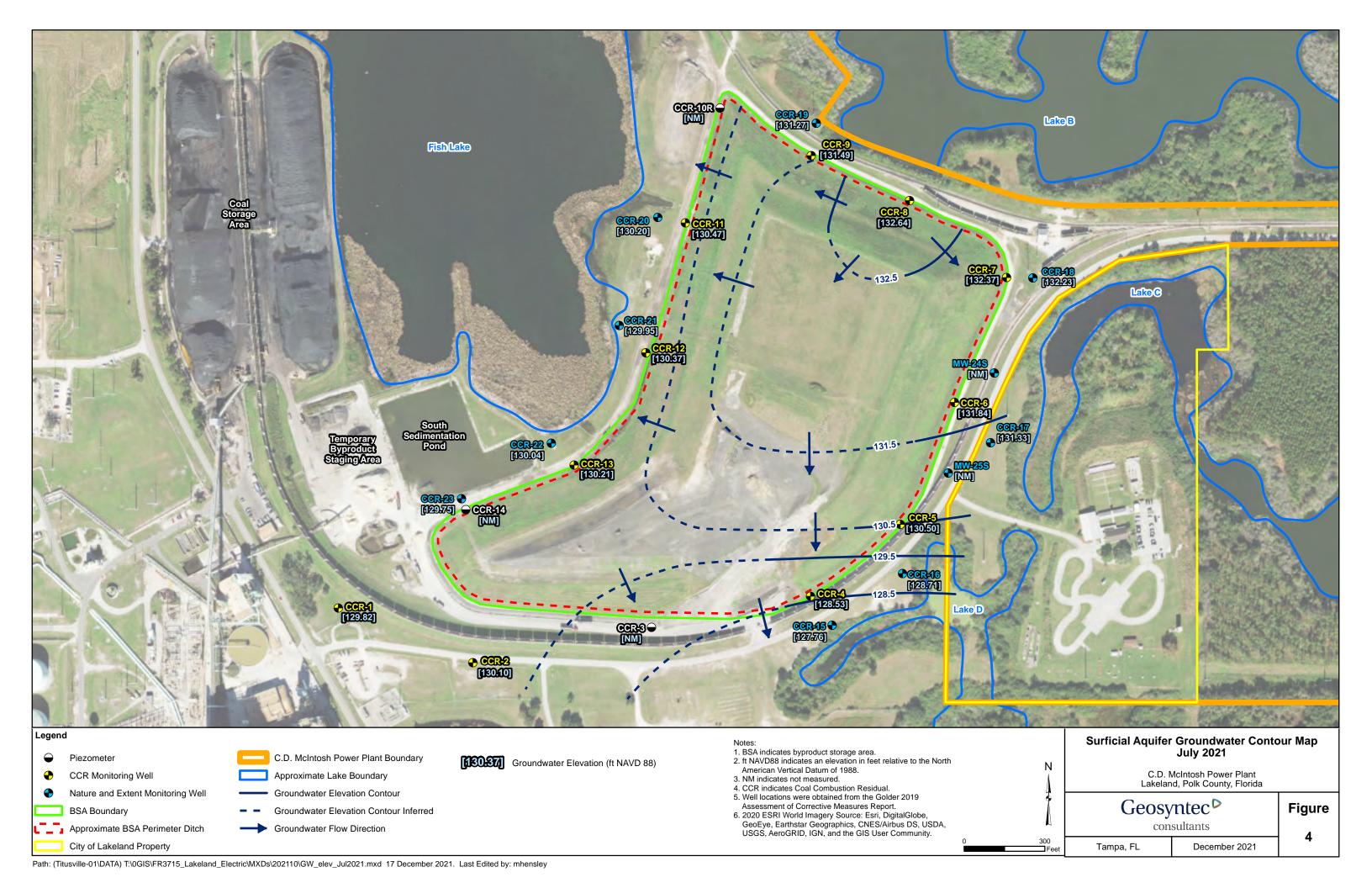
- 1. "USEPA" indicates United States Environmental Protection Agency; "CCR" indicates Coal Combustion Residuals;
- "GWPS" indicates Groundwater Protection Standard; "mg/L" indicates milligrams per liter;
- "pCi/L" indicates picocuries per liter; "NA" indicates not applicable; "NC" indicates not calculated.
- 2. USEPA CCR Rule Specified Limit established in the USEPA CCR Rule Amendment dated July 30, 2018.
- 3. Background indicates the statistically derived upper tolerance limit.
- 4. Site-specific GWPS selected as the higher of the USEPA CCR Rule Specified Limit and background.











APPENDIX A

Laboratory Analytical Reports, Field Sampling Logs, and Data Validation





1460 West McNab Road Fort Lauderdale, FL 33309 1-800-ANALYTE Phone (954) 978-6400 Phone (954) 978-2233 Fax

NELAP Certificate No. E86006

05 February 2021 Lab Work Order (COC): 21B0063

Andrew Barron Lakeland Electric - McIntosh 3030 East Lake Parker Drive Lakeland, FL 33805

RE: 281095/City of Lakeland CCR Wells

Project Location: McIntosh Power Plant

Dear Andrew Barron:

This report details the analytical results of samples collected at the above-referenced project location as well as the results of any associated quality control samples. These samples were received by Florida Spectrum Environmental Services at 02/02/2021 11:10.

All Analyses were performed according to the TNI/NELAP standard unless indicated by a "~" on the report.

Your samples will be retained by Florida Spectrum Environmental for a period of at least 30 days following sample receipt or until the longest of the preparation and/or analytical hold times expires, whichever is shorter. After that time, they will be properly disposed without further notice, unless there exists an explicit contractual agreement to the contrary. We reserve the right to return any unused samples, extracts, or related materials or solutions to you if we consider it necessary. Examples might include those samples identified as hazardous wastes, submissions where the sample sizes significantly exceed those required for analysis, samples containing controlled substances, etc.

We thank you for selecting Florida Spectrum Environmental to serve your analytical needs. Should you have any questions or require additional information regarding any of the information in this report, please feel free to contact us at any time. We appreciate the opportunity to be of service.

Florida Spectrum Environmental Inc.







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Report Printed: 2/5/2021

Work Order # 21B0063

Project: 281095/City of Lakeland CCR Wells

McIntosh Power Plant

DETECTED ANALYTE SUMMARY

Client Sample ID	Laboratory ID	Matrix	Analyte	Result	Units	Collection Date	Collection Time
1010101-01C CCR-01	21B0063-01	Water	Boron	51.5	ug/L	1/25/2021	9:35
1010101-01C CCR-01	21B0063-01	Water	Calcium	39600	ug/L	1/25/2021	9:35
1010101-02C CCR-02	21B0063-02	Water	Calcium	60200	ug/L	1/25/2021	10:11
1010101-02C CCR-02	21B0063-02	Water	Boron	65.0	ug/L	1/25/2021	10:11
1010101-03C CCR-03	21B0063-03	Water	Calcium	485000	ug/L	1/25/2021	10:53
1010101-03C CCR-03	21B0063-03	Water	Boron	788	ug/L	1/25/2021	10:53
1010101-04C CCR-04	21B0063-04	Water	Lithium	135	ug/L	1/25/2021	12:43
1010101-04C CCR-04	21B0063-04	Water	Cobalt	2.70	ug/L	1/25/2021	12:43
1010101-04C CCR-04	21B0063-04	Water	Calcium	1550000	ug/L	1/25/2021	12:43
1010101-04C CCR-04	21B0063-04	Water	Boron	647	ug/L	1/25/2021	12:43
1010101-05C CCR-05	21B0063-05	Water	Potassium	720000	ug/L	1/25/2021	13:18
1010101-05C CCR-05	21B0063-05	Water	Boron	648	ug/L	1/25/2021	13:18
1010101-05C CCR-05	21B0063-05	Water	Lithium	4090	ug/L	1/25/2021	13:18
1010101-05C CCR-05	21B0063-05	Water	Magnesium	24700	ug/L	1/25/2021	13:18
1010101-05C CCR-05	21B0063-05	Water	Calcium	2090000	ug/L	1/25/2021	13:18
1010101-05C CCR-05	21B0063-05	Water	Sodium	995000	ug/L	1/25/2021	13:18
1010101-06C CCR-06	21B0063-06	Water	Magnesium	13600	ug/L	1/25/2021	14:02
1010101-06C CCR-06	21B0063-06	Water	Sodium	201000	ug/L	1/25/2021	14:02
1010101-06C CCR-06	21B0063-06	Water	Potassium	169000	ug/L	1/25/2021	14:02
1010101-06C CCR-06	21B0063-06	Water	Calcium	547000	ug/L	1/25/2021	14:02
1010101-06C CCR-06	21B0063-06	Water	Lithium	784	ug/L	1/25/2021	14:02
1010101-06C CCR-06	21B0063-06	Water	Boron	580	ug/L	1/25/2021	14:02
1010101-07C CCR-07	21B0063-07	Water	Boron	747	ug/L	1/26/2021	9:43
1010101-07C CCR-07	21B0063-07	Water	Potassium	64800	ug/L	1/26/2021	9:43

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Work Order # 21B0063

Project: 281095/City of Lakeland CCR Wells

McIntosh Power Plant

DETECTED ANALYTE SUMMARY

Client Sample ID	Laboratory ID	Matrix	Analyte	Result	Units	Collection Date	Collection Time
1010101-07C CCR-07	21B0063-07	Water	Lithium	53.7	ug/L	1/26/2021	9:43
1010101-07C CCR-07	21B0063-07	Water	Sodium	56500	ug/L	1/26/2021	9:43
1010101-07C CCR-07	21B0063-07	Water	Magnesium	10600	ug/L	1/26/2021	9:43
1010101-07C CCR-07	21B0063-07	Water	Calcium	165000	ug/L	1/26/2021	9:43
1010101-08C CCR-08	21B0063-08	Water	Calcium	118000	ug/L	1/26/2021	10:21
1010101-08C CCR-08	21B0063-08	Water	Cobalt	1.20	ug/L	1/26/2021	10:21
1010101-08C CCR-08	21B0063-08	Water	Boron	119	ug/L	1/26/2021	10:21
1010101-08C CCR-08	21B0063-08	Water	Lithium	49.1	ug/L	1/26/2021	10:21
1010101-08C CCR-08	21B0063-08	Water	Arsenic	7.90	ug/L	1/26/2021	10:21
1010101-09C CCR-09	21B0063-09	Water	Calcium	677000	ug/L	1/26/2021	11:16
1010101-09C CCR-09	21B0063-09	Water	Magnesium	51000	ug/L	1/26/2021	11:16
1010101-09C CCR-09	21B0063-09	Water	Potassium	117000	ug/L	1/26/2021	11:16
1010101-09C CCR-09	21B0063-09	Water	Sodium	159000	ug/L	1/26/2021	11:16
1010101-09C CCR-09	21B0063-09	Water	Lithium	70.5	ug/L	1/26/2021	11:16
1010101-09C CCR-09	21B0063-09	Water	Arsenic	5.60	ug/L	1/26/2021	11:16
1010101-09C CCR-09	21B0063-09	Water	Boron	429	ug/L	1/26/2021	11:16
1010101-11C CCR-11	21B0063-10	Water	Boron	374	ug/L	1/26/2021	13:33
1010101-11C CCR-11	21B0063-10	Water	Magnesium	21900	ug/L	1/26/2021	13:33
1010101-11C CCR-11	21B0063-10	Water	Potassium	324000	ug/L	1/26/2021	13:33
1010101-11C CCR-11	21B0063-10	Water	Calcium	631000	ug/L	1/26/2021	13:33
1010101-11C CCR-11	21B0063-10	Water	Arsenic	54.4	ug/L	1/26/2021	13:33
1010101-11C CCR-11	21B0063-10	Water	Sodium	265000	ug/L	1/26/2021	13:33
1010101-12C CCR-12	21B0063-11	Water	Calcium	675000	ug/L	1/26/2021	14:12
1010101-12C CCR-12	21B0063-11	Water	Magnesium	6770	ug/L	1/26/2021	14:12

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Work Order # 21B0063

Project: 281095/City of Lakeland CCR Wells

McIntosh Power Plant

DETECTED ANALYTE SUMMARY

Client Sample ID	Laboratory ID	Matrix	Analyte	Result	Units	Collection Date	Collection Time
1010101-12C CCR-12	21B0063-11	Water	Potassium	72100	ug/L	1/26/2021	14:12
1010101-12C CCR-12	21B0063-11	Water	Boron	423	ug/L	1/26/2021	14:12
1010101-12C CCR-12	21B0063-11	Water	Arsenic	199	ug/L	1/26/2021	14:12
1010101-12C CCR-12	21B0063-11	Water	Sodium	31600	ug/L	1/26/2021	14:12
1010101-13C CCR-13	21B0063-12	Water	Lithium	222	ug/L	1/26/2021	14:42
1010101-13C CCR-13	21B0063-12	Water	Calcium	517000	ug/L	1/26/2021	14:42
1010101-13C CCR-13	21B0063-12	Water	Boron	201	ug/L	1/26/2021	14:42
1010101-13C CCR-13	21B0063-12	Water	Cobalt	3.40	ug/L	1/26/2021	14:42
1010101-15C CCR-15	21B0063-13	Water	Boron	87.0	ug/L	1/28/2021	8:30
1010101-15C CCR-15	21B0063-13	Water	Calcium	95600	ug/L	1/28/2021	8:30
1010101-15C CCR-15	21B0063-13	Water	Magnesium	2710	ug/L	1/28/2021	8:30
1010101-15C CCR-15	21B0063-13	Water	Sodium	16300	ug/L	1/28/2021	8:30
1010101-15C CCR-15	21B0063-13	Water	Potassium	18800	ug/L	1/28/2021	8:30
1010101-16C CCR-16	21B0063-14	Water	Magnesium	14900	ug/L	1/28/2021	9:10
1010101-16C CCR-16	21B0063-14	Water	Potassium	466000	ug/L	1/28/2021	9:10
1010101-16C CCR-16	21B0063-14	Water	Sodium	416000	ug/L	1/28/2021	9:10
1010101-16C CCR-16	21B0063-14	Water	Lithium	45.3	ug/L	1/28/2021	9:10
1010101-16C CCR-16	21B0063-14	Water	Boron	545	ug/L	1/28/2021	9:10
1010101-16C CCR-16	21B0063-14	Water	Calcium	890000	ug/L	1/28/2021	9:10
1010101-17C CCR-17	21B0063-15	Water	Boron	148	ug/L	1/28/2021	13:14
1010101-17C CCR-17	21B0063-15	Water	Calcium	162000	ug/L	1/28/2021	13:14
1010101-17C CCR-17	21B0063-15	Water	Magnesium	12900	ug/L	1/28/2021	13:14
1010101-17C CCR-17	21B0063-15	Water	Arsenic	9.00	ug/L	1/28/2021	13:14
1010101-17C CCR-17	21B0063-15	Water	Potassium	20200	ug/L	1/28/2021	13:14

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Work Order # 21B0063

Project: 281095/City of Lakeland CCR Wells

McIntosh Power Plant

DETECTED ANALYTE SUMMARY

Client Sample ID	Laboratory ID	Matrix	Analyte	Result	Units	Collection Date	Collection Time
1010101-17C CCR-17	21B0063-15	Water	Sodium	20700	ug/L	1/28/2021	13:14
1010101-18C CCR-18	21B0063-16	Water	Magnesium	3280	ug/L	1/27/2021	8:01
1010101-18C CCR-18	21B0063-16	Water	Sodium	2240	ug/L	1/27/2021	8:01
1010101-18C CCR-18	21B0063-16	Water	Potassium	3100	ug/L	1/27/2021	8:01
1010101-18C CCR-18	21B0063-16	Water	Calcium	73300	ug/L	1/27/2021	8:01
1010101-18C CCR-18	21B0063-16	Water	Boron	44.7	ug/L	1/27/2021	8:01
1010101-19C CCR-19	21B0063-17	Water	Calcium	695000	ug/L	1/27/2021	8:33
1010101-19C CCR-19	21B0063-17	Water	Potassium	265000	ug/L	1/27/2021	8:33
1010101-19C CCR-19	21B0063-17	Water	Magnesium	47500	ug/L	1/27/2021	8:33
1010101-19C CCR-19	21B0063-17	Water	Boron	325	ug/L	1/27/2021	8:33
1010101-19C CCR-19	21B0063-17	Water	Sodium	249000	ug/L	1/27/2021	8:33
1010101-20C CCR-20	21B0063-18	Water	Calcium	506000	ug/L	1/27/2021	13:53
1010101-20C CCR-20	21B0063-18	Water	Magnesium	12700	ug/L	1/27/2021	13:53
1010101-20C CCR-20	21B0063-18	Water	Sodium	214000	ug/L	1/27/2021	13:53
1010101-20C CCR-20	21B0063-18	Water	Potassium	241000	ug/L	1/27/2021	13:53
1010101-20C CCR-20	21B0063-18	Water	Boron	604	ug/L	1/27/2021	13:53
1010101-20C CCR-20	21B0063-18	Water	Arsenic	71.5	ug/L	1/27/2021	13:53
1010101-21C CCR-21	21B0063-19	Water	Magnesium	16100	ug/L	1/27/2021	14:43
1010101-21C CCR-21	21B0063-19	Water	Potassium	22000	ug/L	1/27/2021	14:43
1010101-21C CCR-21	21B0063-19	Water	Calcium	464000	ug/L	1/27/2021	14:43
1010101-21C CCR-21	21B0063-19	Water	Lithium	36.8	ug/L	1/27/2021	14:43
1010101-21C CCR-21	21B0063-19	Water	Sodium	22800	ug/L	1/27/2021	14:43
1010101-21C CCR-21	21B0063-19	Water	Boron	385	ug/L	1/27/2021	14:43
1010101-22C CCR-22	21B0063-20	Water	Potassium	118000	ug/L	1/27/2021	15:28

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Work Order # 21B0063

Project: 281095/City of Lakeland CCR Wells

McIntosh Power Plant

DETECTED ANALYTE SUMMARY

Client Sample ID	Laboratory ID	Matrix	Analyte	Result	Units	Collection Date	Collection Time
1010101-22C CCR-22	21B0063-20	Water	Magnesium	13100	ug/L	1/27/2021	15:28
1010101-22C CCR-22	21B0063-20	Water	Lithium	99.3	ug/L	1/27/2021	15:28
1010101-22C CCR-22	21B0063-20	Water	Boron	418	ug/L	1/27/2021	15:28
1010101-22C CCR-22	21B0063-20	Water	Sodium	36100	ug/L	1/27/2021	15:28
1010101-22C CCR-22	21B0063-20	Water	Calcium	342000	ug/L	1/27/2021	15:28
1010101-23C CCR-23	21B0063-21	Water	Magnesium	28300	ug/L	1/28/2021	13:48
1010101-23C CCR-23	21B0063-21	Water	Calcium	314000	ug/L	1/28/2021	13:48
1010101-23C CCR-23	21B0063-21	Water	Sodium	35400	ug/L	1/28/2021	13:48
1010101-23C CCR-23	21B0063-21	Water	Potassium	16400	ug/L	1/28/2021	13:48
1010101-23C CCR-23	21B0063-21	Water	Boron	770	ug/L	1/28/2021	13:48
1010101-24C CCR-24	21B0063-22	Water	Calcium	14000	ug/L	1/28/2021	15:10
1010101-24C CCR-24	21B0063-22	Water	Magnesium	2060	ug/L	1/28/2021	15:10
1010101-24C CCR-24	21B0063-22	Water	Potassium	3870	ug/L	1/28/2021	15:10
1010101-24C CCR-24	21B0063-22	Water	Boron	32.9	ug/L	1/28/2021	15:10
1010101-24C CCR-24	21B0063-22	Water	Sodium	2770	ug/L	1/28/2021	15:10
1010101-25C CCR-25	21B0063-23	Water	Magnesium	4.90	ug/L	1/26/2021	8:29
1010101-25C CCR-25	21B0063-23	Water	Calcium	11.4	ug/L	1/26/2021	8:29

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Report Printed: 2/5/2021

Work Order # 21B0063

Project: 281095/City of Lakeland CCR Wells

McIntosh Power Plant

Lab ID: 21B0063-01

Client Sample ID: 1010101-01C CCR-01

Matrix: Wate

Collection Date: 01/25/21 09:35 **Received Date:** 02/02/21 11:10

Collected By: Nina Driggers

Laboratory Analysis Report

Parameter	Result	QC	Units	Dil	MDL	PQL	Method	Date Ext.	Date Analy.	Analyst

Total Recoverable Metals by EPA 200 Series Methods

Antimony	ND	U	ug/L	1	5.11	15.0	EPA 200.7/3010	02/02 13:00	02/02 16:21	IN
Arsenic	ND	U	ug/L	1	2.21	10.0	EPA 200.7/3010	02/02 13:00	02/02 16:21	IN
Boron	51.5		ug/L	1	1.57	10.0	EPA 200.7/3010	02/02 13:00	02/02 16:21	IN
Calcium	39600		ug/L	1	5.79	50.0	EPA 200.7/3010	02/02 13:00	02/02 16:21	IN
Cobalt	ND	U	ug/L	1	0.361	1.00	EPA 200.7/3010	02/02 13:00	02/02 16:21	IN
Lithium	ND	U	ug/L	1	2.72	25.0	EPA 200.7/3010	02/02 13:00	02/02 16:46	MAZ
Mercury	ND	U	ug/L	1	0.120	1.00	EPA 245.1	02/02 14:00	02/03 13:05	EN
Selenium	ND	U	ug/L	1	3.46	15.0	EPA 200.7/3010	02/02 13:00	02/02 16:21	IN
Thallium	ND	U	ug/L	1	0.925	4.00	EPA 200.7/3010	02/02 13:00	02/02 16:21	IN

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Work Order # 21B0063

Project: 281095/City of Lakeland CCR Wells

McIntosh Power Plant

Date Ext.

Date Analy.

Analyst

Lab ID: 21B0063-02

1010101-02C CCR-02

Result

Matrix: Water

Client Sample ID:

Parameter

Collection Date: 01/25/21 10:11 **Received Date:** 02/02/21 11:10

Method

Collected By: Nina Driggers

Laboratory Analysis Report

MDL

PQL

Dil

Units

 \mathbf{QC}

Total Recoverable Mo	etals by EPA 200 Seri	es Metl	nods							
Antimony	ND	U	ug/L	1	5.11	15.0	EPA 200.7/3010	02/02 13:00	02/02 16:24	IN
Arsenic	ND	U	ug/L	1	2.21	10.0	EPA 200.7/3010	02/02 13:00	02/02 16:24	IN
Boron	65.0		ug/L	1	1.57	10.0	EPA 200.7/3010	02/02 13:00	02/02 16:24	IN
Calcium	60200		ug/L	1	5.79	50.0	EPA 200.7/3010	02/02 13:00	02/02 16:24	IN
Cobalt	ND	U	ug/L	1	0.361	1.00	EPA 200.7/3010	02/02 13:00	02/02 16:24	IN
Lithium	ND	U	ug/L	1	2.72	25.0	EPA 200.7/3010	02/02 13:00	02/02 16:49	MAZ
Mercury	ND	U	ug/L	1	0.120	1.00	EPA 245.1	02/02 14:00	02/03 13:08	EN
Selenium	ND	U	ug/L	1	3.46	15.0	EPA 200.7/3010	02/02 13:00	02/02 16:24	IN
Thallium	ND	U	ug/L	1	0.925	4.00	EPA 200.7/3010	02/02 13:00	02/02 16:24	IN

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Report Printed: 2/5/2021

Work Order # 21B0063

Project: 281095/City of Lakeland CCR Wells

McIntosh Power Plant

Date Ext.

Date Analy.

Analyst

Lab ID: 21B0063-03

Client Sample ID: 1010101-03C CCR-03

Result

Matrix: Water

Parameter

Collection Date: 01/25/21 10:53 **Received Date:** 02/02/21 11:10

Method

Collected By: Nina Driggers

Laboratory Analysis Report

MDL

PQL

Dil

Units

 \mathbf{QC}

Total Recoverable M	etals by EPA 200 Seri	es Metl	nods							
Antimony	ND	U	ug/L	1	5.11	15.0	EPA 200.7/3010	02/02 13:00	02/02 16:27	IN
Arsenic	ND	U	ug/L	1	2.21	10.0	EPA 200.7/3010	02/02 13:00	02/02 16:27	IN
Boron	788		ug/L	1	1.57	10.0	EPA 200.7/3010	02/02 13:00	02/02 16:27	IN
Calcium	485000		ug/L	10	57.9	500	EPA 200.7/3010	02/02 13:00	02/02 19:36	IN
Cobalt	ND	U	ug/L	1	0.361	1.00	EPA 200.7/3010	02/02 13:00	02/02 16:27	IN
Lithium	ND	U	ug/L	1	2.72	25.0	EPA 200.7/3010	02/02 13:00	02/02 16:52	MAZ
Mercury	ND	U	ug/L	1	0.120	1.00	EPA 245.1	02/02 14:00	02/03 13:11	EN
Selenium	ND	U	ug/L	1	3.46	15.0	EPA 200.7/3010	02/02 13:00	02/02 16:27	IN
Thallium	ND	U	ug/L	1	0.925	4.00	EPA 200.7/3010	02/02 13:00	02/02 16:27	IN





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Work Order # 21B0063

Project: 281095/City of Lakeland CCR Wells

McIntosh Power Plant

Date Ext.

Date Analy.

Analyst

Lab ID: 21B0063-04

Client Sample ID: 1010101-04C CCR-04

Result

Matrix: Water

Parameter

Collection Date: 01/25/21 12:43 **Received Date:** 02/02/21 11:10

Method

Collected By: Nina Driggers

Laboratory Analysis Report

MDL

PQL

Dil

Units

 \mathbf{QC}

Total Recoverable M	etals by EPA 200 Seri	es Metl	ıods							
Antimony	ND	U	ug/L	1	5.11	15.0	EPA 200.7/3010	02/02 13:00	02/02 16:29	IN
Arsenic	ND	U	ug/L	1	2.21	10.0	EPA 200.7/3010	02/02 13:00	02/02 16:29	IN
Boron	647		ug/L	1	1.57	10.0	EPA 200.7/3010	02/02 13:00	02/02 16:29	IN
Calcium	1550000		ug/L	10	57.9	500	EPA 200.7/3010	02/02 13:00	02/02 19:39	IN
Cobalt	2.70		ug/L	1	0.361	1.00	EPA 200.7/3010	02/02 13:00	02/02 16:29	IN
Lithium	135		ug/L	1	2.72	25.0	EPA 200.7/3010	02/02 13:00	02/02 16:54	MAZ
Mercury	ND	U	ug/L	1	0.120	1.00	EPA 245.1	02/02 14:00	02/03 13:14	EN
Selenium	ND	U	ug/L	1	3.46	15.0	EPA 200.7/3010	02/02 13:00	02/02 16:29	IN
Thallium	ND	U	ug/L	1	0.925	4.00	EPA 200.7/3010	02/02 13:00	02/02 16:29	IN





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Work Order # 21B0063

Project: 281095/City of Lakeland CCR Wells

McIntosh Power Plant

Date Ext.

Date Analy.

Analyst

Lab ID: 21B0063-05

Client Sample ID: 1010101-05C CCR-05

Result

Matrix: Water

Parameter

Collection Date: 01/25/21 13:18 **Received Date:** 02/02/21 11:10

Collected By: Nina Driggers

Method

Laboratory Analysis Report

MDL

PQL

Dil

Units

 \mathbf{QC}

Total Recoverable Me	tals by EPA 200 Seri	es Metl	ıods							
Antimony	ND	U	ug/L	1	5.11	15.0	EPA 200.7/3010	02/02 13:00	02/02 16:32	IN
Arsenic	ND	U	ug/L	1	2.21	10.0	EPA 200.7/3010	02/02 13:00	02/02 16:32	IN
Boron	648		ug/L	1	1.57	10.0	EPA 200.7/3010	02/02 13:00	02/02 16:32	IN
Calcium	2090000		ug/L	50	290	2500	EPA 200.7/3010	02/02 13:00	02/03 13:03	IN
Cobalt	ND	U	ug/L	1	0.361	1.00	EPA 200.7/3010	02/02 13:00	02/02 16:32	IN
Lithium	4090		ug/L	1	2.72	25.0	EPA 200.7/3010	02/02 13:00	02/02 16:57	MAZ
Magnesium	24700		ug/L	10	37.4	200	EPA 200.7/3010	02/02 13:00	02/02 19:42	IN
Mercury	ND	U	ug/L	1	0.120	1.00	EPA 245.1	02/02 14:00	02/03 13:18	EN
Potassium	720000		ug/L	50	865	2500	EPA 200.7/3010	02/02 13:00	02/03 13:03	IN
Selenium	ND	U	ug/L	1	3.46	15.0	EPA 200.7/3010	02/02 13:00	02/02 16:32	IN
Sodium	995000		ug/L	50	22300	100000	EPA 200.7/3010	02/02 13:00	02/03 13:03	IN
Thallium	ND	U	ug/L	1	0.925	4.00	EPA 200.7/3010	02/02 13:00	02/02 16:32	IN





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Work Order # 21B0063

Project: 281095/City of Lakeland CCR Wells

McIntosh Power Plant

Date Ext.

Date Analy.

Analyst

Lab ID: 21B0063-06

Client Sample ID: 1010101-06C CCR-06

Result

Matrix: Water

Parameter

Collection Date: 01/25/21 14:02 **Received Date:** 02/02/21 11:10

Method

Collected By: Nina Driggers

Laboratory Analysis Report

MDL

PQL

Dil

Units

 \mathbf{QC}

	. I I ED. 200 C	35.0								
Total Recoverable Me	tals by EPA 200 Seri	es Metr	10ds							
Antimony	ND	U	ug/L	1	5.11	15.0	EPA 200.7/3010	02/02 13:00	02/02 16:35	IN
Arsenic	ND	U	ug/L	1	2.21	10.0	EPA 200.7/3010	02/02 13:00	02/02 16:35	IN
Boron	580		ug/L	1	1.57	10.0	EPA 200.7/3010	02/02 13:00	02/02 16:35	IN
Calcium	547000		ug/L	10	57.9	500	EPA 200.7/3010	02/02 13:00	02/02 19:44	IN
Cobalt	ND	U	ug/L	1	0.361	1.00	EPA 200.7/3010	02/02 13:00	02/02 16:35	IN
Lithium	784		ug/L	1	2.72	25.0	EPA 200.7/3010	02/02 13:00	02/02 17:00	MAZ
Magnesium	13600		ug/L	10	37.4	200	EPA 200.7/3010	02/02 13:00	02/02 19:44	IN
Mercury	ND	U	ug/L	1	0.120	1.00	EPA 245.1	02/02 14:00	02/03 13:21	EN
Potassium	169000		ug/L	10	173	500	EPA 200.7/3010	02/02 13:00	02/02 19:44	IN
Selenium	ND	U	ug/L	1	3.46	15.0	EPA 200.7/3010	02/02 13:00	02/02 16:35	IN
Sodium	201000		ug/L	10	4460	20000	EPA 200.7/3010	02/02 13:00	02/02 19:44	IN
Thallium	ND	U	ug/L	1	0.925	4.00	EPA 200.7/3010	02/02 13:00	02/02 16:35	IN





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Work Order # 21B0063

Project: 281095/City of Lakeland CCR Wells

McIntosh Power Plant

Lab ID: 21B0063-07

Client Sample ID: 1010101-07C CCR-07

Matrix: Water

 Collection Date:
 01/26/21 09:43

 Received Date:
 02/02/21 11:10

 Collected By:
 Nina Driggers

Laboratory Analysis Report

Parameter	Result	QC	Units	Dil	MDL	PQL	Method	Date Ext.	Date Analy.	Analyst
	1105411	Q.C				- 4-	memou	Dute Bat.		randijse

Total Recoverable Metals by EPA 200 Series Methods

Antimony	ND	U	ug/L	1	5.11	15.0	EPA 200.7/3010	02/02 13:00	02/02 16:38	IN
Arsenic	ND	U	ug/L	1	2.21	10.0	EPA 200.7/3010	02/02 13:00	02/02 16:38	IN
Boron	747		ug/L	1	1.57	10.0	EPA 200.7/3010	02/02 13:00	02/02 16:38	IN
Calcium	165000		ug/L	10	57.9	500	EPA 200.7/3010	02/02 13:00	02/02 19:47	IN
Cobalt	ND	U	ug/L	1	0.361	1.00	EPA 200.7/3010	02/02 13:00	02/02 16:38	IN
Lithium	53.7		ug/L	1	2.72	25.0	EPA 200.7/3010	02/02 13:00	02/02 17:02	MAZ
Magnesium	10600		ug/L	10	37.4	200	EPA 200.7/3010	02/02 13:00	02/02 19:47	IN
Mercury	ND	U	ug/L	1	0.120	1.00	EPA 245.1	02/02 14:00	02/03 13:24	EN
Potassium	64800		ug/L	1	17.3	50.0	EPA 200.7/3010	02/02 13:00	02/02 16:38	IN
Selenium	ND	U	ug/L	1	3.46	15.0	EPA 200.7/3010	02/02 13:00	02/02 16:38	IN
Sodium	56500		ug/L	1	446	2000	EPA 200.7/3010	02/02 13:00	02/02 16:38	IN
Thallium	ND	U	ug/L	1	0.925	4.00	EPA 200.7/3010	02/02 13:00	02/02 16:38	IN





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Work Order # 21B0063

Project: 281095/City of Lakeland CCR Wells

McIntosh Power Plant

Lab ID: 21B0063-08

Client Sample ID: 1010101-08C CCR-08

Matrix: Water

 Collection Date:
 01/26/21 10:21

 Received Date:
 02/02/21 11:10

 Collected By:
 Nina Driggers

Laboratory Analysis Report

-			TI:4-							
Parameter	Result	QC	Units	Dil	MDL	PQL	Method	Date Ext.	Date Analy.	Analyst

Total Recoverable Metals by EPA 200 Series Methods

Antimony	ND	U	ug/L	1	5.11	15.0	EPA 200.7/3010	02/02 13:00	02/02 16:41	IN
Arsenic	7.90	I	ug/L	1	2.21	10.0	EPA 200.7/3010	02/02 13:00	02/02 16:41	IN
Boron	119		ug/L	1	1.57	10.0	EPA 200.7/3010	02/02 13:00	02/02 16:41	IN
Calcium	118000		ug/L	1	5.79	50.0	EPA 200.7/3010	02/02 13:00	02/02 16:41	IN
Cobalt	1.20		ug/L	1	0.361	1.00	EPA 200.7/3010	02/02 13:00	02/02 16:41	IN
Lithium	49.1		ug/L	1	2.72	25.0	EPA 200.7/3010	02/02 13:00	02/02 17:05	MAZ
Mercury	ND	U	ug/L	1	0.120	1.00	EPA 245.1	02/02 14:00	02/03 13:27	EN
Selenium	ND	U	ug/L	1	3.46	15.0	EPA 200.7/3010	02/02 13:00	02/02 16:41	IN
Thallium	ND	U	ug/L	1	0.925	4.00	EPA 200.7/3010	02/02 13:00	02/02 16:41	IN





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Work Order # 21B0063

Project: 281095/City of Lakeland CCR Wells

McIntosh Power Plant

Date Ext.

Date Analy.

Analyst

Lab ID: 21B0063-09

Client Sample ID: 1010101-09C CCR-09

Result

Matrix: Water

Parameter

Collection Date: 01/26/21 11:16 **Received Date:** 02/02/21 11:10

Method

Collected By: Nina Driggers

Laboratory Analysis Report

MDL

PQL

Dil

Units

 \mathbf{QC}

Total Recoverable Me	tals by EPA 200 Seri	es Metl	ıods							
Antimony	ND	U	ug/L	1	5.11	15.0	EPA 200.7/3010	02/02 13:00	02/02 16:44	IN
Arsenic	5.60	I	ug/L	1	2.21	10.0	EPA 200.7/3010	02/02 13:00	02/02 16:44	IN
Boron	429		ug/L	1	1.57	10.0	EPA 200.7/3010	02/02 13:00	02/02 16:44	IN
Calcium	677000		ug/L	10	57.9	500	EPA 200.7/3010	02/02 13:00	02/02 19:53	IN
Cobalt	ND	U	ug/L	1	0.361	1.00	EPA 200.7/3010	02/02 13:00	02/02 16:44	IN
Lithium	70.5		ug/L	1	2.72	25.0	EPA 200.7/3010	02/02 13:00	02/02 17:07	MAZ
Magnesium	51000		ug/L	10	37.4	200	EPA 200.7/3010	02/02 13:00	02/02 19:53	IN
Mercury	ND	U	ug/L	1	0.120	1.00	EPA 245.1	02/02 14:00	02/03 13:31	EN
Potassium	117000		ug/L	10	173	500	EPA 200.7/3010	02/02 13:00	02/02 19:53	IN
Selenium	ND	U	ug/L	1	3.46	15.0	EPA 200.7/3010	02/02 13:00	02/02 16:44	IN
Sodium	159000		ug/L	10	4460	20000	EPA 200.7/3010	02/02 13:00	02/02 19:53	IN
Thallium	ND	U	ug/L	1	0.925	4.00	EPA 200.7/3010	02/02 13:00	02/02 16:44	IN





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Work Order # 21B0063

Project: 281095/City of Lakeland CCR Wells

McIntosh Power Plant

Date Ext.

Date Analy.

Analyst

Lab ID: 21B0063-10

Client Sample ID: 1010101-11C CCR-11

Result

Matrix: Water

Parameter

Collection Date: 01/26/21 13:33 **Received Date:** 02/02/21 11:10

Collected By: Nina Driggers

Method

Laboratory Analysis Report

MDL

PQL

Dil

Units

 \mathbf{QC}

Total Recoverable Me	tals by EPA 200 Seri	es Metl	ıods							
Antimony	ND	U	ug/L	1	5.11	15.0	EPA 200.7/3010	02/02 13:00	02/02 16:47	IN
Arsenic	54.4		ug/L	1	2.21	10.0	EPA 200.7/3010	02/02 13:00	02/02 16:47	IN
Boron	374		ug/L	1	1.57	10.0	EPA 200.7/3010	02/02 13:00	02/02 16:47	IN
Calcium	631000	J3	ug/L	10	57.9	500	EPA 200.7/3010	02/02 13:00	02/02 19:56	IN
Cobalt	ND	U	ug/L	1	0.361	1.00	EPA 200.7/3010	02/02 13:00	02/02 16:47	IN
Lithium	ND	U	ug/L	1	2.72	25.0	EPA 200.7/3010	02/02 13:00	02/02 17:10	MAZ
Magnesium	21900		ug/L	10	37.4	200	EPA 200.7/3010	02/02 13:00	02/02 19:56	IN
Mercury	ND	U	ug/L	1	0.120	1.00	EPA 245.1	02/02 14:00	02/03 13:34	EN
Potassium	324000	J3	ug/L	10	173	500	EPA 200.7/3010	02/02 13:00	02/02 19:56	IN
Selenium	ND	U	ug/L	1	3.46	15.0	EPA 200.7/3010	02/02 13:00	02/02 16:47	IN
Sodium	265000	J3	ug/L	10	4460	20000	EPA 200.7/3010	02/02 13:00	02/02 19:56	IN
Thallium	ND	U	ug/L	1	0.925	4.00	EPA 200.7/3010	02/02 13:00	02/02 16:47	IN





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Work Order # 21B0063

Project: 281095/City of Lakeland CCR Wells

McIntosh Power Plant

Lab ID: 21B0063-11

Client Sample ID: 1010101-12C CCR-12

Matrix: Water

 Collection Date:
 01/26/21 14:12

 Received Date:
 02/02/21 11:10

 Collected By:
 Nina Driggers

Laboratory Analysis Report

Parameter	Result	QC	Units	Dil	MDL	PQL	Method	Date Ext.	Date Analy.	Analyst
		-				-			-	

Total Recoverable Metals by EPA 200 Series Methods

						1	1			
Antimony	ND	U	ug/L	1	5.11	15.0	EPA 200.7/3010	02/02 13:00	02/02 17:10	IN
Arsenic	199		ug/L	1	2.21	10.0	EPA 200.7/3010	02/02 13:00	02/02 17:10	IN
Boron	423		ug/L	1	1.57	10.0	EPA 200.7/3010	02/02 13:00	02/02 17:10	IN
Calcium	675000		ug/L	10	57.9	500	EPA 200.7/3010	02/02 13:00	02/02 20:07	IN
Cobalt	ND	U	ug/L	1	0.361	1.00	EPA 200.7/3010	02/02 13:00	02/02 17:10	IN
Lithium	ND	U	ug/L	1	2.72	25.0	EPA 200.7/3010	02/02 13:00	02/02 17:57	MAZ
Magnesium	6770		ug/L	10	37.4	200	EPA 200.7/3010	02/02 13:00	02/02 20:07	IN
Mercury	ND	U	ug/L	1	0.120	1.00	EPA 245.1	02/02 14:00	02/03 14:08	EN
Potassium	72100		ug/L	10	173	500	EPA 200.7/3010	02/02 13:00	02/02 20:07	IN
Selenium	ND	U	ug/L	1	3.46	15.0	EPA 200.7/3010	02/02 13:00	02/02 17:10	IN
Sodium	31600		ug/L	1	446	2000	EPA 200.7/3010	02/02 13:00	02/02 17:10	IN
Thallium	ND	U	ug/L	1	0.925	4.00	EPA 200.7/3010	02/02 13:00	02/02 17:10	IN





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Work Order # 21B0063

Project: 281095/City of Lakeland CCR Wells

McIntosh Power Plant

Lab ID: 21B0063-12

Client Sample ID: 1010101-13C CCR-13

Matrix: Water

 Collection Date:
 01/26/21 14:42

 Received Date:
 02/02/21 11:10

 Collected By:
 Nina Driggers

Laboratory Analysis Report

Parameter	Result	QC	Units	Dil	MDL	PQL	Method	Date Ext.	Date Analy.	Analyst

Total Recoverable Metals by EPA 200 Series Methods

Antimony	ND	U	ug/L	1	5.11	15.0	EPA 200.7/3010	02/02 13:00	02/02 17:13	IN
Arsenic	ND	U	ug/L	1	2.21	10.0	EPA 200.7/3010	02/02 13:00	02/02 17:13	IN
Boron	201		ug/L	1	1.57	10.0	EPA 200.7/3010	02/02 13:00	02/02 17:13	IN
Calcium	517000		ug/L	10	57.9	500	EPA 200.7/3010	02/02 13:00	02/02 20:10	IN
Cobalt	3.40		ug/L	1	0.361	1.00	EPA 200.7/3010	02/02 13:00	02/02 17:13	IN
Lithium	222		ug/L	1	2.72	25.0	EPA 200.7/3010	02/02 13:00	02/02 18:00	MAZ
Mercury	ND	U	ug/L	1	0.120	1.00	EPA 245.1	02/02 14:00	02/03 14:11	EN
Selenium	ND	U	ug/L	1	3.46	15.0	EPA 200.7/3010	02/02 13:00	02/02 17:13	IN
Thallium	ND	U	ug/L	1	0.925	4.00	EPA 200.7/3010	02/02 13:00	02/02 17:13	IN





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Work Order # 21B0063

Project: 281095/City of Lakeland CCR Wells

McIntosh Power Plant

Lab ID: 21B0063-13

Client Sample ID: 1010101-15C CCR-15

Matrix: Water

 Collection Date:
 01/28/21 08:30

 Received Date:
 02/02/21 11:10

 Collected By:
 Nina Driggers

Laboratory Analysis Report

Parameter	Result	QC	Units	Dil	MDL	PQL	Method	Date Ext.	Date Analy.	Analyst
		~ -								

Total Recoverable Metals by EPA 200 Series Methods

Antimony	ND	U	ug/L	1	5.11	15.0	EPA 200.7/3010	02/02 13:00	02/02 17:16	IN
Antimony	IND	U	ug/L	1	3.11	13.0	EFA 200.7/3010	02/02 13.00	02/02 17.10	
Arsenic	ND	U	ug/L	1	2.21	10.0	EPA 200.7/3010	02/02 13:00	02/02 17:16	IN
Boron	87.0		ug/L	1	1.57	10.0	EPA 200.7/3010	02/02 13:00	02/02 17:16	IN
Calcium	95600		ug/L	1	5.79	50.0	EPA 200.7/3010	02/02 13:00	02/02 17:16	IN
Cobalt	ND	U	ug/L	1	0.361	1.00	EPA 200.7/3010	02/02 13:00	02/02 17:16	IN
Lithium	ND	U	ug/L	1	2.72	25.0	EPA 200.7/3010	02/02 13:00	02/02 18:03	MAZ
Magnesium	2710		ug/L	10	37.4	200	EPA 200.7/3010	02/02 13:00	02/02 20:13	IN
Mercury	ND	U	ug/L	1	0.120	1.00	EPA 245.1	02/02 14:00	02/03 14:15	EN
Potassium	18800		ug/L	1	17.3	50.0	EPA 200.7/3010	02/02 13:00	02/02 17:16	IN
Selenium	ND	U	ug/L	1	3.46	15.0	EPA 200.7/3010	02/02 13:00	02/02 17:16	IN
Sodium	16300		ug/L	1	446	2000	EPA 200.7/3010	02/02 13:00	02/02 17:16	IN
Thallium	ND	U	ug/L	1	0.925	4.00	EPA 200.7/3010	02/02 13:00	02/02 17:16	IN





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Work Order # 21B0063

Project: 281095/City of Lakeland CCR Wells

McIntosh Power Plant

Date Ext.

Date Analy.

Analyst

Lab ID: 21B0063-14

Client Sample ID: 1010101-16C CCR-16

Result

Matrix: Water

Parameter

Collection Date: 01/28/21 09:10 **Received Date:** 02/02/21 11:10

Method

Collected By: Nina Driggers

Laboratory Analysis Report

MDL

PQL

Dil

Units

 \mathbf{QC}

Total Recoverable Me	tals by EPA 200 Seri	es Metl	ıods							
Antimony	ND	U	ug/L	1	5.11	15.0	EPA 200.7/3010	02/02 13:00	02/02 17:18	IN
Arsenic	ND	U	ug/L	1	2.21	10.0	EPA 200.7/3010	02/02 13:00	02/02 17:18	IN
Boron	545		ug/L	1	1.57	10.0	EPA 200.7/3010	02/02 13:00	02/02 17:18	IN
Calcium	890000		ug/L	10	57.9	500	EPA 200.7/3010	02/02 13:00	02/02 20:16	IN
Cobalt	ND	U	ug/L	1	0.361	1.00	EPA 200.7/3010	02/02 13:00	02/02 17:18	IN
Lithium	45.3		ug/L	1	2.72	25.0	EPA 200.7/3010	02/02 13:00	02/02 18:05	MAZ
Magnesium	14900		ug/L	10	37.4	200	EPA 200.7/3010	02/02 13:00	02/02 20:16	IN
Mercury	ND	U	ug/L	1	0.120	1.00	EPA 245.1	02/02 14:00	02/03 14:18	EN
Potassium	466000		ug/L	10	173	500	EPA 200.7/3010	02/02 13:00	02/02 20:16	IN
Selenium	ND	U	ug/L	1	3.46	15.0	EPA 200.7/3010	02/02 13:00	02/02 17:18	IN
Sodium	416000		ug/L	10	4460	20000	EPA 200.7/3010	02/02 13:00	02/02 20:16	IN
Thallium	ND	U	ug/L	1	0.925	4.00	EPA 200.7/3010	02/02 13:00	02/02 17:18	IN





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Report Printed: 2/5/2021

Work Order # 21B0063

Project: 281095/City of Lakeland CCR Wells

McIntosh Power Plant

Date Ext.

Date Analy.

Analyst

Lab ID: 21B0063-15

Client Sample ID: 1010101-17C CCR-17

Result

Matrix: Water

Parameter

Collection Date: 01/28/21 13:14 **Received Date:** 02/02/21 11:10

Method

Collected By: Nina Driggers

Laboratory Analysis Report

MDL

PQL

Dil

Units

 \mathbf{QC}

Total Recoverable Me	tals by EPA 200 Seri	es Metl	nods							
Antimony	ND	U	ug/L	1	5.11	15.0	EPA 200.7/3010	02/02 13:00	02/02 17:21	IN
Arsenic	9.00	I	ug/L	1	2.21	10.0	EPA 200.7/3010	02/02 13:00	02/02 17:21	IN
Boron	148		ug/L	1	1.57	10.0	EPA 200.7/3010	02/02 13:00	02/02 17:21	IN
Calcium	162000		ug/L	10	57.9	500	EPA 200.7/3010	02/02 13:00	02/02 20:19	IN
Cobalt	ND	U	ug/L	1	0.361	1.00	EPA 200.7/3010	02/02 13:00	02/02 17:21	IN
Lithium	ND	U	ug/L	1	2.72	25.0	EPA 200.7/3010	02/02 13:00	02/02 18:08	MAZ
Magnesium	12900		ug/L	10	37.4	200	EPA 200.7/3010	02/02 13:00	02/02 20:19	IN
Mercury	ND	U	ug/L	1	0.120	1.00	EPA 245.1	02/02 14:00	02/03 14:21	EN
Potassium	20200		ug/L	1	17.3	50.0	EPA 200.7/3010	02/02 13:00	02/02 17:21	IN
Selenium	ND	U	ug/L	1	3.46	15.0	EPA 200.7/3010	02/02 13:00	02/02 17:21	IN
Sodium	20700		ug/L	1	446	2000	EPA 200.7/3010	02/02 13:00	02/02 17:21	IN
Thallium	ND	U	ug/L	1	0.925	4.00	EPA 200.7/3010	02/02 13:00	02/02 17:21	IN





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Work Order # 21B0063

Project: 281095/City of Lakeland CCR Wells

McIntosh Power Plant

Lab ID: 21B0063-16

Client Sample ID: 1010101-18C CCR-18

Matrix: Water

 Collection Date:
 01/27/21 08:01

 Received Date:
 02/02/21 11:10

 Collected By:
 Nina Driggers

Laboratory Analysis Report

Parameter	Result	QC	Units	Dil	MDL	PQL	Method	Date Ext.	Date Analy.	Analyst

Total Recoverable Metals by EPA 200 Series Methods

Antimony	ND	U	ug/L	1	5.11	15.0	EPA 200.7/3010	02/02 13:00	02/02 17:24	IN
Antimony	ND	U	ug/ L	1	3.11	13.0	EFA 200.7/3010	02/02 13.00	02/02 17.24	111
Arsenic	ND	U	ug/L	1	2.21	10.0	EPA 200.7/3010	02/02 13:00	02/02 17:24	IN
Boron	44.7		ug/L	1	1.57	10.0	EPA 200.7/3010	02/02 13:00	02/02 17:24	IN
Calcium	73300		ug/L	1	5.79	50.0	EPA 200.7/3010	02/02 13:00	02/02 17:24	IN
Cobalt	ND	U	ug/L	1	0.361	1.00	EPA 200.7/3010	02/02 13:00	02/02 17:24	IN
Lithium	ND	U	ug/L	1	2.72	25.0	EPA 200.7/3010	02/02 13:00	02/02 18:11	MAZ
Magnesium	3280		ug/L	10	37.4	200	EPA 200.7/3010	02/02 13:00	02/02 20:22	IN
Mercury	ND	U	ug/L	1	0.120	1.00	EPA 245.1	02/02 14:00	02/03 14:24	EN
Potassium	3100		ug/L	1	17.3	50.0	EPA 200.7/3010	02/02 13:00	02/02 17:24	IN
Selenium	ND	U	ug/L	1	3.46	15.0	EPA 200.7/3010	02/02 13:00	02/02 17:24	IN
Sodium	2240		ug/L	1	446	2000	EPA 200.7/3010	02/02 13:00	02/02 17:24	IN
Thallium	ND	U	ug/L	1	0.925	4.00	EPA 200.7/3010	02/02 13:00	02/02 17:24	IN





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Work Order # 21B0063

Project: 281095/City of Lakeland CCR Wells

McIntosh Power Plant

Date Ext.

Date Analy.

Analyst

Lab ID: 21B0063-17

Client Sample ID: 1010101-19C CCR-19

Result

Matrix: Water

Parameter

Collection Date: 01/27/21 08:33 **Received Date:** 02/02/21 11:10

Method

Collected By: Nina Driggers

Laboratory Analysis Report

MDL

PQL

Dil

Units

 \mathbf{QC}

T. (1D.) 11 M	. I I ED. 200 C	3.5.0								
Total Recoverable Me	tals by EPA 200 Seri	es Metr	iods							
Antimony	ND	U	ug/L	1	5.11	15.0	EPA 200.7/3010	02/02 13:00	02/02 17:27	IN
Arsenic	ND	U	ug/L	1	2.21	10.0	EPA 200.7/3010	02/02 13:00	02/02 17:27	IN
Boron	325		ug/L	1	1.57	10.0	EPA 200.7/3010	02/02 13:00	02/02 17:27	IN
Calcium	695000		ug/L	10	57.9	500	EPA 200.7/3010	02/02 13:00	02/02 20:25	IN
Cobalt	ND	U	ug/L	1	0.361	1.00	EPA 200.7/3010	02/02 13:00	02/02 17:27	IN
Lithium	ND	U	ug/L	1	2.72	25.0	EPA 200.7/3010	02/02 13:00	02/02 18:13	MAZ
Magnesium	47500		ug/L	10	37.4	200	EPA 200.7/3010	02/02 13:00	02/02 20:25	IN
Mercury	ND	U	ug/L	1	0.120	1.00	EPA 245.1	02/02 14:00	02/03 14:18	EN
Potassium	265000		ug/L	10	173	500	EPA 200.7/3010	02/02 13:00	02/02 20:25	IN
Selenium	ND	U	ug/L	1	3.46	15.0	EPA 200.7/3010	02/02 13:00	02/02 17:27	IN
Sodium	249000		ug/L	10	4460	20000	EPA 200.7/3010	02/02 13:00	02/02 20:25	IN
Thallium	ND	U	ug/L	1	0.925	4.00	EPA 200.7/3010	02/02 13:00	02/02 17:27	IN





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Work Order # 21B0063

Project: 281095/City of Lakeland CCR Wells

McIntosh Power Plant

Lab ID: 21B0063-18

Client Sample ID: 1010101-20C CCR-20

Matrix: Water

 Collection Date:
 01/27/21 13:53

 Received Date:
 02/02/21 11:10

 Collected By:
 Nina Driggers

Laboratory Analysis Report

Parameter	Result	QC	Units	Dil	MDL	PQL	Method	Date Ext.	Date Analy.	Analyst
		~ ~					cuiou			

Total Recoverable Metals by EPA 200 Series Methods

Antimony	ND	U	ug/L	1	5.11	15.0	EPA 200.7/3010	02/02 13:00	02/02 17:30	IN
Arsenic	71.5		ug/L	1	2.21	10.0	EPA 200.7/3010	02/02 13:00	02/02 17:30	IN
Boron	604		ug/L	1	1.57	10.0	EPA 200.7/3010	02/02 13:00	02/02 17:30	IN
Calcium	506000		ug/L	10	57.9	500	EPA 200.7/3010	02/02 13:00	02/02 20:27	IN
Cobalt	ND	U	ug/L	1	0.361	1.00	EPA 200.7/3010	02/02 13:00	02/02 17:30	IN
Lithium	ND	U	ug/L	1	2.72	25.0	EPA 200.7/3010	02/02 13:00	02/02 18:16	MAZ
Magnesium	12700		ug/L	10	37.4	200	EPA 200.7/3010	02/02 13:00	02/02 20:27	IN
Mercury	ND	U	ug/L	1	0.120	1.00	EPA 245.1	02/02 14:00	02/03 14:31	EN
Potassium	241000		ug/L	10	173	500	EPA 200.7/3010	02/02 13:00	02/02 20:27	IN
Selenium	ND	U	ug/L	1	3.46	15.0	EPA 200.7/3010	02/02 13:00	02/02 17:30	IN
Sodium	214000		ug/L	10	4460	20000	EPA 200.7/3010	02/02 13:00	02/02 20:27	IN
Thallium	ND	U	ug/L	1	0.925	4.00	EPA 200.7/3010	02/02 13:00	02/02 17:30	IN





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Work Order # 21B0063

Project: 281095/City of Lakeland CCR Wells

McIntosh Power Plant

Lab ID: 21B0063-19

Client Sample ID: 1010101-21C CCR-21

Matrix: Water

 Collection Date:
 01/27/21 14:43

 Received Date:
 02/02/21 11:10

 Collected By:
 Nina Driggers

Laboratory Analysis Report

Parameter	Result	QC	Units	Dil	MDL	PQL	Method	Date Ext.	Date Analy.	Analyst

Total Recoverable Metals by EPA 200 Series Methods

			110/1	١,	5.11	15.0	ED 4 200 7/2010	02/02 12 00	02/02 17:33	IN
Antimony	ND	U	ug/L	1	3.11	13.0	EPA 200.7/3010	02/02 13:00	02/02 17:33	IIN
Arsenic	ND	U	ug/L	1	2.21	10.0	EPA 200.7/3010	02/02 13:00	02/02 17:33	IN
Boron	385		ug/L	1	1.57	10.0	EPA 200.7/3010	02/02 13:00	02/02 17:33	IN
Calcium	464000		ug/L	10	57.9	500	EPA 200.7/3010	02/02 13:00	02/02 20:30	IN
Cobalt	ND	U	ug/L	1	0.361	1.00	EPA 200.7/3010	02/02 13:00	02/02 17:33	IN
Lithium	36.8		ug/L	1	2.72	25.0	EPA 200.7/3010	02/02 13:00	02/02 18:18	MAZ
Magnesium	16100		ug/L	10	37.4	200	EPA 200.7/3010	02/02 13:00	02/02 20:30	IN
Mercury	ND	U	ug/L	1	0.120	1.00	EPA 245.1	02/02 14:00	02/03 14:34	EN
Potassium	22000		ug/L	1	17.3	50.0	EPA 200.7/3010	02/02 13:00	02/02 17:33	IN
Selenium	ND	U	ug/L	1	3.46	15.0	EPA 200.7/3010	02/02 13:00	02/02 17:33	IN
Sodium	22800		ug/L	1	446	2000	EPA 200.7/3010	02/02 13:00	02/02 17:33	IN
Thallium	ND	U	ug/L	1	0.925	4.00	EPA 200.7/3010	02/02 13:00	02/02 17:33	IN





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Work Order # 21B0063

Project: 281095/City of Lakeland CCR Wells

McIntosh Power Plant

Date Ext.

Date Analy.

Analyst

Lab ID: 21B0063-20

Client Sample ID: 1010101-22C CCR-22

Result

Matrix: Water

Parameter

Collection Date: 01/27/21 15:28 **Received Date:** 02/02/21 11:10

Method

Collected By: Nina Driggers

Laboratory Analysis Report

MDL

PQL

Dil

Units

 \mathbf{QC}

Total Recoverable Me	tals by FPA 200 Sari	os Matl	ands							
Antimony	ND	U	ug/L	1	5.11	15.0	EPA 200.7/3010	02/02 13:00	02/02 17:36	IN
Arsenic	ND	U	ug/L	1	2.21	10.0	EPA 200.7/3010	02/02 13:00	02/02 17:36	IN
Boron	418		ug/L	1	1.57	10.0	EPA 200.7/3010	02/02 13:00	02/02 17:36	IN
Calcium	342000		ug/L	10	57.9	500	EPA 200.7/3010	02/02 13:00	02/02 20:33	IN
Cobalt	ND	U	ug/L	1	0.361	1.00	EPA 200.7/3010	02/02 13:00	02/02 17:36	IN
Lithium	99.3		ug/L	1	2.72	25.0	EPA 200.7/3010	02/02 13:00	02/02 18:21	MAZ
Magnesium	13100		ug/L	10	37.4	200	EPA 200.7/3010	02/02 13:00	02/02 20:33	IN
Mercury	ND	U	ug/L	1	0.120	1.00	EPA 245.1	02/02 14:00	02/03 14:37	EN
Potassium	118000		ug/L	10	173	500	EPA 200.7/3010	02/02 13:00	02/02 20:33	IN
Selenium	ND	U	ug/L	1	3.46	15.0	EPA 200.7/3010	02/02 13:00	02/02 17:36	IN
Sodium	36100		ug/L	1	446	2000	EPA 200.7/3010	02/02 13:00	02/02 17:36	IN
Thallium	ND	U	ug/L	1	0.925	4.00	EPA 200.7/3010	02/02 13:00	02/02 17:36	IN





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Work Order # 21B0063

Project: 281095/City of Lakeland CCR Wells

McIntosh Power Plant

Date Ext.

Date Analy.

Analyst

Lab ID: 21B0063-21

Client Sample ID: 1010101-23C CCR-23

Result

Matrix: Water

Parameter

Collection Date: 01/28/21 13:48 **Received Date:** 02/02/21 11:10

Method

Collected By: Nina Driggers

Laboratory Analysis Report

MDL

PQL

Dil

Units

 \mathbf{QC}

Total Recoverable Me	tals by EPA 200 Seri	es Metl	ıods							
Antimony	ND	U	ug/L	1	5.11	15.0	EPA 200.7/3010	02/02 13:00	02/02 17:59	IN
Arsenic	ND	U	ug/L	1	2.21	10.0	EPA 200.7/3010	02/02 13:00	02/02 17:59	IN
Boron	770		ug/L	1	1.57	10.0	EPA 200.7/3010	02/02 13:00	02/02 17:59	IN
Calcium	314000		ug/L	10	57.9	500	EPA 200.7/3010	02/02 13:00	02/02 18:22	IN
Cobalt	ND	U	ug/L	1	0.361	1.00	EPA 200.7/3010	02/02 13:00	02/02 17:59	IN
Lithium	ND	U	ug/L	1	2.72	25.0	EPA 200.7/3010	02/02 13:00	02/02 18:40	MAZ
Magnesium	28300		ug/L	10	37.4	200	EPA 200.7/3010	02/02 13:00	02/02 18:22	IN
Mercury	ND	U	ug/L	1	0.120	1.00	EPA 245.1	02/02 14:00	02/03 12:29	EN
Potassium	16400		ug/L	1	17.3	50.0	EPA 200.7/3010	02/02 13:00	02/02 17:59	IN
Selenium	ND	U	ug/L	1	3.46	15.0	EPA 200.7/3010	02/02 13:00	02/02 17:59	IN
Sodium	35400		ug/L	1	446	2000	EPA 200.7/3010	02/02 13:00	02/02 17:59	IN
Thallium	ND	U	ug/L	1	0.925	4.00	EPA 200.7/3010	02/02 13:00	02/02 17:59	IN





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Work Order # 21B0063

Project: 281095/City of Lakeland CCR Wells

McIntosh Power Plant

Date Ext.

Date Analy.

Analyst

Lab ID: 21B0063-22

1010101-24C CCR-24

Result

Matrix: Water

Client Sample ID:

Parameter

Collection Date: 01/28/21 15:10 **Received Date:** 02/02/21 11:10

Method

Collected By: Nina Driggers

Laboratory Analysis Report

MDL

PQL

Dil

Units

 \mathbf{QC}

Total Recoverable Me	tals by EPA 200 Seri	ies Meth	ıods							
Antimony	ND	U	ug/L	1	5.11	15.0	EPA 200.7/3010	02/02 13:00	02/02 18:02	IN
Arsenic	ND	U	ug/L	1	2.21	10.0	EPA 200.7/3010	02/02 13:00	02/02 18:02	IN
Boron	32.9		ug/L	1	1.57	10.0	EPA 200.7/3010	02/02 13:00	02/02 18:02	IN
Calcium	14000		ug/L	1	5.79	50.0	EPA 200.7/3010	02/02 13:00	02/02 18:02	IN
Cobalt	ND	U	ug/L	1	0.361	1.00	EPA 200.7/3010	02/02 13:00	02/02 18:02	IN
Lithium	ND	U	ug/L	1	2.72	25.0	EPA 200.7/3010	02/02 13:00	02/02 18:42	MAZ
Magnesium	2060		ug/L	10	37.4	200	EPA 200.7/3010	02/02 13:00	02/02 18:24	IN
Mercury	ND	U	ug/L	1	0.120	1.00	EPA 245.1	02/02 14:00	02/03 12:32	EN
Potassium	3870		ug/L	1	17.3	50.0	EPA 200.7/3010	02/02 13:00	02/02 18:02	IN
Selenium	ND	U	ug/L	1	3.46	15.0	EPA 200.7/3010	02/02 13:00	02/02 18:02	IN
Sodium	2770		ug/L	1	446	2000	EPA 200.7/3010	02/02 13:00	02/02 18:02	IN
Thallium	ND	U	ug/L	1	0.925	4.00	EPA 200.7/3010	02/02 13:00	02/02 18:02	IN





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Work Order # 21B0063

Project: 281095/City of Lakeland CCR Wells

McIntosh Power Plant

Date Ext.

Date Analy.

Analyst

Lab ID: 21B0063-23

Client Sample ID: 1010101-25C CCR-25

Result

Matrix: Water

Parameter

Collection Date: 01/26/21 08:29 **Received Date:** 02/02/21 11:10

Method

Collected By: Nina Driggers

Laboratory Analysis Report

MDL

PQL

Dil

Units

 \mathbf{QC}

T (ID II M	4 1 1 ED 200 C	- M. 41								
Total Recoverable Me	tals by EPA 200 Seri	es Meti	10ds							
Antimony	ND	U	ug/L	1	5.11	15.0	EPA 200.7/3010	02/02 13:00	02/02 18:04	IN
Arsenic	ND	U	ug/L	1	2.21	10.0	EPA 200.7/3010	02/02 13:00	02/02 18:04	IN
Boron	ND	U	ug/L	1	1.57	10.0	EPA 200.7/3010	02/02 13:00	02/02 18:04	IN
Calcium	11.4	I	ug/L	1	5.79	50.0	EPA 200.7/3010	02/02 13:00	02/02 18:04	IN
Cobalt	ND	U	ug/L	1	0.361	1.00	EPA 200.7/3010	02/02 13:00	02/02 18:04	IN
Lithium	ND	U	ug/L	1	2.72	25.0	EPA 200.7/3010	02/02 13:00	02/02 18:45	MAZ
Magnesium	4.90	I	ug/L	1	3.74	20.0	EPA 200.7/3010	02/02 13:00	02/02 18:04	IN
Mercury	ND	U	ug/L	1	0.120	1.00	EPA 245.1	02/02 14:00	02/03 12:36	EN
Potassium	ND	U	ug/L	1	17.3	50.0	EPA 200.7/3010	02/02 13:00	02/02 18:04	IN
Selenium	ND	U	ug/L	1	3.46	15.0	EPA 200.7/3010	02/02 13:00	02/02 18:04	IN
Sodium	ND	U	ug/L	1	446	2000	EPA 200.7/3010	02/02 13:00	02/02 18:04	IN
Thallium	ND	U	ug/L	1	0.925	4.00	EPA 200.7/3010	02/02 13:00	02/02 18:04	IN





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Work Order # 21B0063

Project: 281095/City of Lakeland CCR Wells

McIntosh Power Plant

5	Total Recoverable	Metals by E	PA 200	Series Me	thods - Q	uality Co	ontrol			
Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 21B0001 - EPA 3010A										
Blank (21B0001-BLK1)				Prepared &	Analyzed:	02/02/202	1			
Magnesium	ND	20.0	ug/L							U
Potassium	ND	50.0	"							U
Selenium	ND	15.0	"							U
Cobalt	ND	1.00	"							U
Sodium	ND	2000	"							U
Гhallium	ND	4.00	"							U
Calcium	ND	50.0	"							U
Antimony	ND	15.0	"							U
Arsenic	ND	10.0	"							U
Boron	ND	10.0	"							U
LCS (21B0001-BS1)				Prepared &	z Analyzed:	02/02/202	1			
Selenium	509.5	15.0	ug/L	500.0		102	85-115			
Cobalt	488.0	1.00	"	500.0		97.6	85-115			
Magnesium	492	20.0	"	500.0		98.5	85-115			
Potassium	23800	50.0	"	25500		93.4	85-115			
Calcium	27300	50.0	"	25500		107	85-115			
Sodium	24200	2000	"	25500		94.9	85-115			
Γhallium	487.5	4.00	"	500.0		97.5	85-115			
Antimony	479.4	15.0	"	500.0		95.9	85-115			
Arsenic	508	10.0	"	500.0		102	85-115			
Boron	504.3	10.0	"	500.0		101	85-115			
Matrix Spike (21B0001-MS1)	Sou	rce: 21B0063-	10	Prepared &	Analyzed:	02/02/202	1			
Antimony	616.1	15.0	ug/L	500.0	ND	123	70-130			
Гhallium	464.0	4.00	"	500.0	ND	92.8	70-130			
Arsenic	621	10.0	"	500.0	54.4	113	70-130			
Boron	938.9	10.0	"	500.0	374.5	113	70-130			
Calcium	600000	50.0	"	25500	631000	NR	70-130			J3, L
Cobalt	503.0	1.00	"	500.0	ND	101	70-130			-
Magnesium	22300	20.0	"	500.0	21900	79.5	70-130			
Potassium	335000	50.0	"	25500	324000	45.7	70-130			J3, L

Florida-Spectrum Environmental Services, Inc. 1460 W. McNab Road, Fort Lauderdale, FL 33309

Pembroke Laboratory 528 Gooch Rd. Fort Mead, FL 33841 Big Lake Laboratory 610 Parrot Ave. N. Okeechobee, FL 34972 Lakeland Laboratory 111 Easton Dr. Lakeland, FL 33803





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Work Order # 21B0063

Project: 281095/City of Lakeland CCR Wells

McIntosh Power Plant

Tota	al Recoverable l	Metals by E	PA 200	Series Me	thods - Q	uality Co	ontrol			
Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 21B0001 - EPA 3010A										
Matrix Spike (21B0001-MS1)	Sou	rce: 21B0063-	10	Prepared &	k Analyzed:	02/02/2021	1			
Sodium	402000	2000	ug/L	25500	265000	537	70-130			J3, L
Selenium	365.1	15.0	"	500.0	ND	73.0	70-130			
Matrix Spike Dup (21B0001-MSD1)	Sou	rce: 21B0063-	10	Prepared &	k Analyzed:	02/02/2021	1			
Calcium	604000	50.0	ug/L	25500	631000	NR	70-130	NR	20	J3, L
Magnesium	22400	20.0	"	500.0	21900	94.7	70-130	17.5	20	
Selenium	369.6	15.0	"	500.0	ND	73.9	70-130	1.22	20	
Sodium	403000	2000	"	25500	265000	543	70-130	1.10	20	J3, L
Гhallium	467.5	4.00	"	500.0	ND	93.5	70-130	0.751	20	
Potassium	337000	50.0	"	25500	324000	53.5	70-130	15.6	20	J3, L
Cobalt	504.8	1.00	"	500.0	ND	101	70-130	0.357	20	
Antimony	618.2	15.0	"	500.0	ND	124	70-130	0.340	20	
Arsenic	625	10.0	"	500.0	54.4	114	70-130	0.651	20	
Boron	942.1	10.0	"	500.0	374.5	114	70-130	0.565	20	
Batch 21B0002 - EPA 3010A										
Blank (21B0002-BLK1)				Prepared &	k Analyzed:	02/02/202	1			
Antimony	ND	15.0	ug/L							U
Selenium	ND	15.0	"							U
Potassium	ND	50.0	"							U
Arsenic	ND	10.0	"							U
Thallium	ND	4.00	"							U
Sodium	ND	2000	"							U
Calcium	ND	50.0	"							U
Boron	ND	10.0	"							U
Cobalt	ND	1.00	"							U
Magnesium	ND	20.0	"							U

Florida-Spectrum Environmental Services, Inc. 1460 W. McNab Road, Fort Lauderdale, FL 33309

Pembroke Laboratory 528 Gooch Rd. Fort Mead, FL 33841 Big Lake Laboratory 610 Parrot Ave. N. Okeechobee, FL 34972 Lakeland Laboratory 111 Easton Dr. Lakeland, FL 33803





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Report Printed: 2/5/2021

Work Order # 21B0063

Project: 281095/City of Lakeland CCR Wells

McIntosh Power Plant

Tota	l Recoverable N	Metals by E	PA 200	Series Met	thods - Q	Total Recoverable Metals by EPA 200 Series Methods - Quality Control											
		Reporting		Spike	Source		%REC		RPD								
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes							
Batch 21B0002 - EPA 3010A																	
LCS (21B0002-BS1)				Prepared &	Analyzed:	02/02/2021	1										
Arsenic	502	10.0	ug/L	500.0	•	100	85-115										
Antimony	472.6	15.0	"	500.0		94.5	85-115										
Sodium	24000	2000	"	25500		94.1	85-115										
Potassium	23400	50.0	"	25500		91.8	85-115										
Selenium	504.6	15.0	"	500.0		101	85-115										
Гhallium	476.1	4.00	"	500.0		95.2	85-115										
Boron	497.8	10.0	"	500.0		99.6	85-115										
Cobalt	478.6	1.00	"	500.0		95.7	85-115										
Magnesium	481	20.0	"	500.0		96.2	85-115										
Calcium	26900	50.0	"	25500		105	85-115										
Matrix Spike (21B0002-MS1)	Sour	rce: 21B0036-	01	Prepared: (02/02/2021	Analyzed: (02/03/2021										
Arsenic	495	10.0	ug/L	500.0	ND	98.9	70-130										
Antimony	558.1	15.0	"	500.0	ND	112	70-130										
Potassium	26200	50.0	"	25500	3050	90.9	70-130										
Selenium	486.8	15.0	"	500.0	ND	97.4	70-130										
Sodium	55700	2000	"	25500	32000	93.0	70-130										
Thallium	461.7	4.00	"	500.0	ND	92.3	70-130										
Boron	559.8	10.0	"	500.0	63.90	99.2	70-130										
Calcium	41700	50.0	"	25500	18500	90.8	70-130										
Cobalt	480.3	1.00	"	500.0	ND	96.1	70-130										
Magnesium	5560	20.0	"	500.0	5750	NR	70-130			J3, L							
Matrix Spike Dup (21B0002-MSD1)	Sour	rce: 21B0036-	01	Prepared: (02/02/2021	Analyzed: (02/03/2021										
Antimony	562.1	15.0	ug/L	500.0	ND	112	70-130	0.714	20								
Potassium	26200	50.0	"	25500	3050	90.7	70-130	0.253	20								
Arsenic	496	10.0	"	500.0	ND	99.1	70-130	0.182	20								
Sodium	55600	2000	"	25500	32000	92.6	70-130	0.415	20								
Thallium	460.0	4.00	"	500.0	ND	92.0	70-130	0.369	20								
Selenium	485.7	15.0	"	500.0	ND	97.1	70-130	0.226	20								
Calcium	41600	50.0	"	25500	18500	90.6	70-130	0.301	20								
Magnesium	5550	20.0	"	500.0	5750	NR	70-130	NR	20	J3, L							

Florida-Spectrum Environmental Services, Inc. 1460 W. McNab Road, Fort Lauderdale, FL 33309

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Work Order # 21B0063

Project: 281095/City of Lakeland CCR Wells

McIntosh Power Plant

Total R	ecoverable M	etals by E	PA 200	Series Met	thods - Q	uality Co	ontrol			
Andre	D. soule	Reporting Limit	I I!4-	Spike Level	Source	%REC	%REC	RPD	RPD	Notes
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	KPD	Limit	Notes
Batch 21B0002 - EPA 3010A										
Matrix Spike Dup (21B0002-MSD1)	Source	e: 21B0036-	01	Prepared: 0	02/02/2021	Analyzed: (02/03/2021			
Boron	558.6	10.0	ug/L	500.0	63.90	98.9	70-130	0.242	20	
Cobalt	479.4	1.00	"	500.0	ND	95.9	70-130	0.188	20	
Batch 21B0004 - EPA 3010A										
Blank (21B0004-BLK1)				Prepared &	Analyzed:	02/02/202	1			
Lithium	ND	25.0	ug/L							U
LCS (21B0004-BS1)				Prepared &	: Analyzed:	02/02/202	1			
Lithium	2610	25.0	ug/L	2500		104	85-115			
Matrix Spike (21B0004-MS1)	Source	e: 21B0063-	10	Prepared &	Analyzed:	02/02/202	1			
Lithium	1980	25.0	ug/L	2500	ND	79	75-125			
Matrix Spike Dup (21B0004-MSD1)	Source	e: 21B0063-	10	Prepared &	Analyzed:	02/02/202	1			
Lithium	2020	25.0	ug/L	2500	ND	81	75-125	2	20	
Batch 21B0005 - EPA 245.1/245.2 Prep										
Blank (21B0005-BLK1)				Prepared: 0	02/02/2021	Analyzed: (02/03/2021			
Mercury	ND	1.00	ug/L							U
LCS (21B0005-BS1)				Prepared: 0	02/02/2021	Analyzed: (02/03/2021			
Mercury	9.88	1.00	ug/L	10.00		98.8	85-115			
Matrix Spike (21B0005-MS1)	Source	e: 21A0911-	05	Prepared: 0	02/02/2021	Analyzed: (02/03/2021			
Mercury	8.63	1.00	ug/L	10.00	ND	86.3	70-130			

Florida-Spectrum Environmental Services, Inc. 1460 W. McNab Road, Fort Lauderdale, FL 33309

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Report Printed: 2/5/2021

Work Order # 21B0063

Project: 281095/City of Lakeland CCR Wells

McIntosh Power Plant

Total R	ecoverable M	letals by E	PA 200	Series Met	thods - Q	uality Co	ontrol			
Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 21B0005 - EPA 245.1/245.2 Prep										
Matrix Spike Dup (21B0005-MSD1)	Sour	ce: 21A0911-	05	Prepared: 0	02/02/2021 /	Analyzed: (02/03/2021			
Mercury	8.51	1.00	ug/L	10.00	ND	85.1	70-130	1.42	20	
Batch 21B0006 - EPA 245.1/245.2 Prep										
Blank (21B0006-BLK1)				Prepared: 0	02/02/2021	Analyzed: (02/03/2021			
Mercury	ND	1.00	ug/L							U
LCS (21B0006-BS1)				Prepared: 0	02/02/2021	Analyzed: (02/03/2021			
Mercury	8.96	1.00	ug/L	10.00		89.6	85-115			
Matrix Spike (21B0006-MS1)	Sour	ce: 21B0063-	19	Prepared: 0	02/02/2021	Analyzed: (02/03/2021			
Mercury	7.90	1.00	ug/L	10.00	ND	79.0	70-130			
Matrix Spike Dup (21B0006-MSD1)	Sour	ce: 21B0063-	19	Prepared: 0	02/02/2021	Analyzed: (02/03/2021			
Mercury	7.51	1.00	ug/L	10.00	ND	75.1	70-130	5.05	20	
Batch 21B0008 - EPA 3010A										
Blank (21B0008-BLK1)				Prepared &	: Analyzed:	02/02/2021	<u> </u>			
Lithium	ND	25.0	ug/L	-	-					U
LCS (21B0008-BS1)				Prepared &	Analyzed:	02/02/2021	l			
Lithium	2390	25.0	ug/L	2500		95	85-115			
Matrix Spike (21B0008-MS1)	Sour	ce: 21B0063-	23	Prepared &	: Analyzed:	02/02/2021	l			
Lithium	2170	25.0	ug/L	2500	ND	87	75-125			





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Work Order # 21B0063

Project: 281095/City of Lakeland CCR Wells

McIntosh Power Plant

Total	Recoverable M	etals by E	PA 200	Series Met	thods - Q	uality Co	ontrol				
Analyte Batch 21B0008 - EPA 3010A	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes	
Matrix Spike Dup (21B0008-MSD1) Lithium	Source: 21B0063-23 Prepared & Analyzed: 02/02/2021 2140 25.0 ug/L 2500 ND 85 75-125 2 20										





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Report Printed: 2/5/2021

Work Order # 21B0063

Project: 281095/City of Lakeland CCR Wells

McIntosh Power Plant

Notes and Definitions

U Indicated that the compound was analyzed for but not detected. This shall be used to indicate that the specific component was not

detected. The value associated with the qualifier shall be the laboratory method detection limit.

Off-Scale high. The concentration of the analyte was above the quantitation range of the calibration curve.

J3 The matrix spike recovery outside method acceptance limits indicating matrix interference.

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the detection limit

NR Not Reported

L

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference

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

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

Z Too many colonies were present for accurate counting.

QC=Qualifier Codes as defined by DEP 62-160
Unless indicated, soil results are reported on actual (wet) weight basis.
Work performed by outside (subcontracted) labs denoted by SUB in Analyst Field.

Results relate only to this sample.

Suresh (Bobby) Supan - CSM

Authorized CSM Signature (954) 978-6400 Florida-Spectrum Environmental Services,Inc. Certification# E86006

All NELAP certified analysis are performed in accordance with Chapter 64E-1 Florida Administrative code, which has been determined to be equivalent to NELAC standards. Analysis certified by programs other than NELAP are designated with a "~".

Florida-Spectrum Environmental Services, Inc. 1460 W. McNab Road, Fort Lauderdale, FL 33309

Pembroke Laboratory 528 Gooch Rd. Fort Mead, FL 33841 Big Lake Laboratory 610 Parrot Ave. N. Okeechobee, FL 34972 Lakeland Laboratory 111 Easton Dr. Lakeland, FL 33803

WORK ORDER #
21/3063

Logged in LIMS by By

Meets Acceptance Criteria: Y N

Misc. Charges



1460 W. McNab Road Ft Laud. FL 33309 108 Airport Park Dr., Garden City, GA 31408 528 Gooch Road Fort Meade, FL 33841 610 Parrot Ave., N Okeechobee, FL 34972

111 E. Easton Drive., Lakeland, FL 33803

Hex-Hex Cr Buffer

EDA-Ethylene Diamine

Tel: (954) 978-6400 Fax: (954) 978-2233
Tel: (912) 238-5050 Fax: (912) 234-4815
Tel: (863) 285-8145 Fax: (863) 285-7030
Tel: (863) 763-3336 Fax: (863) 763-1544
Tel: (863) 686-4271 Fax: (863) 686-4389

CHAIN OF CUSTODY RECORD

DUE DATE Requested

O2 | 05 | 2 |

RUSH RESERVATION #

SS RUSH RESERVE TION A

Original-Return w/report Yellow- Lab File Copy Pink- Sampler Copy Report Report to (company name) Lakeland Electric 3030 East Lake Parker Drive, Lakeland FL 33805 Address: Invoice to: Purchase Invoice to (company name) City of Lakeland Order # 281095 Address: 501 East Lemon Street, Lakeland FL 33801 Project Name Site CCR Wells Location: McIntosh Power Plant Phone: 863-834-5605 Project Andrew Barron Fax: Email: Andrew. Barron@lakelandgov.net Contact: Nina Driggers Sample Name Affiliation: Sampler Juna Dugger Nina Driggers (printed) Signature ORDER# Date Time Matrix Bottle Number of **Analysis Required** Field Tests Lab Control Number Sampled Sampled & Containers DW SW Pres. Received C C GW WW & NELAC E 0 H As, B, Co, Li, S SED Letter M N 50 Mg, Na, K Comments Hg, Se, TL, Ca HW BIO Combo Suffixes D 0 Shaded Areas For SEA OIL # A-? Codes °C Laboratory Use Onl R X AIR 1010101-01C 01/25/21 HNO3 1 X × **CCR-01** 9:35 SW 0 1010101-02C 01/25/21 X × 10:11 SW HNO3 1 CCR-02 02 1010101-03C 01/25/21 10:53 SW HN₀3 1 X CCR-03 1010101-04C 94 01/25/21 12:43 SW HNO3 X × CCR-04 0 1010101-05C 01/25/21 1 X X × CCR-05 13:18 SW HNO3 1010101-06C 01/25/21 X X × 14:02 SW HNO3 1 CCR-06 1010101-07C X X 01/26/21 9:43 SW HNO3 CCR-07 × 1010101-08C 01/26/21 10:21 HN₀3 X × CCR-08 SW 1 1010101-09C 01/26/21 11:16 HNO3 1 X X × CCR-09 SW 10 X 1010101-11C 01/26/21 SW HNO3 X X CCR-11 13:33 1 GUN-1 Special Comments: Total EMAIL REC. 2-2-21 FROM ANDREW B. ADD SO TO ALL SAMPLES "I waive TNI protocol" (emergency) (sign here) > Affiliation DATE / TIME Signature Deliverables: QA/QC Report Needed? Yes No (additional Sample Custody & Field Comments Bottle Type Preservatives Relinquished by: A-liter amber Received on Ice: B-Bacteria bag/bottle A-ascorbic acid P-H3PO4 Received by: 1.29.21 Temp as received F-500 ml O-125 ml C-HCL S-H2SO4 Custody Seals? H- Plastic Amber Liter T-Na2S2O3-H2O Relinquished by: Cu-CuSO4 RAD-9 GUN-1 L-liter bottle DI-DI Water **U-Unpreserved** S2-2 oz soil jar H-HNO3 N-NaOH 2 Received by: £76501 S4- 4 oz soil jar / S8- 8 oz soil M-MCAB NH4-NH4CL T-250 ml MeOH-Methanol Y-Sterile Relinquished by: FIELD TIME V-40 ml vial Z-zinc acetate W-wide mouth Received by: Sampling hrs Pick-Up hrs X-other TED=Tedlar **Additional Preservations**

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2/1	BO LIMS 6	RDER # 2063 Spectriteria: Y N	orida ectrum ental Services, Inc.	108 Air 528 Go 610 Par	och Road For rot Ave., N O	, Garden t Meade, keechob	City, GA 31408 FL 33841	Tel: (954) 97	88-5050 I 85-8145 I 63-3336 I	Fax: (954) 978-2 Fax: (912) 234-4 Fax: (863) 285-7 Fax: (863) 763-1 Fax: (863) 686-4	815 030 544		RUS	H RESE	E Reque ERVATI	ION#	
						Origi	nal-Return w/repo	rt Yellow-	Lab File Copy	Pink- Sampl	er Copy						
Report		A Tabele d Place						Report to	- 100 Car 10 17 Car		Gill Villes Austr	U.S.					
nvoice t	y name	e) Lakeland Electric		Purchase				Address: Invoice to	3030 East Lake P	Parker Drive, L	akeland FL 338	05					_
	y name,	City of Lakeland		Order #				Address:	501 East Lemon S	Street, Lakeland	FL 33801						
roject l								Site									
CR W								Location:	McIntosh Power	Plant							
roject	ntact: Nina Driggers							Fax:				Email: Andrey	v. Barron@lake	landgo	v.net		
ample orinted	Name	Nina Drigger	2	Affiliation:				Sampler Signature	Juna Dug	gero							
	RDER# Sample Date Time Matrix ontrol Number ID Sampled Sampled						Bottle	Number of		-	lysis Requ	ired			Rield	Test	
Shaded As Laboratory	reas For	ID.	Sampled	Sampled	DW SW GW WW S SED HW BIO SEA OIL X AIR		& Pres. Combo Codes	Containers Received & NELAC Letter Suffixes # A-?	As, B, Co, Li, Hg, Se, TL, Ca	Mg, Na, K	sb	lited	Comments	T E M P	P H	C O N D	C H L O
1	11	1010101-12C	01/26/2	1 14:12	sw	H	HNO3	1	X	X	*		CCR-12				
2	12	1010101-13C	01/26/2	1 14:42	sw		HNO3	1	X		*		CCR-13				
3	13	1010101-15C	01/28/2	1 8:30	sw		HNO3	1	×	×	×		CCR-15				
4	14	1010101-16C	01/28/2	1 9:10	sw		HNO3	1	×	×	*		CCR-16				
5	5	1010101-17C	01/28/2	1 13:14	sw		HNO3	1	×	×	*		CCR-17				
6	16	1010101-18C	01/27/2	1 8:01	sw		HNO3	1	×	×	*		CCR-18				
7	17	1010101-19C	01/27/2	1 8:33	sw		HNO3	1	×	X	×		CCR-19	J.			
8	18	1010101-20C	01/27/2	1 13:53	sw		HNO3	1	×	X	*		CCR-20	10			
9	19	1010101-21C	01/27/2	1 14:43	SW	1./	HNO3	1	X	×	*		CCR-21				
10	20	1010101-22C	01/27/2	1 15:28	SW	0	HNO3	1	X	X	×		CCR-22	iver.			
I waive TNI protocol" (emergency) (sign here) >				Total Signature Affiliation DA				DATE / TIME									
eliverat	bles:	QA/C	QC Report N	eeded?	Yes	No		(additional					1 .				
ample Custody & Field Comments A-liter amber							1 Relinquished by: Nina William 1/29/24										

Received by:

Received by:

Received by:

3

Relinquished by:

Relinquished by:

www.flenviro.com

1.29.71

COC Page

1040

1110

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Received on Ice:

Temp as received

GUN-1

FIELD TIME

Sampling ___hrs Pick-Up __hrs

Custody Seals? RAD-9

Misc. Charges

B-Bacteria bag/bottle

F-500 ml O-125 ml

H- Plastic Amber Liter

S4- 4 oz soil jar / S8- 8 oz soil M-MCAB

TED=Tedlar

L-liter bottle

T-250 ml

X-other

V-40 ml vial

W-wide mouth

S2-2 oz soil jar

A-ascorbic acid

C-HCL

Cu-CuSO4

H-HNO3

DI-DI Water

MeOH-Methanol

Hex-Hex Cr Buffer

EDA-Ethylene Diamine

Z-zinc acetate

P-H3PO4

S-H2SO4

N-NaOH

Y-Sterile

T-Na2S2O3-H2O

U-Unpreserved

NH4-NH4CL

Additional Preservations

Logged in LIMS by 13 C					CHAIN OF CUSTODY RECORD McNab Road Ft Laud. FL 33309 Tel: (954) 978-6400 Fax: (954) 978-2233 port Park Dr., Garden City, GA 31408 Tel: (912) 238-5050 Fax: (912) 234-4815 port Road Fort Meade, FL 33841 Tel: (863) 285-8145 Fax: (863) 285-7030 rot Ave., N Okeechobee, FL 34972 Tel: (863) 763-3336 Fax: (863) 763-1544 Faston Drive., Lakeland, FL 33803 Tel: (863) 686-4271 Fax: (863) 686-4389 Original-Return w/report Yellow- Lab File Copy Pink- Sampler Copy					DUE DATE Requested RUSH RESERVATION # Rush Surcharges apply					
Report					Original-Return w/rep	Report to	Lab File Copy	Pink- Sample	er Copy						
(company nam Invoice to: (company name			Purchas Order #			Address: Invoice to	3030 East Lake I	7		305					-
Project Name CCR Wells	of the Lanciano		Order #	201093		Address: Site	501 East Lemon		IFL 33801						
Project Andrew Barron Phone: 863-83 Contact: Nina Driggers				3-834-5605		Location: McIntosh Power Plant Fax: Email: Andrew. Barron@lakelandgov.net									
Sample Name (printed)	Nine Drig Sample	gers	Affiliation:			Sampler Signature Anna Auggeri									\neg
ORDER#	Sample ID	Date Sampled		Matrix DW SW	Bottle &	Number of Containers	Analysis Required					Field '	Tests	8	
Shuded Areas For Laboratory Use Only				GW WW S SED HW BIO SEA OIL X AIR	Combo Codes	Received & NELAC Letter Suffixes # A-?	As, B, Co, Li, Hg, Se, TL, Ca	Mg, Na, K	Sb		Comments	T E M P	P H	C O N D	C H L O
1 21	1010101-23C	01/28/2	1 13:48	SW	HNO3	1	X	×	*		CCR-23				
2 02	1010101-24C	01/28/2	1 15:10	sw	I HNO3	1	X	×	×		CCR-24				
3 60	1010101-25C	01/26/2	1 8:29	SW	₩ HNO3	1	Х.	Х	×		CCR-25				
5															4
6															
7															
9															
10															
Special Commen	its: ice 24	GUN-1	1		A	Total									
The state of the s	otocol" (emergency) (si						Signature			Affiliation		DA	ATE / TI	IME	
Deliverables:	F: 11.0	QA/QC Report N	1 1 1	Yes		(additional					4 .				
Received on Ice: (Y) N Received on Ice: (Y) N Respective of Ice: (Y) N Representative of the property of th						1 Relinquis 1 Received 2 Relinquis 2 Received 3 Relinquis	by:	Mill Wu An Cia: Feel &		1-29-7	/	_/	046		
W-wide mouth				Hex-Hex Cr B		ons	3 Received by: Columbia 2/2/21 1110 www.flenviro.com COC Page Page 39 co						of 39		





1460 West McNab Road Fort Lauderdale, FL 33309 1-800-ANALYTE Phone (954) 978-6400 Phone (954) 978-2233 Fax

NELAP Certificate No. E86006

05 February 2021 Lab Work Order (COC): 21B0062

Andrew Barron Lakeland Electric - McIntosh 3030 East Lake Parker Drive Lakeland, FL 33805

RE: 281095/City of Lakeland CCR Wells

Project Location: McIntosh Power Plant

Dear Andrew Barron:

This report details the analytical results of samples collected at the above-referenced project location as well as the results of any associated quality control samples. These samples were received by Florida Spectrum Environmental Services at 02/02/2021 11:10.

All Analyses were performed according to the TNI/NELAP standard unless indicated by a "~" on the report.

Your samples will be retained by Florida Spectrum Environmental for a period of at least 30 days following sample receipt or until the longest of the preparation and/or analytical hold times expires, whichever is shorter. After that time, they will be properly disposed without further notice, unless there exists an explicit contractual agreement to the contrary. We reserve the right to return any unused samples, extracts, or related materials or solutions to you if we consider it necessary. Examples might include those samples identified as hazardous wastes, submissions where the sample sizes significantly exceed those required for analysis, samples containing controlled substances, etc.

We thank you for selecting Florida Spectrum Environmental to serve your analytical needs. Should you have any questions or require additional information regarding any of the information in this report, please feel free to contact us at any time. We appreciate the opportunity to be of service.

Florida Spectrum Environmental Inc.







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Report Printed: 2/5/2021

Work Order # 21B0062

Project: 281095/City of Lakeland CCR Wells

McIntosh Power Plant

DETECTED ANALYTE SUMMARY

Client Sample ID	Laboratory ID	Matrix	Analyte	Result	Units	Collection Date	Collection Time
1010101-01D CCR-01	21B0062-01	Water	Fluoride	0.0660	mg/L	1/25/2021	9:35
1010101-02D CCR-02	21B0062-02	Water	Fluoride	0.112	mg/L	1/25/2021	10:11
1010101-03D CCR-03	21B0062-03	Water	Fluoride	0.232	mg/L	1/25/2021	10:53
1010101-04D CCR-04	21B0062-04	Water	Fluoride	0.325	mg/L	1/25/2021	12:43
1010101-05D CCR-05	21B0062-05	Water	Fluoride	0.145	mg/L	1/25/2021	13:18
1010101-05D CCR-05	21B0062-05	Water	Total Alkalinity	31.8	mg/L	1/25/2021	13:18
1010101-05D CCR-05	21B0062-05	Water	Bicarbonate	31.8	mg/L	1/25/2021	13:18
1010101-06D CCR-06	21B0062-06	Water	Fluoride	0.266	mg/L	1/25/2021	14:02
1010101-06D CCR-06	21B0062-06	Water	Total Alkalinity	119	mg/L	1/25/2021	14:02
1010101-06D CCR-06	21B0062-06	Water	Bicarbonate	119	mg/L	1/25/2021	14:02
1010101-07D CCR-07	21B0062-07	Water	Bicarbonate	19.8	mg/L	1/26/2021	9:43
1010101-07D CCR-07	21B0062-07	Water	Fluoride	0.174	mg/L	1/26/2021	9:43
1010101-07D CCR-07	21B0062-07	Water	Total Alkalinity	19.8	mg/L	1/26/2021	9:43
1010101-08D CCR-08	21B0062-08	Water	Fluoride	0.298	mg/L	1/26/2021	10:21
1010101-09D CCR-09	21B0062-09	Water	Total Alkalinity	43.2	mg/L	1/26/2021	11:16
1010101-09D CCR-09	21B0062-09	Water	Fluoride	0.236	mg/L	1/26/2021	11:16
1010101-09D CCR-09	21B0062-09	Water	Bicarbonate	43.2	mg/L	1/26/2021	11:16
1010101-11D CCR-11	21B0062-10	Water	Bicarbonate	18.2	mg/L	1/26/2021	13:33
1010101-11D CCR-11	21B0062-10	Water	Total Alkalinity	18.2	mg/L	1/26/2021	13:33
1010101-11D CCR-11	21B0062-10	Water	Fluoride	1.04	mg/L	1/26/2021	13:33
1010101-12D CCR-12	21B0062-11	Water	Bicarbonate	186	mg/L	1/26/2021	14:12
1010101-12D CCR-12	21B0062-11	Water	Total Alkalinity	186	mg/L	1/26/2021	14:12
1010101-12D CCR-12	21B0062-11	Water	Fluoride	0.716	mg/L	1/26/2021	14:12
1010101-13D CCR-13	21B0062-12	Water	Fluoride	1.59	mg/L	1/26/2021	14:42

Florida-Spectrum Environmental Services, Inc. 1460 W. McNab Road, Fort Lauderdale, FL 33309

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Work Order # 21B0062

Project: 281095/City of Lakeland CCR Wells

McIntosh Power Plant

DETECTED ANALYTE SUMMARY

Client Sample ID	Laboratory ID	Matrix	Analyte	Result	Units	Collection Date	Collection Time
1010101-15D CCR-15	21B0062-13	Water	Fluoride	0.0930	mg/L	1/28/2021	8:30
1010101-16D CCR-16	21B0062-14	Water	Bicarbonate	3.91	mg/L	1/28/2021	9:10
1010101-16D CCR-16	21B0062-14	Water	Total Alkalinity	3.91	mg/L	1/28/2021	9:10
1010101-17D CCR-17	21B0062-15	Water	Bicarbonate	205	mg/L	1/28/2021	13:14
1010101-17D CCR-17	21B0062-15	Water	Fluoride	0.0420	mg/L	1/28/2021	13:14
1010101-17D CCR-17	21B0062-15	Water	Total Alkalinity	205	mg/L	1/28/2021	13:14
1010101-18D CCR-18	21B0062-16	Water	Total Alkalinity	177	mg/L	1/27/2021	8:01
1010101-18D CCR-18	21B0062-16	Water	Fluoride	0.307	mg/L	1/27/2021	8:01
1010101-18D CCR-18	21B0062-16	Water	Bicarbonate	177	mg/L	1/27/2021	8:01
1010101-19D CCR-19	21B0062-17	Water	Bicarbonate	15.8	mg/L	1/27/2021	8:33
1010101-19D CCR-19	21B0062-17	Water	Total Alkalinity	15.8	mg/L	1/27/2021	8:33
1010101-19D CCR-19	21B0062-17	Water	Fluoride	1.74	mg/L	1/27/2021	8:33
1010101-20D CCR-20	21B0062-18	Water	Fluoride	0.242	mg/L	1/27/2021	13:53
1010101-20D CCR-20	21B0062-18	Water	Total Alkalinity	28.6	mg/L	1/27/2021	13:53
1010101-20D CCR-20	21B0062-18	Water	Bicarbonate	28.6	mg/L	1/27/2021	13:53
1010101-21D CCR-21	21B0062-19	Water	Fluoride	0.698	mg/L	1/27/2021	14:43
1010101-21D CCR-21	21B0062-19	Water	Bicarbonate	257	mg/L	1/27/2021	14:43
1010101-21D CCR-21	21B0062-19	Water	Total Alkalinity	257	mg/L	1/27/2021	14:43
1010101-22D CCR-22	21B0062-20	Water	Fluoride	0.704	mg/L	1/27/2021	15:28
1010101-22D CCR-22	21B0062-20	Water	Bicarbonate	12.8	mg/L	1/27/2021	15:28
1010101-22D CCR-22	21B0062-20	Water	Total Alkalinity	12.8	mg/L	1/27/2021	15:28
1010101-23D CCR-23	21B0062-21	Water	Bicarbonate	57.2	mg/L	1/28/2021	13:48
1010101-23D CCR-23	21B0062-21	Water	Fluoride	0.400	mg/L	1/28/2021	13:48
1010101-23D CCR-23	21B0062-21	Water	Total Alkalinity	57.2	mg/L	1/28/2021	13:48

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Work Order # 21B0062

Project: 281095/City of Lakeland CCR Wells

McIntosh Power Plant

DETECTED ANALYTE SUMMARY

Client Sample ID	Laboratory ID	Matrix	Analyte	Result	Units	Collection Date	Collection Time
1010101-24D CCR-24	21B0062-22	Water	Total Alkalinity	34.8	mg/L	1/28/2021	15:10
1010101-24D CCR-24	21B0062-22	Water	Bicarbonate	34.2	mg/L	1/28/2021	15:10
1010101-24D CCR-24	21B0062-22	Water	Fluoride	0.0110	mg/L	1/28/2021	15:10





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Work Order # 21B0062

Project: 281095/City of Lakeland CCR Wells

McIntosh Power Plant

Date Ext.

Date Analy.

Analyst

Lab ID: Client Sample ID:

Parameter

21B0062-01

1010101-01D CCR-01

Result

Matrix: Wate

Collection Date: CReceived Date: C

01/25/21 09:35

Received Date: 02/02/21 11:10 Collected By: Nina Driggers

Method

Laboratory Analysis Report

MDL

PQL

Units

QC

Wet Chemistry									
Fluoride	0.0660	mg/L	1	0.00340	0.0250	EPA 300.0	02/03 14:59	02/03 15:49	OC

Dil





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Work Order # 21B0062

Project: 281095/City of Lakeland CCR Wells

McIntosh Power Plant

Lab ID: Client Sample ID: 21B0062-02

1010101-02D CCR-02

Matrix: Water

Collection Date:
Received Date:

01/25/21 10:11

Received Date: 02/02/21 11:10 Collected By: Nina Driggers

Laboratory Analysis Report

Parameter	Result	QC	Units	Dil	MDL	PQL	Method	Date Ext.	Date Analy.	Analyst
Wet Chemistry										
Fluoride	0.112		mg/L	1	0.00340	0.0250	EPA 300.0	02/03 14:59	02/03 16:38	OC





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Project:

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Work Order # 21B0062

281095/City of Lakeland CCR Wells

McIntosh Power Plant

Lab ID: 21B0062-03

Client Sample ID: 1010101-03D CCR-03

Matrix: Water

Collection Date: 01/25/21 10:53 **Received Date:** 02/02/21 11:10

Collected By: Nina Driggers

Laboratory Analysis Report

Parameter	Result	QC	Units	Dil	MDL	PQL	Method	Date Ext.	Date Analy.	Analyst
Wet Chemistry										
Fluoride	0.232		mg/L	2	0.00680	0.0500	EPA 300.0	02/03 14:59	02/03 16:55	ОС





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Work Order # 21B0062

Project: 281095/City of Lakeland CCR Wells

McIntosh Power Plant

Lab ID: 21B0062-04

Client Sample ID: 1010101-04D CCR-04

Matrix: Water

Collection Date: 01/25/21 12:43 **Received Date:** 02/02/21 11:10

Collected By: Nina Driggers

Laboratory Analysis Report

Parameter	Result	QC	Units	Dil	MDL	PQL	Method	Date Ext.	Date Analy.	Analyst
Wet Chemistry										
Fluoride	0.325		mg/L	5	0.0170	0.125	FPA 300 0	02/03 14:59	02/03 17:11	OC





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Work Order # 21B0062

Project: 281095/City of Lakeland CCR Wells

McIntosh Power Plant

Lab ID: 21B0062-05

Client Sample ID: 1010101-05D CCR-05

Matrix: Water

Collection Date: 01/25/21 13:18 **Received Date:** 02/02/21 11:10

Collected By: Nina Driggers

Laboratory Analysis Report

Parameter	Result	QC	Units	Dil	MDL	PQL	Method	Date Ext.	Date Analy.	Analyst
W-4 Chamistan										

Wet Chemistry

Total Alkalinity	31.8	Y	mg/L	1	2.49	7.46	EPA 310.2	02/02 16:55	02/02 16:55	SA
Bicarbonate	31.8	Y	mg/L	1	2.49	7.46	EPA 310.2	02/02 16:55	02/02 16:55	SA
Fluoride	0.145		mg/L	5	0.0170	0.125	EPA 300.0	02/03 14:59	02/03 17:28	OC





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Work Order # 21B0062

Project: 281095/City of Lakeland CCR Wells

McIntosh Power Plant

Lab ID: 21B0062-06

Client Sample ID: 1010101-06D CCR-06

Matrix: Water

Collection Date: 01/25/21 14:02 **Received Date:** 02/02/21 11:10

Collected By: Nina Driggers

Laboratory Analysis Report

Parameter	Result	QC	Units	Dil	MDL	PQL	Method	Date Ext.	Date Analy.	Analyst
Wet Chemistry										
Total Alkalinity	119	Y	mg/L	1	2.49	7.46	EPA 310.2	02/02 16:55	02/02 16:55	SA
Bicarbonate	119	Y	mg/L	1	2.49	7.46	EPA 310.2	02/02 16:55	02/02 16:55	SA
Fluoride	0.266		mg/L	2	0.00680	0.0500	EPA 300.0	02/03 14:59	02/03 17:44	OC





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Work Order # 21B0062

281095/City of Lakeland CCR Wells **Project:**

McIntosh Power Plant

Lab ID: 21B0062-07

Client Sample ID: 1010101-07D CCR-07

Matrix: Water

01/26/21 09:43 **Collection Date:** 02/02/21 11:10 **Received Date:**

Collected By: Nina Driggers

Laboratory Analysis Report

Parameter	Result	QC	Units	Dil	MDL	PQL	Method	Date Ext.	Date Analy.	Analyst
Wet Chemistry										
Total Alkalinity	19.8	Y	mg/L	1	2.49	7.46	EPA 310.2	02/02 16:55	02/02 16:55	SA
Bicarbonate	19.8	Y	mg/L	1	2.49	7.46	EPA 310.2	02/02 16:55	02/02 16:55	SA
Fluoride	0.174		mo/L	1	0.00340	0.0250	EPA 300 0	02/03 14:59	02/03 18:01	OC





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Work Order # 21B0062

Project: 281095/City of Lakeland CCR Wells

McIntosh Power Plant

Lab ID: 21B0062-08

Client Sample ID: 1010101-08D CCR-08

Matrix: Water

Collection Date: 01/26/21 10:21 **Received Date:** 02/02/21 11:10

Collected By: Nina Driggers

Laboratory Analysis Report

Parameter	Result	QC	Units	Dil	MDL	PQL	Method	Date Ext.	Date Analy.	Analyst
Wet Chemistry										
Fluoride	0.298		mg/L	1	0.00340	0.0250	EPA 300.0	02/03 14:59	02/03 18:17	OC





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Work Order # 21B0062

Project: 281095/City of Lakeland CCR Wells

McIntosh Power Plant

Lab ID: 21B0062-09

Client Sample ID: 1010101-09D CCR-09

Matrix: Water

Collection Date: 01/26/21 11:16 **Received Date:** 02/02/21 11:10

Collected By: Nina Driggers

Laboratory Analysis Report

Parameter	Result	QC	Units	Dil	MDL	PQL	Method	Date Ext.	Date Analy.	Analyst
Wet Chemistry										
Total Alkalinity	43.2	Y	mg/L	1	2.49	7.46	EPA 310.2	02/02 16:55	02/02 16:55	SA
Bicarbonate	43.2	Y	mg/L	1	2.49	7.46	EPA 310.2	02/02 16:55	02/02 16:55	SA
Fluoride	0.236		mg/L	2	0.00680	0.0500	EPA 300.0	02/03 14:59	02/03 18:34	OC





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Work Order # 21B0062

Project: 281095/City of Lakeland CCR Wells

McIntosh Power Plant

Lab ID: 21B0062-10

Client Sample ID: 1010101-11D CCR-11

Matrix: Water

Collection Date: 01/26/21 13:33 **Received Date:** 02/02/21 11:10

Collected By: Nina Driggers

Laboratory Analysis Report

Parameter	Result	QC	Units	Dil	MDL	PQL	Method	Date Ext.	Date Analy.	Analyst
W. A. Cl.										

Wet Chemistry

Total Alkalinity	18.2	Y	mg/L	1	2.49	7.46	EPA 310.2	02/02 16:55	02/02 16:55	SA
Bicarbonate	18.2	Y	mg/L	1	2.49	7.46	EPA 310.2	02/02 16:55	02/02 16:55	SA
Fluoride	1.04		mg/L	5	0.0170	0.125	EPA 300.0	02/03 14:59	02/03 19:24	OC





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Work Order # 21B0062

Project: 281095/City of Lakeland CCR Wells

McIntosh Power Plant

Date Ext.

Date Analy.

Analyst

Lab ID: 21B0062-11

Client Sample ID: 1010101-12D CCR-12

Result

Matrix: Water

Parameter

Collection Date: 01/26/21 14:12 **Received Date:** 02/02/21 11:10

Method

Collected By: Nina Driggers

Laboratory Analysis Report

MDL

PQL

Dil

Units

 \mathbf{QC}

Wet Chemistry										
Total Alkalinity	186	Y	mg/L	1	2.49	7.46	EPA 310.2	02/02 16:55	02/02 16:55	SA
Bicarbonate	186	Y	mg/L	1	2.49	7.46	EPA 310.2	02/02 16:55	02/02 16:55	SA
Fluoride	0.716		mg/L	2	0.00680	0.0500	EPA 300 0	02/03 14:59	02/03 19:40	OC





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Work Order # 21B0062

Project: 281095/City of Lakeland CCR Wells

McIntosh Power Plant

Lab ID: 21B0062-12

Client Sample ID: 1010101-13D CCR-13

Water

 Collection Date:
 01/26/21 14:42

 Received Date:
 02/02/21 11:10

 Collected By:
 Nina Driggers

Laboratory Analysis Report

Parameter Result QC Units Dil MDL PQL Method Date Ext. Date Analy. Analyst

Wet Chemistry

Matrix:

Fluoride	1.59	mg/L	2	0.00680	0.0500	EPA 300.0	02/03 14:59	02/03 19:57	OC





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Work Order # 21B0062

Project: 281095/City of Lakeland CCR Wells

McIntosh Power Plant

Date Ext.

Date Analy.

Analyst

Lab ID: 21B0062-13

Client Sample ID: 1010101-15D CCR-15

Result

Matrix: Water

Parameter

Collection Date: 01/28/21 08:30 **Received Date:** 02/02/21 11:10

Method

Collected By: Nina Driggers

Laboratory Analysis Report

MDL

PQL

Dil

Units

 \mathbf{QC}

Wet Chemistry										
Total Alkalinity	ND	Y, U	mg/L	1	2.49	7.46	EPA 310.2	02/02 16:55	02/02 16:55	SA
Bicarbonate	ND	Y, U	mg/L	1	2.49	7.46	EPA 310.2	02/02 16:55	02/02 16:55	SA
Fluoride	0.0930		mg/L	1	0.00340	0.0250	EPA 300.0	02/03 14:59	02/03 20:13	OC





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Work Order # 21B0062

Project: 281095/City of Lakeland CCR Wells

McIntosh Power Plant

Lab ID: 21B0062-14

Client Sample ID: 1010101-16D CCR-16

Matrix: Water

Collection Date: 01/28/21 09:10 **Received Date:** 02/02/21 11:10

Collected By: Nina Driggers

Laboratory Analysis Report

Parameter	Result	QC	Units	Dil	MDL	PQL	Method	Date Ext.	Date Analy.	Analyst
W. G.										
Wet Chemistry										
Total Alkalinity	3.91	YI	mg/L	1	2.49	7.46	EPA 310.2	02/02 16:55	02/02 16:55	SA
Bicarbonate	3.91	YI	mg/L	1	2.49	7.46	EPA 310.2	02/02 16:55	02/02 16:55	SA
Fluoride	ND	11	mg/L	5	0.0170	0.125	EPA 300 0	02/03 14:59	02/03 20:30	OC





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Work Order # 21B0062

Project: 281095/City of Lakeland CCR Wells

McIntosh Power Plant

Lab ID: 21B0062-15

Client Sample ID: 1010101-17D CCR-17

Matrix: Water

Collection Date: 01/28/21 13:14 **Received Date:** 02/02/21 11:10

Collected By: Nina Driggers

Laboratory Analysis Report

Parameter	Result	QC	Units	Dil	MDL	PQL	Method	Date Ext.	Date Analy.	Analyst
Wet Chemistry										
Total Alkalinity	205	Y	mg/L	1	2.49	7.46	EPA 310.2	02/02 16:55	02/02 16:55	SA
Bicarbonate	205	Y	mg/L	1	2.49	7.46	EPA 310.2	02/02 16:55	02/02 16:55	SA
Fluoride	0.0420		mg/L	1	0.00340	0.0250	EPA 300.0	02/03 14:59	02/03 20:46	OC





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Work Order # 21B0062

Project: 281095/City of Lakeland CCR Wells

McIntosh Power Plant

Lab ID: 21B0062-16

Client Sample ID: 1010101-18D CCR-18

Matrix: Water

Collection Date: 01/27/21 08:01 **Received Date:** 02/02/21 11:10

Collected By: Nina Driggers

Laboratory Analysis Report

Parameter	Result	QC	Units	Dil	MDL	PQL	Method	Date Ext.	Date Analy.	Analyst

Wet Chemistry

Total Alkalinity	177	Y	mg/L	1	2.49	7.46	EPA 310.2	02/02 16:55	02/02 16:55	SA
Bicarbonate	177	Y	mg/L	1	2.49	7.46	EPA 310.2	02/02 16:55	02/02 16:55	SA
Fluoride	0.307		mg/L	1	0.00340	0.0250	EPA 300.0	02/03 14:59	02/03 21:03	OC





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Work Order # 21B0062

Project: 281095/City of Lakeland CCR Wells

McIntosh Power Plant

Lab ID: 21B0062-17

Client Sample ID: 1010101-19D CCR-19

Matrix: Water

Collection Date: 01/27/21 08:33 **Received Date:** 02/02/21 11:10

Collected By: Nina Driggers

Laboratory Analysis Report

Parameter	Result	QC	Units	Dil	MDL	PQL	Method	Date Ext.	Date Analy.	Analyst
Wet Chemistry										
Total Alkalinity	15.8	Y	mg/L	1	2.49	7.46	EPA 310.2	02/02 16:55	02/02 16:55	SA
Bicarbonate	15.8	Y	mg/L	1	2.49	7.46	EPA 310.2	02/02 16:55	02/02 16:55	SA
Fluoride	1.74		mg/L	5	0.0170	0.125	EPA 300.0	02/03 14:59	02/03 21:36	OC





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Work Order # 21B0062

Project: 281095/City of Lakeland CCR Wells

McIntosh Power Plant

Date Ext.

Date Analy.

Analyst

Lab ID: 21B0062-18

Client Sample ID: 1010101-20D CCR-20

Result

Matrix: Water

Parameter

Collection Date: 01/27/21 13:53 **Received Date:** 02/02/21 11:10

Method

conceeca 25.

PQL

Collected By: Nina Driggers

Laboratory Analysis Report

MDL

Dil

Units

 \mathbf{QC}

Wet Chemistry										
Total Alkalinity	28.6	Y	mg/L	1	2.49	7.46	EPA 310.2	02/02 16:55	02/02 16:55	SA
Bicarbonate	28.6	Y	mg/L	1	2.49	7.46	EPA 310.2	02/02 16:55	02/02 16:55	SA
Fluoride	0.242		mg/L	2	0.00680	0.0500	EPA 300.0	02/03 14:59	02/03 21:52	OC





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Work Order # 21B0062

Project: 281095/City of Lakeland CCR Wells

McIntosh Power Plant

Date Ext.

Date Analy.

Analyst

Lab ID: 21B0062-19

Client Sample ID: 1010101-21D CCR-21

Result

Matrix: Water

Parameter

Collection Date: 01/27/21 14:43 **Received Date:** 02/02/21 11:10

Method

Collected By: Nina Driggers

Laboratory Analysis Report

MDL

PQL

Dil

Units

 \mathbf{QC}

Wet Chemistry										
Total Alkalinity	257	Y	mg/L	1	2.49	7.46	EPA 310.2	02/02 16:55	02/02 16:55	SA
Bicarbonate	257	Y	mg/L	1	2.49	7.46	EPA 310.2	02/02 16:55	02/02 16:55	SA
Fluoride	0.608		mø/L	2	0.00680	0.0500	EPA 300 0	02/03 14:59	02/03 22:09	OC





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Work Order # 21B0062

Project: 281095/City of Lakeland CCR Wells

McIntosh Power Plant

Date Ext.

Date Analy.

Analyst

Lab ID: 21B0062-20

Client Sample ID: 1010101-22D CCR-22

Result

Matrix: Water

Parameter

Collection Date: 01/27/21 15:28 **Received Date:** 02/02/21 11:10

Method

Collected By: Nina Driggers

Laboratory Analysis Report

MDL

PQL

Dil

Units

 \mathbf{QC}

Wet Chemistry										
Total Alkalinity	12.8	Y	mg/L	1	2.49	7.46	EPA 310.2	02/02 16:55	02/02 16:55	SA
Bicarbonate	12.8	Y	mg/L	1	2.49	7.46	EPA 310.2	02/02 16:55	02/02 16:55	SA
Fluoride	0.704		mg/L	2	0.00680	0.0500	EPA 300 0	02/04 15:37	02/04 16:28	OC





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Work Order # 21B0062

281095/City of Lakeland CCR Wells **Project:**

McIntosh Power Plant

Lab ID: 21B0062-21

Client Sample ID: 1010101-23D CCR-23

Matrix: Water

01/28/21 13:48 **Collection Date:** 02/02/21 11:10 **Received Date:**

Collected By: Nina Driggers

Laboratory Analysis Report

Parameter	Result	QC	Units	Dil	MDL	PQL	Method	Date Ext.	Date Analy.	Analyst
Wet Chemistry										
wet Chemistry										
Total Alkalinity	57.2	Y	mg/L	1	2.49	7.46	EPA 310.2	02/02 16:55	02/02 16:55	SA
Bicarbonate	57.2	Y	mg/L	1	2.49	7.46	EPA 310.2	02/02 16:55	02/02 16:55	SA
Fluoride	0.400		mg/L	1	0.00340	0.0250	EPA 300.0	02/04 15:37	02/04 16:45	OC





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Work Order # 21B0062

281095/City of Lakeland CCR Wells **Project:**

McIntosh Power Plant

Lab ID: 21B0062-22

Client Sample ID: 1010101-24D CCR-24

Matrix: Water

01/28/21 15:10 **Collection Date:** 02/02/21 11:10 **Received Date:**

Collected By: Nina Driggers

Laboratory Analysis Report

Parameter	Result	QC	Units	Dil	MDL	PQL	Method	Date Ext.	Date Analy.	Analyst
Wet Chemistry										
Total Alkalinity	34.8	Y	mg/L	1	2.49	7.46	EPA 310.2	02/02 16:55	02/02 16:55	SA
Bicarbonate	34.2	Y	mg/L	1	2.49	7.46	EPA 310.2	02/02 16:55	02/02 16:55	SA
Fluoride	0.0110	T	mo/L	1	0.00340	0.0250	EPA 300 0	02/04 15:37	02/04 17:03	OC





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Report Printed: 2/5/2021

Work Order # 21B0062

Project: 281095/City of Lakeland CCR Wells

McIntosh Power Plant

Lab ID: 21B0062-23

Client Sample ID: 1010101-25D CCR-25

Matrix: Water

Collection Date: 01/26/21 08:29 **Received Date:** 02/02/21 11:10

Collected By: Nina Driggers

Laboratory Analysis Report

Parameter	Result	OC	Units	Dil	MDL	POL	Method	Date Ext.	Date Analy.	Analyst
	1100411	Q.C				. 42	Method	Dute Eat.	, .	111111

Wet Chemistry

Total Alkalinity	ND	Y, U	mg/L	1	2.49	7.46	EPA 310.2	02/02 16:55	02/02 16:55	SA
Bicarbonate	ND	Y, U	mg/L	1	2.49	7.46	EPA 310.2	02/02 16:55	02/02 16:55	SA
Fluoride	ND	U	mg/L	1	0.00340	0.0250	EPA 300.0	02/04 15:37	02/04 17:20	OC





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Report Printed: 2/5/2021

Work Order # 21B0062

Project: 281095/City of Lakeland CCR Wells

McIntosh Power Plant

	1	Vet Chemis	stry - Q	uality Con	trol					
		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 21B0174 - Default Prep GenChem										
Blank (21B0174-BLK1)				Prepared &	: Analyzed:	02/02/2021				
Total Alkalinity	ND	7.46	mg/L							U
LCS (21B0174-BS1)				Prepared &	: Analyzed:	02/02/2021				
Total Alkalinity	249	7.46	mg/L	250.0		99.6	90-110			
Duplicate (21B0174-DUP1)	Sour	ce: 21A0856-	01	Prepared &	: Analyzed:	02/02/2021				
Total Alkalinity	367	7.46	mg/L		366			0.273	20	
Matrix Spike (21B0174-MS1)	Sour	ce: 21A0856-	01	Prepared &	Analyzed:	02/02/2021				
Total Alkalinity	639	7.46	mg/L	250.0	366	109	90-110			
Matrix Spike (21B0174-MS2)	Source: 21A0994-01			Prepared &	: Analyzed:	02/02/2021				
Total Alkalinity	271	7.46	mg/L	250.0	69.5	80.6	90-110			J3
Batch 21B0175 - Default Prep GenChem										
Blank (21B0175-BLK1)				Prepared &	Analyzed:	02/02/2021				
Total Alkalinity	ND	7.46	mg/L							U
LCS (21B0175-BS1)				Prepared &	: Analyzed:	02/02/2021				
Total Alkalinity	249	7.46	mg/L	250.0		99.6	90-110			
Duplicate (21B0175-DUP1)	Sour	ce: 21B0062-	10	Prepared &	Analyzed:	02/02/2021				
Total Alkalinity	18.0	7.46	mg/L		18.2			1.10	20	Y
Matrix Spike (21B0175-MS1)	Sour	ce: 21B0062-	10	Prepared &	Analyzed:	02/02/2021				
Total Alkalinity	244	7.46	mg/L	250.0	18.2	90.3	90-110			Y





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Report Printed: 2/5/2021

Work Order # 21B0062

Project: 281095/City of Lakeland CCR Wells

McIntosh Power Plant

	V	Vet Chemis	stry - Q	uality Con	trol					
Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 21B0175 - Default Prep GenChem										
Matrix Spike (21B0175-MS2)	Sour	ce: 21B0062-	22	Prepared &	z Analyzed:	02/02/2021	Į.			
Total Alkalinity	261	7.46	mg/L	250.0	34.8	90.5	90-110			Y
Batch 21B0251 - Default Prep GenChem										
Blank (21B0251-BLK1)				Prepared &	: Analyzed:	02/03/2021	Į			
Fluoride	ND	0.0250	mg/L							U
LCS (21B0251-BS1)				Prepared &	Analyzed:	02/03/2021	l			
Fluoride	2.42	0.0250	mg/L	2.500		96.8	90-110			
Duplicate (21B0251-DUP1)	Sour	ce: 21B0062-	01	Prepared &	Analyzed:	02/03/2021	I			
Fluoride	0.0620	0.0250	mg/L		0.0660			6.25	20	
Matrix Spike (21B0251-MS1)	Sour	ce: 21B0062-	01	Prepared &	Analyzed:	02/03/2021	I			
Fluoride	4.80	0.0250	mg/L	5.000	0.0660	94.7	90-110			
Matrix Spike (21B0251-MS2)	Sour	ce: 21B0062-	16	Prepared &	Analyzed:	02/03/2021	l			
Fluoride	5.07	0.0250	mg/L	5.000	0.307	95.3	90-110			
Batch 21B0270 - Default Prep GenChem										
Blank (21B0270-BLK1)				Prepared &	Analyzed:	02/04/2021	l			
Fluoride	ND	0.0250	mg/L							U
LCS (21B0270-BS1)				Prepared &	. Analyzed:	02/04/2021	l			
Fluoride	2.48	0.0250	mg/L	2.500		99.2	90-110			





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Report Printed: 2/5/2021

Work Order # 21B0062

Project: 281095/City of Lakeland CCR Wells

McIntosh Power Plant

	•	Wet Chemi	stry - Q	uality Con	trol					
Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC	RPD	RPD Limit	Notes
Batch 21B0270 - Default Prep GenChem										
Duplicate (21B0270-DUP1)	Sour	ce: 21B0120-	01	Prepared &	Analyzed:	02/04/2021				
Fluoride	0.274	0.0250	mg/L		0.276			0.727	20	
Matrix Spike (21B0270-MS1)	Sour	ce: 21B0120-	01	Prepared &	Analyzed:	02/04/2021				
Fluoride	4.85	0.0250	mg/L	5.000	0.276	91.5	90-110			
Matrix Spike (21B0270-MS2)	Sour	ce: 21B0197-	01	Prepared &	Analyzed:	02/04/2021				
Fluoride	4.58	0.0250	mg/L	5.000	0.00900	91.4	90-110			





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Report Printed: 2/5/2021

Work Order # 21B0062

Project: 281095/City of Lakeland CCR Wells

McIntosh Power Plant

Notes and Definitions

Y The laboratory analysis was from an unpreserved or improperly preserved sample. The data may not be accurate.

U Indicated that the compound was analyzed for but not detected. This shall be used to indicate that the specific component was not

detected. The value associated with the qualifier shall be the laboratory method detection limit.

J3 The matrix spike recovery outside method acceptance limits indicating matrix interference.

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the detection limit

NR Not Reported

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference

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

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

Z Too many colonies were present for accurate counting.

QC=Qualifier Codes as defined by DEP 62-160
Unless indicated, soil results are reported on actual (wet) weight basis.
Work performed by outside (subcontracted) labs denoted by SUB in Analyst Field.

Results relate only to this sample.

Suresh (Bobby) Supan - CSM

Authorized CSM Signature (954) 978-6400 Florida-Spectrum Environmental Services,Inc. Certification# E86006

All NELAP certified analysis are performed in accordance with Chapter 64E-1 Florida Administrative code, which has been determined to be equivalent to NELAC standards. Analysis certified by programs other than NELAP are designated with a "~".

Florida-Spectrum Environmental Services, Inc. 1460 W. McNab Road, Fort Lauderdale, FL 33309

Pembroke Laboratory 528 Gooch Rd. Fort Mead, FL 33841 Big Lake Laboratory 610 Parrot Ave. N. Okeechobee, FL 34972 Lakeland Laboratory 111 Easton Dr. Lakeland, FL 33803 Savannah Laboratory 108 Airport Park Dr. Garden City, GA 31408

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WORK ORDER # 2/60052 Logged in LIMS by D Meets Acceptance Criteria: Y		Report (company name)	Invoice to: (company name)	Project Name		,,	Ĭ	ORDER # Lab Control Number			Shaded Areas For Laboratory Use Only	10	R	\mathcal{B}	Z	\mathcal{E}	B	Ŕ	\mathcal{B}	60	0)	Special Comments:	"I waive TNI protocoff" (emergency) (sign here) >	Deliverables:	Sample Custody & Field Comments	Received on Ice: Temp as receive	Cu Seals?	ે		an an	barges
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City of Lakeland Electric Purchase Order # 281095	509	Yellow-Lah	lle Copy	Pink- Sampler Copy			
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GUN-1 L-liter bottle			2 Received by:				
(T/O) 0') S4-4 oz soil jar / S8-8 oz soil T-250 ml	M-MCAB NH4-NH4CL McOH-Methanol Y-Sterile		3 Relinquished by:	by:			
FIELD TIME V-40 ml vial W-wide mouth	ic scetste		3 Received by:	Jan	and	11 12/21	2
Sampling hrs Pick-Up hrs X-other TED=Tedlar Hec-Hex C	Additional Preservations Hex Cr Buffer	51	www.flenviro.com	.0.com		. Irs	4
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Report					Donout to		and the same	Mr.					
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rroject Andrew Barron Contact: Nina Driggers	Ā <mark>.</mark>	Phone: 863-834-5605	834-5605		Fax:			Email: An	Email: Andrew. Barron@lakclandgov.net]akelandg	ov.net		
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ly & Field Comments	Bottle Type	. 	1 2		(adainonai charge)	1 Relinar	Relinquished by:	10000	#				
	A-liter amber						(A)	STANDER STANDER	1/201	7			
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£7% 50m	S2-2 oz soli jar S4. 4 oz roll jar (S8. 9 oz roll	1 PE 1	FHN03			2 Received by:	ed by:						
CICAL	on jar i so-re	1 mos 70 c	MeOH-Methanol	NH4-NH4CL Y-Sterile		3 Relinqu	Relinquished by:	test	25)				
ELD LIME	nouth		zzinc aceta e			3 Received by:	ed by:	The live	16/2/0		0///		
Samplug ars rick-Up ars X-other Misc. Charges	TED=Tedlar		Hex-Hex Cr Buffer	Additional Preservations er		ll.www.fi	www.flenviro.com	2000	٠ľ	Page	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	W	T
		H.	EDA-Ethylene Diamine	amine						,	0	٦	





1460 West McNab Road Fort Lauderdale, FL 33309 1-800-ANALYTE Phone (954) 978-6400 Phone (954) 978-2233 Fax

11 August 2021 Lab Work Order (COC): 21G1031

NELAP Certificate No. E86006

Thomas Johnston Lakeland Electric - McIntosh 3030 East Lake Parker Drive Lakeland, FL 33805

RE: CCR Monitoring Program July 2021

Project Location: McIntosh Plant

Dear Thomas Johnston:

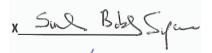
This report details the analytical results of samples collected at the above-referenced project location. These samples were received by Florida Spectrum Environmental Services at **07/30/2021 09:00**.

All Analyses were performed according to the TNI/NELAP standard unless indicated by a "~" on the report.

Your samples will be retained by Florida Spectrum Environmental for a period of at least 30 days following sample receipt or until the longest of the preparation and/or analytical hold times expires, whichever is shorter. After that time, they will be properly disposed without further notice, unless there exists an explicit contractual agreement to the contrary. We reserve the right to return any unused samples, extracts, or related materials or solutions to you if we consider it necessary. Examples might include those samples identified as hazardous wastes, submissions where the sample sizes significantly exceed those required for analysis, samples containing controlled substances, etc.

We thank you for selecting Florida Spectrum Environmental to serve your analytical needs. Should you have any questions or require additional information regarding any of the information in this report, please feel free to contact us at any time. We appreciate the opportunity to be of service.

Florida Spectrum Environmental Inc.







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Report Printed: 8/11/2021

Work Order # 21G1031

Project: CCR Monitoring Program July 2021

McIntosh Plant

DETECTED ANALYTE SUMMARY

CCR-23A	21G1031-01	Water	Calcium	303000	ug/L	7/29/2021	8:58
CCR-23A	21G1031-01	Water	Magnesium	29500	ug/L	7/29/2021	8:58
CCR-23A	21G1031-01	Water	Boron	806	ug/L	7/29/2021	8:58
CCR-23A	21G1031-01	Water	Chromium	2.30	ug/L	7/29/2021	8:58
CCR-23A	21G1031-01	Water	Barium	12.6	ug/L	7/29/2021	8:58
CCR-23A	21G1031-01	Water	Sodium	47900	ug/L	7/29/2021	8:58
CCR-23A	21G1031-01	Water	Potassium	18600	ug/L	7/29/2021	8:58
CCR-23B	21G1031-02	Water	Total Alkalinity	39.8	mg/L	7/29/2021	8:58
CCR-23B	21G1031-02	Water	Total Dissolved Solids	1340	mg/L	7/29/2021	8:58
CCR-23B	21G1031-02	Water	Bicarbonate	39.8	mg/L	7/29/2021	8:58
CCR-23B	21G1031-02	Water	Chloride	136	mg/L	7/29/2021	8:58
CCR-23B	21G1031-02	Water	Sulfate	723	mg/L	7/29/2021	8:58
CCR-23B	21G1031-02	Water	Fluoride	0.715	mg/L	7/29/2021	8:58
SW-106A	21G1031-03	Water	Molybdenum	2.10	ug/L	7/29/2021	10:56
SW-106A	21G1031-03	Water	Sodium	2640	ug/L	7/29/2021	10:56
SW-106A	21G1031-03	Water	Boron	37.9	ug/L	7/29/2021	10:56
SW-106A	21G1031-03	Water	Chromium	1.70	ug/L	7/29/2021	10:56
SW-106A	21G1031-03	Water	Barium	27.4	ug/L	7/29/2021	10:56
SW-106A	21G1031-03	Water	Magnesium	1970	ug/L	7/29/2021	10:56
SW-106A	21G1031-03	Water	Potassium	3770	ug/L	7/29/2021	10:56
SW-106A	21G1031-03	Water	Calcium	12000	ug/L	7/29/2021	10:56
SW-106B	21G1031-04	Water	Total Dissolved Solids	58.0	mg/L	7/29/2021	10:56
SW-106B	21G1031-04	Water	Bicarbonate	23.3	mg/L	7/29/2021	10:56
SW-106B	21G1031-04	Water	Total Alkalinity	23.3	mg/L	7/29/2021	10:56

Florida-Spectrum Environmental Services, Inc. 1460 W. McNab Road, Fort Lauderdale, FL 33309

Pembroke Laboratory 528 Gooch Rd. Fort Mead, FL 33841 Big Lake Laboratory 610 Parrot Ave. N. Okeechobee, FL 34972 Lakeland Laboratory 111 Easton Dr. Lakeland, FL 33803 Savannah Laboratory 108 Airport Park Dr. Garden City, GA 31408





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Report Printed: 8/11/2021

Work Order # 21G1031

Project: CCR Monitoring Program July 2021

McIntosh Plant

DETECTED ANALYTE SUMMARY

Client Sample ID	Laboratory ID	Matrix	Analyte	Result	Units	Collection Date	Collection Time
SW-106B	21G1031-04	Water	Sulfate	13.2	mg/L	7/29/2021	10:56
SW-106B	21G1031-04	Water	Chloride	1.43	mg/L	7/29/2021	10:56
SW-106B	21G1031-04	Water	Fluoride	0.0760	mg/L	7/29/2021	10:56
CCR-11A	21G1031-05	Water	Boron	369	ug/L	7/29/2021	13:46
CCR-11A	21G1031-05	Water	Sodium	253000	ug/L	7/29/2021	13:46
CCR-11A	21G1031-05	Water	Calcium	621000	ug/L	7/29/2021	13:46
CCR-11A	21G1031-05	Water	Potassium	323000	ug/L	7/29/2021	13:46
CCR-11A	21G1031-05	Water	Magnesium	21100	ug/L	7/29/2021	13:46
CCR-11A	21G1031-05	Water	Chromium	1.80	ug/L	7/29/2021	13:46
CCR-11A	21G1031-05	Water	Barium	48.3	ug/L	7/29/2021	13:46
CCR-11A	21G1031-05	Water	Arsenic	63.2	ug/L	7/29/2021	13:46
CCR-11B	21G1031-06	Water	Total Dissolved Solids	3550	mg/L	7/29/2021	13:46
CCR-11B	21G1031-06	Water	Chloride	818	mg/L	7/29/2021	13:46
CCR-11B	21G1031-06	Water	Sulfate	1580	mg/L	7/29/2021	13:46
CCR-11B	21G1031-06	Water	Bicarbonate	6.53	mg/L	7/29/2021	13:46
CCR-11B	21G1031-06	Water	Total Alkalinity	6.53	mg/L	7/29/2021	13:46
CCR-11B	21G1031-06	Water	Fluoride	1.46	mg/L	7/29/2021	13:46





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Report Printed: 8/11/2021

Work Order # 21G1031

Project: CCR Monitoring Program July 2021

McIntosh Plant

Lab ID: 21G1031-01 Client Sample ID: CCR-23A Matrix: Water

 Collection Date:
 07/29/21 08:58

 Received Date:
 07/30/21 09:00

 Collected By:
 Chad Hotchkiss

Laboratory Analysis Report

Parameter	Result	QC	Units	Dil	MDL	PQL	Method	Date Ext.	Date Analy.	Analyst

Total Recoverable Metals by EPA 200 Series Methods

Antimony	ND	U	ug/L	1	5.11	15.0	EPA 200.7/3010	07/30 11:00	07/30 13:46	MAZ
Arsenic	ND	U	ug/L	1	2.21	10.0	EPA 200.7/3010	07/30 11:00	07/30 13:46	MAZ
Barium	12.6		ug/L	1	0.0728	1.00	EPA 200.7/3010	07/30 11:00	07/30 13:46	MAZ
Beryllium	ND	U	ug/L	1	0.101	1.00	EPA 200.7/3010	07/30 11:00	07/30 13:46	MAZ
Boron	806		ug/L	1	1.57	10.0	EPA 200.7/3010	07/30 11:00	07/30 13:46	MAZ
Cadmium	ND	U	ug/L	1	0.181	1.00	EPA 200.7/3010	07/30 11:00	07/30 13:46	MAZ
Calcium	303000		ug/L	10	57.9	500	EPA 200.7/3010	07/30 11:00	07/30 14:44	MAZ
Chromium	2.30	I	ug/L	1	0.339	5.00	EPA 200.7/3010	07/30 11:00	07/30 13:46	MAZ
Cobalt	ND	U	ug/L	1	0.361	1.00	EPA 200.7/3010	07/30 11:00	07/30 13:46	MAZ
Lead	ND	U	ug/L	1	1.19	10.0	EPA 200.7/3010	07/30 11:00	07/30 13:46	MAZ
Lithium	ND	U	ug/L	1	2.72	25.0	EPA 200.7/3010	07/30 08:00	08/03 10:26	MAZ
Magnesium	29500		ug/L	50	187	1000	EPA 200.7/3010	07/30 11:00	07/30 14:41	MAZ
Mercury	ND	U	ug/L	1	0.120	1.00	EPA 245.1	08/03 08:00	08/03 14:14	EN
Molybdenum	ND	U	ug/L	1	1.17	10.0	EPA 200.7/3010	07/30 11:00	07/30 13:46	MAZ
Potassium	18600		ug/L	1	17.3	50.0	EPA 200.7/3010	07/30 11:00	07/30 13:46	MAZ
Selenium	ND	U	ug/L	1	3.46	15.0	EPA 200.7/3010	07/30 11:00	07/30 13:46	MAZ
Sodium	47900		ug/L	1	446	2000	EPA 200.7/3010	07/30 11:00	07/30 13:46	MAZ
Thallium	ND	U	ug/L	1	0.925	4.00	EPA 200.7/3010	07/30 11:00	07/30 13:46	MAZ





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Report Printed: 8/11/2021

Work Order # 21G1031

Project: CCR Monitoring Program July 2021

McIntosh Plant

Lab ID: 21G1031-02 Client Sample ID: CCR-23B Matrix: Water
 Collection Date:
 07/29/21 08:58

 Received Date:
 07/30/21 09:00

 Collected By:
 Chad Hotchkiss

Laboratory Analysis Report

Parameter	Result	QC	Units	Dil	MDL	PQL	Method	Date Ext.	Date Analy.	Analyst
Wet Chemistry										
Total Alkalinity	39.8		mg/L	1	2.49	7.46	EPA 310.2	08/06 18:49	08/06 18:49	OC
Bicarbonate	39.8		mg/L	1	2.49	7.46	EPA 310.2	08/06 18:49	08/06 18:49	OC
Chloride	136		mg/L	5	0.630	2.50	EPA 300.0	07/30 15:48	07/30 21:50	OC
Fluoride	0.715		mg/L	5	0.0260	0.125	EPA 300.0	07/30 15:48	07/30 21:50	OC
Sulfate	723		mg/L	10	0.953	5.00	EPA 300.0	07/30 15:48	07/31 09:57	OC
Total Dissolved Solids	1340		mg/L	4	40.0	120	SM 2540C	08/03 16:22	08/11 13:37	MWO





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Report Printed: 8/11/2021

Work Order # 21G1031

Project: CCR Monitoring Program July 2021

McIntosh Plant

Date Ext.

Date Analy.

Analyst

Lab ID: 21G1031-03
Client Sample ID: SW-106A
Matrix: Water

Result

QC

Units

Parameter

 Collection Date:
 07/29/21 10:56

 Received Date:
 07/30/21 09:00

 Collected By:
 Chad Hotchkiss

Method

Laboratory Analysis Report

MDL

PQL

Dil

Total Recoverable Metals	by EPA 200 Serie	es Metl	ıods							
Antimony	ND	U	ug/L	1	5.11	15.0	EPA 200.7/3010	07/30 11:00	07/30 13:49	MAZ
Arsenic	ND	U	ug/L	1	2.21	10.0	EPA 200.7/3010	07/30 11:00	07/30 13:49	MAZ
Barium	27.4		ug/L	1	0.0728	1.00	EPA 200.7/3010	07/30 11:00	07/30 13:49	MAZ
Beryllium	ND	U	ug/L	1	0.101	1.00	EPA 200.7/3010	07/30 11:00	07/30 13:49	MAZ
Boron	37.9		ug/L	1	1.57	10.0	EPA 200.7/3010	07/30 11:00	07/30 13:49	MAZ
Cadmium	ND	U	ug/L	1	0.181	1.00	EPA 200.7/3010	07/30 11:00	07/30 13:49	MAZ
Calcium	12000		ug/L	1	5.79	50.0	EPA 200.7/3010	07/30 11:00	07/30 13:49	MAZ
Chromium	1.70	I	ug/L	1	0.339	5.00	EPA 200.7/3010	07/30 11:00	07/30 13:49	MAZ
Cobalt	ND	U	ug/L	1	0.361	1.00	EPA 200.7/3010	07/30 11:00	07/30 13:49	MAZ
Lead	ND	U	ug/L	1	1.19	10.0	EPA 200.7/3010	07/30 11:00	07/30 13:49	MAZ
Lithium	ND	U	ug/L	1	2.72	25.0	EPA 200.7/3010	07/30 08:00	08/03 10:29	MAZ
Magnesium	1970		ug/L	1	3.74	20.0	EPA 200.7/3010	07/30 11:00	07/30 13:49	MAZ
Mercury	ND	U	ug/L	1	0.120	1.00	EPA 245.1	08/03 08:00	08/03 14:17	EN
Molybdenum	2.10	I	ug/L	1	1.17	10.0	EPA 200.7/3010	07/30 11:00	07/30 13:49	MAZ
Potassium	3770		ug/L	1	17.3	50.0	EPA 200.7/3010	07/30 11:00	07/30 13:49	MAZ
Selenium	ND	U	ug/L	1	3.46	15.0	EPA 200.7/3010	07/30 11:00	07/30 13:49	MAZ
Sodium	2640		ug/L	1	446	2000	EPA 200.7/3010	07/30 11:00	07/30 13:49	MAZ
Thallium	ND	U	ug/L	1	0.925	4.00	EPA 200.7/3010	07/30 11:00	07/30 13:49	MAZ





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Report Printed: 8/11/2021

Work Order # 21G1031

Project: CCR Monitoring Program July 2021

McIntosh Plant

Lab ID: 21G1031-04
Client Sample ID: SW-106B
Matrix: Water

 Collection Date:
 07/29/21 10:56

 Received Date:
 07/30/21 09:00

 Collected By:
 Chad Hotchkiss

Laboratory Analysis Report

Parameter	Result	QC	Units	Dil	MDL	PQL	Method	Date Ext.	Date Analy.	Analyst
Wet Chemistry										
Total Alkalinity	23.3		mg/L	1	2.49	7.46	EPA 310.2	08/06 18:49	08/06 18:49	OC
Bicarbonate	23.3		mg/L	1	2.49	7.46	EPA 310.2	08/06 18:49	08/06 18:49	OC
Chloride	1.43		mg/L	1	0.126	0.500	EPA 300.0	07/30 15:48	07/30 22:23	OC
Fluoride	0.0760		mg/L	1	0.00520	0.0250	EPA 300.0	07/30 15:48	07/30 22:23	OC
Sulfate	13.2		mg/L	1	0.0953	0.500	EPA 300.0	07/30 15:48	07/30 22:23	OC
Total Dissolved Solids	58.0	I	mg/L	2	20.0	60.0	SM 2540C	08/03 16:22	08/11 13:37	MWO





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Report Printed: 8/11/2021

Work Order # 21G1031

Project: CCR Monitoring Program July 2021

McIntosh Plant

Date Ext.

Date Analy.

Analyst

Lab ID: 21G1031-05
Client Sample ID: CCR-11A
Matrix: Water

Result

QC

Units

Parameter

 Collection Date:
 07/29/21 13:46

 Received Date:
 07/30/21 09:00

 Collected By:
 Chad Hotchkiss

Method

Laboratory Analysis Report

MDL

PQL

Dil

Total Recoverable Met	als by FPA 200 Seri	es Metl	node							
Antimony	ND	U	ug/L	l 1	J 5.11	15.0	EPA 200.7/3010	07/30 11:00	07/30 13:52	MAZ
Arsenic	63.2		ug/L	1	2.21	10.0	EPA 200.7/3010	07/30 11:00	07/30 13:52	MAZ
Barium	48.3		ug/L	1	0.0728	1.00	EPA 200.7/3010	07/30 11:00	07/30 13:52	MAZ
Beryllium	ND	U	ug/L	1	0.101	1.00	EPA 200.7/3010	07/30 11:00	07/30 13:52	MAZ
Boron	369		ug/L	1	1.57	10.0	EPA 200.7/3010	07/30 11:00	07/30 13:52	MAZ
Cadmium	ND	U	ug/L	1	0.181	1.00	EPA 200.7/3010	07/30 11:00	07/30 13:52	MAZ
Calcium	621000		ug/L	10	57.9	500	EPA 200.7/3010	07/30 11:00	07/30 14:47	MAZ
Chromium	1.80	I	ug/L	1	0.339	5.00	EPA 200.7/3010	07/30 11:00	07/30 13:52	MAZ
Cobalt	ND	U	ug/L	1	0.361	1.00	EPA 200.7/3010	07/30 11:00	07/30 13:52	MAZ
Lead	ND	U	ug/L	1	1.19	10.0	EPA 200.7/3010	07/30 11:00	07/30 13:52	MAZ
Lithium	ND	U	ug/L	1	2.72	25.0	EPA 200.7/3010	07/30 08:00	08/03 10:31	MAZ
Magnesium	21100		ug/L	10	37.4	200	EPA 200.7/3010	07/30 11:00	07/30 14:47	MAZ
Mercury	ND	U	ug/L	1	0.120	1.00	EPA 245.1	08/03 08:00	08/03 14:21	EN
Molybdenum	ND	U	ug/L	1	1.17	10.0	EPA 200.7/3010	07/30 11:00	07/30 13:52	MAZ
Potassium	323000		ug/L	10	173	500	EPA 200.7/3010	07/30 11:00	07/30 14:47	MAZ
Selenium	ND	U	ug/L	1	3.46	15.0	EPA 200.7/3010	07/30 11:00	07/30 13:52	MAZ
Sodium	253000		ug/L	10	4460	20000	EPA 200.7/3010	07/30 11:00	07/30 14:47	MAZ
Thallium	ND	U	ug/L	1	0.925	4.00	EPA 200.7/3010	07/30 11:00	07/30 13:52	MAZ





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Work Order # 21G1031

Project: CCR Monitoring Program July 2021

McIntosh Plant

Lab ID: 21G1031-06
Client Sample ID: CCR-11B
Matrix: Water

 Collection Date:
 07/29/21 13:46

 Received Date:
 07/30/21 09:00

 Collected By:
 Chad Hotchkiss

Laboratory Analysis Report

Parameter	Result	QC	Units	Dil	MDL	PQL	Method	Date Ext.	Date Analy.	Analyst
Wet Chemistry										
Total Alkalinity	6.53	I	mg/L	1	2.49	7.46	EPA 310.2	08/06 18:49	08/06 18:49	OC
Bicarbonate	6.53	I	mg/L	1	2.49	7.46	EPA 310.2	08/06 18:49	08/06 18:49	OC
Chloride	818		mg/L	20	2.52	10.0	EPA 300.0	07/30 15:48	07/30 22:40	OC
Fluoride	1.46		mg/L	5	0.0260	0.125	EPA 300.0	08/03 13:47	08/03 15:26	OC
Sulfate	1580		mg/L	20	1.91	10.0	EPA 300.0	07/30 15:48	07/30 22:40	OC
Total Dissolved Solids	3550		mg/L	4	40.0	120	SM 2540C	08/03 16:22	08/11 13:37	MWO





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Report Printed: 8/11/2021

Work Order # 21G1031

Project: CCR Monitoring Program July 2021

McIntosh Plant

Lab ID: 21G1031-07 Client Sample ID: 72921EqBlkA Matrix: Water
 Collection Date:
 07/29/21 15:14

 Received Date:
 07/30/21 09:00

 Collected By:
 Chad Hotchkiss

Laboratory Analysis Report

Parameter	Result	QC	Units	Dil	MDL	PQL	Method	Date Ext.	Date Analy.	Analyst
		-				-				

Total Recoverable Metals by EPA 200 Series Methods

Antimony	ND	U	ug/L	1	5.11	15.0	EPA 200.7/3010	07/30 11:00	07/30 15:08	MAZ
Arsenic	ND	U	ug/L	1	2.21	10.0	EPA 200.7/3010	07/30 11:00	07/30 15:08	MAZ
Barium	ND	U	ug/L	1	0.0728	1.00	EPA 200.7/3010	07/30 11:00	07/30 15:08	MAZ
Beryllium	ND	U	ug/L	1	0.101	1.00	EPA 200.7/3010	07/30 11:00	07/30 15:08	MAZ
Boron	ND	U	ug/L	1	1.57	10.0	EPA 200.7/3010	07/30 11:00	07/30 15:08	MAZ
Cadmium	ND	U	ug/L	1	0.181	1.00	EPA 200.7/3010	07/30 11:00	07/30 15:08	MAZ
Calcium	ND	U	ug/L	1	5.79	50.0	EPA 200.7/3010	07/30 11:00	07/30 15:08	MAZ
Chromium	ND	U	ug/L	1	0.339	5.00	EPA 200.7/3010	07/30 11:00	07/30 15:08	MAZ
Cobalt	ND	U	ug/L	1	0.361	1.00	EPA 200.7/3010	07/30 11:00	07/30 15:08	MAZ
Lead	ND	U	ug/L	1	1.19	10.0	EPA 200.7/3010	07/30 11:00	07/30 15:08	MAZ
Lithium	ND	U	ug/L	1	2.72	25.0	EPA 200.7/3010	07/30 08:00	08/03 10:34	MAZ
Magnesium	ND	U	ug/L	1	3.74	20.0	EPA 200.7/3010	07/30 11:00	07/30 15:08	MAZ
Mercury	ND	U	ug/L	1	0.120	1.00	EPA 245.1	08/03 08:00	08/03 14:30	EN
Molybdenum	ND	U	ug/L	1	1.17	10.0	EPA 200.7/3010	07/30 11:00	07/30 15:08	MAZ
Potassium	ND	U	ug/L	1	17.3	50.0	EPA 200.7/3010	07/30 11:00	07/30 15:08	MAZ
Selenium	ND	U	ug/L	1	3.46	15.0	EPA 200.7/3010	07/30 11:00	07/30 15:08	MAZ
Sodium	ND	U	ug/L	1	446	2000	EPA 200.7/3010	07/30 11:00	07/30 15:08	MAZ
Thallium	ND	U	ug/L	1	0.925	4.00	EPA 200.7/3010	07/30 11:00	07/30 15:08	MAZ





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PQL

Report Printed: 8/11/2021

Work Order # 21G1031

Project: CCR Monitoring Program July 2021

McIntosh Plant

Date Ext.

Date Analy.

Analyst

Lab ID:21G1031-08Client Sample ID:72921EqBlkBMatrix:Water

Parameter

Result

QC

Units

 Collection Date:
 07/29/21 15:14

 Received Date:
 07/30/21 09:00

 Collected By:
 Chad Hotchkiss

Method

Laboratory Analysis Report

MDL

Dil

Wet Chemistry										
Total Alkalinity	ND	U	mg/L	1	2.49	7.46	EPA 310.2	08/06 18:49	08/06 18:49	OC
Bicarbonate	ND	U	mg/L	1	2.49	7.46	EPA 310.2	08/06 18:49	08/06 18:49	OC
Chloride	ND	U	mg/L	1	0.126	0.500	EPA 300.0	07/30 15:48	07/30 22:56	OC
Fluoride	ND	U	mg/L	1	0.00520	0.0250	EPA 300.0	07/30 15:48	07/30 22:56	OC
Sulfate	ND	U	mg/L	1	0.0953	0.500	EPA 300.0	07/30 15:48	07/30 22:56	OC
Total Dissolved Solids	ND	U	mg/L	1	10.0	30.0	SM 2540C	08/03 16:22	08/11 13:37	MWO





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Work Order # 21G1031

Project: CCR Monitoring Program July 2021

McIntosh Plant

	,	Wet Chemis	stry - Q	uality Con	itrol					
Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC	RPD	RPD Limit	Notes
	ressur	Ziiiii	0	Bever	resure	701020	Dillino.	10.5	Diffin	110000
Batch 21G0884 - Default Prep GenChem Blank (21G0884-BLK1)				Prepared &	Analyzed:	07/30/202	1			
Fluoride	ND	0.0250		1 repared &	. Anaryzeu.	011301202	1			
Sulfate	ND ND	0.0230	mg/L							U U
Chloride	ND	0.500	"							U
LCS (21G0884-BS1)				Prepared &	Analyzed:	07/30/202	1			
Fluoride	2.43	0.0250	mg/L	2.500		97	90-110			
Chloride	49.7	0.500	"	50.00		99	90-110			
Sulfate	50.5	0.500	"	50.00		101	90-110			
Duplicate (21G0884-DUP1)	Sou	rce: 21G1036-	01	Prepared &	Analyzed:	07/30/202	1			
Fluoride	0.725	0.0250	mg/L		0.765			5	20	
Chloride	6.69	0.500	"		6.62			1	20	
Sulfate	12.5	0.500	"		12.5			0.00	20	
Matrix Spike (21G0884-MS1)	Sou	rce: 21G1036-	01	Prepared &	Analyzed:	07/30/202	1			
Fluoride	2.90	0.0250	mg/L	2.500	0.765	85	90-110			J3
Chloride	57.3	0.500	"	50.00	6.62	101	90-110			
Sulfate	63.3	0.500	"	50.00	12.5	102	90-110			
Matrix Spike (21G0884-MS2)	Sou	rce: 21G1031-	04	Prepared &	Analyzed:	07/30/202	1			
Fluoride	2.45	0.0250	mg/L	2.500	0.0760	95	90-110			
Sulfate	64.0	0.500	"	50.00	13.2	102	90-110			
Chloride	53.0	0.500	"	50.00	1.43	103	90-110			
Batch 21H0180 - Default Prep GenChem										
Blank (21H0180-BLK1)				Prepared: (08/03/2021	Analyzed: (08/11/2021			
Total Dissolved Solids	ND	30.0	mg/L							U

Florida-Spectrum Environmental Services, Inc. 1460 W. McNab Road, Fort Lauderdale, FL 33309

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Project: CCR Monitoring Program July 2021

McIntosh Plant

	•	Wet Chemis	stry - Q	uality Con	trol					
<u>Analyte</u>	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 21H0180 - Default Prep GenChem										
LCS (21H0180-BS1)				Prepared: 0	08/03/2021	Analyzed: (8/11/2021			
Total Dissolved Solids	484	120	mg/L	500.0		96.8	80-120			
Duplicate (21H0180-DUP1)	Sour	ce: 21G1031-	04	Prepared: 0	08/03/2021	Analyzed: (8/11/2021			
Total Dissolved Solids	64.0	60.0	mg/L		58.0			9.84	20	
Duplicate (21H0180-DUP2)	Sour	ce: 21G1040-	02	Prepared: 0	08/03/2021	Analyzed: (8/11/2021			
Total Dissolved Solids	112	60.0	mg/L		114			1.77	20	
Batch 21H0204 - Default Prep GenChem										
Blank (21H0204-BLK1)				Prepared &	Analyzed:	08/03/2021				
Fluoride	ND	0.0250	mg/L							U
LCS (21H0204-BS1)				Prepared &	Analyzed:	08/03/2021				
Fluoride	2.50	0.0250	mg/L	2.500		100	90-110			
Duplicate (21H0204-DUP1)	Sour	ce: 21H0021-	02	Prepared &	Analyzed:	08/03/2021				
Fluoride	0.705	0.0250	mg/L		0.708			0.4	20	
Matrix Spike (21H0204-MS1)	Sour	ce: 21H0021-	02	Prepared &	Analyzed:	08/03/2021				
Fluoride	2.98	0.0250	mg/L	2.500	0.708	91	90-110			
Matrix Spike (21H0204-MS2)	Sour	ce: 21H0069-	01	Prepared &	Analyzed:	08/03/2021				
Fluoride	2.49	0.0250	mg/L	2.500	0.0830	96	90-110			
Batch 21H0299 - Default Prep GenChem										
Blank (21H0299-BLK1)				Prepared &	Analyzed:	08/06/2021				
Total Alkalinity	ND	7.46	mg/L							U

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Project: CCR Monitoring Program July 2021

McIntosh Plant

	W	et Chemis	stry - Q	uality Con	trol					
Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC	RPD	RPD Limit	Notes
Batch 21H0299 - Default Prep GenChem										
LCS (21H0299-BS1)				Prepared &	Analyzed:	08/06/2021				
Total Alkalinity	261	7.46	mg/L	250.0		104	90-110			
Duplicate (21H0299-DUP1)	Sourc	e: 21G1040-	04	Prepared &	Analyzed:	08/06/2021				
Total Alkalinity	3.56	7.46	mg/L		ND			200	20	I
Matrix Spike (21H0299-MS1)	Sourc	e: 21G1040-	04	Prepared &	Analyzed:	08/06/2021				
Total Alkalinity	261	7.46	mg/L	250.0	ND	104	90-110			
Matrix Spike (21H0299-MS2)	Sourc	e: 21H0111-	03	Prepared &	Analyzed:	08/06/2021				
Total Alkalinity	289	7.46	mg/L	250.0	223	26	90-110			Ј3





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McIntosh Plant

Т	otal Recoverable	Metals by E	PA 200	Series Met	thods - Q	uality Co	ontrol			
Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 21G0112 - EPA 3010A										
Blank (21G0112-BLK1)				Prepared &	Analyzed:	07/30/2021	[
Antimony	ND	15.0	ug/L	Ť	•					U
Arsenic	ND	10.0	"							U
Barium	ND	1.00	"							U
Beryllium	ND	1.00	"							U
Boron	ND	10.0	"							U
Molybdenum	ND	10.0	"							U
Potassium	ND	50.0	"							U
Sodium	ND	2000	"							U
Гhallium	ND	4.00	"							U
Selenium	ND	15.0	"							U
Calcium	ND	50.0	"							U
Cadmium	ND	1.00	"							U
Chromium	ND	5.00	"							U
Cobalt	ND	1.00	"							U
Lead	ND	10.0	"							U
Magnesium	ND	20.0	"							U
LCS (21G0112-BS1)				Prepared &	z Analyzed:	07/30/2021	1			
Antimony	518.9	15.0	ug/L	500.0	<u> </u>	104	85-115			
Arsenic	515	10.0	"	500.0		103	85-115			
Barium	485.5	1.00		500.0		97.1	85-115			
Beryllium	518.7	1.00		500.0		104	85-115			
Chromium	500.8	5.00		500.0		100	85-115			
Molybdenum	508.5	10.0		500.0		102	85-115			
Boron	513.2	10.0	"	500.0		103	85-115			
Selenium	534.2	15.0	"	500.0		107	85-115			
Sodium	24700	2000	"	25500		96.8	85-115			
Гhallium	486.3	4.00	"	500.0		97.3	85-115			
Potassium	24000	50.0	"	25500		94.3	85-115			
Magnesium	485	20.0	"	500.0		97.0	85-115			
Calcium	27100	50.0	"	25500		106	85-115			
Cobalt	492.1	1.00	"	500.0		98.4	85-115			

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McIntosh Plant

Tota	l Recoverable N	Metals by E	PA 200	Series Met	thods - Q	uality Co	ontrol			
Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 21G0112 - EPA 3010A										
LCS (21G0112-BS1)				Prepared &	: Analyzed:	07/30/202	1			
Lead	496	10.0	ug/L	500.0		99.3	85-115			
Cadmium	516.5	1.00	"	500.0		103	85-115			
Matrix Spike (21G0112-MS1)	Sour	rce: 21G1031-	07	Prepared &	: Analyzed:	07/30/202	1			
Antimony	503.6	15.0	ug/L	500.0	ND	101	70-130			<u> </u>
Гhallium	477.0	4.00	"	500.0	ND	95.4	70-130			
Chromium	485.1	5.00	"	500.0	ND	97.0	70-130			
Arsenic	509	10.0	"	500.0	ND	102	70-130			
Beryllium	510.6	1.00	"	500.0	ND	102	70-130			
Boron	497.7	10.0	"	500.0	ND	99.5	70-130			
Barium	470.2	1.00	"	500.0	ND	94.0	70-130			
Calcium	26200	50.0	"	25500	ND	103	70-130			
odium	23900	2000	"	25500	ND	93.9	70-130			
Cobalt	478.7	1.00	"	500.0	ND	95.7	70-130			
ead	475	10.0	"	500.0	ND	95.0	70-130			
Magnesium	474	20.0	"	500.0	ND	94.9	70-130			
Molybdenum	442.4	10.0	"	500.0	ND	88.5	70-130			
Potassium	23200	50.0	"	25500	ND	91.1	70-130			
Selenium	555.2	15.0	"	500.0	ND	111	70-130			
Cadmium	506.0	1.00	"	500.0	ND	101	70-130			
Matrix Spike Dup (21G0112-MSD1)	Sour	rce: 21G1031-	07	Prepared &	: Analyzed:	07/30/202	1			
antimony	510.0	15.0	ug/L	500.0	ND	102	70-130	1.26	20	
Barium	470.7	1.00	"	500.0	ND	94.1	70-130	0.106	20	
Beryllium	512.2	1.00	"	500.0	ND	102	70-130	0.313	20	
Arsenic	511	10.0	"	500.0	ND	102	70-130	0.392	20	
Selenium	561.3	15.0	"	500.0	ND	112	70-130	1.09	20	
Calcium	26200	50.0	"	25500	ND	103	70-130	0.00915	20	
Potassium	23200	50.0	"	25500	ND	90.8	70-130	0.351	20	
Magnesium	474	20.0	"	500.0	ND	94.8	70-130	0.127	20	
Molybdenum	463.2	10.0	"	500.0	ND	92.6	70-130	4.59	20	
Sodium	23800	2000	"	25500	ND	93.4	70-130	0.471	20	

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McIntosh Plant

Total	Recoverable N	Metals by E	PA 200	Series Me	thods - Q	uality Co	ontrol			
Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC	RPD	RPD Limit	Notes
Batch 21G0112 - EPA 3010A										
Matrix Spike Dup (21G0112-MSD1)	Sour	rce: 21G1031-	07	Prepared &	z Analyzed:	07/30/202	1			
Thallium	474.1	4.00	ug/L	500.0	ND	94.8	70-130	0.610	20	
Boron	497.4	10.0	"	500.0	ND	99.5	70-130	0.0603	20	
Cadmium	506.2	1.00	"	500.0	ND	101	70-130	0.0395	20	
Cobalt	482.7	1.00	"	500.0	ND	96.5	70-130	0.832	20	
Lead	477	10.0	"	500.0	ND	95.4	70-130	0.441	20	
Chromium	484.6	5.00	"	500.0	ND	96.9	70-130	0.103	20	
Batch 21G0118 - EPA 245.1/245.2 Prep Blank (21G0118-BLK1)				Prepared &	t Analyzed:	08/03/202	1			
Mercury	ND	1.00	ug/L							U
LCS (21G0118-BS1)				Prepared &	Analyzed:	08/03/202	1			
Mercury	9.27	1.00	ug/L	10.00		93	85-115			
Matrix Spike (21G0118-MS1)	Sour	rce: 21G1031-	07	Prepared &	z Analyzed:	08/03/202	1			
Mercury	8.43	1.00	ug/L	10.00	ND	84	70-130			
Matrix Spike Dup (21G0118-MSD1)	Sour	rce: 21G1031-	07	Prepared &	Analyzed:	08/03/202	1			
Mercury	8.37	1.00	ug/L	10.00	ND	84	70-130	0.7	20	
Batch 21G0119 - EPA 3010A										
Blank (21G0119-BLK1)				Prepared: (07/30/2021	Analyzed: (08/03/2021			
Lithium	ND	25.0	ug/L							U





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McIntosh Plant

Total	Recoverable M	etals by E	PA 200	Series Met	thods - Q	uality Co	ontrol			
<u>Analyte</u>	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 21G0119 - EPA 3010A										
LCS (21G0119-BS1)				Prepared: (7/30/2021	Analyzed: (08/03/2021			
Lithium	2550	25.0	ug/L	2500		102	85-115			
Matrix Spike (21G0119-MS1)	Source	e: 21G1031-	07	Prepared: (07/30/2021	Analyzed: (08/03/2021			
Lithium	2490	25.0	ug/L	2500	ND	100	75-125			
Matrix Spike Dup (21G0119-MSD1)	Source	ce: 21G1031-	07	Prepared: (07/30/2021	Analyzed: (08/03/2021			
Lithium	2500	25.0	ug/L	2500	ND	100	75-125	0.3	20	





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Project: CCR Monitoring Program July 2021

McIntosh Plant

Notes and Definitions

U Indicated that the compound was analyzed for but not detected. This shall be used to indicate that the specific component was not

detected. The value associated with the qualifier shall be the laboratory method detection limit.

J3 The matrix spike recovery outside method acceptance limits indicating matrix interference.

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the detection limit

NR Not Reported

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference

N.O.O. No Odor Observed

REP Field parameter measured by client

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

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

Z Too many colonies were present for accurate counting.

SUB Work performed by outside (subcontracted) labs denoted by SUB in analyst field.

QC=Qualifier Codes as defined by DEP 62-160 Unless indicated, soil results are reported on actual (wet) weight basis. The Color SM2120B method is reported as (Color / pH) Legionella analyzed under CDC acreditation program Dilution factors \geq = 1000 are abreviated using k=1000 and M=1000000 Field parameters are not NELAP acredited. Results relate only to this sample.

Suresh (Bobby) Supan - CSM

Authorized CSM Signature (954) 978-6400 Florida-Spectrum Environmental Services,Inc. Certification# E86006

All NELAP certified analysis are performed in accordance with Chapter 64E-1 Florida Administrative code, which has been determined to be equivalent to NELAC standards. Analysis certified by programs other than NELAP are designated with a "~".

													4		
. 7 . 7 .	Snect														
115103/	Environmental Services, Inc.		1460 W McNa	b Road Ft I	14% W McNab Road Ft Lauderdale FL 33309		Tel: (954) 978-6400 Tel: (863) 763 3336	-6400 3236	Fax: (Fax: (954) 978-2233	233		ad Holla		
Togged into		1	O THE WINE	Sureel, Okt	secnobee, FL		a. (603) 703- a. (613) 728	0000	rax:	Fax: (803) /03-1344 F (613) 224 4015	4 ;		RUSH RESERVATION#	SEKVAL	# 20
LIMS by:	,	# \c	528 Gooch Road Fort Meade FT 33841	eet Savanna ad Fort Mea	n, GA 31401 de ET 33841	ř	Tel: (912) 238-5050 Tel: (863) 285-8145	-5050 -8145	Fax (9	Fax (912) 234-4815 Fax (863) 285-7030	51. 05.				
) *	Doc. Ctri:0401117-001 Date: 12/6/17		1910 Harden Blvd # 101, Lakeland	lvd # 101,]	Lakeland, FL	FL 33803 Te	Tel: (863) 686-4271	4271	Fax (8	Fax (863) 686-4389	68		Rush Sur	Rush Surcharges apply	vlac
Report to: Lakeland Electric	ric					Report to	4 0000								
Invoice to. I abeland Flactric			Durahasa			Address:	3030 East Lake Farker Drive, Lakeland FL	аке Рагкег	Drive, Lak		53805				
			Order # 287348	48		ress:	501 East Lemon Street, Lakeland FL 33801	on Street, L	akeland FI	. 33801		-			
Name Jumber	CCR Monitoring Program July 2021					Site Location: N	Site Location: McIntosh Plant	Ħ							
٩			Phone: 954-802-9143	43		Fax:					Email:	Email: Thomas.Johnston@lakelandelectric.com	ston@lakel	andelectri	.com
Sampler Name:	West Line	7				Sampler	N.								
		to Commised	E	Martin	Double 6	Signature .	U								
UKUEK # Lab Control Number	Sampie	Date Samplen	Sampled	DW SW	Press	Containers		7	Analysis Required	is Req	uired				Tests
	3			GW SED	Сошро	Received &	SUCCESSION OF THE PARTY OF THE	Λ		-H	7			Ь	
Shaded Areas For Laboratory Use Only					Codes	NELAC Letter Suffixes #	II xibnəqqA elatəM	Appendix IV slatsM	SC Suite zlatsM	App III Cl, I SO4, TDS	GC Suite Bicarb, T-All		H Z L O	- E	0 N O C E E E E E E E E E E E E E E E E E E
/ S	CCR-23A 7	7/29/2021	858	œM.	HL		×	×	×	,					
02	CCR-23B 7	7/29/2021	858	В	UT	1				×	×				
3	SW-106A	7/29/2021	1056	GW	HI	T	×	×	×						
150	SW-106B	7/29/2021	1056	GW	UT	T				×	×				a sitely.
02	CCR-11A	7/29/2021	1346	GW	HL	-	×	×	×						
20	CCR-11B	7/29/2021	1346	GW	UT	-				×	×				
5	72921EqBlkA	7/29/2021	から	В			×	×	×						
	72921EqBikB 7	7/29/2021	いか	GW						×	×				
Special Comments: 0,2	1 de Com.					Total			SAMPLE	CUSTOD	AND TRAI	SAMPLE CUSTODY AND TRANSFER SIGNATURES	TURES	Į ď	DATE / TIME
"I waive NELAC protocol" (sign here) >	gn here) >		1.34				1 Relinc	Relinquished by:			HOLLIN,	155	7	129/21	1 1533
Deliverables	QA/QC Report Needed?	Needed?	Yes No	(addition	(additional charge)		1 Receiv	Received by:	(lon	1	BIK.		420	1	1530
Sample Custody & Field Comments	ents A litture me ber	Bottle Type		Preserv	Preservatives	00	2 Relinc	Relinquished by:	13	, R			1		
as received 0, 9		ig/bottle O-125ml		C-HCL Cu-CuSO ₄		S-H ₂ SO ₄ S-H ₂ SO ₄ T-Na ₂ S ₂ O ₄ -H ₂ O	2 Receiv	Received by:	J.	N	N	3821	0	3	
ly Seals? Y N	L-liter bottle	H-Plastic Amber TED-Tedlar Air	Bag	H-HNO3 M-MCAB	U-U DI-D	U-Unpreserved DI-DI Water	3 Relinc	Relinquished by:							
GUN-1/2/ FIELD TIME:	(250 m) T-250 m) V-40 ml vial		00000000000000000000000000000000000000	N-NaOH NHNH,CL		Z-zinc acetate	3 Receiv	Received by:				ļ			
ing hr Pick up	hr W-wide mouth	4		Hex-Hex.Cr. Buffer	. Buffer		NAWAYA.	www flenvire com	mos os			COC Page	1	Ju	





1460 West McNab Road Fort Lauderdale, FL 33309 1-800-ANALYTE Phone (954) 978-6400 Phone (954) 978-2233 Fax

04 August 2021

Lab Work Order (COC): 21G0804

NELAP Certificate No. E86006

Thomas Johnston Lakeland Electric - McIntosh 3030 East Lake Parker Drive Lakeland, FL 33805

RE: CCR Monitoring Program

Project Location: McIntosh Plant

Dear Thomas Johnston:

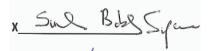
This report details the analytical results of samples collected at the above-referenced project location. These samples were received by Florida Spectrum Environmental Services at **07/23/2021 09:00**.

All Analyses were performed according to the TNI/NELAP standard unless indicated by a "~" on the report.

Your samples will be retained by Florida Spectrum Environmental for a period of at least 30 days following sample receipt or until the longest of the preparation and/or analytical hold times expires, whichever is shorter. After that time, they will be properly disposed without further notice, unless there exists an explicit contractual agreement to the contrary. We reserve the right to return any unused samples, extracts, or related materials or solutions to you if we consider it necessary. Examples might include those samples identified as hazardous wastes, submissions where the sample sizes significantly exceed those required for analysis, samples containing controlled substances, etc.

We thank you for selecting Florida Spectrum Environmental to serve your analytical needs. Should you have any questions or require additional information regarding any of the information in this report, please feel free to contact us at any time. We appreciate the opportunity to be of service.

Florida Spectrum Environmental Inc.







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Report Printed: 8/4/2021

Work Order # 21G0804

Project: CCR Monitoring Program

McIntosh Plant

DETECTED ANALYTE SUMMARY

CCR-1A	21G0804-01	Water	Calcium	53300	ug/L	7/22/2021	8:55
CCR-1A	21G0804-01	Water	Molybdenum	2.00	ug/L	7/22/2021	8:55
CCR-1A	21G0804-01	Water	Barium	7.30	ug/L	7/22/2021	8:55
CCR-1A	21G0804-01	Water	Boron	43.4	ug/L	7/22/2021	8:55
CCR-1A	21G0804-01	Water	Chromium	1.20	ug/L	7/22/2021	8:55
CCR-1B	21G0804-02	Water	Sulfate	56.7	mg/L	7/22/2021	8:55
CCR-1B	21G0804-02	Water	Total Dissolved Solids	210	mg/L	7/22/2021	8:55
CCR-1B	21G0804-02	Water	Chloride	3.13	mg/L	7/22/2021	8:55
CCR-1B	21G0804-02	Water	Fluoride	0.0950	mg/L	7/22/2021	8:55
CCR-2A	21G0804-03	Water	Chromium	1.20	ug/L	7/22/2021	9:50
CCR-2A	21G0804-03	Water	Barium	11.7	ug/L	7/22/2021	9:50
CCR-2A	21G0804-03	Water	Calcium	65600	ug/L	7/22/2021	9:50
CCR-2A	21G0804-03	Water	Boron	42.7	ug/L	7/22/2021	9:50
CCR-2B	21G0804-04	Water	Sulfate	105	mg/L	7/22/2021	9:50
CCR-2B	21G0804-04	Water	Fluoride	0.163	mg/L	7/22/2021	9:50
CCR-2B	21G0804-04	Water	Chloride	25.3	mg/L	7/22/2021	9:50
CCR-2B	21G0804-04	Water	Total Dissolved Solids	326	mg/L	7/22/2021	9:50
CCR-4A	21G0804-05	Water	Lithium	239	ug/L	7/22/2021	11:07
CCR-4A	21G0804-05	Water	Calcium	1670000	ug/L	7/22/2021	11:07
CCR-4A	21G0804-05	Water	Boron	643	ug/L	7/22/2021	11:07
CCR-4A	21G0804-05	Water	Barium	289	ug/L	7/22/2021	11:07
CCR-4A	21G0804-05	Water	Chromium	1.70	ug/L	7/22/2021	11:07
CCR-4B	21G0804-06	Water	Total Dissolved Solids	9480	mg/L	7/22/2021	11:07
CCR-4B	21G0804-06	Water	Chloride	4240	mg/L	7/22/2021	11:07

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Work Order # 21G0804

Project: CCR Monitoring Program

McIntosh Plant

DETECTED ANALYTE SUMMARY

Client Sample ID	Laboratory ID	Matrix	Analyte	Result	Units	Collection Date	Collection Time
CCR-4B	21G0804-06	Water	Fluoride	0.915	mg/L	7/22/2021	11:07
CCR-4B	21G0804-06	Water	Sulfate	937	mg/L	7/22/2021	11:07
CCR-15A	21G0804-07	Water	Boron	23.6	ug/L	7/22/2021	14:12
CCR-15A	21G0804-07	Water	Barium	29.9	ug/L	7/22/2021	14:12
CCR-15A	21G0804-07	Water	Chromium	2.40	ug/L	7/22/2021	14:12
CCR-15A	21G0804-07	Water	Magnesium	777	ug/L	7/22/2021	14:12
CCR-15A	21G0804-07	Water	Calcium	15400	ug/L	7/22/2021	14:12
CCR-15A	21G0804-07	Water	Sodium	2420	ug/L	7/22/2021	14:12
CCR-15A	21G0804-07	Water	Potassium	766	ug/L	7/22/2021	14:12
CCR-15B	21G0804-08	Water	Chloride	7.31	mg/L	7/22/2021	14:12
CCR-15B	21G0804-08	Water	Fluoride	0.162	mg/L	7/22/2021	14:12
CCR-15B	21G0804-08	Water	Sulfate	50.4	mg/L	7/22/2021	14:12
CCR-15B	21G0804-08	Water	Total Dissolved Solids	102	mg/L	7/22/2021	14:12
CCR-15B	21G0804-08	Water	Total Alkalinity	3.09	mg/L	7/22/2021	14:12
CCR-15B	21G0804-08	Water	Bicarbonate	3.09	mg/L	7/22/2021	14:12
CCR-16A	21G0804-09	Water	Barium	136	ug/L	7/22/2021	15:19
CCR-16A	21G0804-09	Water	Lithium	62.2	ug/L	7/22/2021	15:19
CCR-16A	21G0804-09	Water	Potassium	508000	ug/L	7/22/2021	15:19
CCR-16A	21G0804-09	Water	Magnesium	65900	ug/L	7/22/2021	15:19
CCR-16A	21G0804-09	Water	Calcium	1220000	ug/L	7/22/2021	15:19
CCR-16A	21G0804-09	Water	Chromium	1.40	ug/L	7/22/2021	15:19
CCR-16A	21G0804-09	Water	Boron	514	ug/L	7/22/2021	15:19
CCR-16A	21G0804-09	Water	Sodium	460000	ug/L	7/22/2021	15:19
CCR-16B	21G0804-10	Water	Bicarbonate	2.84	mg/L	7/22/2021	15:19

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Work Order # 21G0804

Project: CCR Monitoring Program

McIntosh Plant

DETECTED ANALYTE SUMMARY

Client Sample ID	Laboratory ID	Matrix	Analyte	Result	Units	Collection Date	Collection Time
CCR-16B	21G0804-10	Water	Total Alkalinity	2.84	mg/L	7/22/2021	15:19
CCR-16B	21G0804-10	Water	Chloride	2780	mg/L	7/22/2021	15:19
CCR-16B	21G0804-10	Water	Sulfate	1070	mg/L	7/22/2021	15:19
CCR-16B	21G0804-10	Water	Fluoride	0.609	mg/L	7/22/2021	15:19
CCR-16B	21G0804-10	Water	Total Dissolved Solids	6960	mg/L	7/22/2021	15:19





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Work Order # 21G0804

Project: CCR Monitoring Program

McIntosh Plant

Lab ID: 21G0804-01 Client Sample ID: CCR-1A Matrix: Water **Collection Date:** 07/22/21 08:55 **Received Date:** 07/23/21 09:00

Collected By: Client

Laboratory Analysis Report

Parameter	Result	QC	Units	Dil	MDL	PQL	Method	Date Ext.	Date Analy.	Anaiyst
Total Recoverable Metals by E	PA 200 Serie	es Meth	nods							
Antimony	ND	U	ug/L	1	5.11	15.0	EPA 200.7/3010	07/23 10:30	07/23 13:54	MAZ

Antimony	ND	U	ug/L	1	5.11	15.0	EPA 200.7/3010	07/23 10:30	07/23 13:54	MAZ
Arsenic	ND	U	ug/L	1	2.21	10.0	EPA 200.7/3010	07/23 10:30	07/23 13:54	MAZ
Barium	7.30		ug/L	1	0.0728	1.00	EPA 200.7/3010	07/23 10:30	07/23 13:54	MAZ
Beryllium	ND	U	ug/L	1	0.101	1.00	EPA 200.7/3010	07/23 10:30	07/23 13:54	MAZ
Boron	43.4		ug/L	1	1.57	10.0	EPA 200.7/3010	07/23 10:30	07/23 13:54	MAZ
Cadmium	ND	U	ug/L	1	0.181	1.00	EPA 200.7/3010	07/23 10:30	07/23 13:54	MAZ
Calcium	53300		ug/L	1	5.79	50.0	EPA 200.7/3010	07/23 10:30	07/23 13:54	MAZ
Chromium	1.20	I	ug/L	1	0.339	5.00	EPA 200.7/3010	07/23 10:30	07/23 13:54	MAZ
Cobalt	ND	U	ug/L	1	0.361	1.00	EPA 200.7/3010	07/23 10:30	07/23 13:54	MAZ
Lead	ND	U	ug/L	1	1.19	10.0	EPA 200.7/3010	07/23 10:30	07/23 13:54	MAZ
Lithium	ND	U	ug/L	1	2.72	25.0	EPA 200.7/3010	07/29 11:30	07/29 14:30	MAZ
Mercury	ND	U	ug/L	1	0.120	1.00	EPA 245.1	07/27 11:40	07/28 15:37	EN
Molybdenum	2.00	I	ug/L	1	1.17	10.0	EPA 200.7/3010	07/23 10:30	07/23 13:54	MAZ
Selenium	ND	U	ug/L	1	3.46	15.0	EPA 200.7/3010	07/23 10:30	07/23 13:54	MAZ
Thallium	ND	U	ug/L	1	0.925	4.00	EPA 200.7/3010	07/23 10:30	07/23 13:54	MAZ





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Work Order # 21G0804

Project: CCR Monitoring Program

McIntosh Plant

Lab ID: 21G0804-02 Client Sample ID: CCR-1B Matrix: Water **Collection Date:** 07/22/21 08:55 **Received Date:** 07/23/21 09:00

Collected By: Client

Laboratory Analysis Report

Parameter	Result	QC	Units	Dil	MDL	PQL	Method	Date Ext.	Date Analy.	Analyst
Wet Chemistry										
	1			•			ī		1	Т
Chloride	3.13		mg/L	1	0.126	0.500	EPA 300.0	07/23 17:30	07/24 01:20	OC
Fluoride	0.0950		mg/L	1	0.00520	0.0250	EPA 300.0	07/23 17:30	07/24 01:20	OC
Sulfate	56.7		mg/L	1	0.0953	0.500	EPA 300.0	07/23 17:30	07/24 01:20	OC
Total Dissolved Solids	210		mg/L	2	20.0	60.0	SM 2540C	07/27 16:56	07/28 15:01	MWO





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Work Order # 21G0804

Project: CCR Monitoring Program

McIntosh Plant

Lab ID: 21G0804-03 Client Sample ID: CCR-2A Matrix: Water **Collection Date:** 07/22/21 09:50 **Received Date:** 07/23/21 09:00

Collected By: Client

Laboratory Analysis Report

Parameter	Result	QC	Units	Dil	MDL	PQL	Method	Date Ext.	Date Analy.	Analyst
Total Recoverable Metals by	EPA 200 Seri	es Metl	ıods							
Antimony	ND	U	ug/L	1	5.11	15.0	EPA 200.7/3010	07/23 10:30	07/23 13:57	MAZ
Arsenic	ND	U	ug/L	1	2.21	10.0	EPA 200.7/3010	07/23 10:30	07/23 13:57	MAZ
Barium	11.7		ug/L	1	0.0728	1.00	EPA 200.7/3010	07/23 10:30	07/23 13:57	MAZ
Beryllium	ND	U	ug/L	1	0.101	1.00	EPA 200.7/3010	07/23 10:30	07/23 13:57	MAZ
Boron	42.7		ug/L	1	1.57	10.0	EPA 200.7/3010	07/23 10:30	07/23 13:57	MAZ
Cadmium	ND	U	ug/L	1	0.181	1.00	EPA 200.7/3010	07/23 10:30	07/23 13:57	MAZ
Calcium	65600		ug/L	1	5.79	50.0	EPA 200.7/3010	07/23 10:30	07/23 13:57	MAZ
Chromium	1.20	I	ug/L	1	0.339	5.00	EPA 200.7/3010	07/23 10:30	07/23 13:57	MAZ
Cobalt	ND	U	ug/L	1	0.361	1.00	EPA 200.7/3010	07/23 10:30	07/23 13:57	MAZ
Lead	ND	U	ug/L	1	1.19	10.0	EPA 200.7/3010	07/23 10:30	07/23 13:57	MAZ
Lithium	ND	U	ug/L	1	2.72	25.0	EPA 200.7/3010	07/29 11:30	07/29 14:32	MAZ
Mercury	ND	U	ug/L	1	0.120	1.00	EPA 245.1	07/27 11:40	07/28 15:40	EN
Molybdenum	ND	U	ug/L	1	1.17	10.0	EPA 200.7/3010	07/23 10:30	07/23 13:57	MAZ
Selenium	ND	U	ug/L	1	3.46	15.0	EPA 200.7/3010	07/23 10:30	07/23 13:57	MAZ
Thallium	ND	U	ug/L	1	0.925	4.00	EPA 200.7/3010	07/23 10:30	07/23 13:57	MAZ





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Work Order # 21G0804

Project: CCR Monitoring Program

McIntosh Plant

Lab ID: 21G0804-04 Client Sample ID: CCR-2B Matrix: Water **Collection Date:** 07/22/21 09:50 **Received Date:** 07/23/21 09:00

Collected By: Client

Laboratory Analysis Report

Parameter	Result	QC	Units	Dil	MDL	PQL	Method	Date Ext.	Date Analy.	Analyst
Wet Chemistry										
Chloride	25.3	Τ	mg/L	1	0.126	0.500	EPA 300.0	07/23 17:30	07/24 01:37	OC
Fluoride	0.163		mg/L	1	0.00520	0.0250	EPA 300.0	07/23 17:30	07/24 01:37	OC
Sulfate	105		mg/L	1	0.0953	0.500	EPA 300.0	07/23 17:30	07/24 01:37	OC
Total Dissolved Solids	326		mg/L	2	20.0	60.0	SM 2540C	07/27 16:56	07/28 15:01	MWO





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Work Order # 21G0804

Project: CCR Monitoring Program

McIntosh Plant

Lab ID: 21G0804-05 Client Sample ID: CCR-4A Matrix: Water **Collection Date:** 07/22/21 11:07 **Received Date:** 07/23/21 09:00

Collected By: Client

Laboratory Analysis Report

Parameter	Result	QC	Units	Dil	MDL	PQL	Method	Date Ext.	Date Analy.	Analyst
Total Recoverable Metals by l	EPA 200 Seri	es Metl	ıods							
Antimony	ND	U	ug/L	1	5.11	15.0	EPA 200.7/3010	07/23 10:30	07/23 14:08	MAZ
Arsenic	ND	U	ug/L	1	2.21	10.0	EPA 200.7/3010	07/23 10:30	07/23 14:08	MAZ
Barium	289		ug/L	1	0.0728	1.00	EPA 200.7/3010	07/23 10:30	07/23 14:08	MAZ
Beryllium	ND	U	ug/L	1	0.101	1.00	EPA 200.7/3010	07/23 10:30	07/23 14:08	MAZ
Boron	643		ug/L	1	1.57	10.0	EPA 200.7/3010	07/23 10:30	07/23 14:08	MAZ
Cadmium	ND	U	ug/L	1	0.181	1.00	EPA 200.7/3010	07/23 10:30	07/23 14:08	MAZ
Calcium	1670000		ug/L	50	290	2500	EPA 200.7/3010	07/23 10:30	07/23 15:15	MAZ
Chromium	1.70	I	ug/L	1	0.339	5.00	EPA 200.7/3010	07/23 10:30	07/23 14:08	MAZ
Cobalt	ND	U	ug/L	1	0.361	1.00	EPA 200.7/3010	07/23 10:30	07/23 14:08	MAZ
Lead	ND	U	ug/L	1	1.19	10.0	EPA 200.7/3010	07/23 10:30	07/23 14:08	MAZ
Lithium	239		ug/L	1	2.72	25.0	EPA 200.7/3010	07/29 11:30	07/29 14:35	MAZ
Mercury	ND	U	ug/L	1	0.120	1.00	EPA 245.1	07/27 11:40	07/28 16:38	EN
Molybdenum	ND	U	ug/L	1	1.17	10.0	EPA 200.7/3010	07/23 10:30	07/23 14:08	MAZ
Selenium	ND	U	ug/L	1	3.46	15.0	EPA 200.7/3010	07/23 10:30	07/23 14:08	MAZ
Thallium	ND	U	ug/L	1	0.925	4.00	EPA 200.7/3010	07/23 10:30	07/23 14:08	MAZ





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Work Order # 21G0804

Project: CCR Monitoring Program

McIntosh Plant

Lab ID: 21G0804-06
Client Sample ID: CCR-4B
Matrix: Water

Collection Date: 07/22/21 11:07 **Received Date:** 07/23/21 09:00

Collected By: Client

Laboratory Analysis Report

Parameter	Result	QC	Units	Dil	MDL	PQL	Method	Date Ext.	Date Analy.	Analyst
Wet Chemistry										
	_		-							
Chloride	4240		mg/L	40	5.04	20.0	EPA 300.0	07/28 18:30	07/29 03:46	OC
Fluoride	0.915		mg/L	10	0.0520	0.250	EPA 300.0	07/23 17:30	07/24 01:53	OC
Sulfate	937		mg/L	10	0.953	5.00	EPA 300.0	07/23 17:30	07/24 01:53	OC
Total Dissolved Solids	9480		mg/L	4	40.0	120	SM 2540C	07/27 16:56	07/29 15:30	MWO





Report To: Thomas Johnston Lakeland Electric - McIntosh 3030 East Lake Parker Drive Lakeland FL, 33805

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Work Order # 21G0804

Project: CCR Monitoring Program

McIntosh Plant

Lab ID: 21G0804-07 **Client Sample ID:** CCR-15A Matrix: Water

07/22/21 14:12 **Collection Date: Received Date:** 07/23/21 09:00

Collected By: Client

Laboratory Analysis Report

Parameter	Result	QC	Units	Dil	MDL	PQL	Method	Date Ext.	Date Analy.	Analyst
Total Recoverable Metal	ls by EPA 200 Seri	es Metl	ıods							
Antimony	ND	U	ug/L	1	5.11	15.0	EPA 200.7/3010	07/23 10:30	07/23 13:59	MAZ
Arsenic	ND	U	ug/L	1	2.21	10.0	EPA 200.7/3010	07/23 10:30	07/23 13:59	MAZ
Barium	29.9		ug/L	1	0.0728	1.00	EPA 200.7/3010	07/23 10:30	07/23 13:59	MAZ
Beryllium	ND	U	ug/L	1	0.101	1.00	EPA 200.7/3010	07/23 10:30	07/23 13:59	MAZ
Boron	23.6		ug/L	1	1.57	10.0	EPA 200.7/3010	07/23 10:30	07/23 13:59	MAZ
Cadmium	ND	U	ug/L	1	0.181	1.00	EPA 200.7/3010	07/23 10:30	07/23 13:59	MAZ
Calcium	15400		ug/L	1	5.79	50.0	EPA 200.7/3010	07/23 10:30	07/23 13:59	MAZ
Chromium	2.40	I	ug/L	1	0.339	5.00	EPA 200.7/3010	07/23 10:30	07/23 13:59	MAZ
Cobalt	ND	U	ug/L	1	0.361	1.00	EPA 200.7/3010	07/23 10:30	07/23 13:59	MAZ
Lead	ND	U	ug/L	1	1.19	10.0	EPA 200.7/3010	07/23 10:30	07/23 13:59	MAZ
Lithium	ND	U	ug/L	1	2.72	25.0	EPA 200.7/3010	07/29 11:30	07/29 14:38	MAZ
Magnesium	777		ug/L	1	3.74	20.0	EPA 200.7/3010	07/23 10:30	07/23 13:59	MAZ
Mercury	ND	U	ug/L	1	0.120	1.00	EPA 245.1	07/27 11:40	07/28 15:03	EN
Molybdenum	ND	U	ug/L	1	1.17	10.0	EPA 200.7/3010	07/23 10:30	07/23 13:59	MAZ
Potassium	766		ug/L	1	17.3	50.0	EPA 200.7/3010	07/23 10:30	07/23 13:59	MAZ
Selenium	ND	U	ug/L	1	3.46	15.0	EPA 200.7/3010	07/23 10:30	07/23 13:59	MAZ
Sodium	2420		ug/L	1	446	2000	EPA 200.7/3010	07/23 10:30	07/23 13:59	MAZ
Thallium	ND	U	ug/L	1	0.925	4.00	EPA 200.7/3010	07/23 10:30	07/23 13:59	MAZ





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Work Order # 21G0804

Project: CCR Monitoring Program

McIntosh Plant

Lab ID: 21G0804-08
Client Sample ID: CCR-15B
Matrix: Water

Collection Date: 07/22/21 14:12 **Received Date:** 07/23/21 09:00

Collected By: Client

Laboratory Analysis Report

Parameter	Result	QC	Units	Dil	MDL	PQL	Method	Date Ext.	Date Analy.	Analyst
Wet Chemistry										
Total Alkalinity	3.09	I	mg/L	1	2.49	7.46	EPA 310.2	07/23 12:31	07/23 12:31	SA
Bicarbonate	3.09	I	mg/L	1	2.49	7.46	EPA 310.2	07/23 12:31	07/23 12:31	SA
Chloride	7.31		mg/L	1	0.126	0.500	EPA 300.0	07/23 17:30	07/24 02:10	OC
Fluoride	0.162		mg/L	1	0.00520	0.0250	EPA 300.0	07/23 17:30	07/24 02:10	OC
Sulfate	50.4		mg/L	1	0.0953	0.500	EPA 300.0	07/23 17:30	07/24 02:10	OC
Total Dissolved Solids	102		mg/L	2	20.0	60.0	SM 2540C	07/27 16:56	07/28 15:01	MWO





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PQL

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Work Order # 21G0804

Project: CCR Monitoring Program

McIntosh Plant

Date Ext.

Date Analy.

Analyst

Lab ID: 21G0804-09 Client Sample ID: CCR-16A Matrix: Water

Result

QC

Units

Parameter

Collection Date: 07/22/21 15:19 **Received Date:** 07/23/21 09:00

Method

Collected By: Client

Laboratory Analysis Report

MDL

Dil

	1100011	QC	Onts	<i>D</i> 11	.,	1 42		Dute Ext.		
T. 10	1 1 ED. 400 C .	3.5.4	•							
Total Recoverable Meta	is by EPA 200 Serie	es Meti	10 as							
Antimony	ND	U	ug/L	1	5.11	15.0	EPA 200.7/3010	07/23 10:30	07/23 14:02	MAZ
Arsenic	ND	U	ug/L	1	2.21	10.0	EPA 200.7/3010	07/23 10:30	07/23 14:02	MAZ
Barium	136		ug/L	1	0.0728	1.00	EPA 200.7/3010	07/23 10:30	07/23 14:02	MAZ
Beryllium	ND	U	ug/L	1	0.101	1.00	EPA 200.7/3010	07/23 10:30	07/23 14:02	MAZ
Boron	514		ug/L	1	1.57	10.0	EPA 200.7/3010	07/23 10:30	07/23 14:02	MAZ
Cadmium	ND	U	ug/L	1	0.181	1.00	EPA 200.7/3010	07/23 10:30	07/23 14:02	MAZ
Calcium	1220000		ug/L	50	290	2500	EPA 200.7/3010	07/23 10:30	07/23 15:18	MAZ
Chromium	1.40	I	ug/L	1	0.339	5.00	EPA 200.7/3010	07/23 10:30	07/23 14:02	MAZ
Cobalt	ND	U	ug/L	1	0.361	1.00	EPA 200.7/3010	07/23 10:30	07/23 14:02	MAZ
Lead	ND	U	ug/L	1	1.19	10.0	EPA 200.7/3010	07/23 10:30	07/23 14:02	MAZ
Lithium	62.2		ug/L	1	2.72	25.0	EPA 200.7/3010	07/29 11:30	07/29 14:40	MAZ
Magnesium	65900		ug/L	50	187	1000	EPA 200.7/3010	07/23 10:30	07/23 15:18	MAZ
Mercury	ND	U	ug/L	1	0.120	1.00	EPA 245.1	07/27 11:40	07/28 15:46	EN
Molybdenum	ND	U	ug/L	1	1.17	10.0	EPA 200.7/3010	07/23 10:30	07/23 14:02	MAZ
Potassium	508000		ug/L	50	865	2500	EPA 200.7/3010	07/23 10:30	07/23 15:18	MAZ
Selenium	ND	U	ug/L	1	3.46	15.0	EPA 200.7/3010	07/23 10:30	07/23 14:02	MAZ
Sodium	460000		ug/L	50	22300	100000	EPA 200.7/3010	07/23 10:30	07/23 15:18	MAZ
Thallium	ND	U	ug/L	1	0.925	4.00	EPA 200.7/3010	07/23 10:30	07/23 14:02	MAZ





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Work Order # 21G0804

Project: CCR Monitoring Program

McIntosh Plant

Lab ID: 21G0804-10 Client Sample ID: CCR-16B Matrix: Water **Collection Date:** 07/22/21 15:19 **Received Date:** 07/23/21 09:00

Collected By: Client

Laboratory Analysis Report

Parameter	Result	QC	Units	Dil	MDL	PQL	Method	Date Ext.	Date Analy.	Analyst
Wet Chemistry										
Total Alkalinity	2.84	I	mg/L	1	2.49	7.46	EPA 310.2	07/23 12:31	07/23 12:31	SA
Bicarbonate	2.84	I	mg/L	1	2.49	7.46	EPA 310.2	07/23 12:31	07/23 12:31	SA
Chloride	2780		mg/L	40	5.04	20.0	EPA 300.0	07/28 18:30	07/29 06:31	OC
Fluoride	0.609		mg/L	10	0.0520	0.250	EPA 300.0	07/23 17:30	07/24 02:26	OC
Sulfate	1070		mg/L	10	0.953	5.00	EPA 300.0	07/23 17:30	07/24 02:26	OC
Total Dissolved Solids	6960		mg/L	4	40.0	120	SM 2540C	07/27 16:56	07/30 10:04	MWO





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Work Order # 21G0804

Project: CCR Monitoring Program

McIntosh Plant

	•	Wet Chemis	stry - Q	uality Con	trol					
Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 21G0683 - Default Prep GenChem										
Blank (21G0683-BLK1)				Prepared &	Analyzed:	07/23/202	1			
Total Alkalinity	ND	7.46	mg/L	1						U
LCS (21G0683-BS1)				Prepared &	z Analyzed:	07/23/202	1			
Total Alkalinity	251	7.46	mg/L	250.0	<u> </u>	100	90-110			
Duplicate (21G0683-DUP1)	Sour	ce: 21G0738-	02	Prepared &	z Analyzed:	07/23/202	1			
Total Alkalinity	122	7.46	mg/L	•	122			0	20	
Matrix Spike (21G0683-MS1)	Sour	ce: 21G0738-	02	Prepared &	z Analyzed:	07/23/202	1			
Total Alkalinity	342	7.46	mg/L	250.0	122	88	90-110			J3
Matrix Spike (21G0683-MS2)	Sour	ce: 21G0804-	10	Prepared &	z Analyzed:	07/23/202	1			
Total Alkalinity	227	7.46	mg/L	250.0	2.84	90	90-110			
Batch 21G0709 - Default Prep GenChem										
Blank (21G0709-BLK1)				Prepared &	Analvzed:	07/23/202	1			
Fluoride	ND	0.0250	mg/L	1						U
Sulfate	ND	0.500	"							U
Chloride	ND	0.500	"							U
LCS (21G0709-BS1)				Prepared &	Analyzed:	07/23/202	1			
Fluoride	2.34	0.0250	mg/L	2.500		94	90-110			
Sulfate	50.4	0.500	"	50.00		101	90-110			
Chloride	50.6	0.500	"	50.00		101	90-110			
Duplicate (21G0709-DUP1)	Sour	ce: 21G0787-	03	Prepared: (07/23/2021	Analyzed: (07/24/2021			
Fluoride	0.279	0.0250	mg/L		0.280			0.4	20	
Chloride	15.8	0.500	"		15.7			0.6	20	
Sulfate	11.6	0.500	"		11.6			0.00	20	

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Work Order # 21G0804

Project: CCR Monitoring Program

McIntosh Plant

		Wet Chemi	stry - Q	uality Con	trol					
Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 21G0709 - Default Prep GenChem										
Matrix Spike (21G0709-MS1)	Sou	rce: 21G0787-	03	Prepared: 0	07/23/2021	Analyzed:	07/24/2021			
Fluoride Chloride	4.72 65.4	0.0250 0.500	mg/L	5.000 50.00	0.280 15.7	89 99	90-110 90-110			Ј3
Sulfate	61.5	0.500	"	50.00	11.6	99.8	90-110			
Batch 21G0772 - Default Prep GenChem										
Blank (21G0772-BLK1)				Prepared: 0	7/27/2021	Analyzed:	07/28/2021			
Total Dissolved Solids	ND	30.0	mg/L							U
LCS (21G0772-BS1)				Prepared: 0	07/27/2021	Analyzed:	07/28/2021			
Total Dissolved Solids	480	120	mg/L	500.0		96.0	80-120			
Duplicate (21G0772-DUP1)	Sou	rce: 21G0804-	02	Prepared: 0	7/27/2021	Analyzed:	07/28/2021			
Total Dissolved Solids	208	60.0	mg/L		210			0.957	20	
Duplicate (21G0772-DUP2)	Sou	rce: 21G0804-	04	Prepared: 0	7/27/2021	Analyzed:	07/28/2021			
Total Dissolved Solids	324	60.0	mg/L		326			0.615	20	
Batch 21G0825 - Default Prep GenChem										
Blank (21G0825-BLK1)				Prepared: 0	07/28/2021	Analyzed:	07/29/2021			
Chloride	ND	0.500	mg/L							U
LCS (21G0825-BS1)				Prepared: 0	07/28/2021	Analyzed:	07/29/2021			
Chloride	50.1	0.500	mg/L	50.00		100	90-110			





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Work Order # 21G0804

Project: CCR Monitoring Program

McIntosh Plant

	,	Wet Chemis	stry - Q	uality Con	itrol					
Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 21G0825 - Default Prep GenChem										
Duplicate (21G0825-DUP1)	Sou	rce: 21G0964-	01	Prepared: (07/28/2021	Analyzed: (07/29/2021			
Chloride	0.810	0.500	mg/L		0.798			1	20	
Matrix Spike (21G0825-MS1)	Sou	rce: 21G0964-	01	Prepared: (07/28/2021	Analyzed: (07/29/2021			
Chloride	51.9	0.500	mg/L	50.00	0.798	102	90-110			
Matrix Spike (21G0825-MS2)	Sou	rce: 21G0899-	06	Prepared: (07/28/2021	Analyzed: (07/29/2021			
Chloride	71.9	0.500	mg/L	50.00	23.6	97	90-110			





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Project: CCR Monitoring Program

McIntosh Plant

То	tal Recoverable N	Metals by E	PA 200 S	Series Met	thods - Q	uality Co	ontrol			
		Reporting		Spike	Source	A/PEG	%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 21G0089 - EPA 3010A										
Blank (21G0089-BLK1)				Prepared &	: Analyzed:	07/23/2021				
Beryllium	ND	1.00	ug/L							U
Boron	ND	10.0	"							U
Barium	ND	1.00	"							U
Arsenic	ND	10.0	"							U
Antimony	ND	15.0	"							U
Cadmium	ND	1.00	"							U
Sodium	ND	2000	"							U
Γhallium	ND	4.00	"							U
Magnesium	ND	20.0	"							U
Potassium	ND	50.0	"							U
Chromium	ND	5.00	"							U
Calcium	ND	50.0	"							U
Selenium	ND	15.0	"							U
Molybdenum	ND	10.0	"							U
Cobalt	ND	1.00	"							U
Lead	ND	10.0	"							U
LCS (21G0089-BS1)				Prepared &	: Analyzed:	07/23/2021				
Beryllium	509.2	1.00	ug/L	500.0		102	85-115			
Barium	488.0	1.00	"	500.0		97.6	85-115			
Boron	519.0	10.0	"	500.0		104	85-115			
Antimony	431.6	15.0	"	500.0		86.3	85-115			
Sodium	24900	2000	"	25500		97.6	85-115			
Arsenic	506	10.0	"	500.0		101	85-115			
Selenium	527.8	15.0	"	500.0		106	85-115			
Molybdenum	507.7	10.0	"	500.0		102	85-115			
Magnesium	512	20.0	"	500.0		102	85-115			
Potassium	24300	50.0	"	25500		95.3	85-115			
Гhallium	490.5	4.00	"	500.0		98.1	85-115			
Cadmium	509.7	1.00	"	500.0		102	85-115			
Calcium	26500	50.0	"	25500		104	85-115			
Chromium	503.8	5.00	"	500.0		101	85-115			

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Project: CCR Monitoring Program

McIntosh Plant

Tot	al Recoverable M	letals by E	PA 200	Series Me	thods - Q	uality Co	ontrol			
		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 21G0089 - EPA 3010A										
LCS (21G0089-BS1)				Prepared &	& Analyzed:	07/23/202	1			
Cobalt	487.0	1.00	ug/L	500.0	·	97.4	85-115			
Lead	497	10.0	"	500.0		99.4	85-115			
Matrix Spike (21G0089-MS1)	Sour	ce: 21G0774-	01	Prepared &	& Analyzed:	07/23/202	1			
Barium	487.3	1.00	ug/L	500.0	22.70	92.9	70-130			
Beryllium	447.9	1.00	"	500.0	ND	89.6	70-130			
Arsenic	534	10.0	"	500.0	ND	107	70-130			
Antimony	635.9	15.0	"	500.0	ND	127	70-130			
Sodium	13900000	2000	"	25500	7730000	NR	70-130			J3, L
Boron	4470	10.0	"	500.0	3898	114	70-130			-,-
Selenium	527.3	15.0	"	500.0	ND	105	70-130			
Γhallium	401.1	4.00	"	500.0	ND	80.2	70-130			
Molybdenum	517.4	10.0	"	500.0	12.80	101	70-130			
Magnesium	881000	20.0	"	500.0	883000	NR	70-130			J3, I
Potassium	533000	50.0	"	25500	523000	36.9	70-130			J3, I
Cadmium	553.5	1.00	"	500.0	ND	111	70-130			- ,
Chromium	474.8	5.00	"	500.0	ND	95.0	70-130			
Cobalt	444.3	1.00	"	500.0	ND	88.9	70-130			
Lead	426	10.0	"	500.0	ND	85.1	70-130			
Calcium	324000	50.0	"	25500	302000	82.9	70-130			
Matrix Spike Dup (21G0089-MSD1)	Sour	ce: 21G0774-	01	Prepared &	& Analyzed:	07/23/202	1			
Barium	482.3	1.00	ug/L	500.0	22.70	91.9	70-130	1.08	20	
Beryllium	443.6	1.00	"	500.0	ND	88.7	70-130	0.965	20	
Arsenic	526	10.0	"	500.0	ND	105	70-130	1.40	20	
Boron	4436	10.0	"	500.0	3898	108	70-130	6.11	20	
Fhallium	393.9	4.00	"	500.0	ND	78.8	70-130	1.81	20	
Antimony	630.0	15.0	"	500.0	ND	126	70-130	0.932	20	
Lead	421	10.0	"	500.0	ND	84.1	70-130	1.16	20	
Potassium	525000	50.0	"	25500	523000	8.53	70-130	125	20	J3, L
Sodium	13700000	2000	"	25500	7730000	NR	70-130	4.28	20	J3, L
Molybdenum	515.4	10.0	"	500.0	12.80	101	70-130	0.397	20	,-

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Project: CCR Monitoring Program

McIntosh Plant

Tota	l Recoverable N	Metals by E	PA 200	Series Me	thods - Q	uality Co	ontrol			
Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 21G0089 - EPA 3010A										
Matrix Spike Dup (21G0089-MSD1)	Sou	rce: 21G0774-	01	Prepared &	Analyzed:	07/23/202	l			
Selenium	521.0	15.0	ug/L	500.0	ND	104	70-130	1.20	20	
Cadmium	548.0	1.00	"	500.0	ND	110	70-130	0.999	20	
Calcium	321000	50.0	"	25500	302000	74.2	70-130	11.1	20	
Cobalt	436.7	1.00	"	500.0	ND	87.3	70-130	1.73	20	
Chromium	468.1	5.00	"	500.0	ND	93.6	70-130	1.42	20	
Magnesium	869000	20.0	"	500.0	883000	NR	70-130	NR	20	J3, L
Blank (21G0098-BLK1)				Prepared: (07/27/2021	Analyzed: (07/28/2021			
Mercury	ND	1.00	ug/L			-				U
LCS (21G0098-BS1)				Prepared: (07/27/2021	Analyzed: (07/28/2021			
Mercury	10.2	1.00	ug/L	10.00		102	85-115			
Matrix Spike (21G0098-MS1)	Sou	rce: 21G0804-	05	Prepared: (07/27/2021	Analyzed: (07/28/2021			
Mercury	9.27	1.00	ug/L	10.00	ND	93	70-130			
Matrix Spike Dup (21G0098-MSD1)	Sou	rce: 21G0804-	05	Prepared: (07/27/2021	Analyzed: (07/28/2021			
Mercury	9.22	1.00	ug/L	10.00	ND	92	70-130	0.6	20	
Batch 21G0102 - EPA 3010A										
Blank (21G0102-BLK1)				Prepared &	z Analyzed:	07/29/202	l			
Lithium	ND	25.0	ug/L							U





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Work Order # 21G0804

Project: CCR Monitoring Program

McIntosh Plant

Total F	Recoverable M	etals by E	PA 200	Series Met	thods - Q	Quality Co	ontrol			
Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 21G0102 - EPA 3010A										
LCS (21G0102-BS1)				Prepared &	Analyzed:	07/29/2021	l			
Lithium	2210	25.0	ug/L	2500		88	85-115			
Matrix Spike (21G0102-MS1)	Sourc	e: 21G0877-	09	Prepared &	Analyzed:	07/29/2021	l			
Lithium	2210	25.0	ug/L	2500	ND	88	75-125			
Matrix Spike Dup (21G0102-MSD1)	Sourc	e: 21G0877-	09	Prepared &	Analyzed:	07/29/2021	l			
Lithium	2160	25.0	ug/L	2500	ND	87	75-125	2	20	





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Project: CCR Monitoring Program

McIntosh Plant

Notes and Definitions

U Indicated that the compound was analyzed for but not detected. This shall be used to indicate that the specific component was not

detected. The value associated with the qualifier shall be the laboratory method detection limit.

L Off-Scale high. The concentration of the analyte was above the quantitation range of the calibration curve.

J3 The matrix spike recovery outside method acceptance limits indicating matrix interference.

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the detection limit

NR Not Reported

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference

N.O.O. No Odor Observed

REP Field parameter measured by client

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

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

Z Too many colonies were present for accurate counting.

SUB Work performed by outside (subcontracted) labs denoted by SUB in analyst field.

QC=Qualifier Codes as defined by DEP 62-160 Unless indicated, soil results are reported on actual (wet) weight basis. The Color SM2120B method is reported as (Color / pH) Legionella analyzed under CDC acreditation program Dilution factors \geq = 1000 are abreviated using k=1000 and M=1000000 Field parameters are not NELAP acredited. Results relate only to this sample.

Suresh (Bobby) Supan - CSM

Authorized CSM Signature (954) 978-6400 Florida-Spectrum Environmental Services,Inc. Certification# E86006

All NELAP certified analysis are performed in accordance with Chapter 64E-1 Florida Administrative code, which has been determined to be equivalent to NELAC standards. Analysis certified by programs other than NELAP are designated with a "~".

Logged into Lims by: Report to: Lakeland Electric Invoice to: Lakeland Electric Project Name	Spectrum Environmental Services, inc		1460 W McNab Road Ft Lauderdale FL 33309	ib Road Ft L	anderdale FL		Tel· (954) 978_6400	(400	7-30	T					
							つっく ことつごう	-040C	Fax: 1754	1) 9 / 8-2233					
)	1112 NW Park Street, Okeechobee, FL 34972	Street, Oke	schobee, FL		Tel: (863) 763-3336	-3336	Fax: (86;	Fax: (863) 763-1544		RUSHR	RUSH RESERVATION	TION #	
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Project Name	ic		Purchase	er t		Invoice to									
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Sample Custody & Field Comments Received on Ice: ((Y) N	A-liter amber	<u>Bottle Type</u> ber	4	Preservi A-Ascorbic acid	ative	34	2 Relinqu	Relinquished by:				,	1		
Tem received 5.8	B-Bacteria F-500 ml	bag/bottle O-125ml		C-HCL Cu-CuSO,	S-H ₂ SO,	S-H ₂ SO ₄ T-Na ₂ S ₂ O ₃ -H ₂ O	2 Received by:	ed by:		The sale	45%				
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Byonda

CCR Monitoring Program - 2021

Byproduct Storage Area

C.D. McIntosh Plant

Preprint W Bank)

Well ID	Well Type	Historical GWPS exceedances	SSL?	Jul-21 & Jan-22 Monitoring?	Rationale	Parameters	
CCR-1	Background	None- background	NO	YES	: Ongoing Assessment Monitoring	Appendix III, IV	1
CCR-2	Background	None- background	NO	YES	Ongoing Assessment Monitoring	Appendix III, IV	1
CCR-3	CCR Compliance	arsenic	NO	NO ¥	No Further Monitoring Warranted		-
CCD 4	CCD C I'	lithium	NO		O A	Appendix III, IV	
CCR-4	CCR Compliance	thallium	NO	YES	Ongoing Assessment Monitoring	Appendix III, IV	
	Ī	arsenic	NO				
CCR-5	CCR Compliance	lithium	YES	YES	Ongoing Assessment Monitoring	Appendix III, IV, GC suite	ر ا د
		thallium	NO				
CCR-6	CCR Compliance	lithium	YES	YES	Ongoing Assessment Monitoring	Appendix III, IV, GC suite	2
CCR-7	CCP Compliance	arsenic	NO	YES	Ongoing Assessment Monitoring	i Appendix III, IV, GC suite	,
CCN-7	CCR Compliance	lithium	NO	165	Origonia Assessment Monitoring	Appendix iii, iv, de suite	
CCR-8	CCR Compliance	arsenic	NO	YES	Ongoing Assessment Monitoring	Appendix III, IV	
	i	arsenic	NO			: 	
CCR-9	CCR Compliance	lithium	YES	YES	Ongoing Assessment Monitoring	Appendix III, IV, GC suite	<u> </u>
	i	thallium	NO				1
CCR-10	CCR Compliance	No GWPS exceedances	NO	NO 🔀	No Further Monitoring Warranted		4
CCR-11	CCR Compliance	arsenic	YES	YES	Ongoing Assessment Monitoring	Appendix III, IV, GC suite	2
		arsenic	YES	1			
CCR-12	CCR Compliance	lithium	NO	YES	Ongoing Assessment Monitoring	Appendix III, IV, GC suite	2
		thallium	NO		l	: 1	
CCR-13	CCR Compliance	' lithium	YES	YES	Ongoing Assessment Monitoring	Appendix III, IV	
CCR-14	CCR Compliance	No GWPS exceedances	NO	NO x	No Further Monitoring Warranted	~	_
CCR-15	Nature & Extent	NA	NA	YES	Evaluate lithium mobility	Appendix III, IV, GC suite	ڍ
					downgradient CCR-4		į
CCR-16	Nature & Extent	NA	NA	YES	Evaluate lithium mobility	Appendix III, IV, GC suite	2
					downgradient CCR-5		
CCR-17	Nature & Extent	NA	NA	YES	Evaluate lithium mobility	Appendix III, IV, GC suite	2
					downgradient CCR-6		ı
CCR-18	Nature & Extent	NA	NA	YES	Evaluate lithium mobility	Appendix III, IV, GC suite	٤
				L	downgradient CCR-7		
CCR-19	Nature & Extent	NA	NA	YES	Evaluate lithium mobility	Appendix III, IV, GC suite	2
					downgradient CCR-9		Ì
CCR-20	Nature & Extent	NA	NA	YES	Evaluate arsenic mobility	Appendix III, IV, GC suite	2
					downgradient CCR-11		-
CCR-21	Nature & Extent	NA	NA	YES	Evaluate arsenic mobility	Appendix III, IV, GC suite	2
]		downgradient CCR-12		
CCR-22	Nature & Extent	NA	NA	YES	Evaluate lithium mobility	Appendix III, IV, GC suite	2
		and the second of the second	gagerija i it		downgradient CCR-13	4	
CCR-23	Nature & Extent	NA	NA	YES	Evaluate lithium mobility	Appendix III, IV, GC suite	2
				ļ	downgradient CCR-13		-
C144 10C		N/A		VEC	Evaluate GWPS compliance at	A and in III IV CCit-	
SW-106	Nature & Extent	NA	NA	YES	downgradient property boundary	Appendix III, IV, GC suite	-

Notes:

- 1. NA -not applicable
- 2. GWPS Groundwater protection standards
- 3. SSL statistically significant level
- 4. Appendix III boron, calcium, chloride, fluoride, sulfate, total dissolved solidas ~ 16 G H
- 5. Appendix IV arsenic, antimony, barlum, baryllium, cadmium, chromium, cobalt, lead lithium, mercury, molybdenum, selenium, thallium (Radium elininated via ASD).
- 6. GC Suite Geochemical suite: magnesium, sodium, bicarbonate, potassium, alkalinity Al 6H

Geosyntec consultants

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McIntosh CCR monitoring plan - 2021

To allow





1460 West McNab Road Fort Lauderdale, FL 33309 1-800-ANALYTE Phone (954) 978-6400 Phone (954) 978-2233 Fax

NELAP Certificate No. E86006

05 August 2021 Lab Work Order (COC): 21G0981

Thomas Johnston Lakeland Electric - McIntosh 3030 East Lake Parker Drive Lakeland, FL 33805

RE: CCR Monitoring Program

Project Location: McIntosh Plant

Dear Thomas Johnston:

This report details the analytical results of samples collected at the above-referenced project location. These samples were received by Florida Spectrum Environmental Services at **07/29/2021 09:00**.

All Analyses were performed according to the TNI/NELAP standard unless indicated by a "~" on the report.

Your samples will be retained by Florida Spectrum Environmental for a period of at least 30 days following sample receipt or until the longest of the preparation and/or analytical hold times expires, whichever is shorter. After that time, they will be properly disposed without further notice, unless there exists an explicit contractual agreement to the contrary. We reserve the right to return any unused samples, extracts, or related materials or solutions to you if we consider it necessary. Examples might include those samples identified as hazardous wastes, submissions where the sample sizes significantly exceed those required for analysis, samples containing controlled substances, etc.

We thank you for selecting Florida Spectrum Environmental to serve your analytical needs. Should you have any questions or require additional information regarding any of the information in this report, please feel free to contact us at any time. We appreciate the opportunity to be of service.

Florida Spectrum Environmental Inc.







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Report Printed: 8/5/2021

Work Order # 21G0981

Project: CCR Monitoring Program

McIntosh Plant

DETECTED ANALYTE SUMMARY

CCR-5A	21G0981-01	Water	Lithium	3640	ug/L	7/27/2021	9:31
CCR-5A	21G0981-01	Water	Magnesium	26700	ug/L	7/27/2021	9:31
CCR-5A	21G0981-01	Water	Potassium	667000	ug/L	7/27/2021	9:31
CCR-5A	21G0981-01	Water	Sodium	953000	ug/L	7/27/2021	9:31
CCR-5A	21G0981-01	Water	Calcium	2090000	ug/L	7/27/2021	9:31
CCR-5A	21G0981-01	Water	Chromium	0.800	ug/L	7/27/2021	9:31
CCR-5A	21G0981-01	Water	Barium	69.4	ug/L	7/27/2021	9:31
CCR-5A	21G0981-01	Water	Boron	612	ug/L	7/27/2021	9:31
CCR-5B	21G0981-02	Water	Total Dissolved Solids	12800	mg/L	7/27/2021	9:31
CCR-5B	21G0981-02	Water	Bicarbonate	31.8	mg/L	7/27/2021	9:31
CCR-5B	21G0981-02	Water	Total Alkalinity	31.8	mg/L	7/27/2021	9:31
CCR-5B	21G0981-02	Water	Chloride	5550	mg/L	7/27/2021	9:31
CCR-5B	21G0981-02	Water	Sulfate	625	mg/L	7/27/2021	9:31
CCR-5B	21G0981-02	Water	Fluoride	0.835	mg/L	7/27/2021	9:31
CCR-6A	21G0981-03	Water	Barium	35.8	ug/L	7/27/2021	11:07
CCR-6A	21G0981-03	Water	Potassium	229000	ug/L	7/27/2021	11:07
CCR-6A	21G0981-03	Water	Sodium	263000	ug/L	7/27/2021	11:07
CCR-6A	21G0981-03	Water	Calcium	721000	ug/L	7/27/2021	11:07
CCR-6A	21G0981-03	Water	Magnesium	13300	ug/L	7/27/2021	11:07
CCR-6A	21G0981-03	Water	Lithium	1120	ug/L	7/27/2021	11:07
CCR-6A	21G0981-03	Water	Molybdenum	13.5	ug/L	7/27/2021	11:07
CCR-6A	21G0981-03	Water	Boron	595	ug/L	7/27/2021	11:07
CCR-6A	21G0981-03	Water	Chromium	1.00	ug/L	7/27/2021	11:07
CCR-6B	21G0981-04	Water	Total Dissolved Solids	4400	mg/L	7/27/2021	11:07

Florida-Spectrum Environmental Services, Inc. 1460 W. McNab Road, Fort Lauderdale, FL 33309

Pembroke Laboratory 528 Gooch Rd. Fort Mead, FL 33841 Big Lake Laboratory 610 Parrot Ave. N. Okeechobee, FL 34972 Lakeland Laboratory 111 Easton Dr. Lakeland, FL 33803





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Report Printed: 8/5/2021

Work Order # 21G0981

Project: CCR Monitoring Program

McIntosh Plant

DETECTED ANALYTE SUMMARY

Client Sample ID	Laboratory ID	Matrix	Analyte	Result	Units	Collection Date	Collection Time
CCR-6B	21G0981-04	Water	Sulfate	788	mg/L	7/27/2021	11:07
CCR-6B	21G0981-04	Water	Chloride	1200	mg/L	7/27/2021	11:07
CCR-6B	21G0981-04	Water	Fluoride	0.535	mg/L	7/27/2021	11:07
CCR-6B	21G0981-04	Water	Bicarbonate	134	mg/L	7/27/2021	11:07
CCR-6B	21G0981-04	Water	Total Alkalinity	134	mg/L	7/27/2021	11:07
CCR-7A	21G0981-05	Water	Chromium	2.20	ug/L	7/27/2021	14:02
CCR-7A	21G0981-05	Water	Lithium	44.7	ug/L	7/27/2021	14:02
CCR-7A	21G0981-05	Water	Magnesium	14300	ug/L	7/27/2021	14:02
CCR-7A	21G0981-05	Water	Calcium	229000	ug/L	7/27/2021	14:02
CCR-7A	21G0981-05	Water	Potassium	64900	ug/L	7/27/2021	14:02
CCR-7A	21G0981-05	Water	Boron	815	ug/L	7/27/2021	14:02
CCR-7A	21G0981-05	Water	Barium	16.0	ug/L	7/27/2021	14:02
CCR-7A	21G0981-05	Water	Sodium	81000	ug/L	7/27/2021	14:02
CCR-7B	21G0981-06	Water	Total Dissolved Solids	1250	mg/L	7/27/2021	14:02
CCR-7B	21G0981-06	Water	Chloride	156	mg/L	7/27/2021	14:02
CCR-7B	21G0981-06	Water	Fluoride	0.540	mg/L	7/27/2021	14:02
CCR-7B	21G0981-06	Water	Sulfate	651	mg/L	7/27/2021	14:02
CCR-7B	21G0981-06	Water	Total Alkalinity	20.9	mg/L	7/27/2021	14:02
CCR-7B	21G0981-06	Water	Bicarbonate	20.9	mg/L	7/27/2021	14:02





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Report Printed: 8/5/2021

Work Order # 21G0981

Project: CCR Monitoring Program

McIntosh Plant

Lab ID: 21G0981-01 Client Sample ID: CCR-5A Matrix: Water

 Collection Date:
 07/27/21 09:31

 Received Date:
 07/29/21 09:00

 Collected By:
 Chad Hotchkiss

Laboratory Analysis Report

Parameter	Result	QC	Units	Dil	MDL	PQL	Method	Date Ext.	Date Analy.	Analyst

Total Recoverable Metals by EPA 200 Series Methods

ND	U	ug/L	1	5.11	15.0	EPA 200.7/3010	07/29 09:30	07/29 12:23	IN
ND	U	ug/L	1	2.21	10.0	EPA 200.7/3010	07/29 09:30	07/29 12:23	IN
69.4		ug/L	1	0.0728	1.00	EPA 200.7/3010	07/29 09:30	07/29 12:23	IN
ND	U	ug/L	1	0.101	1.00	EPA 200.7/3010	07/29 09:30	07/29 12:23	IN
612		ug/L	1	1.57	10.0	EPA 200.7/3010	07/29 09:30	07/29 12:23	IN
ND	U	ug/L	1	0.181	1.00	EPA 200.7/3010	07/29 09:30	07/29 12:23	IN
2090000		ug/L	50	290	2500	EPA 200.7/3010	07/29 09:30	07/29 14:44	IN
0.800	I	ug/L	1	0.339	5.00	EPA 200.7/3010	07/29 09:30	07/29 12:23	IN
ND	U	ug/L	1	0.361	1.00	EPA 200.7/3010	07/29 09:30	07/29 12:23	IN
ND	U	ug/L	1	1.19	10.0	EPA 200.7/3010	07/29 09:30	07/29 12:23	IN
3640		ug/L	1	2.72	25.0	EPA 200.7/3010	07/29 11:30	07/29 15:32	MAZ
26700		ug/L	50	187	1000	EPA 200.7/3010	07/29 09:30	07/29 14:44	IN
ND	U	ug/L	1	0.120	1.00	EPA 245.1	08/03 08:00	08/03 12:54	EN
ND	U	ug/L	1	1.17	10.0	EPA 200.7/3010	07/29 09:30	07/29 12:23	IN
667000		ug/L	50	865	2500	EPA 200.7/3010	07/29 09:30	07/29 14:44	IN
ND	U	ug/L	1	3.46	15.0	EPA 200.7/3010	07/29 09:30	07/29 12:23	IN
953000		ug/L	50	22300	100000	EPA 200.7/3010	07/29 09:30	07/29 14:44	IN
ND	U	ug/L	1	0.925	4.00	EPA 200.7/3010	07/29 09:30	07/29 12:23	IN
	ND 69.4 ND 612 ND 2090000 0.800 ND ND 3640 26700 ND ND ND ND 953000	ND U 69.4 ND U 69.4 ND U 612 ND U 2090000 0.800 I ND U 3640 26700 ND U ND U 667000 ND U 953000	ND U ug/L 69.4 ug/L ND U ug/L 612 ug/L ND U ug/L 2090000 ug/L 0.800 I ug/L ND U ug/L 3640 ug/L ug/L ND U ug/L ND U ug/L ND U ug/L 667000 ug/L ug/L 953000 ug/L ug/L	ND U ug/L 1 69.4 ug/L 1 ND U ug/L 1 612 ug/L 1 ND U ug/L 1 2090000 ug/L 50 0.800 I ug/L 1 ND U ug/L 1 ND U ug/L 1 3640 ug/L 1 1 26700 ug/L 50 1 ND U ug/L 1 ND U ug/L 1 667000 ug/L 50 ND U ug/L 1 953000 ug/L 50	ND U ug/L 1 2.21 69.4 ug/L 1 0.0728 ND U ug/L 1 0.101 612 ug/L 1 1.57 ND U ug/L 1 0.181 20900000 ug/L 50 290 0.800 I ug/L 1 0.339 ND U ug/L 1 0.361 ND U ug/L 1 1.19 3640 ug/L 1 2.72 26700 ug/L 50 187 ND U ug/L 1 0.120 ND U ug/L 1 1.17 667000 ug/L 50 865 ND U ug/L 1 3.46 953000 ug/L 50 22300	ND U ug/L 1 2.21 10.0 69.4 ug/L 1 0.0728 1.00 ND U ug/L 1 0.101 1.00 612 ug/L 1 1.57 10.0 ND U ug/L 1 0.181 1.00 2090000 ug/L 50 290 2500 0.800 I ug/L 1 0.339 5.00 ND U ug/L 1 0.361 1.00 ND U ug/L 1 1.19 10.0 3640 ug/L 1 2.72 25.0 26700 ug/L 50 187 1000 ND U ug/L 1 0.120 1.00 ND U ug/L 1 1.17 10.0 667000 ug/L 50 865 2500 ND U ug/L 1 3.46 15.0 </td <td>ND U ug/L 1 2.21 10.0 EPA 200.7/3010 69.4 ug/L 1 0.0728 1.00 EPA 200.7/3010 ND U ug/L 1 0.101 1.00 EPA 200.7/3010 612 ug/L 1 1.57 10.0 EPA 200.7/3010 ND U ug/L 1 0.181 1.00 EPA 200.7/3010 20900000 ug/L 50 290 2500 EPA 200.7/3010 0.800 I ug/L 1 0.339 5.00 EPA 200.7/3010 ND U ug/L 1 0.361 1.00 EPA 200.7/3010 ND U ug/L 1 1.19 10.0 EPA 200.7/3010 26700 ug/L 1 2.72 25.0 EPA 200.7/3010 ND U ug/L 1 0.120 1.00 EPA 200.7/3010 ND U ug/L 1 1.17 10.0 EPA 200.7/3010 <td>ND U ug/L 1 2.21 10.0 EPA 200.7/3010 07/29 09:30 69.4 ug/L 1 0.0728 1.00 EPA 200.7/3010 07/29 09:30 ND U ug/L 1 0.101 1.00 EPA 200.7/3010 07/29 09:30 612 ug/L 1 1.57 10.0 EPA 200.7/3010 07/29 09:30 ND U ug/L 1 0.181 1.00 EPA 200.7/3010 07/29 09:30 20900000 ug/L 50 290 2500 EPA 200.7/3010 07/29 09:30 ND U ug/L 1 0.339 5.00 EPA 200.7/3010 07/29 09:30 ND U ug/L 1 0.361 1.00 EPA 200.7/3010 07/29 09:30 ND U ug/L 1 1.19 10.0 EPA 200.7/3010 07/29 09:30 26700 ug/L 1 2.72 25.0 EPA 200.7/3010 07/29 09:30 ND U ug</td><td>ND U ug/L 1 2.21 10.0 EPA 200.7/3010 07/29 09:30 07/29 12:23 69.4 ug/L 1 0.0728 1.00 EPA 200.7/3010 07/29 09:30 07/29 12:23 ND U ug/L 1 0.101 1.00 EPA 200.7/3010 07/29 09:30 07/29 12:23 612 ug/L 1 1.57 10.0 EPA 200.7/3010 07/29 09:30 07/29 12:23 ND U ug/L 1 0.181 1.00 EPA 200.7/3010 07/29 09:30 07/29 12:23 2090000 ug/L 50 290 2500 EPA 200.7/3010 07/29 09:30 07/29 12:23 ND U ug/L 1 0.339 5.00 EPA 200.7/3010 07/29 09:30 07/29 12:23 ND U ug/L 1 0.361 1.00 EPA 200.7/3010 07/29 09:30 07/29 12:23 ND U ug/L 1 1.19 10.0 EPA 200.7/3010 07/29 09:30 07/29 12:23</td></td>	ND U ug/L 1 2.21 10.0 EPA 200.7/3010 69.4 ug/L 1 0.0728 1.00 EPA 200.7/3010 ND U ug/L 1 0.101 1.00 EPA 200.7/3010 612 ug/L 1 1.57 10.0 EPA 200.7/3010 ND U ug/L 1 0.181 1.00 EPA 200.7/3010 20900000 ug/L 50 290 2500 EPA 200.7/3010 0.800 I ug/L 1 0.339 5.00 EPA 200.7/3010 ND U ug/L 1 0.361 1.00 EPA 200.7/3010 ND U ug/L 1 1.19 10.0 EPA 200.7/3010 26700 ug/L 1 2.72 25.0 EPA 200.7/3010 ND U ug/L 1 0.120 1.00 EPA 200.7/3010 ND U ug/L 1 1.17 10.0 EPA 200.7/3010 <td>ND U ug/L 1 2.21 10.0 EPA 200.7/3010 07/29 09:30 69.4 ug/L 1 0.0728 1.00 EPA 200.7/3010 07/29 09:30 ND U ug/L 1 0.101 1.00 EPA 200.7/3010 07/29 09:30 612 ug/L 1 1.57 10.0 EPA 200.7/3010 07/29 09:30 ND U ug/L 1 0.181 1.00 EPA 200.7/3010 07/29 09:30 20900000 ug/L 50 290 2500 EPA 200.7/3010 07/29 09:30 ND U ug/L 1 0.339 5.00 EPA 200.7/3010 07/29 09:30 ND U ug/L 1 0.361 1.00 EPA 200.7/3010 07/29 09:30 ND U ug/L 1 1.19 10.0 EPA 200.7/3010 07/29 09:30 26700 ug/L 1 2.72 25.0 EPA 200.7/3010 07/29 09:30 ND U ug</td> <td>ND U ug/L 1 2.21 10.0 EPA 200.7/3010 07/29 09:30 07/29 12:23 69.4 ug/L 1 0.0728 1.00 EPA 200.7/3010 07/29 09:30 07/29 12:23 ND U ug/L 1 0.101 1.00 EPA 200.7/3010 07/29 09:30 07/29 12:23 612 ug/L 1 1.57 10.0 EPA 200.7/3010 07/29 09:30 07/29 12:23 ND U ug/L 1 0.181 1.00 EPA 200.7/3010 07/29 09:30 07/29 12:23 2090000 ug/L 50 290 2500 EPA 200.7/3010 07/29 09:30 07/29 12:23 ND U ug/L 1 0.339 5.00 EPA 200.7/3010 07/29 09:30 07/29 12:23 ND U ug/L 1 0.361 1.00 EPA 200.7/3010 07/29 09:30 07/29 12:23 ND U ug/L 1 1.19 10.0 EPA 200.7/3010 07/29 09:30 07/29 12:23</td>	ND U ug/L 1 2.21 10.0 EPA 200.7/3010 07/29 09:30 69.4 ug/L 1 0.0728 1.00 EPA 200.7/3010 07/29 09:30 ND U ug/L 1 0.101 1.00 EPA 200.7/3010 07/29 09:30 612 ug/L 1 1.57 10.0 EPA 200.7/3010 07/29 09:30 ND U ug/L 1 0.181 1.00 EPA 200.7/3010 07/29 09:30 20900000 ug/L 50 290 2500 EPA 200.7/3010 07/29 09:30 ND U ug/L 1 0.339 5.00 EPA 200.7/3010 07/29 09:30 ND U ug/L 1 0.361 1.00 EPA 200.7/3010 07/29 09:30 ND U ug/L 1 1.19 10.0 EPA 200.7/3010 07/29 09:30 26700 ug/L 1 2.72 25.0 EPA 200.7/3010 07/29 09:30 ND U ug	ND U ug/L 1 2.21 10.0 EPA 200.7/3010 07/29 09:30 07/29 12:23 69.4 ug/L 1 0.0728 1.00 EPA 200.7/3010 07/29 09:30 07/29 12:23 ND U ug/L 1 0.101 1.00 EPA 200.7/3010 07/29 09:30 07/29 12:23 612 ug/L 1 1.57 10.0 EPA 200.7/3010 07/29 09:30 07/29 12:23 ND U ug/L 1 0.181 1.00 EPA 200.7/3010 07/29 09:30 07/29 12:23 2090000 ug/L 50 290 2500 EPA 200.7/3010 07/29 09:30 07/29 12:23 ND U ug/L 1 0.339 5.00 EPA 200.7/3010 07/29 09:30 07/29 12:23 ND U ug/L 1 0.361 1.00 EPA 200.7/3010 07/29 09:30 07/29 12:23 ND U ug/L 1 1.19 10.0 EPA 200.7/3010 07/29 09:30 07/29 12:23





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Report Printed: 8/5/2021

Work Order # 21G0981

Project: CCR Monitoring Program

McIntosh Plant

Lab ID: 21G0981-02 Client Sample ID: CCR-5B Matrix: Water
 Collection Date:
 07/27/21 09:31

 Received Date:
 07/29/21 09:00

 Collected By:
 Chad Hotchkiss

Laboratory Analysis Report

Parameter	Result	QC	Units	Dil	MDL	PQL	Method	Date Ext.	Date Analy.	Analyst
Wet Chemistry										
Total Alkalinity	31.8		mg/L	1	2.49	7.46	EPA 310.2	07/29 19:02	07/29 19:02	OC
Bicarbonate	31.8		mg/L	1	2.49	7.46	EPA 310.2	07/29 19:02	07/29 19:02	OC
Chloride	5550		mg/L	100	12.6	50.0	EPA 300.0	07/30 15:48	07/30 16:37	OC
Fluoride	0.835		mg/L	10	0.0520	0.250	EPA 300.0	08/03 13:47	08/03 14:36	OC
Sulfate	625		mg/L	100	9.53	50.0	EPA 300.0	07/30 15:48	07/30 16:37	OC
Total Dissolved Solids	12800		mg/L	10	100	300	SM 2540C	07/30 17:48	08/04 10:11	MWO





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Report Printed: 8/5/2021

Work Order # 21G0981

Project: CCR Monitoring Program

McIntosh Plant

Date Ext.

Date Analy.

Analyst

Lab ID: 21G0981-03
Client Sample ID: CCR-6A
Matrix: Water

Result

QC

Units

Parameter

 Collection Date:
 07/27/21 11:07

 Received Date:
 07/29/21 09:00

 Collected By:
 Chad Hotchkiss

Method

Laboratory Analysis Report

MDL

PQL

Dil

Antimony	ND	U	ug/L	1	5.11	15.0	EPA 200.7/3010	07/29 09:30	07/29 12:26	IN
Arsenic	ND	U	ug/L	1	2.21	10.0	EPA 200.7/3010	07/29 09:30	07/29 12:26	IN
Barium	35.8		ug/L	1	0.0728	1.00	EPA 200.7/3010	07/29 09:30	07/29 12:26	IN
Beryllium	ND	U	ug/L	1	0.101	1.00	EPA 200.7/3010	07/29 09:30	07/29 12:26	IN
Boron	595		ug/L	1	1.57	10.0	EPA 200.7/3010	07/29 09:30	07/29 12:26	IN
Cadmium	ND	U	ug/L	1	0.181	1.00	EPA 200.7/3010	07/29 09:30	07/29 12:26	IN
Calcium	721000		ug/L	25	145	1250	EPA 200.7/3010	07/29 09:30	07/29 14:50	IN
Chromium	1.00	I	ug/L	1	0.339	5.00	EPA 200.7/3010	07/29 09:30	07/29 12:26	IN
Cobalt	ND	U	ug/L	1	0.361	1.00	EPA 200.7/3010	07/29 09:30	07/29 12:26	IN
Lead	ND	U	ug/L	1	1.19	10.0	EPA 200.7/3010	07/29 09:30	07/29 12:26	IN
Lithium	1120		ug/L	1	2.72	25.0	EPA 200.7/3010	07/29 11:30	07/29 15:34	MAZ
Magnesium	13300		ug/L	25	93.5	500	EPA 200.7/3010	07/29 09:30	07/29 14:50	IN
Mercury	ND	U	ug/L	1	0.120	1.00	EPA 245.1	08/03 08:00	08/03 12:57	EN
Molybdenum	13.5		ug/L	1	1.17	10.0	EPA 200.7/3010	07/29 09:30	07/29 12:26	IN
Potassium	229000		ug/L	10	173	500	EPA 200.7/3010	07/29 09:30	07/29 14:47	IN
Selenium	ND	U	ug/L	1	3.46	15.0	EPA 200.7/3010	07/29 09:30	07/29 12:26	IN
Sodium	263000		ug/L	10	4460	20000	EPA 200.7/3010	07/29 09:30	07/29 14:47	IN
Thallium	ND	U	ug/L	1	0.925	4.00	EPA 200.7/3010	07/29 09:30	07/29 12:26	IN





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Work Order # 21G0981

Project: CCR Monitoring Program

McIntosh Plant

Lab ID: 21G0981-04
Client Sample ID: CCR-6B
Matrix: Water

 Collection Date:
 07/27/21 11:07

 Received Date:
 07/29/21 09:00

 Collected By:
 Chad Hotchkiss

Laboratory Analysis Report

Parameter	Result	QC	Units	Dil	MDL	PQL	Method	Date Ext.	Date Analy.	Analyst
Wet Chemistry										
Total Alkalinity	134		mg/L	1	2.49	7.46	EPA 310.2	07/29 19:02	07/29 19:02	OC
Bicarbonate	134		mg/L	1	2.49	7.46	EPA 310.2	07/29 19:02	07/29 19:02	OC
Chloride	1200		mg/L	20	2.52	10.0	EPA 300.0	07/30 15:48	07/30 16:54	OC
Fluoride	0.535		mg/L	5	0.0260	0.125	EPA 300.0	07/30 18:00	07/31 06:22	OC
Sulfate	788		mg/L	20	1.91	10.0	EPA 300.0	07/30 15:48	07/30 16:54	OC
Total Dissolved Solids	4400		mg/L	4	40.0	120	SM 2540C	07/30 17:48	08/02 18:22	MWO





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Work Order # 21G0981

Project: CCR Monitoring Program

McIntosh Plant

Date Ext.

Date Analy.

Analyst

Lab ID: 21G0981-05
Client Sample ID: CCR-7A
Matrix: Water

Result

QC

Units

Parameter

 Collection Date:
 07/27/21 14:02

 Received Date:
 07/29/21 09:00

 Collected By:
 Chad Hotchkiss

Method

Laboratory Analysis Report

MDL

PQL

Dil

Antimony	ND	U	ug/L	1	5.11	15.0	EPA 200.7/3010	07/29 09:30	07/29 12:29	IN
Arsenic	ND	U	ug/L	1	2.21	10.0	EPA 200.7/3010	07/29 09:30	07/29 12:29	IN
Barium	16.0		ug/L	1	0.0728	1.00	EPA 200.7/3010	07/29 09:30	07/29 12:29	IN
Beryllium	ND	U	ug/L	1	0.101	1.00	EPA 200.7/3010	07/29 09:30	07/29 12:29	IN
Boron	815		ug/L	1	1.57	10.0	EPA 200.7/3010	07/29 09:30	07/29 12:29	IN
Cadmium	ND	U	ug/L	1	0.181	1.00	EPA 200.7/3010	07/29 09:30	07/29 12:29	IN
Calcium	229000		ug/L	10	57.9	500	EPA 200.7/3010	07/29 09:30	07/29 14:56	IN
Chromium	2.20	I	ug/L	1	0.339	5.00	EPA 200.7/3010	07/29 09:30	07/29 12:29	IN
Cobalt	ND	U	ug/L	1	0.361	1.00	EPA 200.7/3010	07/29 09:30	07/29 12:29	IN
Lead	ND	U	ug/L	1	1.19	10.0	EPA 200.7/3010	07/29 09:30	07/29 12:29	IN
Lithium	44.7		ug/L	1	2.72	25.0	EPA 200.7/3010	07/29 11:30	07/29 15:37	MAZ
Magnesium	14300		ug/L	10	37.4	200	EPA 200.7/3010	07/29 09:30	07/29 14:56	IN
Mercury	ND	U	ug/L	1	0.120	1.00	EPA 245.1	08/03 08:00	08/03 13:00	EN
Molybdenum	ND	U	ug/L	1	1.17	10.0	EPA 200.7/3010	07/29 09:30	07/29 12:29	IN
Potassium	64900		ug/L	4	69.2	200	EPA 200.7/3010	07/29 09:30	07/29 14:53	IN
Selenium	ND	U	ug/L	1	3.46	15.0	EPA 200.7/3010	07/29 09:30	07/29 12:29	IN
Sodium	81000		ug/L	4	1780	8000	EPA 200.7/3010	07/29 09:30	07/29 14:53	IN
Thallium	ND	U	ug/L	1	0.925	4.00	EPA 200.7/3010	07/29 09:30	07/29 12:29	IN





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Work Order # 21G0981

Project: CCR Monitoring Program

McIntosh Plant

Lab ID: 21G0981-06
Client Sample ID: CCR-7B
Matrix: Water

 Collection Date:
 07/27/21 14:02

 Received Date:
 07/29/21 09:00

 Collected By:
 Chad Hotchkiss

Laboratory Analysis Report

Parameter	Result	QC	Units	Dil	MDL	PQL	Method	Date Ext.	Date Analy.	Analyst
Wet Chemistry										
Total Alkalinity	20.9		mg/L	1	2.49	7.46	EPA 310.2	07/29 19:02	07/29 19:02	OC
Bicarbonate	20.9		mg/L	1	2.49	7.46	EPA 310.2	07/29 19:02	07/29 19:02	OC
Chloride	156		mg/L	5	0.630	2.50	EPA 300.0	07/30 15:48	07/30 17:10	OC
Fluoride	0.540		mg/L	5	0.0260	0.125	EPA 300.0	07/30 15:48	07/30 17:10	OC
Sulfate	651		mg/L	10	0.953	5.00	EPA 300.0	07/30 15:48	07/31 08:18	OC
Total Dissolved Solids	1250		mg/L	4	40.0	120	SM 2540C	07/30 17:48	08/02 18:22	MWO





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Work Order # 21G0981

Project: CCR Monitoring Program

McIntosh Plant

	1	Wet Chemis	stry - Q	uality Con	itrol					
		Reporting		Spike	Source	0/770	%REC	222	RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 21G0842 - Default Prep GenChem										
Blank (21G0842-BLK1)				Prepared &	Analyzed:	07/29/202	1			
Total Alkalinity	ND	7.46	mg/L							U
LCS (21G0842-BS1)				Prepared &	Analyzed:	07/29/202	1			
Total Alkalinity	257	7.46	mg/L	250.0		103	90-110			
Duplicate (21G0842-DUP1)	Sour	ce: 21G0877-	04	Prepared &	Analyzed:	07/29/202	1			
Total Alkalinity	140	7.46	mg/L		141			0.7	20	
Matrix Spike (21G0842-MS1)	Sour	ce: 21G0877-	04	Prepared &	Analyzed:	07/29/202	1			
Total Alkalinity	298	7.46	mg/L	250.0	141	63	90-110			J3
Matrix Spike (21G0842-MS2)	Sour	ce: 21G0982-	02	Prepared &	Analyzed:	07/29/202	1			
Total Alkalinity	283	7.46	mg/L	250.0	155	51	90-110			J3
Batch 21G0880 - Default Prep GenChem										
Blank (21G0880-BLK1)				Prepared: (07/30/2021	Analyzed:	08/02/2021			
Total Dissolved Solids	ND	30.0	mg/L							U
LCS (21G0880-BS1)				Prepared: (07/30/2021	Analyzed:	08/02/2021			
Total Dissolved Solids	508	120	mg/L	500.0		102	80-120			
Duplicate (21G0880-DUP1)	Sour	ce: 21G0982-	02	Prepared: (07/30/2021	Analyzed:	08/02/2021			
Total Dissolved Solids	392	60.0	mg/L		390			0.512	20	
Duplicate (21G0880-DUP2)	Sour	ce: 21G0999-	01	Prepared: (07/30/2021	Analyzed:	08/02/2021			
Total Dissolved Solids	616	60.0	mg/L		594			3.64	20	





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Project: CCR Monitoring Program

McIntosh Plant

	•	Wet Chemis	stry - Q	uality Con	itrol					
		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 21G0884 - Default Prep GenChem										
Blank (21G0884-BLK1)				Prepared &	z Analyzed:	07/30/202	1			
Fluoride	ND	0.0250	mg/L							U
Sulfate	ND	0.500	"							U
Chloride	ND	0.500	"							U
LCS (21G0884-BS1)				Prepared &	Analyzed:	07/30/202	1			
Fluoride	2.43	0.0250	mg/L	2.500		97	90-110			
Chloride	49.7	0.500	"	50.00		99	90-110			
Sulfate	50.5	0.500	"	50.00		101	90-110			
Duplicate (21G0884-DUP1)	Sou	rce: 21G1036-	01	Prepared &	Analyzed:	07/30/202	1			
Fluoride	0.725	0.0250	mg/L		0.765			5	20	
Chloride	6.69	0.500	"		6.62			1	20	
Sulfate	12.5	0.500	"		12.5			0.00	20	
Matrix Spike (21G0884-MS1)	Sou	rce: 21G1036-	01	Prepared &	Analyzed:	07/30/202	1			
Fluoride	2.90	0.0250	mg/L	2.500	0.765	85	90-110			Ј3
Sulfate	63.3	0.500	"	50.00	12.5	102	90-110			
Chloride	57.3	0.500	"	50.00	6.62	101	90-110			
Matrix Spike (21G0884-MS2)	Sou	rce: 21G1031-	04	Prepared &	Analyzed:	07/30/202	1			
Fluoride	2.45	0.0250	mg/L	2.500	0.0760	95	90-110			
Sulfate	64.0	0.500	"	50.00	13.2	102	90-110			
Chloride	53.0	0.500	"	50.00	1.43	103	90-110			
Batch 21G0885 - Default Prep GenChem										
Blank (21G0885-BLK1)				Prepared &	Analyzed:	07/30/202	1			
Fluoride	ND	0.0250	mg/L	-	· ·					U

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Project: CCR Monitoring Program

McIntosh Plant

	•	Wet Chemis	stry - Q	uality Con	trol					
		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 21G0885 - Default Prep GenChem										
LCS (21G0885-BS1)				Prepared: 0	07/30/2021	Analyzed:	07/31/2021			
Fluoride	2.46	0.0250	mg/L	2.500		98	90-110			
Duplicate (21G0885-DUP1)	Sour	rce: 21G0983-	02	Prepared: 0	07/30/2021	Analyzed:	07/31/2021			
Fluoride	0.128	0.0250	mg/L		0.128			0	20	
Matrix Spike (21G0885-MS1)	Sour	rce: 21G0983-	02	Prepared: 0	7/30/2021	Analyzed:	07/31/2021			
Fluoride	2.38	0.0250	mg/L	2.500	0.128	90	90-110			
Matrix Spike (21G0885-MS2)	Sour	rce: 21G0984-	03	Prepared: 0	07/30/2021	Analyzed:	07/31/2021			
Fluoride	2.38	0.0250	mg/L	2.500	0.152	89	90-110			J3
Batch 21H0204 - Default Prep GenChem										
Blank (21H0204-BLK1)				Prepared &	Analyzed:	08/03/202	1			
Fluoride	ND	0.0250	mg/L							U
LCS (21H0204-BS1)				Prepared &	Analyzed:	08/03/202	1			
Fluoride	2.50	0.0250	mg/L	2.500		100	90-110			
Duplicate (21H0204-DUP1)	Sour	rce: 21H0021-	02	Prepared &	Analyzed:	08/03/202	1			
Fluoride	0.705	0.0250	mg/L		0.708			0.4	20	
Matrix Spike (21H0204-MS1)	Sour	rce: 21H0021-	02	Prepared &	Analyzed:	08/03/202	1			
Fluoride	2.98	0.0250	mg/L	2.500	0.708	91	90-110			
Matrix Spike (21H0204-MS2)	Sour	rce: 21H0069-	01	Prepared &	Analyzed:	08/03/202	1			
Fluoride	2.49	0.0250	mg/L	2.500	0.0830	96	90-110			





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Project: CCR Monitoring Program

McIntosh Plant

Total	Recoverable N	Ietals by E l	PA 200	Series Met	thods - Q	uality Co	ontrol			
		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 21G0102 - EPA 3010A										
Blank (21G0102-BLK1)				Prepared &	z Analyzed:	07/29/2021	[
Lithium	ND	25.0	ug/L							U
LCS (21G0102-BS1)				Prepared &	z Analyzed:	07/29/2021	I			
Lithium	2210	25.0	ug/L	2500	•	88	85-115			
Matrix Spike (21G0102-MS1)	Sour	ce: 21G0877-	09	Prepared &	z Analyzed:	07/29/2021	l			
Lithium	2210	25.0	ug/L	2500	ND	88	75-125			
Matrix Spike Dup (21G0102-MSD1)	Sour	ce: 21G0877-	09	Prepared &	Analyzed:	07/29/2021	l			
Lithium	2160	25.0	ug/L	2500	ND	87	75-125	2	20	
Batch 21G0105 - EPA 3010A										
Blank (21G0105-BLK1)				Prepared &	Analyzed:	07/29/2021	[
Boron	ND	10.0	ug/L							U
Cadmium	ND	1.00	"							U
Calcium	ND	50.0	"							U
Antimony	ND	15.0	"							U
Arsenic	ND	10.0	"							U
Barium	ND	1.00	"							U
Beryllium	ND	1.00	"							U
Selenium	ND	15.0	"							U
Chromium	ND	5.00	"							U
Sodium	ND	2000	"							U
Potassium	ND	50.0	"							U
Thallium	ND	4.00	"							U
Cobalt	ND	1.00	"							U
Lead	ND	10.0	"							U
Magnesium	ND	20.0	"							U
Molybdenum	ND	10.0	"							U

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Project: CCR Monitoring Program

McIntosh Plant

То	tal Recoverable M	letals by E	PA 200	Series Met	thods - Q	uality Co	ontrol			
	D. Iv	Reporting	1 1 '.	Spike	Source	0/BEC	%REC	DDD	RPD	NI .
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 21G0105 - EPA 3010A										
LCS (21G0105-BS1)				Prepared &	: Analyzed:	07/29/2021				
Calcium	27400	50.0	ug/L	25500		108	85-115			
Boron	529.3	10.0	"	500.0		106	85-115			
Cadmium	526.4	1.00	"	500.0		105	85-115			
Antimony	535.9	15.0	"	500.0		107	85-115			
Barium	501.5	1.00	"	500.0		100	85-115			
Beryllium	529.9	1.00	"	500.0		106	85-115			
Arsenic	533	10.0	"	500.0		107	85-115			
Sodium	25000	2000	"	25500		97.9	85-115			
Potassium	25000	50.0	"	25500		97.9	85-115			
Magnesium	499	20.0	"	500.0		99.8	85-115			
Selenium	551.8	15.0	"	500.0		110	85-115			
Thallium	503.3	4.00	"	500.0		101	85-115			
Chromium	515.1	5.00	"	500.0		103	85-115			
Lead	509	10.0	"	500.0		102	85-115			
Molybdenum	535.2	10.0	"	500.0		107	85-115			
Cobalt	509.6	1.00	"	500.0		102	85-115			
Matrix Spike (21G0105-MS1)	Sour	ce: 21G0968-	05	Prepared &	: Analyzed:	07/29/2021				
Boron	510.6	10.0	ug/L	500.0	ND	102	70-130			
Cadmium	516.1	1.00	"	500.0	ND	103	70-130			
Calcium	26200	50.0	"	25500	ND	103	70-130			
Antimony	524.7	15.0	"	500.0	ND	105	70-130			
Arsenic	522	10.0	"	500.0	ND	104	70-130			
Beryllium	520.7	1.00	"	500.0	ND	104	70-130			
Barium	486.4	1.00	"	500.0	ND	97.3	70-130			
Selenium	573.2	15.0	"	500.0	ND	115	70-130			
Sodium	23800	2000	"	25500	ND	93.3	70-130			
Гhallium	493.2	4.00	"	500.0	ND	98.6	70-130			
Chromium	500.1	5.00	"	500.0	ND	100	70-130			
Potassium	23500	50.0	"	25500	ND	92.0	70-130			
Cobalt	499.3	1.00	"	500.0	ND	99.9	70-130			
Lead	494	10.0		500.0	ND	98.8	70-130			

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Project: CCR Monitoring Program

McIntosh Plant

Total R	ecoverable M	1etals by E	PA 200	Series Met	thods - Q	uality Co	ontrol			
		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 21G0105 - EPA 3010A										
Matrix Spike (21G0105-MS1)	Sour	ce: 21G0968-	05	Prepared &	Analyzed:	07/29/202	1			
Magnesium	488	20.0	ug/L	500.0	ND	97.7	70-130			
Molybdenum	468.7	10.0	"	500.0	ND	93.7	70-130			
Matrix Spike Dup (21G0105-MSD1)	Sour	ce: 21G0968-	05	Prepared &	Analyzed:	07/29/202	1			
Beryllium	523.5	1.00	ug/L	500.0	ND	105	70-130	0.536	20	
Boron	511.1	10.0	"	500.0	ND	102	70-130	0.0979	20	
Cadmium	516.5	1.00	"	500.0	ND	103	70-130	0.0775	20	
Arsenic	522	10.0	"	500.0	ND	104	70-130	0.0958	20	
Magnesium	488	20.0	"	500.0	ND	97.7	70-130	0.0205	20	
Calcium	26300	50.0	"	25500	ND	103	70-130	0.325	20	
Antimony	532.6	15.0	"	500.0	ND	107	70-130	1.49	20	
Barium	486.0	1.00	"	500.0	ND	97.2	70-130	0.0823	20	
Potassium	23500	50.0	"	25500	ND	92.2	70-130	0.179	20	
Sodium	23800	2000	"	25500	ND	93.3	70-130	0.0433	20	
Thallium	492.2	4.00	"	500.0	ND	98.4	70-130	0.203	20	
Selenium	573.8	15.0	"	500.0	ND	115	70-130	0.105	20	
Cobalt	498.0	1.00	"	500.0	ND	99.6	70-130	0.261	20	
Chromium	500.5	5.00	"	500.0	ND	100	70-130	0.0800	20	
Molybdenum	477.0	10.0	"	500.0	ND	95.4	70-130	1.76	20	
Lead	488	10.0	"	500.0	ND	97.7	70-130	1.16	20	
Batch 21G0117 - EPA 245.1/245.2 Prep										
Blank (21G0117-BLK1)				Prepared &	z Analyzed:	08/03/202	1			
Mercury	ND	1.00	ug/L							U
LCS (21G0117-BS1)				Prepared &	z Analyzed:	08/03/202	1			
Mercury	9.84	1.00	ug/L	10.00		98	85-115			

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Project: CCR Monitoring Program

McIntosh Plant

Total	Recoverable M	letals by E	PA 200	Series Met	thods - Q	uality Co	ontrol			
Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 21G0117 - EPA 245.1/245.2 Prep Matrix Spike (21G0117-MS1)	Sour	ce: 21G0975-	01	Prepared &	Analyzed:	08/03/2021				
Mercury	8.00	1.00	ug/L	10.00	ND	80	70-130			
Matrix Spike Dup (21G0117-MSD1)	Sour	ce: 21G0975-	01	Prepared &	Analyzed:	08/03/2021				
Mercury	8.13	1.00	ug/L	10.00	ND	81	70-130	2	20	





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Project: CCR Monitoring Program

McIntosh Plant

Notes and Definitions

U Indicated that the compound was analyzed for but not detected. This shall be used to indicate that the specific component was not

detected. The value associated with the qualifier shall be the laboratory method detection limit.

J3 The matrix spike recovery outside method acceptance limits indicating matrix interference.

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the detection limit

NR Not Reported

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference

N.O.O. No Odor Observed

REP Field parameter measured by client

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

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

Z Too many colonies were present for accurate counting.

SUB Work performed by outside (subcontracted) labs denoted by SUB in analyst field.

QC=Qualifier Codes as defined by DEP 62-160 Unless indicated, soil results are reported on actual (wet) weight basis. The Color SM2120B method is reported as (Color / pH) Legionella analyzed under CDC acreditation program Dilution factors \geq = 1000 are abreviated using k=1000 and M=1000000 Field parameters are not NELAP acredited. Results relate only to this sample.

Maria Castellanos - Lab Manager

Authorized CSM Signature (954) 978-6400 Florida-Spectrum Environmental Services,Inc. Certification# E86006

All NELAP certified analysis are performed in accordance with Chapter 64E-1 Florida Administrative code, which has been determined to be equivalent to NELAC standards. Analysis certified by programs other than NELAP are designated with a "~".

SUBMISSION#	Florida	ja seretji		CHAIN	OF CIT	VUOTS	AIN OF CUSTODY RECORD	Ca		Ind	DUE DATE Requested
Less of States o		_				1 2 4 2			,	_	
Ž	Environmental Servicas, Inc.	1460 W Mcl 1112 NW Pa	1460 W McNab Road Rt Lauderdale FI 1112 NW Park Struet, Okeechobee, FL 630 Indian Straet Struental, GA 31401	1460 W McNab Road Rt Lauderdale FL 33309 1112 NW Park Stroet, Okeechobee, FL 34972 630 Indian Street Shyandah, GA 31401		Tel: (954) 978-6400 Tel: (863) 763-3336 Tel: (912) 238-5050	100 36 30	Fax: (954) 978-2233 Fax: (863) 763-1544 Fax (912) 234-4815	978-2233 763-1544 34-4815	RUSE	RUSH RESERVATION#
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Report to: Lakeland Electric		:			rt to	3030 East Lake Parker Drive. Lakeland FL, 33805	Parker Driv	re. Lakeland	FL 33805		
Invoice to: Lakeland Electric	,	Purchase Order # 287348	7348		, w	501 East Lemon Street, Lakeland FL 33801	Street, Lakel	and FL 338	01		
Project Name and/or Number CCR Monitoring Program July 2021	ogram July 2021	, ş. · · ·				Intosh Plant					
S Joh	A	Phone: 954-802-9143	9143		Fax:	THE THE PARTY OF T	,		Emai	Email: Thomas.Johnston@lakelandelectric.com	lakelandelectric.com
5 S	16:35			3. 0.	Sampler Signature	W.	W	e in the second]		
RDER #	ple Date Sampled	npled Time Sampled	Matrix DW SW		Number of Containers		An	alysis l	Analysis Required		Field Tests
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"I waive NELAC protocol" (sign here) >	Y A					1 Relinqui	Relinquished by:	had	Hoth	Less .	7/27/21 1523
Deliverables Q.	QA/QC Report Needed?	d? Yes No		(additional charge)		1 Received by:	S) ZHOW	UNIN	· +2-+	5251 12-t
Sample Custody & Field Comments Remined on Ice: N N	Bottle A- liter amber	Bottle Type	Preservi A-Ascorbic acid	Preservatives rbic acid P-H ₃ PO ₄)4	2 Relinquished by:	}	Fehry	10		
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dy Seals? Y N	L-liter bottle H S-Soil jar T	H-Plastic Amber TED-Tedlar Air Bag	H-HNO ₃ M-MCAB	U-Unpreserve DI-DI Water	U-Unpreserved DI-DI Water	3 Relinquished by:	ished by:				
R \otimes GUN-1 \angle /65 \mathcal{O} \otimes FIELD TIME:	T-250 ml V-40 ml vial		N-NaOH NH,-NH,CL		Z-zinc acetate	3 Received by:	1 by:				
ing F	W-wide mouth		Hex- Hex.Cr. Buffer FDA-Ethylene Diamine	. Buffer		www.	www.flenviro.com	com		COC Page	1 of





1460 West McNab Road Fort Lauderdale, FL 33309 1-800-ANALYTE Phone (954) 978-6400 Phone (954) 978-2233 Fax

NELAP Certificate No. E86006

05 August 2021 Lab Work Order (COC): 21G0982

Thomas Johnston Lakeland Electric - McIntosh 3030 East Lake Parker Drive Lakeland, FL 33805

RE: CCR Monitoring Program

Project Location: McIntosh Plant

Dear Thomas Johnston:

This report details the analytical results of samples collected at the above-referenced project location. These samples were received by Florida Spectrum Environmental Services at **07/29/2021 09:00**.

All Analyses were performed according to the TNI/NELAP standard unless indicated by a "~" on the report.

Your samples will be retained by Florida Spectrum Environmental for a period of at least 30 days following sample receipt or until the longest of the preparation and/or analytical hold times expires, whichever is shorter. After that time, they will be properly disposed without further notice, unless there exists an explicit contractual agreement to the contrary. We reserve the right to return any unused samples, extracts, or related materials or solutions to you if we consider it necessary. Examples might include those samples identified as hazardous wastes, submissions where the sample sizes significantly exceed those required for analysis, samples containing controlled substances, etc.

We thank you for selecting Florida Spectrum Environmental to serve your analytical needs. Should you have any questions or require additional information regarding any of the information in this report, please feel free to contact us at any time. We appreciate the opportunity to be of service.

Florida Spectrum Environmental Inc.







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Report Printed: 8/5/2021

Work Order # 21G0982

Project: CCR Monitoring Program

McIntosh Plant

DETECTED ANALYTE SUMMARY

Client Sample ID	Laboratory ID	Matrix	Analyte	Result	Units	Collection Date	Collection Time
CCR-8A	21G0982-01	Water	Barium	34.2	ug/L	7/27/2021	8:57
CCR-8A	21G0982-01	Water	Calcium	114000	ug/L	7/27/2021	8:57
CCR-8A	21G0982-01	Water	Chromium	0.800	ug/L	7/27/2021	8:57
CCR-8A	21G0982-01	Water	Boron	103	ug/L	7/27/2021	8:57
CCR-8A	21G0982-01	Water	Magnesium	4730	ug/L	7/27/2021	8:57
CCR-8A	21G0982-01	Water	Sodium	3690	ug/L	7/27/2021	8:57
CCR-8A	21G0982-01	Water	Potassium	4900	ug/L	7/27/2021	8:57
CCR-8B	21G0982-02	Water	Total Alkalinity	155	mg/L	7/27/2021	8:57
CCR-8B	21G0982-02	Water	Total Dissolved Solids	390	mg/L	7/27/2021	8:57
CCR-8B	21G0982-02	Water	Bicarbonate	155	mg/L	7/27/2021	8:57
CCR-8B	21G0982-02	Water	Fluoride	0.348	mg/L	7/27/2021	8:57
CCR-8B	21G0982-02	Water	Sulfate	144	mg/L	7/27/2021	8:57
CCR-8B	21G0982-02	Water	Chloride	4.62	mg/L	7/27/2021	8:57
CCR-9A	21G0982-03	Water	Chromium	1.10	ug/L	7/27/2021	9:51
CCR-9A	21G0982-03	Water	Barium	54.2	ug/L	7/27/2021	9:51
CCR-9A	21G0982-03	Water	Potassium	132000	ug/L	7/27/2021	9:51
CCR-9A	21G0982-03	Water	Sodium	141000	ug/L	7/27/2021	9:51
CCR-9A	21G0982-03	Water	Calcium	681000	ug/L	7/27/2021	9:51
CCR-9A	21G0982-03	Water	Magnesium	43500	ug/L	7/27/2021	9:51
CCR-9A	21G0982-03	Water	Boron	494	ug/L	7/27/2021	9:51
CCR-9A	21G0982-03	Water	Arsenic	3.70	ug/L	7/27/2021	9:51
CCR-9B	21G0982-04	Water	Total Alkalinity	46.4	mg/L	7/27/2021	9:51
CCR-9B	21G0982-04	Water	Sulfate	1250	mg/L	7/27/2021	9:51
CCR-9B	21G0982-04	Water	Total Dissolved Solids	3400	mg/L	7/27/2021	9:51

Florida-Spectrum Environmental Services, Inc. 1460 W. McNab Road, Fort Lauderdale, FL 33309

Pembroke Laboratory 528 Gooch Rd. Fort Mead, FL 33841 Big Lake Laboratory 610 Parrot Ave. N. Okeechobee, FL 34972 Lakeland Laboratory 111 Easton Dr. Lakeland, FL 33803





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Report Printed: 8/5/2021

Work Order # 21G0982

Project: CCR Monitoring Program

McIntosh Plant

DETECTED ANALYTE SUMMARY

Client Sample ID	Laboratory ID	Matrix	Analyte	Result	Units	Collection Date	Collection Time
CCR-9B	21G0982-04	Water	Chloride	692	mg/L	7/27/2021	9:51
CCR-9B	21G0982-04	Water	Fluoride	0.580	mg/L	7/27/2021	9:51
CCR-9B	21G0982-04	Water	Bicarbonate	46.4	mg/L	7/27/2021	9:51
CCR-12A	21G0982-05	Water	Potassium	79900	ug/L	7/27/2021	13:44
CCR-12A	21G0982-05	Water	Calcium	720000	ug/L	7/27/2021	13:44
CCR-12A	21G0982-05	Water	Magnesium	8020	ug/L	7/27/2021	13:44
CCR-12A	21G0982-05	Water	Arsenic	196	ug/L	7/27/2021	13:44
CCR-12A	21G0982-05	Water	Molybdenum	21.4	ug/L	7/27/2021	13:44
CCR-12A	21G0982-05	Water	Sodium	33900	ug/L	7/27/2021	13:44
CCR-12A	21G0982-05	Water	Boron	504	ug/L	7/27/2021	13:44
CCR-12A	21G0982-05	Water	Chromium	0.800	ug/L	7/27/2021	13:44
CCR-12A	21G0982-05	Water	Barium	22.4	ug/L	7/27/2021	13:44
CCR-12B	21G0982-06	Water	Chloride	28.4	mg/L	7/27/2021	13:44
CCR-12B	21G0982-06	Water	Sulfate	1580	mg/L	7/27/2021	13:44
CCR-12B	21G0982-06	Water	Total Alkalinity	215	mg/L	7/27/2021	13:44
CCR-12B	21G0982-06	Water	Bicarbonate	215	mg/L	7/27/2021	13:44
CCR-12B	21G0982-06	Water	Fluoride	1.44	mg/L	7/27/2021	13:44
CCR-12B	21G0982-06	Water	Total Dissolved Solids	2600	mg/L	7/27/2021	13:44
CCR-13A	21G0982-07	Water	Calcium	534000	ug/L	7/27/2021	14:26
CCR-13A	21G0982-07	Water	Magnesium	20500	ug/L	7/27/2021	14:26
CCR-13A	21G0982-07	Water	Sodium	73700	ug/L	7/27/2021	14:26
CCR-13A	21G0982-07	Water	Potassium	186000	ug/L	7/27/2021	14:26
CCR-13A	21G0982-07	Water	Chromium	1.80	ug/L	7/27/2021	14:26
CCR-13A	21G0982-07	Water	Boron	297	ug/L	7/27/2021	14:26

Florida-Spectrum Environmental Services, Inc. 1460 W. McNab Road, Fort Lauderdale, FL 33309

Pembroke Laboratory 528 Gooch Rd. Fort Mead, FL 33841 Big Lake Laboratory 610 Parrot Ave. N. Okeechobee, FL 34972 Lakeland Laboratory 111 Easton Dr. Lakeland, FL 33803





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Report Printed: 8/5/2021

Work Order # 21G0982

Project: CCR Monitoring Program

McIntosh Plant

DETECTED ANALYTE SUMMARY

Client Sample ID	Laboratory ID	Matrix	Analyte	Result	Units	Collection Date	Collection Time
CCR-13A	21G0982-07	Water	Cobalt	2.60	ug/L	7/27/2021	14:26
CCR-13A	21G0982-07	Water	Lithium	157	ug/L	7/27/2021	14:26
CCR-13A	21G0982-07	Water	Barium	36.7	ug/L	7/27/2021	14:26
CCR-13B	21G0982-08	Water	Chloride	282	mg/L	7/27/2021	14:26
CCR-13B	21G0982-08	Water	Total Alkalinity	13.8	mg/L	7/27/2021	14:26
CCR-13B	21G0982-08	Water	Sulfate	1420	mg/L	7/27/2021	14:26
CCR-13B	21G0982-08	Water	Fluoride	1.31	mg/L	7/27/2021	14:26
CCR-13B	21G0982-08	Water	Total Dissolved Solids	2530	mg/L	7/27/2021	14:26
CCR-13B	21G0982-08	Water	Bicarbonate	13.8	mg/L	7/27/2021	14:26





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Report Printed: 8/5/2021

Work Order # 21G0982

Project: CCR Monitoring Program

McIntosh Plant

Lab ID: 21G0982-01
Client Sample ID: CCR-8A
Matrix: Water

 Collection Date:
 07/27/21 08:57

 Received Date:
 07/29/21 09:00

 Collected By:
 Chad Hotchkiss

Laboratory Analysis Report

Parameter	Result	QC	Units	Dil	MDL	PQL	Method	Date Ext.	Date Analy.	Analyst

Total Recoverable Metals by EPA 200 Series Methods

Antimony	ND	U	ug/L	1	5.11	15.0	EPA 200.7/3010	07/29 09:30	07/29 12:31	IN
Arsenic	ND	U	ug/L	1	2.21	10.0	EPA 200.7/3010	07/29 09:30	07/29 12:31	IN
Barium	34.2		ug/L	1	0.0728	1.00	EPA 200.7/3010	07/29 09:30	07/29 12:31	IN
Beryllium	ND	U	ug/L	1	0.101	1.00	EPA 200.7/3010	07/29 09:30	07/29 12:31	IN
Boron	103		ug/L	1	1.57	10.0	EPA 200.7/3010	07/29 09:30	07/29 12:31	IN
Cadmium	ND	U	ug/L	1	0.181	1.00	EPA 200.7/3010	07/29 09:30	07/29 12:31	IN
Calcium	114000		ug/L	5	29.0	250	EPA 200.7/3010	07/29 09:30	07/29 14:58	IN
Chromium	0.800	I	ug/L	1	0.339	5.00	EPA 200.7/3010	07/29 09:30	07/29 12:31	IN
Cobalt	ND	U	ug/L	1	0.361	1.00	EPA 200.7/3010	07/29 09:30	07/29 12:31	IN
Lead	ND	U	ug/L	1	1.19	10.0	EPA 200.7/3010	07/29 09:30	07/29 12:31	IN
Lithium	ND	U	ug/L	1	2.72	25.0	EPA 200.7/3010	07/29 11:30	07/29 15:40	MAZ
Magnesium	4730		ug/L	5	18.7	100	EPA 200.7/3010	07/29 09:30	07/29 14:58	IN
Mercury	ND	U	ug/L	1	0.120	1.00	EPA 245.1	08/03 08:00	08/03 13:03	EN
Molybdenum	13.3		ug/L	1	1.17	10.0	EPA 200.7/3010	07/29 09:30	07/29 12:31	IN
Potassium	4900		ug/L	1	17.3	50.0	EPA 200.7/3010	07/29 09:30	07/29 12:31	IN
Selenium	ND	U	ug/L	1	3.46	15.0	EPA 200.7/3010	07/29 09:30	07/29 12:31	IN
Sodium	3690		ug/L	1	446	2000	EPA 200.7/3010	07/29 09:30	07/29 12:31	IN
Thallium	ND	U	ug/L	1	0.925	4.00	EPA 200.7/3010	07/29 09:30	07/29 12:31	IN





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Report Printed: 8/5/2021

Work Order # 21G0982

Project: CCR Monitoring Program

McIntosh Plant

Lab ID: 21G0982-02 Client Sample ID: CCR-8B Matrix: Water
 Collection Date:
 07/27/21 08:57

 Received Date:
 07/29/21 09:00

 Collected By:
 Chad Hotchkiss

Laboratory Analysis Report

Parameter	Result	QC	Units	Dil	MDL	PQL	Method	Date Ext.	Date Analy.	Analyst
Wet Chemistry										
Total Alkalinity	155	J3	mg/L	1	2.49	7.46	EPA 310.2	07/29 19:02	07/29 19:02	OC
Bicarbonate	155		mg/L	1	2.49	7.46	EPA 310.2	07/29 19:02	07/29 19:02	OC
Chloride	4.62		mg/L	1	0.126	0.500	EPA 300.0	07/30 15:48	07/30 17:27	OC
Fluoride	0.348		mg/L	1	0.00520	0.0250	EPA 300.0	07/30 15:48	07/30 17:27	OC
Sulfate	144		mg/L	2	0.191	1.00	EPA 300.0	07/30 15:48	07/31 08:43	OC
Total Dissolved Solids	390		mg/L	2	20.0	60.0	SM 2540C	07/30 17:48	08/04 10:11	MWO





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Report Printed: 8/5/2021

Work Order # 21G0982

Project: CCR Monitoring Program

McIntosh Plant

Date Ext.

Date Analy.

Analyst

Lab ID: 21G0982-03
Client Sample ID: CCR-9A
Matrix: Water

Result

QC

Units

Parameter

 Collection Date:
 07/27/21 09:51

 Received Date:
 07/29/21 09:00

 Collected By:
 Chad Hotchkiss

Method

Laboratory Analysis Report

MDL

PQL

Dil

Total Recoverable Met	als by EPA 200 Serie	es Metl	nods							
Antimony	ND	U	ug/L	1 1	5.11	15.0	EPA 200.7/3010	07/29 09:30	07/29 12:34	IN
Arsenic	3.70	I	ug/L	1	2.21	10.0	EPA 200.7/3010	07/29 09:30	07/29 12:34	IN
Barium	54.2		ug/L	1	0.0728	1.00	EPA 200.7/3010	07/29 09:30	07/29 12:34	IN
Beryllium	ND	U	ug/L	1	0.101	1.00	EPA 200.7/3010	07/29 09:30	07/29 12:34	IN
Boron	494		ug/L	1	1.57	10.0	EPA 200.7/3010	07/29 09:30	07/29 12:34	IN
Cadmium	ND	U	ug/L	1	0.181	1.00	EPA 200.7/3010	07/29 09:30	07/29 12:34	IN
Calcium	681000		ug/L	25	145	1250	EPA 200.7/3010	07/29 09:30	07/29 15:04	IN
Chromium	1.10	I	ug/L	1	0.339	5.00	EPA 200.7/3010	07/29 09:30	07/29 12:34	IN
Cobalt	ND	U	ug/L	1	0.361	1.00	EPA 200.7/3010	07/29 09:30	07/29 12:34	IN
Lead	ND	U	ug/L	1	1.19	10.0	EPA 200.7/3010	07/29 09:30	07/29 12:34	IN
Lithium	ND	U	ug/L	1	2.72	25.0	EPA 200.7/3010	07/29 11:30	07/29 15:42	MAZ
Magnesium	43500		ug/L	25	93.5	500	EPA 200.7/3010	07/29 09:30	07/29 15:04	IN
Mercury	ND	U	ug/L	1	0.120	1.00	EPA 245.1	08/03 08:00	08/03 13:23	EN
Molybdenum	ND	U	ug/L	1	1.17	10.0	EPA 200.7/3010	07/29 09:30	07/29 12:34	IN
Potassium	132000		ug/L	5	86.5	250	EPA 200.7/3010	07/29 09:30	07/29 15:01	IN
Selenium	ND	U	ug/L	1	3.46	15.0	EPA 200.7/3010	07/29 09:30	07/29 12:34	IN
Sodium	141000		ug/L	5	2230	10000	EPA 200.7/3010	07/29 09:30	07/29 15:01	IN
Thallium	ND	U	ug/L	1	0.925	4.00	EPA 200.7/3010	07/29 09:30	07/29 12:34	IN





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Report Printed: 8/5/2021

Work Order # 21G0982

Project: CCR Monitoring Program

McIntosh Plant

Lab ID: 21G0982-04
Client Sample ID: CCR-9B
Matrix: Water

 Collection Date:
 07/27/21 09:51

 Received Date:
 07/29/21 09:00

 Collected By:
 Chad Hotchkiss

Laboratory Analysis Report

Parameter	Result	QC	Units	Dil	MDL	PQL	Method	Date Ext.	Date Analy.	Analyst
Wet Chemistry										
Total Alkalinity	46.4		mg/L	1	2.49	7.46	EPA 310.2	07/29 19:02	07/29 19:02	OC
Bicarbonate	46.4		mg/L	1	2.49	7.46	EPA 310.2	07/29 19:02	07/29 19:02	OC
Chloride	692		mg/L	20	2.52	10.0	EPA 300.0	07/30 15:48	07/30 17:43	OC
Fluoride	0.580		mg/L	5	0.0260	0.125	EPA 300.0	08/03 13:47	08/03 14:53	OC
Sulfate	1250		mg/L	20	1.91	10.0	EPA 300.0	07/30 15:48	07/30 17:43	OC
Total Dissolved Solids	3400		mg/L	4	40.0	120	SM 2540C	07/30 17:48	08/02 18:22	MWO

Florida-Spectrum Environmental Services, Inc. 1460 W. McNab Road, Fort Lauderdale, FL 33309

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Report Printed: 8/5/2021

Work Order # 21G0982

Project: CCR Monitoring Program

McIntosh Plant

Date Ext.

Date Analy.

Analyst

Lab ID: 21G0982-05
Client Sample ID: CCR-12A
Matrix: Water

Result

QC

Units

Parameter

 Collection Date:
 07/27/21 13:44

 Received Date:
 07/29/21 09:00

 Collected By:
 Chad Hotchkiss

Method

Laboratory Analysis Report

MDL

PQL

Dil

Antimony	ND	U	ug/L	1	5.11	15.0	EPA 200.7/3010	07/29 09:30	07/29 12:37	IN
Arsenic	196		ug/L	1	2.21	10.0	EPA 200.7/3010	07/29 09:30	07/29 12:37	IN
Barium	22.4		ug/L	1	0.0728	1.00	EPA 200.7/3010	07/29 09:30	07/29 12:37	IN
Beryllium	ND	U	ug/L	1	0.101	1.00	EPA 200.7/3010	07/29 09:30	07/29 12:37	IN
Boron	504		ug/L	1	1.57	10.0	EPA 200.7/3010	07/29 09:30	07/29 12:37	IN
Cadmium	ND	U	ug/L	1	0.181	1.00	EPA 200.7/3010	07/29 09:30	07/29 12:37	IN
Calcium	720000		ug/L	25	145	1250	EPA 200.7/3010	07/29 09:30	07/29 15:10	IN
Chromium	0.800	I	ug/L	1	0.339	5.00	EPA 200.7/3010	07/29 09:30	07/29 12:37	IN
Cobalt	ND	U	ug/L	1	0.361	1.00	EPA 200.7/3010	07/29 09:30	07/29 12:37	IN
Lead	ND	U	ug/L	1	1.19	10.0	EPA 200.7/3010	07/29 09:30	07/29 12:37	IN
Lithium	ND	U	ug/L	1	2.72	25.0	EPA 200.7/3010	07/29 11:30	07/29 15:45	MAZ
Magnesium	8020		ug/L	25	93.5	500	EPA 200.7/3010	07/29 09:30	07/29 15:10	IN
Mercury	ND	U	ug/L	1	0.120	1.00	EPA 245.1	08/03 08:00	08/03 13:20	EN
Molybdenum	21.4		ug/L	1	1.17	10.0	EPA 200.7/3010	07/29 09:30	07/29 12:37	IN
Potassium	79900		ug/L	4	69.2	200	EPA 200.7/3010	07/29 09:30	07/29 15:07	IN
Selenium	ND	U	ug/L	1	3.46	15.0	EPA 200.7/3010	07/29 09:30	07/29 12:37	IN
Sodium	33900		ug/L	1	446	2000	EPA 200.7/3010	07/29 09:30	07/29 12:37	IN
Thallium	ND	U	ug/L	1	0.925	4.00	EPA 200.7/3010	07/29 09:30	07/29 12:37	IN





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Work Order # 21G0982

Project: CCR Monitoring Program

McIntosh Plant

Lab ID: 21G0982-06
Client Sample ID: CCR-12B
Matrix: Water

 Collection Date:
 07/27/21 13:44

 Received Date:
 07/29/21 09:00

 Collected By:
 Chad Hotchkiss

Laboratory Analysis Report

Parameter	Result	QC	Units	Dil	MDL	PQL	Method	Date Ext.	Date Analy.	Analyst
Wet Chemistry										
Total Alkalinity	215		mg/L	1	2.49	7.46	EPA 310.2	07/29 19:02	07/29 19:02	OC
Bicarbonate	215		mg/L	1	2.49	7.46	EPA 310.2	07/29 19:02	07/29 19:02	OC
Chloride	28.4		mg/L	10	1.26	5.00	EPA 300.0	07/30 15:48	07/30 17:59	OC
Fluoride	1.44		mg/L	10	0.0520	0.250	EPA 300.0	07/30 15:48	07/30 17:59	OC
Sulfate	1580		mg/L	20	1.91	10.0	EPA 300.0	07/30 15:48	07/31 08:51	OC
Total Dissolved Solids	2600		mg/L	4	40.0	120	SM 2540C	07/30 17:48	08/02 18:22	MWO





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PQL

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Work Order # 21G0982

Project: CCR Monitoring Program

McIntosh Plant

Date Ext.

Date Analy.

Analyst

Lab ID: 21G0982-07
Client Sample ID: CCR-13A
Matrix: Water

Result

QC

Units

Parameter

 Collection Date:
 07/27/21 14:26

 Received Date:
 07/29/21 09:00

 Collected By:
 Chad Hotchkiss

Method

Laboratory Analysis Report

MDL

Dil

Antimony	ND	U	ug/L	1	5.11	15.0	EPA 200.7/3010	07/29 09:30	07/29 12:40	IN
Arsenic	ND	U	ug/L	1	2.21	10.0	EPA 200.7/3010	07/29 09:30	07/29 12:40	IN
Barium	36.7		ug/L	1	0.0728	1.00	EPA 200.7/3010	07/29 09:30	07/29 12:40	IN
Beryllium	ND	U	ug/L	1	0.101	1.00	EPA 200.7/3010	07/29 09:30	07/29 12:40	IN
Boron	297		ug/L	1	1.57	10.0	EPA 200.7/3010	07/29 09:30	07/29 12:40	IN
Cadmium	ND	U	ug/L	1	0.181	1.00	EPA 200.7/3010	07/29 09:30	07/29 12:40	IN
Calcium	534000		ug/L	25	145	1250	EPA 200.7/3010	07/29 09:30	07/29 15:30	IN
Chromium	1.80	I	ug/L	1	0.339	5.00	EPA 200.7/3010	07/29 09:30	07/29 12:40	IN
Cobalt	2.60		ug/L	1	0.361	1.00	EPA 200.7/3010	07/29 09:30	07/29 12:40	IN
Lead	ND	U	ug/L	1	1.19	10.0	EPA 200.7/3010	07/29 09:30	07/29 12:40	IN
Lithium	157		ug/L	1	2.72	25.0	EPA 200.7/3010	07/29 11:30	07/29 15:48	MAZ
Magnesium	20500		ug/L	25	93.5	500	EPA 200.7/3010	07/29 09:30	07/29 15:30	IN
Mercury	ND	U	ug/L	1	0.120	1.00	EPA 245.1	08/03 08:00	08/03 13:29	EN
Molybdenum	ND	U	ug/L	1	1.17	10.0	EPA 200.7/3010	07/29 09:30	07/29 12:40	IN
Potassium	186000		ug/L	10	173	500	EPA 200.7/3010	07/29 09:30	07/29 15:24	IN
Selenium	ND	U	ug/L	1	3.46	15.0	EPA 200.7/3010	07/29 09:30	07/29 12:40	IN
Sodium	73700		ug/L	4	1780	8000	EPA 200.7/3010	07/29 09:30	07/29 15:21	IN
Thallium	ND	U	ug/L	1	0.925	4.00	EPA 200.7/3010	07/29 09:30	07/29 12:40	IN





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Work Order # 21G0982

Project: CCR Monitoring Program

McIntosh Plant

Lab ID: 21G0982-08
Client Sample ID: CCR-13B
Matrix: Water

 Collection Date:
 07/27/21 14:26

 Received Date:
 07/29/21 09:00

 Collected By:
 Chad Hotchkiss

Laboratory Analysis Report

Parameter	Result	QC	Units	Dil	MDL	PQL	Method	Date Ext.	Date Analy.	Analyst
Wet Chemistry										
Total Alkalinity	13.8		mg/L	1	2.49	7.46	EPA 310.2	07/29 19:02	07/29 19:02	OC
Bicarbonate	13.8		mg/L	1	2.49	7.46	EPA 310.2	07/29 19:02	07/29 19:02	OC
Chloride	282		mg/L	20	2.52	10.0	EPA 300.0	07/30 15:48	07/30 18:16	OC
Fluoride	1.31		mg/L	2	0.0104	0.0500	EPA 300.0	08/03 13:47	08/03 15:09	OC
Sulfate	1420		mg/L	20	1.91	10.0	EPA 300.0	07/30 15:48	07/30 18:16	OC
Total Dissolved Solids	2520		mo/L	4	I 40.0	120	SM 2540C	07/30 17:48	08/02 18:22	MWO





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Work Order # 21G0982

Project: CCR Monitoring Program

McIntosh Plant

	V	Vet Chemis								
		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 21G0842 - Default Prep GenChem										
Blank (21G0842-BLK1)				Prepared &	Analyzed:	07/29/202	1			
Total Alkalinity	ND	7.46	mg/L							U
LCS (21G0842-BS1)				Prepared &	: Analyzed:	07/29/202	1			
Total Alkalinity	257	7.46	mg/L	250.0		103	90-110			
Duplicate (21G0842-DUP1)	Sour	ce: 21G0877-	04	Prepared &	Analyzed:	07/29/202	1			
Total Alkalinity	140	7.46	mg/L		141			0.7	20	
Matrix Spike (21G0842-MS1)	Sour	ce: 21G0877-	04	Prepared &	Analyzed:					
Total Alkalinity	298	7.46	mg/L	250.0	141	63	90-110			Ј3
Matrix Spike (21G0842-MS2)	Sour	ce: 21G0982-	02	Prepared &	Analyzed:	07/29/202	1			
Total Alkalinity	283	7.46	mg/L	250.0	155	51	90-110			Ј3
Batch 21G0880 - Default Prep GenChem										
Blank (21G0880-BLK1)				Prepared: (07/30/2021 A	Analyzed:	08/02/2021			
Total Dissolved Solids	ND	30.0	mg/L							U
LCS (21G0880-BS1)				Prepared: (07/30/2021 A	Analyzed:	08/02/2021			
Total Dissolved Solids	508	120	mg/L	500.0		102	80-120			
Duplicate (21G0880-DUP1)	Sour	ce: 21G0982-	02	Prepared: (07/30/2021 A	Analyzed:	08/02/2021			
Total Dissolved Solids	392	60.0	mg/L		390			0.512	20	
Duplicate (21G0880-DUP2)	Source: 21G0999-01 Prepared: 07/30/2021 Analyzed: 08/02/2021									
Total Dissolved Solids	616	60.0	mg/L		594			3.64	20	





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Project: CCR Monitoring Program

McIntosh Plant

	•	Wet Chemis	stry - Q	uality Con	itrol					
		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 21G0884 - Default Prep GenChem										
Blank (21G0884-BLK1)				Prepared &	Analyzed:	07/30/202	1			
Fluoride	ND	0.0250	mg/L							U
Chloride	ND	0.500	"							U
Sulfate	ND	0.500	"							U
LCS (21G0884-BS1)				Prepared &	Analyzed:	07/30/202	1			
Fluoride	2.43	0.0250	mg/L	2.500		97	90-110			
Sulfate	50.5	0.500	"	50.00		101	90-110			
Chloride	49.7	0.500	"	50.00		99	90-110			
Duplicate (21G0884-DUP1)	Sou	rce: 21G1036-	01	Prepared &	Analyzed:	07/30/202	1			
Fluoride	0.725	0.0250	mg/L		0.765			5	20	
Chloride	6.69	0.500	"		6.62			1	20	
Sulfate	12.5	0.500	"		12.5			0.00	20	
Matrix Spike (21G0884-MS1)	Sou	rce: 21G1036-	01	Prepared &	Analyzed:	07/30/202	1			
Fluoride	2.90	0.0250	mg/L	2.500	0.765	85	90-110			Ј3
Chloride	57.3	0.500	"	50.00	6.62	101	90-110			
Sulfate	63.3	0.500	"	50.00	12.5	102	90-110			
Matrix Spike (21G0884-MS2)	Sou	rce: 21G1031-	04	Prepared &	Analyzed:	07/30/202	1			
Fluoride	2.45	0.0250	mg/L	2.500	0.0760	95	90-110			
Chloride	53.0	0.500	"	50.00	1.43	103	90-110			
Sulfate	64.0	0.500	"	50.00	13.2	102	90-110			
Batch 21H0204 - Default Prep GenChem										
Blank (21H0204-BLK1)				Prepared &	Analyzed:	08/03/202	1			
Fluoride	ND	0.0250	mg/L							U

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Project: CCR Monitoring Program

McIntosh Plant

	V	Vet Chemis	stry - Q	uality Con	trol					
Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 21H0204 - Default Prep GenChem										
LCS (21H0204-BS1)				Prepared &	Analyzed:	08/03/2021				
Fluoride	2.50	0.0250	mg/L	2.500		100	90-110			
Duplicate (21H0204-DUP1)	Sour	ce: 21H0021-	02	Prepared &	Analyzed:	08/03/2021				
Fluoride	0.705	0.0250	mg/L		0.708			0.4	20	
Matrix Spike (21H0204-MS1)	Sour	ce: 21H0021-	02	Prepared &	Analyzed:	08/03/2021				
Fluoride	2.98	0.0250	mg/L	2.500	0.708	91	90-110			
Matrix Spike (21H0204-MS2)	Sour	ce: 21H0069-	01	Prepared &	Analyzed:	08/03/2021				
Fluoride	2.49	0.0250	mg/L	2.500	0.0830	96	90-110			





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Project: CCR Monitoring Program

McIntosh Plant

Total Recoverable Metals by EPA 200 Series Methods - Quality Control											
		Reporting		Spike	Source		%REC		RPD		
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes	
Batch 21G0102 - EPA 3010A											
Blank (21G0102-BLK1)				Prepared &	: Analyzed:	07/29/2021	1				
Lithium	ND	25.0	ug/L							U	
LCS (21G0102-BS1)				Prepared &	: Analyzed:	07/29/2021	I				
Lithium	2210	25.0	ug/L	2500	•	88	85-115				
Matrix Spike (21G0102-MS1)	Sour	ce: 21G0877-	09	Prepared &	: Analyzed:	07/29/2021	l				
Lithium	2210	25.0	ug/L	2500	ND	88	75-125				
Matrix Spike Dup (21G0102-MSD1)	Sour	ce: 21G0877-	09	Prepared &	: Analyzed:	07/29/2021	I				
Lithium	2160	25.0	ug/L	2500	ND	87	75-125	2	20		
Batch 21G0105 - EPA 3010A											
Blank (21G0105-BLK1)				Prepared &	: Analyzed:	07/29/2021					
Chromium	ND	5.00	ug/L							U	
Molybdenum	ND	10.0	"							U	
Antimony	ND	15.0	"							U	
Magnesium	ND	20.0	"							U	
Cobalt	ND	1.00	"							U	
Lead	ND	10.0	"							U	
Potassium	ND	50.0	"							U	
Sodium	ND	2000	"							U	
Calcium	ND	50.0	"							U	
Selenium	ND	15.0	"							U	
Fhallium	ND	4.00	"							U	
Arsenic	ND	10.0	"							U	
Barium	ND	1.00	"							U	
Beryllium	ND	1.00	"							U	
Boron	ND	10.0	"							U	
Cadmium	ND	1.00	"							U	

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Project: CCR Monitoring Program

McIntosh Plant

Тоб	tal Recoverable M	etals by E	PA 200	Series Met	thods - Q	Quality Co	ontrol			
		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 21G0105 - EPA 3010A										
LCS (21G0105-BS1)				Prepared &	: Analyzed:	07/29/202	1			
Cobalt	509.6	1.00	ug/L	500.0	-	102	85-115			
Chromium	515.1	5.00	"	500.0		103	85-115			
Molybdenum	535.2	10.0	"	500.0		107	85-115			
Arsenic	533	10.0	"	500.0		107	85-115			
ead	509	10.0	"	500.0		102	85-115			
Magnesium	499	20.0	"	500.0		99.8	85-115			
Calcium	27400	50.0	"	25500		108	85-115			
otassium	25000	50.0	"	25500		97.9	85-115			
antimony	535.9	15.0	"	500.0		107	85-115			
elenium	551.8	15.0	"	500.0		110	85-115			
Thallium	503.3	4.00	"	500.0		101	85-115			
odium	25000	2000	"	25500		97.9	85-115			
Beryllium	529.9	1.00	"	500.0		106	85-115			
Barium	501.5	1.00	"	500.0		100	85-115			
Boron	529.3	10.0	"	500.0		106	85-115			
admium	526.4	1.00	"	500.0		105	85-115			
Aatrix Spike (21G0105-MS1)	Sourc	e: 21G0968-	05	Prepared &	: Analyzed:	07/29/202	1			
Chromium	500.1	5.00	ug/L	500.0	ND	100	70-130			
Magnesium (1997)	488	20.0	"	500.0	ND	97.7	70-130			
ead	494	10.0		500.0	ND	98.8	70-130			
Cobalt	499.3	1.00		500.0	ND	99.9	70-130			
elenium	573.2	15.0		500.0	ND	115	70-130			
Thallium	493.2	4.00		500.0	ND	98.6	70-130			
otassium	23500	50.0	"	25500	ND	92.0	70-130			
odium	23800	2000	"	25500	ND	93.3	70-130			
Calcium	26200	50.0		25500	ND	103	70-130			
rsenic	522	10.0	"	500.0	ND	104	70-130			
Barium	486.4	1.00	"	500.0	ND	97.3	70-130			
Molybdenum	468.7	10.0	"	500.0	ND	93.7	70-130			
Antimony	524.7	15.0	,,	500.0	ND	105	70-130			
Beryllium	520.7	1.00	"	500.0	ND	104	70-130			

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Project: CCR Monitoring Program

McIntosh Plant

Total R	ecoverable M	letals by E	PA 200	Series Met	thods - Q	uality Co	ontrol			
		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 21G0105 - EPA 3010A										
Matrix Spike (21G0105-MS1)	Sour	ce: 21G0968-	05	Prepared &	Analyzed:	07/29/202	1			
Boron	510.6	10.0	ug/L	500.0	ND	102	70-130			
Cadmium	516.1	1.00	"	500.0	ND	103	70-130			
Matrix Spike Dup (21G0105-MSD1)	Sour	ce: 21G0968-	05	Prepared &	Analyzed:	07/29/202	1			
Calcium	26300	50.0	ug/L	25500	ND	103	70-130	0.325	20	
Lead	488	10.0	"	500.0	ND	97.7	70-130	1.16	20	
Chromium	500.5	5.00	"	500.0	ND	100	70-130	0.0800	20	
Cobalt	498.0	1.00	"	500.0	ND	99.6	70-130	0.261	20	
Magnesium	488	20.0	"	500.0	ND	97.7	70-130	0.0205	20	
Гhallium	492.2	4.00	"	500.0	ND	98.4	70-130	0.203	20	
Antimony	532.6	15.0	"	500.0	ND	107	70-130	1.49	20	
Molybdenum	477.0	10.0	"	500.0	ND	95.4	70-130	1.76	20	
Selenium	573.8	15.0	"	500.0	ND	115	70-130	0.105	20	
Potassium	23500	50.0	"	25500	ND	92.2	70-130	0.179	20	
Sodium	23800	2000	"	25500	ND	93.3	70-130	0.0433	20	
Arsenic	522	10.0	"	500.0	ND	104	70-130	0.0958	20	
Barium	486.0	1.00	"	500.0	ND	97.2	70-130	0.0823	20	
Beryllium	523.5	1.00	"	500.0	ND	105	70-130	0.536	20	
Boron	511.1	10.0	"	500.0	ND	102	70-130	0.0979	20	
Cadmium	516.5	1.00	"	500.0	ND	103	70-130	0.0775	20	
Batch 21G0117 - EPA 245.1/245.2 Prep										
Blank (21G0117-BLK1)				Prepared &	z Analyzed:	08/03/202	1			
Mercury	ND	1.00	ug/L							U
LCS (21G0117-BS1)				Prepared &	z Analyzed:	08/03/202	1			
Mercury	9.84	1.00	ug/L	10.00		98	85-115			

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Project: CCR Monitoring Program

McIntosh Plant

Total	Recoverable Me	etals by E	PA 200	Series Met	thods - Q	uality Co	ontrol			
Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 21G0117 - EPA 245.1/245.2 Prep Matrix Spike (21G0117-MS1)	Source	e: 21G0975-	01	Prepared &	Analyzed:	08/03/2021				
Mercury	8.00	1.00	ug/L	10.00	ND	80	70-130			
Matrix Spike Dup (21G0117-MSD1)	Source	e: 21G0975-	01	Prepared &	Analyzed:	08/03/2021				
Mercury	8.13	1.00	ug/L	10.00	ND	81	70-130	2	20	





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Project: CCR Monitoring Program

McIntosh Plant

Notes and Definitions

U Indicated that the compound was analyzed for but not detected. This shall be used to indicate that the specific component was not

detected. The value associated with the qualifier shall be the laboratory method detection limit.

J3 The matrix spike recovery outside method acceptance limits indicating matrix interference.

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the detection limit

NR Not Reported

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference

N.O.O. No Odor Observed

REP Field parameter measured by client

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

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

Z Too many colonies were present for accurate counting.

SUB Work performed by outside (subcontracted) labs denoted by SUB in analyst field.

QC=Qualifier Codes as defined by DEP 62-160 Unless indicated, soil results are reported on actual (wet) weight basis. The Color SM2120B method is reported as (Color / pH) Legionella analyzed under CDC acreditation program Dilution factors \geq = 1000 are abreviated using k=1000 and M=1000000 Field parameters are not NELAP acredited. Results relate only to this sample.

Maria Castellanos - Lab Manager

Authorized CSM Signature (954) 978-6400 Florida-Spectrum Environmental Services,Inc. Certification# E86006

All NELAP certified analysis are performed in accordance with Chapter 64E-1 Florida Administrative code, which has been determined to be equivalent to NELAC standards. Analysis certified by programs other than NELAP are designated with a "~".

DUE DATE Requested	233 544 RUSH RESERVATION # 815	O30 Rush Surcharges apply	33805			Email: Thomas.Johnston@lakelandelectric.com			uired Field Tests	GC Suite Bicarb, T-Alk H M Z w Ö H M Z W Ö H M M M		×		×		×		×			SAMPLE CUSTODY AND TRANSFER SIGNATURES DATE / TIME 128/21 15.04	3-20, 2/		2/2/2 09W			COC Page 1 of
DY RECORD		55-8145 Fax (863) 285-7050 86-4271 Fax (863) 686-4389	3030 East Lake Parker Drive, Lakeland FL 3	501 East Lemon Street, Lakeland FL 33801	lant	7777		, and an area of the second se	Analysis Required	Appendix IV Metals GC Suite Metals Aetals Aetals App III Cl, F-	×	×	×	×	×	×	×	×			SAMPLE CUSTOR		Relinquished by:	Received by:	Relinquished by:	Received by:	www flantire com
CHAIN OF CUSTODY RECORD	dale FL 33309 iee, FL 34972 31401	ade FL 33841 Tel: (863) 285-8145 Lakeland, FL 33803 Tel: (863) 686-4271	ort to	, v	1 .	Fax:	Sampler		Bottle & Press	Combo	HT X	от -	+T	UT	HT.	OT.	TT.	L.			Total 1 R	(additional charge) 1 R	afives 2	P-H ₃ PO ₄ S-H ₃ SO ₄ T-N ₂ E-O-H-O	U-Unpreserved 3	Z-zinc acetate 3	. Buffer
	1460 W McNab Road Ft Lauderdale FL 33309 112 NW Park Street, Okeechobee, FL 34972 630 Indian Street Savannah, GA 31401	528 Gooch Road Fort Meade FL 33841 1910 Harden Blvd # 101, Lakeland, FL 33803	A CONTRACTOR OF THE CONTRACTOR	Purchase Order # 287348		Phone: 954-802-9143	× 0.		Time	DW SW GW SED S EFF HW BIO SA OIL X	1 857 GW	1 857 GW	1 951 GW	1 951 GW	1 1344 GW	1 1344 GW	1 1426 GW	1 1426 GW	,	4 - 10	· - •	Yes No (addition		A-Ascor C-HCL	c. Amber Isr Air Bag	263841696	Hex- Hex.Cr. Bu
Florida	Spectrum Environmental Services, Inc.	Doc. Ctrl:0401117-001 Date: 12/6/17			CCB Monitoring Program Inly 2021		1. 10211	ってつかがっとう	Sample Date Sampled	A	CCR-8A 7/27/2021	CCR-8B 7/27/2021	CCR-9A 7/27/2021	CCR-9B 7/27/2021	CCR-12A 7/27/2021	CCR-12B 7/27/2021	CCR-13A 7/27/2021	CCR-13B 7/27/2021			J.W.Z. n here) >	QA/QC Report Needed?	Bottle Type	A- liter amber B-Bacteria bag/bottle	L-liter bottle	(U) T-250 ml	br W-wide mouth
SUBMISSION #	2 160982 Logged into	LIMS by:	Report to: Lakeland Electric	Invoice to: Lakeland Electric	Project Name	t	Mgr: Thomas Johnston Sampler Name: 7 / / /	(printed) (Nach Hz	\$\hat{\chi}	Lab Control Number Shaded Areas For Laboratory Use Only	3	2				0000	0) 69		6	1000 C	Special Comments: Ot b	Deliverables		Received on Ice: (Y N	d dy Seals? Y N	21 SON-1 E161	





1460 West McNab Road Fort Lauderdale, FL 33309 1-800-ANALYTE Phone (954) 978-6400 Phone (954) 978-2233 Fax

NELAP Certificate No. E86006

09 August 2021 Lab Work Order (COC): 21G0877

Thomas Johnston Lakeland Electric - McIntosh 3030 East Lake Parker Drive Lakeland, FL 33805

RE: CCR Monitoring Program July 2021

Project Location: McIntosh Plant

Dear Thomas Johnston:

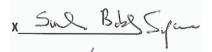
This report details the analytical results of samples collected at the above-referenced project location. These samples were received by Florida Spectrum Environmental Services at **07/27/2021 09:30**.

All Analyses were performed according to the TNI/NELAP standard unless indicated by a "~" on the report.

Your samples will be retained by Florida Spectrum Environmental for a period of at least 30 days following sample receipt or until the longest of the preparation and/or analytical hold times expires, whichever is shorter. After that time, they will be properly disposed without further notice, unless there exists an explicit contractual agreement to the contrary. We reserve the right to return any unused samples, extracts, or related materials or solutions to you if we consider it necessary. Examples might include those samples identified as hazardous wastes, submissions where the sample sizes significantly exceed those required for analysis, samples containing controlled substances, etc.

We thank you for selecting Florida Spectrum Environmental to serve your analytical needs. Should you have any questions or require additional information regarding any of the information in this report, please feel free to contact us at any time. We appreciate the opportunity to be of service.

Florida Spectrum Environmental Inc.







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Report Printed: 8/9/2021

Work Order # 21G0877

Project: CCR Monitoring Program July 2021

McIntosh Plant

DETECTED ANALYTE SUMMARY

CCR-17A	21G0877-01	Water	Magnesium	15300	ug/L	7/26/2021	8:45
CCR-17A	21G0877-01	Water	Chromium	1.20	ug/L	7/26/2021	8:45
CCR-17A	21G0877-01	Water	Calcium	267000	ug/L	7/26/2021	8:45
CCR-17A	21G0877-01	Water	Barium	4.70	ug/L	7/26/2021	8:45
CCR-17A	21G0877-01	Water	Boron	162	ug/L	7/26/2021	8:45
CCR-17A	21G0877-01	Water	Molybdenum	4.90	ug/L	7/26/2021	8:45
CCR-17A	21G0877-01	Water	Potassium	33400	ug/L	7/26/2021	8:45
CCR-17A	21G0877-01	Water	Sodium	48100	ug/L	7/26/2021	8:45
CCR-17A	21G0877-01	Water	Arsenic	8.20	ug/L	7/26/2021	8:45
CCR-17B	21G0877-02	Water	Bicarbonate	238	mg/L	7/26/2021	8:45
CCR-17B	21G0877-02	Water	Total Alkalinity	238	mg/L	7/26/2021	8:45
CCR-17B	21G0877-02	Water	Sulfate	282	mg/L	7/26/2021	8:45
CCR-17B	21G0877-02	Water	Chloride	220	mg/L	7/26/2021	8:45
CCR-17B	21G0877-02	Water	Total Dissolved Solids	1320	mg/L	7/26/2021	8:45
CCR-17B	21G0877-02	Water	Fluoride	0.405	mg/L	7/26/2021	8:45
CCR-18A	21G0877-03	Water	Barium	1.30	ug/L	7/26/2021	9:34
CCR-18A	21G0877-03	Water	Potassium	2750	ug/L	7/26/2021	9:34
CCR-18A	21G0877-03	Water	Molybdenum	4.40	ug/L	7/26/2021	9:34
CCR-18A	21G0877-03	Water	Calcium	66100	ug/L	7/26/2021	9:34
CCR-18A	21G0877-03	Water	Boron	43.7	ug/L	7/26/2021	9:34
CCR-18A	21G0877-03	Water	Sodium	1730	ug/L	7/26/2021	9:34
CCR-18A	21G0877-03	Water	Chromium	1.30	ug/L	7/26/2021	9:34
CCR-18A	21G0877-03	Water	Magnesium	3260	ug/L	7/26/2021	9:34
CCR-18B	21G0877-04	Water	Total Dissolved Solids	238	mg/L	7/26/2021	9:34

Florida-Spectrum Environmental Services, Inc. 1460 W. McNab Road, Fort Lauderdale, FL 33309

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Report Printed: 8/9/2021

Work Order # 21G0877

Project: CCR Monitoring Program July 2021

McIntosh Plant

DETECTED ANALYTE SUMMARY

Client Sample ID	Laboratory ID	Matrix	Analyte	Result	Units	Collection Date	Collection Time
CCR-18B	21G0877-04	Water	Sulfate	31.4	mg/L	7/26/2021	9:34
CCR-18B	21G0877-04	Water	Chloride	2.83	mg/L	7/26/2021	9:34
CCR-18B	21G0877-04	Water	Fluoride	0.322	mg/L	7/26/2021	9:34
CCR-18B	21G0877-04	Water	Bicarbonate	141	mg/L	7/26/2021	9:34
CCR-18B	21G0877-04	Water	Total Alkalinity	141	mg/L	7/26/2021	9:34
CCR-19A	21G0877-05	Water	Barium	103	ug/L	7/26/2021	10:26
CCR-19A	21G0877-05	Water	Boron	310	ug/L	7/26/2021	10:26
CCR-19A	21G0877-05	Water	Chromium	1.40	ug/L	7/26/2021	10:26
CCR-19A	21G0877-05	Water	Calcium	690000	ug/L	7/26/2021	10:26
CCR-19A	21G0877-05	Water	Magnesium	50900	ug/L	7/26/2021	10:26
CCR-19A	21G0877-05	Water	Potassium	239000	ug/L	7/26/2021	10:26
CCR-19A	21G0877-05	Water	Sodium	239000	ug/L	7/26/2021	10:26
CCR-19B	21G0877-06	Water	Sulfate	1080	mg/L	7/26/2021	10:26
CCR-19B	21G0877-06	Water	Chloride	1200	mg/L	7/26/2021	10:26
CCR-19B	21G0877-06	Water	Fluoride	1.44	mg/L	7/26/2021	10:26
CCR-19B	21G0877-06	Water	Total Alkalinity	19.8	mg/L	7/26/2021	10:26
CCR-19B	21G0877-06	Water	Bicarbonate	19.8	mg/L	7/26/2021	10:26
CCR-19B	21G0877-06	Water	Total Dissolved Solids	4450	mg/L	7/26/2021	10:26
CCR-20A	21G0877-07	Water	Molybdenum	1.70	ug/L	7/26/2021	11:28
CCR-20A	21G0877-07	Water	Magnesium	12400	ug/L	7/26/2021	11:28
CCR-20A	21G0877-07	Water	Boron	548	ug/L	7/26/2021	11:28
CCR-20A	21G0877-07	Water	Arsenic	67.9	ug/L	7/26/2021	11:28
CCR-20A	21G0877-07	Water	Chromium	1.70	ug/L	7/26/2021	11:28
CCR-20A	21G0877-07	Water	Barium	66.8	ug/L	7/26/2021	11:28

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Work Order # 21G0877

Project: CCR Monitoring Program July 2021

McIntosh Plant

DETECTED ANALYTE SUMMARY

Client Sample ID	Laboratory ID	Matrix	Analyte	Result	Units	Collection Date	Collection Time
CCR-20A	21G0877-07	Water	Calcium	575000	ug/L	7/26/2021	11:28
CCR-20A	21G0877-07	Water	Potassium	316000	ug/L	7/26/2021	11:28
CCR-20A	21G0877-07	Water	Sodium	246000	ug/L	7/26/2021	11:28
CCR-20B	21G0877-08	Water	Total Dissolved Solids	3280	mg/L	7/26/2021	11:28
CCR-20B	21G0877-08	Water	Fluoride	0.520	mg/L	7/26/2021	11:28
CCR-20B	21G0877-08	Water	Chloride	555	mg/L	7/26/2021	11:28
CCR-20B	21G0877-08	Water	Sulfate	1650	mg/L	7/26/2021	11:28
CCR-20B	21G0877-08	Water	Total Alkalinity	26.8	mg/L	7/26/2021	11:28
CCR-20B	21G0877-08	Water	Bicarbonate	26.8	mg/L	7/26/2021	11:28
CCR-21A	21G0877-09	Water	Chromium	0.700	ug/L	7/26/2021	13:47
CCR-21A	21G0877-09	Water	Magnesium	14900	ug/L	7/26/2021	13:47
CCR-21A	21G0877-09	Water	Boron	362	ug/L	7/26/2021	13:47
CCR-21A	21G0877-09	Water	Calcium	434000	ug/L	7/26/2021	13:47
CCR-21A	21G0877-09	Water	Potassium	20600	ug/L	7/26/2021	13:47
CCR-21A	21G0877-09	Water	Barium	44.3	ug/L	7/26/2021	13:47
CCR-21A	21G0877-09	Water	Molybdenum	28.9	ug/L	7/26/2021	13:47
CCR-21A	21G0877-09	Water	Sodium	20300	ug/L	7/26/2021	13:47
CCR-21B	21G0877-10	Water	Sulfate	815	mg/L	7/26/2021	13:47
CCR-21B	21G0877-10	Water	Total Dissolved Solids	1550	mg/L	7/26/2021	13:47
CCR-21B	21G0877-10	Water	Chloride	22.8	mg/L	7/26/2021	13:47
CCR-21B	21G0877-10	Water	Total Alkalinity	273	mg/L	7/26/2021	13:47
CCR-21B	21G0877-10	Water	Bicarbonate	273	mg/L	7/26/2021	13:47
CCR-21B	21G0877-10	Water	Fluoride	0.766	mg/L	7/26/2021	13:47
CCR-22A	21G0877-11	Water	Potassium	103000	ug/L	7/26/2021	14:47

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Work Order # 21G0877

Project: CCR Monitoring Program July 2021

McIntosh Plant

DETECTED ANALYTE SUMMARY

Client Sample ID	Laboratory ID	Matrix	Analyte	Result	Units	Collection Date	Collection Time
CCR-22A	21G0877-11	Water	Lithium	81.1	ug/L	7/26/2021	14:47
CCR-22A	21G0877-11	Water	Calcium	365000	ug/L	7/26/2021	14:47
CCR-22A	21G0877-11	Water	Magnesium	16000	ug/L	7/26/2021	14:47
CCR-22A	21G0877-11	Water	Sodium	37200	ug/L	7/26/2021	14:47
CCR-22A	21G0877-11	Water	Barium	27.3	ug/L	7/26/2021	14:47
CCR-22A	21G0877-11	Water	Chromium	1.80	ug/L	7/26/2021	14:47
CCR-22A	21G0877-11	Water	Boron	460	ug/L	7/26/2021	14:47
CCR-22B	21G0877-12	Water	Total Dissolved Solids	1740	mg/L	7/26/2021	14:47
CCR-22B	21G0877-12	Water	Bicarbonate	16.0	mg/L	7/26/2021	14:47
CCR-22B	21G0877-12	Water	Total Alkalinity	16.0	mg/L	7/26/2021	14:47
CCR-22B	21G0877-12	Water	Sulfate	1090	mg/L	7/26/2021	14:47
CCR-22B	21G0877-12	Water	Chloride	74.0	mg/L	7/26/2021	14:47
CCR-22B	21G0877-12	Water	Fluoride	1.37	mg/L	7/26/2021	14:47





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Report Printed: 8/9/2021

Work Order # 21G0877

Project: CCR Monitoring Program July 2021

McIntosh Plant

Lab ID: 21G0877-01 Client Sample ID: CCR-17A Matrix: Water
 Collection Date:
 07/26/21 08:45

 Received Date:
 07/27/21 09:30

 Collected By:
 Thomas Johnston

Laboratory Analysis Report

Parameter	Result	QC	Units	Dil	MDL	PQL	Method	Date Ext.	Date Analy.	Analyst

Total Recoverable Metals by EPA 200 Series Methods

Antimony	ND	U	ug/L	1	5.11	15.0	EPA 200.7/3010	07/27 11:40	07/27 14:06	IN
Arsenic	8.20	I	ug/L	1	2.21	10.0	EPA 200.7/3010	07/27 11:40	07/27 14:06	IN
Barium	4.70		ug/L	1	0.0728	1.00	EPA 200.7/3010	07/27 11:40	07/27 14:06	IN
Beryllium	ND	U	ug/L	1	0.101	1.00	EPA 200.7/3010	07/27 11:40	07/27 14:06	IN
Boron	162		ug/L	1	1.57	10.0	EPA 200.7/3010	07/27 11:40	07/27 14:06	IN
Cadmium	ND	U	ug/L	1	0.181	1.00	EPA 200.7/3010	07/27 11:40	07/27 14:06	IN
Calcium	267000		ug/L	10	57.9	500	EPA 200.7/3010	07/27 11:40	07/27 15:41	IN
Chromium	1.20	I	ug/L	1	0.339	5.00	EPA 200.7/3010	07/27 11:40	07/27 14:06	IN
Cobalt	ND	U	ug/L	1	0.361	1.00	EPA 200.7/3010	07/27 11:40	07/27 14:06	IN
Lead	ND	U	ug/L	1	1.19	10.0	EPA 200.7/3010	07/27 11:40	07/27 14:06	IN
Lithium	ND	U	ug/L	1	2.72	25.0	EPA 200.7/3010	07/29 11:30	07/29 14:43	MAZ
Magnesium	15300		ug/L	10	37.4	200	EPA 200.7/3010	07/27 11:40	07/27 15:41	IN
Mercury	ND	U	ug/L	1	0.120	1.00	EPA 245.1	07/27 11:40	07/28 16:19	EN
Molybdenum	4.90	I	ug/L	1	1.17	10.0	EPA 200.7/3010	07/27 11:40	07/27 14:06	IN
Potassium	33400		ug/L	1	17.3	50.0	EPA 200.7/3010	07/27 11:40	07/27 14:06	IN
Selenium	ND	U	ug/L	1	3.46	15.0	EPA 200.7/3010	07/27 11:40	07/27 14:06	IN
Sodium	48100		ug/L	1	446	2000	EPA 200.7/3010	07/27 11:40	07/27 14:06	IN
Thallium	ND	U	ug/L	1	0.925	4.00	EPA 200.7/3010	07/27 11:40	07/27 14:06	IN





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Report Printed: 8/9/2021

Work Order # 21G0877

Project: CCR Monitoring Program July 2021

McIntosh Plant

Lab ID: 21G0877-02 Client Sample ID: CCR-17B Matrix: Water Collection Date: 07/26/21 08:45
Received Date: 07/27/21 09:30
Collected By: Thomas Johnston

Laboratory Analysis Report

Parameter	Result	QC	Units	Dil	MDL	PQL	Method	Date Ext.	Date Analy.	Analyst
Wet Chemistry										
Total Alkalinity	238		mg/L	1	2.49	7.46	EPA 310.2	07/29 19:02	07/29 19:02	OC
Bicarbonate	238		mg/L	1	2.49	7.46	EPA 310.2	07/29 19:02	07/29 19:02	OC
Chloride	220		mg/L	5	0.630	2.50	EPA 300.0	07/27 13:59	07/27 16:11	OC
Fluoride	0.405		mg/L	5	0.0260	0.125	EPA 300.0	07/27 13:59	07/27 16:11	OC
Sulfate	282		mg/L	5	0.476	2.50	EPA 300.0	07/27 13:59	07/27 16:11	OC
Total Dissolved Solids	1320		mg/L	4	40.0	120	SM 2540C	07/27 16:56	07/28 15:01	MWO





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Report Printed: 8/9/2021

Work Order # 21G0877

Project: CCR Monitoring Program July 2021

Date Ext.

Date Analy.

Analyst

McIntosh Plant

Lab ID: 21G0877-03 Client Sample ID: CCR-18A Matrix: Water

Parameter

Result

QC

Units

Collection Date: 07/26/21 09:34
Received Date: 07/27/21 09:30
Collected By: Thomas Johnston

Method

Laboratory Analysis Report

MDL

PQL

Dil

Total Recoverable Metals b	oy EPA 200 Seri	es Metl	nods							
Antimony	ND	U	ug/L	1	5.11	15.0	EPA 200.7/3010	07/27 11:40	07/27 14:09	IN
Arsenic	ND	U	ug/L	1	2.21	10.0	EPA 200.7/3010	07/27 11:40	07/27 14:09	IN
Barium	1.30		ug/L	1	0.0728	1.00	EPA 200.7/3010	07/27 11:40	07/27 14:09	IN
Beryllium	ND	U	ug/L	1	0.101	1.00	EPA 200.7/3010	07/27 11:40	07/27 14:09	IN
Boron	43.7		ug/L	1	1.57	10.0	EPA 200.7/3010	07/27 11:40	07/27 14:09	IN
Cadmium	ND	U	ug/L	1	0.181	1.00	EPA 200.7/3010	07/27 11:40	07/27 14:09	IN
Calcium	66100		ug/L	1	5.79	50.0	EPA 200.7/3010	07/27 11:40	07/27 14:09	IN
Chromium	1.30	I	ug/L	1	0.339	5.00	EPA 200.7/3010	07/27 11:40	07/27 14:09	IN
Cobalt	ND	U	ug/L	1	0.361	1.00	EPA 200.7/3010	07/27 11:40	07/27 14:09	IN
Lead	ND	U	ug/L	1	1.19	10.0	EPA 200.7/3010	07/27 11:40	07/27 14:09	IN
Lithium	ND	U	ug/L	1	2.72	25.0	EPA 200.7/3010	07/29 11:30	07/29 14:45	MAZ
Magnesium	3260		ug/L	1	3.74	20.0	EPA 200.7/3010	07/27 11:40	07/27 14:09	IN
Mercury	ND	U	ug/L	1	0.120	1.00	EPA 245.1	07/27 11:40	07/28 16:19	EN
Molybdenum	4.40	I	ug/L	1	1.17	10.0	EPA 200.7/3010	07/27 11:40	07/27 14:09	IN
Potassium	2750		ug/L	1	17.3	50.0	EPA 200.7/3010	07/27 11:40	07/27 14:09	IN
Selenium	ND	U	ug/L	1	3.46	15.0	EPA 200.7/3010	07/27 11:40	07/27 14:09	IN
Sodium	1730	I	ug/L	1	446	2000	EPA 200.7/3010	07/27 11:40	07/27 14:09	IN
Thallium	ND	U	ug/L	1	0.925	4.00	EPA 200.7/3010	07/27 11:40	07/27 14:09	IN





Report To: Thomas Johnston Lakeland Electric - McIntosh 3030 East Lake Parker Drive Lakeland FL, 33805

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Report Printed: 8/9/2021

Work Order # 21G0877

Project: CCR Monitoring Program July 2021

McIntosh Plant

Lab ID: 21G0877-04 **Client Sample ID:** CCR-18B Matrix: Water

07/26/21 09:34 **Collection Date:** 07/27/21 09:30 **Received Date:** Collected By: Thomas Johnston

Laboratory Analysis Report

Parameter	Result	QC	Units	Dil	MDL	PQL	Method	Date Ext.	Date Analy.	Analyst
Wet Chemistry										
Total Alkalinity	141	J3	mg/L	1	2.49	7.46	EPA 310.2	07/29 19:02	07/29 19:02	OC
Bicarbonate	141		mg/L	1	2.49	7.46	EPA 310.2	07/29 19:02	07/29 19:02	OC
Chloride	2.83		mg/L	1	0.126	0.500	EPA 300.0	07/27 13:59	07/27 16:27	OC
Fluoride	0.322		mg/L	1	0.00520	0.0250	EPA 300.0	07/27 13:59	07/27 16:27	OC
Sulfate	31.4		mg/L	1	0.0953	0.500	EPA 300.0	07/27 13:59	07/27 16:27	OC
Total Dissolved Solids	238		mg/L	2	20.0	60.0	SM 2540C	07/27 16:56	07/28 15:01	MWO





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Report Printed: 8/9/2021

Work Order # 21G0877

Project: CCR Monitoring Program July 2021

McIntosh Plant

Lab ID: 21G0877-05
Client Sample ID: CCR-19A
Matrix: Water

Result

QC

Units

Parameter

Collection Date: 07/26/21 10:26

Received Date: 07/27/21 09:30

Method

PQL

Collected By: Thomas Johnston

Date Ext.

Date Analy.

Analyst

Laboratory Analysis Report

MDL

Dil

Total Recoverable Metals by I	EPA 200 Serie	es Metl	ıods							
Antimony	ND	U	ug/L	1	5.11	15.0	EPA 200.7/3010	07/27 11:40	07/27 14:12	IN
Arsenic	ND	U	ug/L	1	2.21	10.0	EPA 200.7/3010	07/27 11:40	07/27 14:12	IN
Barium	103		ug/L	1	0.0728	1.00	EPA 200.7/3010	07/27 11:40	07/27 14:12	IN
Beryllium	ND	U	ug/L	1	0.101	1.00	EPA 200.7/3010	07/27 11:40	07/27 14:12	IN
Boron	310		ug/L	1	1.57	10.0	EPA 200.7/3010	07/27 11:40	07/27 14:12	IN
Cadmium	ND	U	ug/L	1	0.181	1.00	EPA 200.7/3010	07/27 11:40	07/27 14:12	IN
Calcium	690000		ug/L	10	57.9	500	EPA 200.7/3010	07/27 11:40	07/27 15:10	IN
Chromium	1.40	I	ug/L	1	0.339	5.00	EPA 200.7/3010	07/27 11:40	07/27 14:12	IN
Cobalt	ND	U	ug/L	1	0.361	1.00	EPA 200.7/3010	07/27 11:40	07/27 14:12	IN
Lead	ND	U	ug/L	1	1.19	10.0	EPA 200.7/3010	07/27 11:40	07/27 14:12	IN
Lithium	ND	U	ug/L	1	2.72	25.0	EPA 200.7/3010	07/29 11:30	07/29 14:48	MAZ
Magnesium	50900		ug/L	10	37.4	200	EPA 200.7/3010	07/27 11:40	07/27 15:10	IN
Mercury	ND	U	ug/L	1	0.120	1.00	EPA 245.1	07/27 11:40	07/28 16:25	EN
Molybdenum	ND	U	ug/L	1	1.17	10.0	EPA 200.7/3010	07/27 11:40	07/27 14:12	IN
Potassium	239000		ug/L	10	173	500	EPA 200.7/3010	07/27 11:40	07/27 15:10	IN
Selenium	ND	U	ug/L	1	3.46	15.0	EPA 200.7/3010	07/27 11:40	07/27 14:12	IN
Sodium	239000		ug/L	10	4460	20000	EPA 200.7/3010	07/27 11:40	07/27 15:10	IN
Thallium	ND	U	ug/L	1	0.925	4.00	EPA 200.7/3010	07/27 11:40	07/27 14:12	IN





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Report Printed: 8/9/2021

Work Order # 21G0877

Project: CCR Monitoring Program July 2021

McIntosh Plant

Lab ID: 21G0877-06 **Client Sample ID:** CCR-19B Matrix: Water

07/26/21 10:26 **Collection Date:** 07/27/21 09:30 **Received Date:** Collected By: Thomas Johnston

Laboratory Analysis Report

Parameter	Result	QC	Units	Dil	MDL	PQL	Method	Date Ext.	Date Analy.	Analyst
Wet Chemistry										
Total Alkalinity	19.8		mg/L	1	2.49	7.46	EPA 310.2	07/29 19:02	07/29 19:02	OC
Bicarbonate	19.8		mg/L	1	2.49	7.46	EPA 310.2	07/29 19:02	07/29 19:02	OC
Chloride	1200		mg/L	25	3.15	12.5	EPA 300.0	07/27 20:54	07/28 01:46	OC
Fluoride	1.44		mg/L	5	0.0260	0.125	EPA 300.0	07/27 13:59	07/27 16:44	OC
Sulfate	1080		mg/L	25	2.38	12.5	EPA 300.0	07/27 20:54	07/28 01:46	OC
Total Dissolved Solids	4450		mg/L	4	40.0	120	SM 2540C	07/27 16:56	07/28 15:01	MWO





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PQL

Report Printed: 8/9/2021

Work Order # 21G0877

Project: CCR Monitoring Program July 2021

Date Ext.

Date Analy.

Analyst

McIntosh Plant

Lab ID: 21G0877-07 Client Sample ID: CCR-20A Matrix: Water

Parameter

Result

QC

Units

Collection Date: 07/26/21 11:28
Received Date: 07/27/21 09:30
Collected By: Thomas Johnston

Method

Laboratory Analysis Report

MDL

Dil

Total Recoverable Metals by	EPA 200 Seri	es Metl	nods							
Antimony	ND	U	ug/L	1	5.11	15.0	EPA 200.7/3010	07/27 11:40	07/27 14:38	IN
Arsenic	67.9		ug/L	1	2.21	10.0	EPA 200.7/3010	07/27 11:40	07/27 14:38	IN
Barium	66.8		ug/L	1	0.0728	1.00	EPA 200.7/3010	07/27 11:40	07/27 14:38	IN
Beryllium	ND	U	ug/L	1	0.101	1.00	EPA 200.7/3010	07/27 11:40	07/27 14:38	IN
Boron	548		ug/L	1	1.57	10.0	EPA 200.7/3010	07/27 11:40	07/27 14:38	IN
Cadmium	ND	U	ug/L	1	0.181	1.00	EPA 200.7/3010	07/27 11:40	07/27 14:38	IN
Calcium	575000		ug/L	10	57.9	500	EPA 200.7/3010	07/27 11:40	07/27 15:13	IN
Chromium	1.70	I	ug/L	1	0.339	5.00	EPA 200.7/3010	07/27 11:40	07/27 14:38	IN
Cobalt	ND	U	ug/L	1	0.361	1.00	EPA 200.7/3010	07/27 11:40	07/27 14:38	IN
Lead	ND	U	ug/L	1	1.19	10.0	EPA 200.7/3010	07/27 11:40	07/27 14:38	IN
Lithium	ND	U	ug/L	1	2.72	25.0	EPA 200.7/3010	07/29 11:30	07/29 14:51	MAZ
Magnesium	12400		ug/L	10	37.4	200	EPA 200.7/3010	07/27 11:40	07/27 15:13	IN
Mercury	ND	U	ug/L	1	0.120	1.00	EPA 245.1	07/27 11:40	07/28 16:28	EN
Molybdenum	1.70	I	ug/L	1	1.17	10.0	EPA 200.7/3010	07/27 11:40	07/27 14:38	IN
Potassium	316000		ug/L	10	173	500	EPA 200.7/3010	07/27 11:40	07/27 15:13	IN
Selenium	ND	U	ug/L	1	3.46	15.0	EPA 200.7/3010	07/27 11:40	07/27 14:38	IN
Sodium	246000		ug/L	10	4460	20000	EPA 200.7/3010	07/27 11:40	07/27 15:13	IN
Thallium	ND	U	ug/L	1	0.925	4.00	EPA 200.7/3010	07/27 11:40	07/27 14:38	IN





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Report Printed: 8/9/2021

Work Order # 21G0877

Project: CCR Monitoring Program July 2021

McIntosh Plant

Lab ID: 21G0877-08 **Client Sample ID:** CCR-20B Matrix: Water

07/26/21 11:28 **Collection Date: Received Date:** 07/27/21 09:30 Collected By: Thomas Johnston

Laboratory Analysis Report

Parameter	Result	QC	Units	Dil	MDL	PQL	Method	Date Ext.	Date Analy.	Analyst
Wet Chemistry										
Total Alkalinity	26.8		mg/L	1	2.49	7.46	EPA 310.2	07/29 19:02	07/29 19:02	OC
Bicarbonate	26.8		mg/L	1	2.49	7.46	EPA 310.2	07/29 19:02	07/29 19:02	OC
Chloride	555		mg/L	25	3.15	12.5	EPA 300.0	07/27 20:54	07/28 02:03	OC
Fluoride	0.520		mg/L	5	0.0260	0.125	EPA 300.0	07/27 13:59	07/27 17:00	OC
Sulfate	1650		mg/L	25	2.38	12.5	EPA 300.0	07/27 20:54	07/28 02:03	OC
Total Dissolved Solids	3280		mg/L	4	40.0	120	SM 2540C	07/27 16:56	07/29 15:30	MWO





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PQL

Report Printed: 8/9/2021

Work Order # 21G0877

Project: CCR Monitoring Program July 2021

Date Ext.

Date Analy.

Analyst

McIntosh Plant

Lab ID: 21G0877-09
Client Sample ID: CCR-21A
Matrix: Water

Parameter

Result

QC

Units

Collection Date: 07/26/21 13:47
Received Date: 07/27/21 09:30
Collected By: Thomas Johnston

Method

Laboratory Analysis Report

MDL

Dil

Total Recoverable Meta	als by EPA 200 Serio	es Metl	ıods							
Antimony	ND	U	ug/L	1	5.11	15.0	EPA 200.7/3010	07/27 11:40	07/27 14:40	IN
Arsenic	ND	U	ug/L	1	2.21	10.0	EPA 200.7/3010	07/27 11:40	07/27 14:40	IN
Barium	44.3		ug/L	1	0.0728	1.00	EPA 200.7/3010	07/27 11:40	07/27 14:40	IN
Beryllium	ND	U	ug/L	1	0.101	1.00	EPA 200.7/3010	07/27 11:40	07/27 14:40	IN
Boron	362		ug/L	1	1.57	10.0	EPA 200.7/3010	07/27 11:40	07/27 14:40	IN
Cadmium	ND	U	ug/L	1	0.181	1.00	EPA 200.7/3010	07/27 11:40	07/27 14:40	IN
Calcium	434000		ug/L	10	57.9	500	EPA 200.7/3010	07/27 11:40	07/27 15:44	IN
Chromium	0.700	I	ug/L	1	0.339	5.00	EPA 200.7/3010	07/27 11:40	07/27 14:40	IN
Cobalt	ND	U	ug/L	1	0.361	1.00	EPA 200.7/3010	07/27 11:40	07/27 14:40	IN
Lead	ND	U	ug/L	1	1.19	10.0	EPA 200.7/3010	07/27 11:40	07/27 14:40	IN
Lithium	ND	U	ug/L	1	2.72	25.0	EPA 200.7/3010	07/29 11:30	07/29 14:53	MAZ
Magnesium	14900		ug/L	10	37.4	200	EPA 200.7/3010	07/27 11:40	07/27 15:44	IN
Mercury	ND	U	ug/L	1	0.120	1.00	EPA 245.1	07/27 11:40	07/28 16:32	EN
Molybdenum	28.9		ug/L	1	1.17	10.0	EPA 200.7/3010	07/27 11:40	07/27 14:40	IN
Potassium	20600		ug/L	1	17.3	50.0	EPA 200.7/3010	07/27 11:40	07/27 14:40	IN
Selenium	ND	U	ug/L	1	3.46	15.0	EPA 200.7/3010	07/27 11:40	07/27 14:40	IN
Sodium	20300		ug/L	1	446	2000	EPA 200.7/3010	07/27 11:40	07/27 14:40	IN
Thallium	ND	U	ug/L	1	0.925	4.00	EPA 200.7/3010	07/27 11:40	07/27 14:40	IN





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Report Printed: 8/9/2021

Work Order # 21G0877

Project: CCR Monitoring Program July 2021

McIntosh Plant

Lab ID: 21G0877-10
Client Sample ID: CCR-21B
Matrix: Water

 Collection Date:
 07/26/21 13:47

 Received Date:
 07/27/21 09:30

 Collected By:
 Thomas Johnston

Laboratory Analysis Report

Parameter	Result	QC	Units	Dil	MDL	PQL	Method	Date Ext.	Date Analy.	Analyst
Wet Chemistry										
Total Alkalinity	273		mg/L	1	2.49	7.46	EPA 310.2	07/29 19:02	07/29 19:02	OC
Bicarbonate	273		mg/L	1	2.49	7.46	EPA 310.2	07/29 19:02	07/29 19:02	OC
Chloride	22.8		mg/L	2	0.252	1.00	EPA 300.0	07/27 13:59	07/27 17:17	OC
Fluoride	0.766		mg/L	2	0.0104	0.0500	EPA 300.0	07/27 13:59	07/27 17:17	OC
Sulfate	815		mg/L	10	0.953	5.00	EPA 300.0	07/27 20:54	07/28 02:21	OC
Total Dissalved Solids	1550		mg/I	4	1 40 0	120	SM 2540C	07/27 16:56	07/28 15:01	MWO





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Work Order # 21G0877

Project: CCR Monitoring Program July 2021

McIntosh Plant

Lab ID: 21G0877-11
Client Sample ID: CCR-22A
Matrix: Water

Result

QC

Units

Parameter

Collection Date: 0' **Received Date:** 0'

PQL

07/26/21 14:47 07/27/21 09:30

Date Ext.

Date Analy.

Analyst

Collected By: Thomas Johnston

Method

Laboratory Analysis Report

MDL

Dil

Total Dagayayahla Mat-l- b I	7DA 200 C	na Ma41	and o							
Total Recoverable Metals by I			ı	ı .			1	<u> </u>	I	
Antimony	ND	U	ug/L	1	5.11	15.0	EPA 200.7/3010	07/27 11:40	07/27 14:49	IN
Arsenic	ND	U	ug/L	1	2.21	10.0	EPA 200.7/3010	07/27 11:40	07/27 14:49	IN
Barium	27.3		ug/L	1	0.0728	1.00	EPA 200.7/3010	07/27 11:40	07/27 14:49	IN
Beryllium	ND	U	ug/L	1	0.101	1.00	EPA 200.7/3010	07/27 11:40	07/27 14:49	IN
Boron	460		ug/L	1	1.57	10.0	EPA 200.7/3010	07/27 11:40	07/27 14:49	IN
Cadmium	ND	U	ug/L	1	0.181	1.00	EPA 200.7/3010	07/27 11:40	07/27 14:49	IN
Calcium	365000		ug/L	10	57.9	500	EPA 200.7/3010	07/27 11:40	07/27 16:42	IN
Chromium	1.80	I	ug/L	1	0.339	5.00	EPA 200.7/3010	07/27 11:40	07/27 14:49	IN
Cobalt	ND	U	ug/L	1	0.361	1.00	EPA 200.7/3010	07/27 11:40	07/27 14:49	IN
Lead	ND	U	ug/L	1	1.19	10.0	EPA 200.7/3010	07/27 11:40	07/27 14:49	IN
Lithium	81.1		ug/L	1	2.72	25.0	EPA 200.7/3010	07/29 11:30	07/29 15:29	MAZ
Magnesium	16000		ug/L	10	37.4	200	EPA 200.7/3010	07/27 11:40	07/27 16:42	IN
Mercury	ND	U	ug/L	1	0.120	1.00	EPA 245.1	07/27 11:40	07/28 16:35	EN
Molybdenum	ND	U	ug/L	1	1.17	10.0	EPA 200.7/3010	07/27 11:40	07/27 14:49	IN
Potassium	103000		ug/L	10	173	500	EPA 200.7/3010	07/27 11:40	07/27 16:42	IN
Selenium	ND	U	ug/L	1	3.46	15.0	EPA 200.7/3010	07/27 11:40	07/27 14:49	IN
Sodium	37200		ug/L	1	446	2000	EPA 200.7/3010	07/27 11:40	07/27 14:49	IN
Thallium	ND	U	ug/L	1	0.925	4.00	EPA 200.7/3010	07/27 11:40	07/27 14:49	IN





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Work Order # 21G0877

Project: CCR Monitoring Program July 2021

Date Ext.

Date Analy.

Analyst

McIntosh Plant

Lab ID: 21G0877-12
Client Sample ID: CCR-22B
Matrix: Water

Parameter

Result

QC

Units

 Collection Date:
 07/26/21 14:47

 Received Date:
 07/27/21 09:30

 Collected By:
 Thomas Johnston

Method

PQL

Laboratory Analysis Report

MDL

Dil

Wet Chemistry									
Total Alkalinity	16.0	mg/L	1	2.49	7.46	EPA 310.2	07/29 19:02	07/29 19:02	OC
Bicarbonate	16.0	mg/L	1	2.49	7.46	EPA 310.2	07/29 19:02	07/29 19:02	OC
Chloride	74.0	mg/L	2	0.252	1.00	EPA 300.0	07/27 13:59	07/27 17:33	OC
Fluoride	1.37	mg/L	2	0.0104	0.0500	EPA 300.0	07/27 13:59	07/27 17:33	OC
Sulfate	1090	mg/L	10	0.953	5.00	EPA 300.0	07/27 20:54	07/28 02:38	OC
Total Dissolved Solids	1740	mg/L	4	40.0	120	SM 2540C	07/27 16:56	07/28 15:01	MWO





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Report Printed: 8/9/2021

Work Order # 21G0877

Project: CCR Monitoring Program July 2021

McIntosh Plant

		Wet Chemi	stry - Q	uality Con	itrol					
		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 21G0772 - Default Prep GenChem										
Blank (21G0772-BLK1)				Prepared: (07/27/2021	Analyzed:	07/28/2021			
Total Dissolved Solids	ND	30.0	mg/L							U
LCS (21G0772-BS1)				Prepared: (07/27/2021	Analyzed:	07/28/2021			
Total Dissolved Solids	480	120	mg/L	500.0		96.0	80-120			
Duplicate (21G0772-DUP1)	Sou	rce: 21G0804-	-02	Prepared: (07/27/2021	Analyzed:	07/28/2021			
Total Dissolved Solids	208	60.0	mg/L		210			0.957	20	
Duplicate (21G0772-DUP2)	Sou	rce: 21G0804-	-04	Prepared: (07/27/2021	Analyzed:	07/28/2021			
Total Dissolved Solids	324	60.0	mg/L		326			0.615	20	
Batch 21G0794 - Default Prep GenChem										
Blank (21G0794-BLK1)				Prepared &	Analyzed:	07/27/202	1			
Fluoride	ND	0.0250	mg/L							U
Sulfate	ND	0.500	"							U
Chloride	ND	0.500	"							U
LCS (21G0794-BS1)				Prepared &	Analyzed:	07/27/202	1			
Fluoride	2.55	0.0250	mg/L	2.500		102	90-110			
Chloride	49.6	0.500	"	50.00		99	90-110			
Sulfate	50.1	0.500	"	50.00		100	90-110			
Duplicate (21G0794-DUP1)	Sou	rce: 21G0887-	-01	Prepared: (07/27/2021	Analyzed:	07/28/2021			
Fluoride	0.114	0.0250	mg/L		0.103			10	20	
Chloride	2.60	0.500	"		2.51			4	20	
Sulfate	1.96	0.500	"		1.89			3.64	20	





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Report Printed: 8/9/2021

Work Order # 21G0877

Project: CCR Monitoring Program July 2021

McIntosh Plant

	,	Wet Chemis	stry - Q	uality Con	trol					
Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 21G0794 - Default Prep GenChem										
Matrix Spike (21G0794-MS1)	Sou	rce: 21G0887-	01	Prepared: 0	7/27/2021 .	Analyzed: (07/28/2021			
Fluoride	2.30	0.0250	mg/L	2.500	0.103	88	90-110			Ј3
Chloride	53.4	0.500	"	50.00	2.51	102	90-110			
Sulfate	53.2	0.500	"	50.00	1.89	103	90-110			
Matrix Spike (21G0794-MS2)	Sou	rce: 21G0865-	02	Prepared: 0	7/27/2021	Analyzed: (07/28/2021			
Fluoride	4.78	0.0500	mg/L	5.000	0.324	89	90-110			Ј3
Chloride	131	1.00	"	100.0	28.4	102	90-110			
Sulfate	150	1.00	"	100.0	43.8	106	90-110			
Batch 21G0802 - Default Prep GenChem										
Blank (21G0802-BLK1)				Prepared &	Analyzed:	07/27/2021	1			
Chloride	ND	0.500	mg/L							U
Sulfate	ND	0.500	"							U
LCS (21G0802-BS1)				Prepared &	Analyzed:	07/27/2021	1			
Chloride	50.3	0.500	mg/L	50.00		101	90-110			
Sulfate	50.1	0.500	"	50.00		100	90-110			
Duplicate (21G0802-DUP1)	Sou	rce: 21G0921-	01	Prepared: 0	7/27/2021	Analyzed: (07/28/2021			
Sulfate	3.77	0.500	mg/L		3.77			0.00	20	
Chloride	8.01	0.500	"		8.01			0	20	
Matrix Spike (21G0802-MS1)	Sou	rce: 21G0921-	01	Prepared: 0	7/27/2021	Analyzed: (07/28/2021			
Sulfate	54.6	0.500	mg/L	50.00	3.77	102	90-110			
Chloride	58.3	0.500	"	50.00	8.01	101	90-110			





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Report Printed: 8/9/2021

Work Order # 21G0877

Project: CCR Monitoring Program July 2021

McIntosh Plant

	V	Vet Chemi	stry - Q	uality Con	itrol					
Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 21G0802 - Default Prep GenChem	resur	Diffic	Omts	Lever	Result	7 UNCE C	Diffing	Rib	Diffit	TYOTOS
Matrix Spike (21G0802-MS2)	Sour	ce: 21G0922-	-04	Prepared: (07/27/2021	Analyzed: (07/28/2021			
Sulfate	302	2.50	mg/L	250.0	44.0	103	90-110			
Chloride	294	2.50	"	250.0	37.7	103	90-110			
Batch 21G0842 - Default Prep GenChem										
Blank (21G0842-BLK1)				Prepared &	Analyzed:	07/29/202	1			
Total Alkalinity	ND	7.46	mg/L							U
LCS (21G0842-BS1)				Prepared &	Analyzed:	07/29/202	1			
Total Alkalinity	257	7.46	mg/L	250.0		103	90-110			
Duplicate (21G0842-DUP1)	Sour	ce: 21G0877-	-04	Prepared &	Analyzed:	07/29/202	1			
Total Alkalinity	140	7.46	mg/L		141			0.7	20	
Matrix Spike (21G0842-MS1)	Sour	ce: 21G0877-	-04	Prepared &	z Analyzed:	07/29/202	1			
Total Alkalinity	298	7.46	mg/L	250.0	141	63	90-110			Ј3
Matrix Spike (21G0842-MS2)	Sour	ce: 21G0982-	-02	Prepared &	Analyzed:	07/29/202	1			
Total Alkalinity	283	7.46	mg/L	250.0	155	51	90-110			Ј3





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Report Printed: 8/9/2021

Work Order # 21G0877

Project: CCR Monitoring Program July 2021

McIntosh Plant

To	tal Recoverable 1	Metals by E	PA 200	Series Me	thods - Q	uality Co	ontrol			
Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 21G0095 - EPA 3010A										
Blank (21G0095-BLK1)				Prepared &	k Analyzed:	07/27/2021				
Boron	ND	10.0	ug/L	•	•					U
Cadmium	ND	1.00	"							U
Calcium	ND	50.0	"							U
Beryllium	ND	1.00	"							U
- Barium	ND	1.00	"							U
Antimony	ND	15.0	"							U
Arsenic	ND	10.0	"							U
Sodium	ND	2000	"							U
Selenium	ND	15.0	"							U
Thallium	ND	4.00	"							U
Molybdenum	ND	10.0	"							U
Lead	ND	10.0	"							U
Chromium	ND	5.00	"							U
Cobalt	ND	1.00	"							U
Magnesium	ND	20.0	"							U
Potassium	ND	50.0	"							U
LCS (21G0095-BS1)				Prepared &	k Analyzed:	07/27/2021				
Boron	516.2	10.0	ug/L	500.0		103	85-115			
Cadmium	524.4	1.00	"	500.0		105	85-115			
Beryllium	529.1	1.00	"	500.0		106	85-115			
Barium	499.9	1.00	"	500.0		100	85-115			
Arsenic	536	10.0	"	500.0		107	85-115			
Antimony	569.1	15.0	"	500.0		114	85-115			
Calcium	27600	50.0	"	25500		108	85-115			
Sodium	25400	2000	"	25500		99.6	85-115			
Cobalt	506.6	1.00	"	500.0		101	85-115			
Molybdenum	541.1	10.0	"	500.0		108	85-115			
Selenium	558.6	15.0	"	500.0		112	85-115			
Thallium	504.3	4.00	"	500.0		101	85-115			
Chromium	517.1	5.00	"	500.0		103	85-115			
Potassium	24800	50.0	"	25500		97.4	85-115			

Florida-Spectrum Environmental Services, Inc. 1460 W. McNab Road, Fort Lauderdale, FL 33309

Pembroke Laboratory 528 Gooch Rd. Fort Mead, FL 33841 Big Lake Laboratory 610 Parrot Ave. N. Okeechobee, FL 34972 Lakeland Laboratory 111 Easton Dr. Lakeland, FL 33803





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Project: CCR Monitoring Program July 2021

McIntosh Plant

Tota	l Recoverable N	Metals by E	PA 200	Series Met	thods - Q	uality Co	ontrol			
		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 21G0095 - EPA 3010A										
LCS (21G0095-BS1)				Prepared &	z Analyzed:	07/27/2021	[
Lead	509	10.0	ug/L	500.0		102	85-115			
Magnesium	499	20.0	"	500.0		99.8	85-115			
Matrix Spike (21G0095-MS1)	Sour	rce: 21G0865-	05	Prepared &	z Analyzed:	07/27/2021	[
Beryllium	514.4	1.00	ug/L	500.0	ND	103	70-130			
Boron	504.3	10.0	"	500.0	ND	101	70-130			
Cadmium	508.7	1.00	"	500.0	ND	102	70-130			
Antimony	384.2	15.0	"	500.0	ND	76.8	70-130			
Barium	480.6	1.00	"	500.0	ND	96.1	70-130			
Arsenic	523	10.0	"	500.0	ND	105	70-130			
Potassium	23800	50.0	"	25500	ND	93.2	70-130			
Calcium	26700	50.0	"	25500	47.7	105	70-130			
Magnesium	483	20.0	"	500.0	ND	96.6	70-130			
Selenium	572.6	15.0	"	500.0	ND	115	70-130			
Sodium	24700	2000	"	25500	ND	96.8	70-130			
Chromium	495.9	5.00	"	500.0	ND	99.2	70-130			
Гhallium	489.4	4.00	"	500.0	ND	97.9	70-130			
Cobalt	491.7	1.00	"	500.0	ND	98.3	70-130			
Lead	487	10.0	"	500.0	ND	97.4	70-130			
Molybdenum	453.3	10.0	"	500.0	ND	90.7	70-130			
Matrix Spike Dup (21G0095-MSD1)	Sour	rce: 21G0865-	05	Prepared &	z Analyzed:	07/27/2021	<u> </u>			
Beryllium	514.2	1.00	ug/L	500.0	ND	103	70-130	0.0389	20	
Boron	505.4	10.0	"	500.0	ND	101	70-130	0.218	20	
Cadmium	509.1	1.00	"	500.0	ND	102	70-130	0.0786	20	
Barium	480.6	1.00	"	500.0	ND	96.1	70-130	0.00	20	
Arsenic	526	10.0	"	500.0	ND	105	70-130	0.705	20	
Antimony	428.5	15.0	"	500.0	ND	85.7	70-130	10.9	20	
Cobalt	491.8	1.00	"	500.0	ND	98.4	70-130	0.0203	20	
Selenium	578.9	15.0	"	500.0	ND	116	70-130	1.09	20	
Thallium Thallium	491.0	4.00	"	500.0	ND	98.2	70-130	0.326	20	
Magnesium	481	20.0	"	500.0	ND	96.2	70-130	0.394	20	

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Project: CCR Monitoring Program July 2021

McIntosh Plant

Total	Recoverable l	Metals by E	PA 200	Series Met	thods - Q	uality Co	ontrol			
Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 21G0095 - EPA 3010A										
Matrix Spike Dup (21G0095-MSD1)	Sou	rce: 21G0865-	05	Prepared &	Analyzed:	07/27/202	1			
Potassium	23700	50.0	ug/L	25500	ND	93.1	70-130	0.0404	20	
Sodium	24700	2000	"	25500	ND	96.7	70-130	0.0515	20	
Calcium	26700	50.0	"	25500	47.7	104	70-130	0.0544	20	
Chromium	497.8	5.00	"	500.0	ND	99.6	70-130	0.382	20	
Lead	485	10.0	"	500.0	ND	97.0	70-130	0.411	20	
Molybdenum	471.0	10.0	"	500.0	ND	94.2	70-130	3.83	20	
Batch 21G0098 - EPA 245.1/245.2 Prep Blank (21G0098-BLK1)				Prepared: (07/27/2021	Analyzed: (07/28/2021			
Mercury	ND	1.00	ug/L							U
LCS (21G0098-BS1)				Prepared: (07/27/2021	Analyzed: (07/28/2021			
Mercury	10.2	1.00	ug/L	10.00		102	85-115			
Matrix Spike (21G0098-MS1)	Sou	rce: 21G0804-	05	Prepared: (07/27/2021	Analyzed: (07/28/2021			
Mercury	9.27	1.00	ug/L	10.00	ND	93	70-130			
Matrix Spike Dup (21G0098-MSD1)	Sou	rce: 21G0804-	05	Prepared: (07/27/2021	Analyzed: (07/28/2021			
Mercury	9.22	1.00	ug/L	10.00	ND	92	70-130	0.6	20	
Batch 21G0102 - EPA 3010A										
Blank (21G0102-BLK1)				Prepared &	Analyzed:	07/29/202	1			
Lithium	ND	25.0	ug/L							U





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Project: CCR Monitoring Program July 2021

McIntosh Plant

Total I	Recoverable M	etals by E	PA 200	Series Met	thods - Q	uality Co	ontrol			
Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 21G0102 - EPA 3010A										
LCS (21G0102-BS1)				Prepared &	Analyzed:	07/29/2021				
Lithium	2210	25.0	ug/L	2500		88	85-115			
Matrix Spike (21G0102-MS1)	Sourc	e: 21G0877-	09	Prepared &	Analyzed:	07/29/2021	l			
Lithium	2210	25.0	ug/L	2500	ND	88	75-125			
Matrix Spike Dup (21G0102-MSD1)	Sourc	e: 21G0877-	09	Prepared &	: Analyzed:	07/29/2021	l			
Lithium	2160	25.0	ug/L	2500	ND	87	75-125	2	20	





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McIntosh Plant

Notes and Definitions

U Indicated that the compound was analyzed for but not detected. This shall be used to indicate that the specific component was not

detected. The value associated with the qualifier shall be the laboratory method detection limit.

J3 The matrix spike recovery outside method acceptance limits indicating matrix interference.

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the detection limit

NR Not Reported

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference

N.O.O. No Odor Observed

REP Field parameter measured by client

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

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

Z Too many colonies were present for accurate counting.

SUB Work performed by outside (subcontracted) labs denoted by SUB in analyst field.

QC=Qualifier Codes as defined by DEP 62-160 Unless indicated, soil results are reported on actual (wet) weight basis. The Color SM2120B method is reported as (Color / pH) Legionella analyzed under CDC acreditation program Dilution factors \geq = 1000 are abreviated using k=1000 and M=1000000 Field parameters are not NELAP acredited. Results relate only to this sample.

Suresh (Bobby) Supan - CSM

Authorized CSM Signature (954) 978-6400 Florida-Spectrum Environmental Services,Inc. Certification# E86006

All NELAP certified analysis are performed in accordance with Chapter 64E-1 Florida Administrative code, which has been determined to be equivalent to NELAC standards. Analysis certified by programs other than NELAP are designated with a "~".

DUE DATE Requested	8-2233 83-1544 RUSH RESERVATION #		6-4389 Rush Surcharges apply	L 33805			Email: Thomas.Johnston@lakelandelectric.com		MM.	equired Field Tests	L L	Suite MA-T,dri M M M V	GG Bitana		×		×		×			S 07-18-19	× /df:th	SAMPLE CUSTODY AND TRANSFER SIGNATURES DATE / TIME	in Sinhali	25 1/2 1/2 1/20			X	the 7/24/2 430	COC Page 1 of
CUSTODY RECORD	Tel: (954) 978-6400 . Fax: (954) 978-2233 Tel: (863) 763-3336 Fax: (863) 763-1544		Tel: (863) 686-4271 Fax (863) 686-4389	3030 East Lake Parker Drive, Lakeland FL 33805	501 East Lemon Street. Lakeland FL, 33801	sh Plant	7777	1 110	Mu. In	Analysis Required		fetals endix IV Calletals Calletals fetals fetals	App 1	×	×	x x x	×	x x x	×	x x x	×	×	×		Relinquished by:	Received by: (MAA (Relinquished by:	Received by:	Relinquished by: / Poll	Received by:	www.flenviro.com
CHAIN OF				Report to Address: 3030	0		Fax:	Sampler		Bottle & Number of Press Containers	Received &	Codes NELAC Letter Letter Suffixed # endix		HT.	ы	HI	- A1	-	1 =	.). 크	၂	+1	- Ol	Total	1	(additional charge) 1	tiV.	cacid P-H,PO4 S-H ₂ SO ₄ T-Na.S-O-H ₂ O		77	Hex- Hex.Cr. Buffer
	1460 W McNab Road Ft Lauderdale FL 33309 1112 NW Park Street, Okeechobee, FL 34972	630 Indian Street Savannah, GA 31401 528 Gooch Road Fort Meade FL 33841	1910 Harden Blvd # 101, Lakeland, FL 33803		Purchase Order # 287348		Phone: 954-802-9143			Time Ma	GW SED	S EFF HW BIO	, ,	021 0845 GW	021 0845 GW	1021 0934 GW	1021 OG341 GW	021 1026 GW	1026	.021 1/28 GW			·			Yes No	Bottle Type Pr	A-Ascorbic acid outle C-HCL O-175m1	Amber lor Air Ban	NEW SIGNATURE OF STREET	Hex- Hex.Cr. Buffer
Florida	Spectrum Environmental Services, Inc.	Doc. Cut:0401117-001	7048E	ric	ric	CCR Monitoring Program July 2021		1	Johnston	Sample Date Sampled	<u> </u>			CCR-17A 7/26/2021	CCR-17B 7/26/2021	CCR-18A 7/26/2021	CCR-18B 7/26/2021	CCR-19A 7/26/2021	CCR-19B 7/26/2021	CCR-20A 7/26/2021	CCR-20B 7/26/2021	CCR-21A 7/26/2021	CCR-21B 7/26/2021	- RUSH	_	C COA/QC Report Needed?		A- liter amber B-Bacteria bag/bottle	L-liter bottle S Soil in-	ONO T-250 ml	hr W-wide mouth
SUBMISSION #	210087	Logged into		Report to: Lakeland Electric	Invoice to: Lakeland Electric	Project Name and/or Number CCR Mon	tt.	Thomas Johr	(printed) Nowes	ORDER#	Lab Control Number	Shaded Areas For Laboratory Use Only		7 0	2 B	ž	₽ <i>G</i>	s 56	ŝ	£	*	\$	0,	Special Comments:	"I waive NELAC protocol" (sign here) >	Deliverables, COSE	3	· g F	Classy Seals? Y N	CON-1	Se of the Pick up

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	Fax: (954) 978-2233	Fax: (863) 763-1544	Fax (912) 234-4815 Fax (863) 285-7030	Fax (863) 686-4389	3030 East Lake Parker Drive. Lakeland FL, 33805	10	100		K	Required		SQT, AOS,											CHSTONY AND TRANSFER SIGNABIRES	1					7	
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CUSTODY RECORD					rker D	e I too	201, 1.4		\	A		Metals						<u> </u>		<u> </u>				d by:		d by:	ļ.,	d by:	07	nvir.
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CHA	iderdale	hobee,	GA 31401 FL 33841	keland,						Bottle & Press	Combo	Code													charge,	itiv		, p -	7 7	3uffer Diamin
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	ıb Road	Street	eet Sav. ad Fort	3lvd # 1		84	2	43		Matrix	GW SED	S EFF HW BIO SA OIL X	βğ	GW	GW	GW.									(ada	-	A-Ascorbic C-HCL	CII-CIISO H-HNO3 M-MCAB	N-NaOH	Hex- H EDA-E
,	1460 W McNab Road Ft Lauderdale FL 33309	1112 NW Park Street, Okeechobee, FL 34972	528 Gooch Road Fort Meade FL	1910 Harden Blvd # 101, Lakeland, FL 33803		Purchase Order # 287348		Phone: 954-802-9143		Time Sampled			1/2	17	.,			,	11.	:	,			3.4	N _o			3734GCGCSCH0025W6s	91)	-
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叠	SPECITUM Environmental Services, Inc.						2021		301	Date S			7/26/	7/26	7/26/	7/26									QA/QC Report Needed?	Bott	g/b			outh
Florida			117-001	3			ylul m																		Repo		A- liter amber B-Bacteria bag r 700 .	r-300 mi L-liter bottle S-Soil iar	T-250 ml	W-wide mouth X-other
	A E	l	Chico401	Date: 12/6/17			Progra		Lo mes	Sample	3		CCR-22A	CCR-22B	CCR-23A	CCR-23B							\bigcirc	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	Q4/Q(<u>B.B.</u>	<u> </u>	986699	××
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Site Name:	McIntosh Power P	lant				Site Location:		Lakeland, FL			
Well No:	CCR-1			Sample ID:	1010101-01	-		Date:	112	5/21	
Well No.					PURGIN	G DATA	77.5				7.75
Well Diameter		Tubing D	iameter		Well Scre	en Interval		Static depth to	water >	Purge pump	type
(inches)	2	(inches)	3/8	Depth:	15.7	to	25.2	(feet):	11-41	PP	
Well Volum		total well depth		static depth to water			well capacity (gal/ft)		u.		
C	ne well volume =		-			Х		=	0	gal	
Equipment Purge:	Volume	pump vol (gal)		flow cell volume (gal)		tubing length (ft)		Tubing capacity			
1 equ	ipment volume =	0.06	+	0.101	gal +	25.71	x	0.006	=	0.31526	gal
Initial pump or	tubing		Final pump	_		Purging Initia	ated 925	Purging		Total Volume	
De	epth in well (feet):	20.45	Depth	in well (feet):	20.4	at:	0917	Ended at:	0935	Purged (gallons):	1.49
Time (Military)	Vol. Purged (gal)	Cumul. Vol. Purged (gals)	Purge Rate (gpm)	Depth to Water (ft)	Temp ° C	Cond. (µS/cm)	pH (SU)	Color by observation	po mg/i/or %	Turbidity (NTUs)	Sheen by observation
0997	,83	.83	.083	11.39	24.7	206.5	631	clan	6.79	426	Neve
0931	.33	116	.083	11.39	247	205.8	6.31	Clan	B.6.78	382	None
0935	,33	149	.085	11,40	247	2026	6.30	Clean	6.75	2.95	ALIAN
Tubing inside Di	allons per Foot): (a. Capacity (Gal./Ft.) MENT CODES: B=B		6: 3/16" = 0.0	0014: 1/4" = 1 Electric Submer	0.0026: 5/10 sible Pump, Pl SAMPLIN	P=peristaltic Pun	" = 0.006: 1/2"	= 0.010: 5/8" =	= 5.88 0.016		
Tubing inside Di	a. Capacity (Gal./Ft.) MENT CODES: B=B	: 1/8" = 0.0000	6: 3/16" = 0.0	0014: 1/4" = 1 Electric Submer	0.0026: 5/10 sible Pump, Pl SAMPLIN mature(s):	6" = 0.004: 3/8" P=peristaltic Pun	" = 0.006: 1/2"	= 0.010: 5/8" =	0.016	Sampling	
Tubing inside Di PURGING EQUIP Sampled By (Pri	a. Capacity (Gal./Ft.) MENT CODES: B=B nt) Affiliation:	: 1/8" = 0.0000 aller, BP=Bladd	6: 3/16* = 0.0 ler Pump ESP=	0014: 1/4" = 1 Electric Submer	0.0026: 5/10 sible Pump, Pl SAMPLIN mature(s):	6" = 0.004: 3/8" P=peristaltic Pun	" = 0.006: 1/2"	= 0.010: 5/8" = ecify)		Sampling Ended at:	0938
Tubing inside Di PURGING EQUIP Sampled By (Pri	a. Capacity (Gal./Ft.) MENT CODES: B=B	: 1/8" = 0.0000 aller, BP=Bladd	3: 3/16" = 0.0	0014: 1/4" = 1 Electric Submer	0.0026: 5/10 sible Pump, Pl SAMPLIN mature(s):	6" = 0.004: 3/8" P=peristaltic Pun	= 0.006: 1/2** np O=other(sp	= 0.010: 5/8" = ecify) Sampling Initiated at:	0.016	-	0938 _um
Tubing inside Di. PURGING EQUIP Sampled By (Pri	a. Capacity (Gal./Ft.) MENT CODES: B=B nt) Affiliation:	: 1/8" = 0.0000 aller, BP=Bladd th in well (feet):	5: 3/16" = 0.0	0014: 1/4" = Electric Submer	0.0026: 5/10 sible Pump, Pl SAMPLIN mature(s):	6" = 0.004: 3/8' P=perIstaltic Pun IG DATA	= 0.006: 1/2** np O=other(sp	= 0.010: 5/8" = ecify) Sampling Initiated at: ed: Y (N)	0.016	Ended at:	
Tubing inside Di. PURGING EQUIP Sampled By (Pri	a. Capacity (Gal./Ft.) MENT CODES: B=B nt) Affiliation: 'ump or Tubing Depriced Decontamination Sample Container S	th in well (feet):	3: 3/16" = 0.4	0014: 1/4" = Electric Submer	0.0026: 5/11 sible Pump, Pl SAMPLIN mature(s): d Code Tuble Sample P	3" = 0.004: 3/8" P=peristaltic Pun IG DATA P=	= 0.006: 1/2" np O=other(sp Field-Filtere Filtration E	= 0.010: 5/8" = ecify) Sampling Initiated at: ed: Y (N)	0.016	Filter Size:	um (N) pump rate minute)
Tubing inside Dipure in Purished By (Print Bank) Sampled By (Print Bank) P Financial Sample I.D. Code	a. Capacity (Gal./Ft.) MENT CODES: B=B nt) Affiliation: LAMA ump or Tubing Depticated Decontamination Sample Containers # Containers	th in well (feet):	3: 3/16" = 0.1	0014: 1/4" = Electric Submer	0.0026: 5/11 sible Pump, Pl SAMPLIN mature(s): d Code Tuble Sample P	P= 0.004: 3/8* P=perIstaltic Pun IG DATA PE PE PE PE P P P P P P P P P P P P P	" = 0.006: 1/2" np O=other(sp Field-Filtere Filtration Editor	= 0.010: 5/8" = ecify) Sampling Initiated at: ed: Y (N) quipment type Intended Analysis and/or	0.016 OF35 Dup Sampling Equipment	Filter Size:_ silicate: Y (um (N) - pump rate minute)
Tubing inside Di. PURGING EQUIP Sampled By (Prin P Fi Sample I.D. Code 1010101-01A	a. Capacity (Gal./Ft.) MENT CODES: B=B nt) Affiliation: ump or Tubing Depticed Decontamination Sample Container: # Containers	th in well (feet): "" Y (N) Material Code	3: 3/16" = 0.4	DO14: 1/4" = 1 Electric Submer Sampler(s) Sig	0.0026: 5/11 sible Pump, Pl SAMPLIN mature(s): d Code Tubir Sample P	P= 0.004: 3/8* P=perIstaltic Pun IG DATA P= (Y) N (Preservation Added in Field mL)	= 0.006: 1/2" np O=other(sp Field-Filterr Filtration E- replaced)	= 0.010: 5/8" = ecify) Sampling Initiated at: ed: Y (N) quipment Type Intended Analysis and/or Method	O.016 O.016 Dup Sampling Equipment Code	Filter Size:	um (N) - pump rate minute)
Tubing inside Dipurging Equip Sampled By (Print Report Print Report P	a. Capacity (Gal./Ft.) MENT CODES: B=B nt) Affiliation: LAMA ump or Tubing Deptication ield Decontamination Sample Container: # Containers 1	th in well (feet): N Specification Material Code PP	20 . Volume 500 ml 250mL	DO14: 1/4" = Electric Submer Sampler(s) Signature Tubing Material Preserv. Used ICE HNO3	0.0026: 5/11 sible Pump, Pl SAMPLIN mature(s): I Code Tuble Sample P Total Volume None	P= 0.004: 3/8' P=perIstaltic Pun IG DATA P=	Field-Filterer Filtration Erreplaced) Final pH NA	= 0.010: 5/8" = ecify) Sampling Initiated at: ed: Y (N) quipment type Intended Analysis and/or Method TDS, CI Metal Inhouse	O.016 O.016 Dup Sampling Equipment Code RFPP RFPP	Filter Size:	um (N) - pump rate minute)
Tubing inside Dipurging Equipolar Sampled By (Pring Pring Pr	a. Capacity (Gal./Ft.) MENT CODES: B=B at) Affiliation: ump or Tubing Depticed Decontamination sample Containers # Containers 1 1	th in well (feet): Naterial Code PP PP	20 . Volume 500 ml 250mL	Tubing Materia Preserv. Used ICE HNO3 HNO3	0.0026: 5/11 sible Pump, Pl SAMPLIN mature(s): d Code Tuble Sample P Total Volume (i) None None	P= 0.004: 3/8* P=peristaltic Pun IG DATA P= (Y) N (Preservation Added in Field mL) None None	Field-Filters Filtration E replaced) Final pH NA NA	= 0.010: 5/8" = ecify) Sampling Initiated at: ed: Y (N) quipment Type Intended Analysis and/or Method TDS, CI	O.016 O.016 Dup Sampling Equipment Code RFPP	Filter Size:	um (N) pulmp rate minute)
Tubing inside Dipurging Equip Sampled By (Print Report Print Report P	a. Capacity (Gal./Ft.) MENT CODES: B=B nt) Affiliation: LAMA ump or Tubing Deptication ield Decontamination Sample Container: # Containers 1	th in well (feet): N Specification Material Code PP	20 . Volume 500 ml 250mL	DO14: 1/4" = Electric Submer Sampler(s) Signature Tubing Material Preserv. Used ICE HNO3	0.0026: 5/11 sible Pump, Pl SAMPLIN mature(s): I Code Tuble Sample P Total Volume None	P= 0.004: 3/8' P=perIstaltic Pun IG DATA P=	Field-Filterer Filtration Erreplaced) Final pH NA	= 0.010: 5/8" = ecify) Sampling Initiated at: ed: Y (N) quipment Type Intended Analysis and/or Method TDS, CI Metal Inhouse Metals II +	O935 Dup Sampling Equipment Code RFPP RFPP	Filter Size:	um (N) pump rate milinute) 3785

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

Sampling EQUIPMENT CODES: APP= After (Through) Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Peristaltic Pump; SM=Straw Method(tubing Gravity Drain); O=Other (Specify)

^{2.} Stabilization Criteria for Range of Variation of Last Three Consecutive Readings (See FS 2212, section 3):

pH = +/- 0.2; Temperature = +/- 0.2°; Specific Conductance = +/- 5%, Dissolved Oxygen = ≤20% saturation(see Table FS 2200-2): optionally, +/-0.2 mg/L or 10% (whichever is greater). Turbidity: all readings ≤20 NTU: optionally +/- 5 NTU or +/- 10 % (whichever is greater)

Olda Name:	McIntosh Power P			FD 9000-2	,	Site Location:		Lakeland, FL			
Site Name:	7/2-7	red I t		O1 12	1010101-02	Site Location:		Date:	17~	5/21	
Well No:	CCR-2	_	_	Sample ID:	PURGING	C DATA		Date:	(/ L	3141	
Well Diameter		Tubing D	iameter		Well Scree			Static depth to	water	Purge/pump	type
(inches)	2	(inches)	3/8	Depth:	15.7	to	25.7	(feet):	10,7	S PP	
Well Volume	Purge:	total well depth		static depth to water			well capacity (gal/ft)				
Or	ne well volume =		-			X		=	0	gal	
Equipment \ Purge:	Volume	pump vol (gal)		flow cell volume (gal)		tubing length (ft)		Tubing capacity			
1 equi	pment volume =		+	0.101	gal +	25.71	×	0.006	-	0.31526	gal
Initial pump or t	tubing		Final pump	or tubing		Purging Initia	ated 953	Purging		Total Volume	
	oth in well (feet):	20.45	Depth	in well (feet):	20.45	at:	6 50	Ended at:	10:11	Purged (gallons):	1.99
Time (Military)	Vol. Purged (gal)	Cumul. Vol. Purged (gals)	Purge Rate (gpm)	Depth to Water (ft)	Temp ° C	Cond. (µS/cm)	pH (SU)	Color by observation	mg/L or %	Turbidity (NTUs)	Sheen by observation
1003	/ 1/	111	11	10.49	25.9	382.5	5.29	Clan Ba	0.49	12.6	NEME
10:01	,44	1.55	11	10.50	25.9	384.5	5.29	CHARBA	G.44	11.5	NOW
10:11	41	1.99	.11	10.50	26.0	3842	5.30	CHERRY	0.41	8.84	Nore
	Capacity (Gal./Ft.) MENT CODES: B=B		3/16" = 0.0	0014: 1/4" = (0.0026: 5/16 sible Pump, PF SAMPLIN nature(s):	=peristaltic Pur	" = 0.006: 1/2"	= 0.010: 5/8" = (ecify) Sampling	= 5.88 0.016	Sampling Ended at:	10:15
D. Bags			1 0 4 V			~~	Field-Filtere	17	1012	Filter Size:	10,65 um
Pu	mp or Tubing Dep	th in well (feet):	20,45	Tubing Materia	l Code	TE		quipment Type		· inter Gizei	
Fie	ld Decontamination	n: Y (N)			Tubin	g (Y) N	(replaced)		Dup	olicate: Y	(N)
	Sample Container	Specification			Sample P	reservation		Intended Analysis and/or	Sampling Equipment		e pump rate
Sample I.D. Code	# Containers	Material Code	Volume	Preserv. Used		Added in Field nL)	Final pH	Method	Code		minute) c 3785
1010101-02A	1	PP	500 ml	ICE	None	None	NA	TDS, CI	RFPP		
1010101-02B	1	PP	250mL	HNO3	None	None	NA	Metal Inhouse	RFPP		
1010101-02C	1	PP	250mL	HNO3	None	None	NA	Metals II +	RFPP		
1010101-02D	1	PP	250 mL	Ice	None	None	NA	Fluoride	RFPP		
1010101-02E		PP	2000 ml	HNOS	None	None	NA	Ra 228+ 228	RFPP		
Remarks:											

Sampling EQUIPMENT CODES: APP= After (Through) Peristaltic Pump; B = Baller; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Peristaltic Pump; SM=Straw Method(tubing Gravity Drain); O=Other (Specify)

^{2.} Stabilization Criteria for Range of Variation of Last Three Consecutive Readings (See FS 2212, section 3):

pH = +/- 0.2; Temperature = +/- 0.2°; Specific Conductance = +/- 5%, Dissolved Oxygen = ≤ 20% saturation(see Table FS 2200-2): optionally, +/-0.2 mg/L or 10% (whichever is greater). Turbidity: all readings ≤20 NTU: optionally +/- 5 NTU or +/- 10 % (whichever is greater)

Site Name:	McIntosh Power P	lant				Site Location:		Lakeland, FL			
Well No:	CCR-3			Sample ID:	1010101-03			Date:	1128	2	
200				,	PURGING	G DATA			234		
Well Diameter		Tubing D	iameter		Well Scree	en Interval		Static depth to		Purge pump	- Fallon
(inches)	2	(inches)	3/8	Depth:	15.9	to	25.3	(feet):	6.94	Р	P
Well Volum	e Purge:	total well depth		static depth to water			well capacity (gal/ft)				
)ne well volume =		-			Х		=	0	gal	
Equipment Purge:	Volume	pump vol (gal)		flow cell volume (gal)		tubing length (ft)		Tubing capacity			
1 eq	uipment volume =	0.06	+	0.101	gal +	25.8	x	0.006	=	0.3158	gal
Initial pump or	r tubing		Final pump	or tubing		Purging Initia	ated	Purging		Total Volume	
De	epth in well (feet):	20.6	Depth	in well (feet):	20.6	at:	1035	Ended at:	1053	Purged (gallons):	
Time (Military)	Vol. Purged (gal)	Cumul. Vol. Purged (gals)	Purge Rate (gpm)	Depth to Water (ft)	Temp ° C	Cond. (µS/cm)	pH (SU)	Color by observation	mg/L or %	Turbidity (NTUs)	Sheen by observation
1045	1.11	1 180	- 1	7.18	25.7	1914	5.45	Clear	.42	8.50	NEWS
1047		/("			-	1923	5.45	CYENR	,38	7.07	NEW
104	44	1.55	.H.	7.24	25.7		215	1	150	6.38	
1055	44	1.9	11.	718	25.8	1925	5.45	CLEAR	.39	6.0	NON
	iallons per Foot): (a. Capacity (Gal./Ft.)	0.75" = 0.02; 1 1: 1/8" = 0.0006	B: 3/16" = 0.0	0014: 1/4" = 0	0.0026: 5/16		= 0.006: 1/2"	= 0.010: 5/8* = 0	= 5.88 0.016		
PURGING EQUIF	PMENT CODES: B=B		ler Pump ESP=	Sampler(s) Sig	SAMPLIN	the second second	np O=other(sp			Sampling	
PURGING EQUIP	nt) Affiliation:	ailer, BP=Bladd	ler Pump ESP=	W	SAMPLIN	the second second	np O=other(sp	Sampling	1053	Sampling Ended at:	1059
Sampled By (Pri	nt) Affiliation:	aller, BP=Bladd	20.4	W	SAMPLIN prature(s):	the second second	Field-Filtere	Sampling Initiated at:	1053	Sampling Ended at: Filter Size:_	1059 um
PURGING EQUIP Sampled By (Pri	nt) Affiliation:	Electrication in well (feet):	20.6	Sampler(s) Sig	SAMPLIN prature(s):	G DATA	Field-Filtere	Sampling Initiated at:		Ended at:	
PURGING EQUIP Sampled By (Pri	Pump or Tubing Dept	th in well (feet):	20.6	Sampler(s) Sig	SAMPLIN prature(s): al Code	G DATA	Field-Filtere	Sampling Initiated at:		Filter Size:_	(N) e pump
PURGING EQUIP Sampled By (Pri	Pump or Tubing Depticed Decontamination	th in well (feet):	<i>3</i> 0.L	Sampler(s) Sig	SAMPLIN pradure(s): al Code Tubin Sample P. Total Volume	G DATA PLE ng (M) N (Field-Filtere	Sampling Initiated at:	Dup	Filter Size:_	(N) e pump rate minute)
PURGING EQUIP Sampled By (Pri	Pump or Tubing Deptied Decontamination Sample Container S # Containers	th in well (feet): n: Y (N) Specification	<i>3</i> 0.L	Sampler(s) Sig	SAMPLIN pradure(s): al Code Tubin Sample P. Total Volume	G DATA P(Y) N (reservation Added in Field	Field-Filtere Filtration E	Sampling Initiated at: ed: (N) quipment Type Intended Analysis and/or	Dup Sampling Equipment	Filter Size:_ licate: Y Sample flow (mL per	(N) e pump rate minute)
Sampled By (Pri	Pump or Tubing Depticed Decontamination Sample Containers # Containers	th in well (feet): n: Y (N) Specification Material Code	20.6	Sampler(s) Sig	SAMPLIN prafure(s): al Code Tubin Sample P. Total Volume (n	G DATA Pg (Y) N (reservation Added in Field mL)	Field-Filters Filtration E- replaced) Final pH	Sampling Initiated at: ed: (N) quipment Type Intended Analysis and/or Method	Dup Sampling Equipment Code	Filter Size:_ licate: Y Sample flow (mL per	(N) e pump rate minute)
Sampled By (Pri	Pump or Tubing Depticed Decontamination Sample Container S # Containers 1	th in well (feet): n: Y (N) Specification Material Code	O L Volume 500 ml	Sampler(s) Sig Tubing Materia Preserv. Used	SAMPLIN pathure(s): al Code Tubin Sample P. Total Volume (n	g DATA Ig (Y) N (reservation Added in Field nL) None	Field-Filters Filtration Ed replaced) Final pH NA	Sampling Initiated at: ed: (N) quipment Type Intended Analysis and/or Method TDS, CI	Dup Sampling Equipment Code RFPP	Filter Size:_ licate: Y Sample flow (mL per	(N) e pump rate minute)
Sampled By (Pri	Pump or Tubing Depticed Decontamination Sample Containers # Containers 1 1	th in well (feet): n: Y (N) Specification Material Code PP PP	20 16 Volume 500 ml 250mL 250mL	Tubing Materia Preserv. Used ICE HNO3 HNO3	SAMPLIN pathure(s): al Code Tubin Sample P. Total Volume (n None None	g DATA Ing (Y) N (Ing (Y) N (Ing (Y) N (Ing (Y) N) (Ing (Y) N) Added in Field Ing (Ing (Y) N) None None	Field-Filters Filtration E- replaced) Final pH NA	Sampling Initiated at: ed: (N) quipment Type Intended Analysis and/or Method TDS, CI Metal Inhouse	Sampling Equipment Code RFPP	Filter Size:_ licate: Y Sample flow (mL per	(N) e pump rate minute)
Sampled By (Pri	Pump or Tubing Depticed Decontamination Sample Container S # Containers 1	th in well (feet): n: Y (N) Specification Material Code PP PP	Volume 500 ml 250mL	Tubing Materia Preserv. Used ICE HNO3	SAMPLIN prafture(s): al Code Tubin Sample P. Total Volume (n None	g (Y) N (reservation Added in Field nL) None None	Field-Filters Filtration E replaced) Final pH NA NA	Sampling Initiated at: ed: (N) quipment Type Intended Analysis and/or Method TDS, CI Metal Inhouse Metals II +	Sampling Equipment Code RFPP RFPP	Filter Size:_ licate: Y Sample flow (mL per	(N) e pump rate minute)

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

Sampling EQUIPMENT CODES: APP= After (Through) Peristaltic Pump; B = Baller; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Peristaltic Pump; SM=Straw Method(tubing Gravity Drain); O=Other (Specify)

^{2.} Stabilization Criteria for Range of Variation of Last Three Consecutive Readings (See FS 2212, section 3):

pH = +/- 0.2; Temperature = +/- 0.2°; Specific Conductance = +/- 5%, Dissolved Oxygen = ≤ 20% saturation(see Table FS 2200-2): optionally, +/-0.2 mg/L or 10% (whichever is greater). Turbidity: all readings ≤20 NTU: optionally +/- 5 NTU or +/- 10 % (whichever is greater)

	McIntosh Power P	lant				Site Location:		Lakeland, FL			
Well No:	CCR-4			Sample ID:	1010101-04			Date:	U	25/21	
TO THE TOTAL PROPERTY OF THE TOTAL PROPERTY	200.00				PURGING	G DATA			-10		
Well Diameter		Tubing D	iameter		Well Scree	en Interval		Static depth to		Purge pump	type
(inches)	2	(inches)	3/8	Depth:	15.6	to	25.1	(feet):	14.36	Р	P
Well Volume	Purge:	total well depth		static depth to water			well capacity (gal/ft)				
Or	ne well volume =					х		=	0	gal	
Equipment \ Purge:	/olume	pump vol (gal)		flow cell volume (gal)		tubing length (ft)		Tubing capacity			
1 equi	pment volume =	0.06	+	0.101	gal +	25.69	X	0.006	=	0.31514	gal
Initial pump or t Dep	ubing oth in well (feet):	20.35	Final pump o	or tubing in well (feet):	20.35	Purging Initia		Purging Ended at:	1243	Total Volume Purged (gallons):	1.51
Time (Military)	Vol. Purged (gal)	Cumul. Vol. Purged (gals)	Purge Rate (gpm)	Depth to Water (ft)	Temp ° C	Cond. (µS/cm)	pH (SU)	Color by observation	mg/L or %	Turbidity (NTUs)	Sheen by observation
1235	83	.23	.083	1454	25,2	12960	3.84	Clear	0.22	7.32	NEN
1239	24	1.139	.083	14.50	25.	12845	3.84	GER	020	6.31	NEN
243	34	151	.083	14.54	25.1	12-754	384	Clean	0.21	4.50	Nov
Tubing inside Dia PURGING EQUIPM	Capacity (Gal./Ft.) SENT CODES: B=B	aller, BP=Bladd	6: 3/16" = 0.6 ler Pump ESP=	0014: 1/4" = 0	0.0026: 5/16 sible Pump, PF SAMPLIN	=peristaltic Pur	" = 0.006: 1/2"	= 0.010: 5/8" = 0 ecify)		Sampling Ended at:	/3///
Tubing inside Dia PURGING EQUIPM	Capacity (Gal./Ft.) SENT CODES: B=B): 1/8" = 0.0006	6: 3/16" = 0.6 ler Pump ESP=	0014: 1/4" = 0 Electric Submer	0.0026: 5/16 sible Pump, PF SAMPLIN	r = 0.004: 3/8 Peperlstaltic Pur	" = 0.006: 1/2" np O=other(sp	= 0.010: 5/8" = 0 ecify) Sampling Initiated at:	= 5.88	Ended at:	12270
Tubing inside Dia PURGING EQUIPM Sampled By (Print	Capacity (Gal./Ft.) SENT CODES: B=B	1/8" = 0.0000 saller, BP=Bladd	6: 3/16" = 0.0	0014: 1/4" = 0 Electric Submer	0.0026: 5/16 sible Pump, PF SAMPLIN pature(s):	r = 0.004: 3/8 Peperlstaltic Pur	" = 0.006: 1/2" np O=other(sp	= 0.010: 5/8" = ecify) Sampling Initiated at:	= 5.88 0.016		/246 um
Tubing inside Dia PURGING EQUIPM Sampled By (Print	Capacity (Gal./Ft.) IENT CODES: B=B Affiliation:	th in well (feet):	6: 3/16" = 0.0	0014: 1/4" = (Electric Submer	0.0026: 5/16 sible Pump, PF SAMPLIN pature(s):	a" = 0.004: 3/8 P=peristaltic Pur G DATA	" = 0.006: 1/2" np O=other(sp	= 0.010: 5/8" = ecify) Sampling Initiated at:	= 5.88 0.016	Ended at:	
Tubing inside Dia PURGING EQUIPM Sampled By (Print Pu Fie	Capacity (Gal./Ft.) BENT CODES: B=B Affiliation:	: 1/8" = 0.0004 aller, BP=Bladd Electro th in well (feet):	6: 3/16" = 0.0	0014: 1/4" = (Electric Submer	0.0026: 5/16 sible Pump, PF SAMPLIN nature(s):	e" = 0.004: 3/8 P=peristaltic Pur G DATA	" = 0.006: 1/2" np O=other(sp Field-Filten Filtration E	Sampling Initiated at: ed: Y (N) quipment Type	= 5.88 0.016 /243 Dup Sampling	Filter Size:_	um
Tubing inside Dia PURGING EQUIPM Sampled By (Print Pu Pu Fie	Capacity (Gal./Ft.) HENT CODES: B=B Affiliation: The property of the content of	: 1/8" = 0.0004 aller, BP=Bladd Electro th in well (feet):	6: 3/16" = 0.0 ler Pump ESP=	2014: 1/4" = (Electric Submer Sampler(s) Sig	0.0026: 5/16 sible Pump, PF SAMPLIN nature(s): 1 Code Tubin Sample P Total Volume	g (Ÿ) N	" = 0.006: 1/2" np O=other(sp Field-Filten Filtration E	= 0.010: 5/8" = ecify) Sampling Initiated at: ed: Y (N) quipment Type	= 5.88 0.016 /243	Filter Size:_ filter Size:_ slicate: Y	um e pump rate minute)
PURGING EQUIPM Sampled By (Print D Samo Pu	Capacity (Gal./Ft.) IENT CODES: B=B Affiliation: Imp or Tubing Dep Id Decontaminatio	th in well (feet): "" Y N Specification	6: 3/16" = 0.0 ler Pump ESP=	2014: 1/4" = (Electric Submer Sampler(s) Sig	0.0026: 5/16 sible Pump, PF SAMPLIN nature(s): 1 Code Tubin Sample P Total Volume	g (Y) N (reservation Added in Field	" = 0.006: 1/2" np O=other(sp Field-Filter Filtration E (replaced)	= 0.010: 5/8" = ecify) Sampling Initiated at: ed: Y (N) quipment Use Intended Analysis and/or	= 5.88 0.016 1243 Dup Sampling Equipment	Filter Size:_ slicate: Y Sample flow (mL per	um e pump rate minute)
Tubing inside Dia PURGING EQUIPM Sampled By (Print Pu Fie	Capacity (Gal./Ft./ MENT CODES: B=B Affiliation: Tubing Dep Id Decontamination # Containers	th in well (feet): n: Y (N) Material Code	6: 3/16" = 0.0 ler Pump ESP=	Dol4: 1/4" = 0 Electric Submer Sampler(s) Sig Tubing Materia	0.0026: 5/16 sible Pump, PF SAMPLIN nature(s): al Code Tubin Sample P Total Volume	g (Y) N (reservation Added in Field in L)	" = 0.006: 1/2" np O=other(sp Fleid-Filter Filtration E (replaced)	= 0.010: 5/8" = ecify) Sampling Initiated at: ed: Y (N) quipment Type Intended Analysis and/or Method	= 5.88 0.016 /243 Dup Sampling Equipment Code	Filter Size:_ slicate: Y Sample flow (mL per	um e pump rate minute)
Tubing inside Dia PURGING EQUIPM Sampled By (Print Pu Fie Sample I.D. Code 1010101-04A	Capacity (Gal./Ft.) IENT CODES: B=B Affiliation: Imp or Tubing Dep Id Decontaminatio Sample Containers # Containers	th in well (feet): "" Y N Specification Material Code	6: 3/16" = 0.0 ler Pump ESP=	Dol4: 1/4" = (Electric Submer Sampler(s) Signature Material Preserv. Used ICE	0.0026: 5/16 sible Pump, PF SAMPLIN nature(s): 1 Code Tubin Sample P Total Volume (n	g (Y) N (Preservation Added in Field In L)	" = 0.006: 1/2" np O=other(sp Field-Filter Filtration E (replaced) Final pH NA	= 0.010: 5/8" = ecify) Sampling Initiated at: ed: Y (N) quipment Type Intended Analysis and/or Method TDS, CI	= 5.88 0.016 1243 Dup Sampling Equipment Code RFPP	Filter Size:_ slicate: Y Sample flow (mL per	um e pump rate minute)
Tubing inside Dia PURGING EQUIPM Sampled By (Print Pu Fie Sample 1.D. Code 1010101-04A 1010101-04B	Capacity (Gal./Ft., HENT CODES: B=B Affiliation: Imp or Tubing Dep Id Decontamination # Containers 1	th in well (feet): n: Y (N) Specification Material Code PP	S: 3/16" = 0.0 ler Pump ESP= Volume 500 ml 250mL	Sampler(s) Signature Material Preserv. Used ICE HNO3	0.0026: 5/16 sible Pump, PF SAMPLIN nature(s): Il Code Tubin Sample Pi Total Volume (n) None	g (Y) N (reservation Added in Field in L) None None	" = 0.006: 1/2" np O=other(sp Fleid-Filter Filtration E (replaced) Final pH NA NA	= 0.010: 5/8" = ecify) Sampling Initiated at: ed: Y (N) quipment Type Intended Analysis and/or Method TDS, CI Metal Inhouse	= 5.88 0.016 L243 Dup Sampling Equipment Code RFPP RFPP	Filter Size:_ slicate: Y Sample flow (mL per	um e pump rate minute)

Sampling EQUIPMENT CODES: APP= After (Through) Peristaltic Pump; B = Bailer; BP = Bla Gravity Drain); 0=Other (Specify)

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

2. Stabilization Criteria for Range of Variation of Last Three Consecutive Readings (See FS 2212, section 3):

pH = +/- 0.2; Temperature = +/- 0.2°; Specific Conductance = +/- 5%, Dissolved Oxygen = ≤ 20% saturation(see Table FS 2200-2): optionally, +/-0.2 mg/L or 10% (whichever is greater). Turbidity: all readings ≤20 NTU: optionally +/- 5 NTU or +/- 10 % (whichever is greater)

Well No:	CCR-5			Sample ID:	1010101-05	1		Date:	,	1/25/21	
					PURGING	G DATA				1	
Well Diameter		Tubing D	iameter		Well Scree	en Interval		Static depth to		Purge pump	
(inches)	2	(inches)	3/8	Depth:	16.2	to	25.7	(feet):	10.51	F	P
Well Volume	Purge:	total well depth		static depth to water			well capacity (gal/ft)				
Or	e well volume =	26.2	-			X		=	0	gal	
Equipment \ Purge:	/olume	pump vol (gal)		flow cell volume (gal)		tubing length (ft)		Tubing capacity			
1 equi	pment volume =	0.06	+	0.101	gal +	26.21	×	0.006	=	0.31826	gal
Initial pump or t	ubing		Final pump			Purging Initia		Purging	. 10	Total Volume	
Dep	th in well (feet):	20.95	Depth	in well (feet):	20.95	at:	1300	Ended at:	1318	Purged (gallons):	
Time (Military)	Vol. Purged (gal)	Cumul. Vol. Purged (gals)	Purge Rate (gpm)	Depth to Water (ft)	Temp ° C	Cond. (µS/cm)	pH (SU)	Color by observation	mg/L or %	Turbidity (NTUs)	Sheen by observation
1310	.83	.83	.083	248	24.8	16636	5.09	Clear	0.41	20.7	NONE
1314	.33	1.16	087	10.62	35.0		5.11	Clan	0.30	22.0	NONE
1210	.33	1.49	.083	10.60	25.0	16628	5.10	Clean	0.32	21.2	NONE
Well Capacity (Gal		0.75" = 0.02; 1			0.16; 3" =		5; 5" = 1.02 ' = 0.006: 1/2"		= 5.88		
	Capacity (Gal./Ft.) IENT CODES: B=B								0.010		
The same of	02:1				SAMPLIN						
Sampled By (Print	Affiliation:	I deam	4	Sampler(s) Skg				Sampling Initiated at:	1318	Sampling Ended at:	13,22
	mp or Tubing Dep		- 65	Tubing Materia	al Code	PE	Field-Filter Filtration E	ed: Y (N) quipment Type		Filter Size:_	um
Fie	ld Decontaminatio	n: Y (N			Tuble	g (Y)) (replaced)		Dup	olicate: Y	(N)
,	Sample Container	Specification			Sample Pr	reservation		Intended	Sampling		e pump rate
Sample I.D. Code	# Containers	Material Code	Volume	Preserv. Used		Added in Field	Final pH	Analysis and/or Method	Equipment Code	(mL per	minute) x 3785
1010101-05A	1	PP	500 ml	ICE	None	None	NA	TDS, CI	RFPP		
1010101-05B	1	PP	250mL	HNO3	None	None	NA	Metal Inhouse	RFPP		
1010101-05C	1	PP	250mL	HNO3	None	None	NA	Metals II +	RFPP		
1010101-05D	1	PP	250 mL	Ice	None	None	NA	Fluoride	RFPP		
1010101-05E	1	PP	2000 ml	HNO3	None	None	NA	Ra 226+ 228	RFPP		
1010101-036			2400 1111				20/2	20100		1	

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

Sampling EQUIPMENT CODES: APP= After (Through) Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Peristaltic Pump; SM=Straw Method(tubling Gravity Drain); O=Other (Specify)

^{2.} Stabilization Criteria for Range of Variation of Last Three Consecutive Readings (See FS 2212, section 3):

pH = +/- 0.2; Temperature = +/- 0.2°; Specific Conductance = +/- 5%, Dissolved Oxygen = ≤20% saturation(see Table FS 2200-2): optionally, +/-0.2 mg/L or 10% (whichever is greater). Turbidity: all readings ≤20 NTU: optionally +/- 5 NTU or +/- 10 % (whichever is greater)

Site Name:	McIntosh Power P	lant				Site Location:		Lakeland, FL		1 .	
Well No:	CCR-6			Sample ID:	1010101-06			Date:		25/21	
Tell No.	3000				PURGINO	DATA		-		OF P	
Well Diameter		Tubing D	iameter		Well Scree	n Interval		Static depth to	water	Purge pump	type
(inches)	2	(inches)	3/8	Depth:	15.7	to	25.2	(feet):	8.00	F	P
Well Volum	ne Purge:	total well depth		static depth to water			well capacity (gal/ft)				
	One well volume =		-			X		=	0	gal	
Equipment Purge:	Volume	pump vol (gal)		flow cell volume (gal)		tubing length (ft)		Tubing capacity			
1 eq	uipment volume =	0.06	+	0.101	gal +	25.72	х	0.006	=	0.31532	gal
nitial pump o			Final pump			Purging Initia		Purging	uten	Total Volume	00
D	epth in well (feet):	20.45	Depth	in well (feet):	20.45	at:	1340	Ended at:	1402	Purged (gallons):	dd
Time (Military)	Vol. Purged (gal)	Cumul. Vol. Purged (gals)	Purge Rate (gpm)	Depth to Water (ft)	Temp ° C	Cond. (µS/cm)	pH (SU)	Color by observation	mg/L or %	Turbidity (NTUs)	Sheen by observation
1350	1	1	.1	8.89	25.3	3042	6.12	CLEAR	0.41	4.79	Non
1354	,4	и	.1	8.90	25.7	3320	6.03	CLEAR	0.35	395	None
1358	и	1.8	.1	8.89	252	3382	6.03	CLEAR	0.33	3.35	NONE
11/02	-		1	8.90	25,2	3401	6.92	Cler	0.36	3.11	None
1=100-	(2.2		0.10	//	3101	0.01	Col			
-	-										
	-										
Well Capacity (G	Sallons per Foot): ().75" = 0.02; 1	" = 0.04; 1.2!	5" = 0.06; 2" =	: 0.16; 3" =	0.37; 4" = 0.6	 55; 5™ = 1.02	2; 6" = 1.47; 12"	= 5.88		
	ia. Capacity (Gal./Ft.)						" = 0.006: 1/2"		0.016		
PURGING EQUI	PMENT CODES: B=B	aller, BP-Blaud	er Pullip ESF=	Eleculo Subiliei	SAMPLIN		ap o outor(op				
Sampled By (Pri	nt) Affiliation:			Sampler(s) Sig	pature(s):			Sampling		Sampling	
	1									Endod of	PILA
D. Bigg	, LAKEAW	glann		1 De	/ 			Initiated at:	1402	Ended at:	8406
D. Biga	Pump or Tubing Dept		20.45	Tubing Materia		PE	Field-Filtere Filtration E	imuated at.	1402	Filter Size:	um
		th In well (feet):	0	K		(ed: Y (N)	1402	Filter Size:_	um (N)
	Pump or Tubing Dep	th In well (feet):	0	K	al Code Tubin	(Filtration E	ed: Y (N) quipment type	Dup	Filter Size:_ licate: Y	(N) e pump
	Pump or Tubing Depticied Decontamination	th In well (feet):	0	K	Tubin Sample Pr	g (Y) N (Filtration E	ed: Y N) quipment ype	7402 Dup	Filter Size:_ licate: Y Sampl flow (mL per	(N)
F	Pump or Tubing Deptication Sample Containers e # Containers	th In well (feet):		Tubing Materia	Tubin Sample Pr	g (Y) N (reservation	Filtration E	ed: Y (v) quipment pe	Dup Sampling Equipment	Filter Size:_ licate: Y Sampl flow (mL per	(N) e pump
F Sample I.D. Cod	Pump or Tubing Depi	th In well (feet): n: Y (N) Specification Material Code	Volume	Tubing Materia	Tubin Sample Pi Total Volume	g (Y) N (reservation Added in Field	Filtration E (replaced) Final pH	ed: Y (N) quipment Type Intended Analysis and/or Method	Dup Sampling Equipment Code	Filter Size:_ licate: Y Sampl flow (mL per	(N) e pump
F Sample I.D. Cod 1010101-06A	Pump or Tubing Deprived Decontamination Sample Container See # Containers 1	th In well (feet): n: Y (N Specification Material Code	Volume 500 ml	Tubing Materia Preserv. Used	Tubin Sample Pi Total Volume (n	g (Y) N (reservation Added in Field nL) None	Filtration E (replaced) Final pH NA	Intended Analysis and/or Method TDS, CI	Dup Sampling Equipment Code	Filter Size:_ licate: Y Sampl flow (mL per	(N) e pump
Fample I.D. Cod 1010101-06A 1010101-06B	Pump or Tubing Depicied Decontamination Sample Containers # Containers 1 1 1	th In well (feet): The second of the second	Volume 500 ml 250ml	Tubing Materia Preserv. Used ICE HNO3	Tubin Sample Pr Total Volume (n None	g (Y) N (reservation Added in Field nL) None None	Filtration E (replaced) Final pH NA	intended Analysis and/or Method TDS, CI Metal inhouse	Dup Sampling Equipment Code RFPP	Filter Size:_ licate: Y Sampl flow (mL per gpm	e pump / rate r minute) x 3785
F Sample I.D. Cod 1010101-06A 1010101-06B 1010101-06C	Pump or Tubing Deprived Decontamination Sample Containers # Containers 1 1 1	th In well (feet): n: Y (N) Specification Material Code PP PP	Volume 500 ml 250mL 250mL	Preserv. Used ICE HNO3 HNO3	Tubin Sample Pr Total Volume (n None None	g (Y) N (reservation Added in Field nL) None None	Filtration E (replaced) Final pH NA NA	intended Analysis and/or Method TDS, CI Metal inhouse Metals II +	Sampling Equipment Code RFPP RFPP	Filter Size:_ licate: Y Sampl flow (mL per	e pump / rate r minute) x 3785

Sampling EQUIPMENT CODES: APP= After (Through) Peristaltic Pump; B = Baller; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Peristaltic Pump; SM=Straw Method(tubing Gravity Drain); O=Other (Specify)

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

Site Name:	McIntosh Power P	lant				Site Location:		Lakeland, FL			
Well No:	CCR-7		-	Sample ID:	1010101-07			Date:	1/24	2/	
well No:	CIGICAL		_	Campic is:	PURGING	DATA	77.7		1000	,,	
Well Diameter		Tubing D	iameter		Well Scree			Static depth to	water	Purge pump	type
(inches)	2	(inches)	3/8	Depth:	15.7	to	25.2	(feet):	9.25	P	P
Well Volum	e Purge:	total well depth		static depth to water			well capacity (gal/ft)				
C	ne well volume =					X		=	0	gal	
Equipment Purge:	Volume	pump vol (gal)		flow cell volume (gal)		tubing length (ft)	0934	Tubing capacity			
1 equ	uipment volume =	0.06	+	0.101	gal +	25.79	Х	0.006	=	0.31574	gal
Initial pump or			Final pump		,	Purging Initia	ated 4	Purging	0045	Total Volume	-
De	epth in well (feet):	20.45	Depth	in well (feet):	20.45	at:	0925	Ended at:	0947	Purged (gallons):	1.07
Time (Military)	Vol. Purged (gal)	Cumul. Vol. Purged (gals)	Purge Rate (gpm)	Depth to Water (ft)	Temp ° C	Cond. (µS/cm)	pH (SU)	Color by observation	po mg/L) or %	Turbidity (NTUs)	Sheen by observation
0935	3 13	3 73	.085	9.38	24.1	1005	4.78	Clay	0.59	6.48	Nac
0939	.33	0.74	.083	9.39	242	1076	417	Clean	0.46	5.54	NOW.
0943	.33	1.07	.083	939	242	1037	4.74	CLER	0.41	550	NW.
W-N 01/C	-U Factly (0.75" = 0.02; 1	"-004: 42	5" = 0.06; 2" =	0.16; 3"=	0.37: 4" = 0.6	5· 5" = 1 02:	6" = 1.47; 12"	= 5.88		
	allons per Foot): (a. Capacity (Gal./Ft.)					" = 0.004: 3/8"					
PURGING EQUIP	MENT CODES: B=B	ailer, BP=Bladd	er Pump ESP=	Electric Submer			np O=other(spe	cify)			
Sampled By (Pri	/	Elegen		Sampler(s) Sig	SAMPLIN	G DATA	- E	Sampling Initiated at:	0943	Sampling Ended at:	0947
	Pump or Tubing Dep		. 4	Tubing Materia	al Code	PE	Field-Filtere Filtration Eq	d: Y (N) uipment Type		Filter Size:_	um
F	ield Decontamination	n: Y (N)	>		Tubia	g (Y) N (replaced)		Dup	licate: Y	(N)
	Sample Container	Specification			Sample Pr	eservation		Intended	Sampling		e pump rate
Sample I.D. Code	# Containers	Material Code	Volume	Preserv. Used		Added in Field nL)	Final pH	Analysis and/or Method	Equipment Code	(mL per	minute) c 3785
1010101-07A	1	PP	500 ml	ICE	None	None	NA	TDS, CI	RFPP		
1010101-07B	1	PP	250mL	HNO3	None	None	NA	Metal Inhouse	RFPP		
1010101-07C	1	PP	250mL	HNO3	None	None	NA	Metals II +	RFPP		
1010101-07D	1	PP	250 mL	ice	None	None	NA	Fluoride	RFPP		
1010101-07E	1	PP	2000 ml	HNO3	None	None	NA	Ra 228+ 228	RFPP		
	1										

Sampling EQUIPMENT CODES: APP= After (Through) Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Peristaltic Pump; SM=Straw Method(tubing Gravity Drain); O=Other (Specify)

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

	McIntosh Power P	lant				Site Location:		Lakeland, FL		. 1	
Well No:	CCR-8			Sample ID:	1010101-08			Date:	1/20	101	
					PURGING	DATA				P	
Well Diameter		Tubing D	iameter		Well Scree	n Interval		Static depth to	water//	Purge pump	type
(inches)	2	(inches)	3/8	Depth:	15.9	to	25.4	(feet):	6.67	F	P
Well Volumo	e Purge:	total well depth		static depth to water		x	well capacity (gal/ft)		0	gal	
		25.9	-							9	
Equipment Purge:	Volume	pump vol (gal)		flow cell volume (gal)		tubing length (ft)		Tubing capacity			Ú.
1 equ	ipment volume =	0.06	+	0.101	gal +	25.96	X	0.006	-	0.31676	gal
Initial pump or De	tubing pth in well (feet):	20.65	Final pump Depth	or tubing in well (feet):	20.65	Purging Initiate at:	7 -	Purging Ended at:	1071	Total Volume Purged (gallons):	
Time (Military)	Vol. Purged (gal)	Cumul. Vol. Purged (gals)	Purge Rate (gpm)	Depth to Water (ft)	Temp ° C	Cond. (µS/cm)	pH (SU)	Color by observation	mg/l) or %	Turbidity (NTUs)	Sheen by observation
1013	,66	.66	083	8:77	24.0	556	6.42	CER	,45	9.45	NOM
1017	21	.98	.083	8,78	240	564	6.40	Clar	.47	697	Nene
105/	.32	1.30	083	8.78	24,1	577	6.40	CEN	.43	5.03	MM
Tubing inside Dia PURGING EQUIP! Sampled By (Prin	. Capacity (Gal./Ft.) MENT CODES: B=B t) Affiliation:	ailer, BP=Bladd	8: 3/16" = 0. ler Pump ESP=	0014: 1/4" = 0	sible Pump, PP SAMPLIN nature(s):	" = 0.004: 3/8 =peristaltic Pur	" = 0.006: 1/2"	= 0.010: 5/8" =		Sampling Ended at:	10.35
Tubing inside Dia PURGING EQUIP Sampled By (Prin	Capacity (Gal./Ft.) MENT CODES: B=B t) Affiliation:	: 1/8" = 0.0006 ailer, BP=Bladd	8: 3/16" = 0. ler Pump ESP=	0014: 1/4" = (Electric Submer	0.0026: 5/16 sible Pump, PP SAMPLIN nature(s):	" = 0.004: 3/8 =peristaltic Pur	" = 0.006: 1/2" np O=other(sp	(a) (N) (N) (N) (Sampling Initiated at:	0.016		1025 _um
Tubing inside Dia PURGING EQUIPI Sampled By (Prin	t) Affiliation:	i: 1/8" = 0.0004 aller, BP=Bladd thus Section th in well (feet):	3/16" = 0./ ler Pump ESP=	0014: 1/4" = 0	0.0026: 5/16 sible Pump, PP SAMPLIN nature(s):	" = 0.004: 3/8 =peristaltic Pur G DATA	"= 0.006: 1/2" np O=other(sp	6" = 1.47; 12" = 0.010: 5/8" = scify) Sampling Initiated at:	1021	Ended at: Filter Size:_	um
Tubing inside Dia PURGING EQUIPI Sampled By (Prin Pu	t) Affiliation: Important Tubing Depted Decontamination	th in well (feet):	3/16" = 0./ ler Pump ESP=	0014: 1/4" = (Electric Submer	0.0026: 5/16 sible Pump, PP SAMPLIN nature(s):	" = 0.004: 3/8 =peristaltic Pur G DATA	" = 0.006: 1/2" np O=other(sp	(6" = 1.47; 12" = 0.010: 5/8" = scify) Sampling Initiated at: ad: Y (N) pulpment Type	0.016	Ended at: Filter Size:_	um
Tubing inside Dia PURGING EQUIPI Sampled By (Prin D. B.	t) Affiliation:	th in well (feet):	8: 3/16" = 0./ ler Pump ESP=	0014: 1/4" = (Electric Submer	0.0026: 5/16 sible Pump, PP SAMPLIN nature(s): 11 Code Tubin Sample Pi Total Volume	" = 0.004: 3/8 =peristaltic Pur G DATA	"= 0.006: 1/2" np O=other(sp	(a) (N) (N) (N) (Sampling Initiated at:	1021	Ended at: Filter Size:_ Micate: Y Sample flow (mL per	um
PURGING EQUIPI Sampled By (Prin	t) Affiliation: Affiliation: The property of	th in well (feet):	8: 3/16" = 0./ ler Pump ESP=	DO14: 1/4" = 0 Electric Submer Sampler(s) Sig	0.0026: 5/16 sible Pump, PP SAMPLIN nature(s): 11 Code Tubin Sample Pi Total Volume	" = 0.004: 3/8 =peristaltic Pur G DATA g (Y) N reservation Added In Field	" = 0.006: 1/2" np O=other(sp Fleld-Filtere Filtration Ed (replaced)	sampling Initiated at: (N) Intended Analysis and/or	0.016 1 0 2 (Dup Sampling Equipment	Ended at: Filter Size:_ Micate: Y Sample flow (mL per	um (N) e pump rate minute)
Tubing inside Dia PURGING EQUIPI Sampled By (Prin Pu Fice Sample I.D. Code	t) Affiliation: Import Tubing Depicted Decontamination: # Containers	th in well (feet): National Specification Material Code	3/16" = 0. ler Pump ESP=	D014: 1/4" = 0 Electric Submer Sampler(s) Sig Tubing Materia	0.0026: 5/16 sible Pump, PP SAMPLIN nature(s): Il Code Tubin Sample Pi Total Volume (n	" = 0.004: 3/8 "=peristaltic Pur G DATA G DATA g (Y) N reservation Added in Field	" = 0.006: 1/2" np O=other(sp Fleld-Filterr Filtration Ec (replaced)	Sampling Initiated at: d: Y (N) pulpment Type Intended Analysis and/or Method	Dup Sampling Equipment Code	Ended at: Filter Size:_ Micate: Y Sample flow (mL per	um (N) e pump rate minute)
Tubing inside Dia PURGING EQUIPI Sampled By (Prin Pu Fic	t) Affiliation: Affiliation: The property of	th in well (feet): Material Code	8: 3/16" = 0./ ler Pump ESP= NAC Volume 500 ml	D014: 1/4" = 0 Electric Submer Sampler(s) Sig Tubing Materia Preserv. Used	0.0026: 5/16 sible Pump, PP SAMPLIN nature(s): Il Code Tubin Sample Pi Total Volume (n	g (Y) N reservation Added in Field	" = 0.006: 1/2" np O=other(sp Field-Filtere Filtration Ed (replaced) Final pH NA	sampling Initiated at: d: Y (N) gulpmen Type Intended Analysis and/or Method TDS, CI	Dup Sampling Equipment Code RFPP	Ended at: Filter Size:_ Micate: Y Sample flow (mL per	um (N) e pump rate minute)
Tubing inside Dia PURGING EQUIPI Sampled By (Prin Pu Fic Sample I.D. Code 1010101-08A	t) Affiliation:	th in well (feet): Material Code PP	Volume 500 ml	Double 1/4" = 0 Electric Submer Sampler(s) Sig Tubing Materia Preserv. Used ICE HNO3	0.0026: 5/16 sible Pump, PP SAMPLIN nature(s): Il Code Tubin Sample Pi Total Volume (n None	g (Y) N reservation Added in Field nL) None	"= 0.006: 1/2" np O=other(sp Fleid-Filtere Filtration Ed (replaced) Final pH NA NA	Sampling Initiated at: d: Y (N) pulpmen Tyre Intended Analysis and/or Method TDS, CI Metal Inhouse	Dup Sampling Equipment Code RFPP	Ended at: Filter Size:_ Micate: Y Sample flow (mL per	um (N) e pump rate minute)

Gravity Drain); O=Other (Specify)

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

^{2.} Stabilization Criteria for Range of Variation of Last Three Consecutive Readings (See FS 2212, section 3):
pH = +/- 0.2; Temperature = +/- 0.2°; Specific Conductance = +/- 5%, Dissolved Oxygen = ≤ 20% saturation(see Table FS 2200-2): optionally, +/-0.2 mg/L or 10% (whichever is greater). Turbidity:
all readings ≤20 NTU: optionally +/- 5 NTU or +/- 10 % (whichever is greater)

Site Name:	McIntosh Power P	lant				Site Location:		Lakeland, FL		1	
Well No:	CCR-9			Sample ID:	1010101-09			Date:		1/26/	21
					PURGING				10		S
Well Diameter		Tubing D	lameter		Well Scree			Static depth to		Purge pump	
(inches)	2	(inches)	3/8	Depth:	15.5	to	25	(feet):	937	F	P
Well Volum	e Purge:	total well depth		static depth to water			well capacity (gal/ft)				
C	ne well volume =	25.6	-			X		=	0	gal	
Equipment Purge:	Volume	pump vol (gal)		flow cell volume (gal)		tubing length (ft)		Tubing capacity	, 7	147	
1 equ	ipment volume =	.06	+	.10)	gal +	25,61	×	.006	=	0	gal
nitial pump or	tubing		Final pump	or tubing	- m ~	Purging Initia	ated	Purging		Total Volume	
De	pth in well (feet):	20.25	Depth	in well (feet):	200	at:	1033	Ended at:	11119	Purged (gallons):	43
Time (Military)	Vol. Purged (gal)	Cumul. Vol. Purged (gals)	Purge Rate (gpm)	Depth to Water (ft)	Temp ° C	Cond. (μS/cm)	pH (SU)	Color by observation	mg/L or %	Turbidity (NTUs)	Sheen by observation
1040	0.7	0.7	1	9.66	25.5	4393	5.00	closs	028	31.8	NUNG
1044	,((1.1		9.65	25,5	4422	5.01	1	0.33	40.3	NENE
1048	· y	15	1	9.65	25.4	4425	5.01		0.33	32.6	NON
1652	15,	19	1.	9.65	25.5	4431	5.01	(-1	0.34	33.9	NON
1056	,u`	3.3	1.	965	25.5	4433	5.02	ve 41	0,34	25.6	NON
1400	U	27	1.	8.63	25.5	4435	5.02	V6 V6	0.34	253	N/ch2
1104	.4	3.1	1	9.64	25.5	4431	5.03		0.34	36.7	NOW
1108	.4	3.5	1.	9.63	25.5	4426	5,02		0.34	26.9	Nine
1112	.d	3,9	1.	9.63	25.5	4428	5.92	10 00	0.34	29.8	NEMP
1116	٠٤	4.3	,1	9.64	25.5	4426	5.03	le e i	0,34	27.5	NOW
	and the same of the same	1000			Te die	0.37; 4" = 0.6			= 5.88		
	a. Capacity (Gal./Ft.) MENT CODES: B=B						" = 0.006: 1/2" np O=other(spe		0.016		
	TAX TO				SAMPLIN		7777				
Sampled By (Prin	Lalgan	Elegan		Sampler(s) Sig	nature(s):			Sampling Initiated at:	1116	Sampling Ended at:	120
P	ump or Tubing Dep	th in well (feet):	20:2	Jubing Materia	Il Code	1/E	Field-Filtere Filtration Ed	ed: Y (N) quipment Type		Filter Size:_	um
FI	eld Decontamination	n: Y (N	5)		Tubin	g (Y) N	(replaced)		Dup	licate: Y	(N)
	Sample Container	Specification				reservation		Intended Analysis and/or	Sampling Equipment	flow	e pump rate
Sample I.D. Code	# Containers	Material Code	Volume	Preserv. Used		Added in Field nL)	Final pH	Method	Code		minute) x 3785
1010101-09A	1	PP	500 ml	ICE	None	None	NA	TDS, CI	RFPP		
1010101-09B	1	PP	250mL	HNO3	None	None	NA	Metal Inhouse	RFPP		
1010101-09C	1	PP	250mL	HNO3	None	None	NA	Metals II +	RFPP		
1010101-09D	1	PP	250 mL	Ice	None	None	NA	Fluoride	RFPP		
1010101-09E		РР	2000 ml	HNO3	None	None	NA	Ra 226+ 228	RFPP		00/

Sampling EQUIPMENT CODES: APP= After (Through) Peristaltic Pump; B = Baller; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Peristaltic Pump; SM=Straw Method(tubing Gravity Drain); O=Other (Specify)

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

Site Name:	McIntosh Power P	lant				Site Location:		Lakeland, FL		. 1	
Well No:	CCR-11			Sample ID:	1010101-11			Date:	1/	26/21	
	and the same of th				PURGIN	G DATA			, , ,	الجا	1
Well Diameter		Tubing D	iameter	-	Well Scree	en Interval		Static depth to		Púrge pump	type
(inches)	2	(inches)	3/8	Depth:	15.6	to	25.1	(feet):	5.88	F	PP
Well Volum	e Purge:	total well depth		static depth to water			well capacity (gal/ft)				
C	ne well volume =					Х		=	0	gal	
Equipment Purge:	Volume	pump voi (gai)		flow cell volume (gal)		tubing length (ft)		Tubing capacity			
1 equ	ipment volume =	0.06	+	0.101	gal +	25/64	x	0.006	=	0.31484	gal
Initial pump or			Final pump	-	000	Purging Initia		Purging		Total Volume	ti-
De	pth in well (feet):	20.35	Depth	in well (feet):	203		1255	Ended at:	/333	Purged (gallons):	2.97
Time (Military)	Vol. Purged (gal)	Cumul. Vol. Purged (gals)	Purge Rate (gpm)	Depth to Water (ft)	Temp ° C	Cond. (μS/cm)	pH (SU)	Color by observation	mg/L or %	Turbidity (NTUs)	Sheen by observation
1305	.66	66	,083	5.75	27	4766	4.29	Chasy	0.37	546	NONE
1309	33	0.99	083	574	38	4736	4.28	Cludy	0.40	39.6	NEW
1313	.33	1.32	083	574	23.8	4407	4.29	Clast	0.40	38.6	Akwe
1217	.33	1.65	083	5.73	23.9	4636	4.30	10 0	0.40	49,5	Nunc
1221	133	1.98	083	5.73	239	4642	4.31	62 62	0.40	52.7	NUN
1205	.33	2.31	.083	572	240	4619	4.34	21	0.46	32.4	NON
1379	.33	2,64	.083	574	33.9	4616	4.35	1	0.40	29.5	AWN
1222	.33	2,97	.083	5.73	23.9	4608	4.35	((()	0.40	28.6	NON
1///	.)/	51. (1	.00>	2.17		7008	10.00		0.40		
	allons per Foot): 6	0.75" = 0.02; 1 1/8" = 0.0006			0.16; 3" = 0.0026: 5/16		5; 5" = 1.02; " = 0.006: 1/2"		= 5.88 0.016		
	MENT CODES: B=B										
Sampled By (Prin	A Milation			Sampler(s) Sig	SAMPLIN	G DATA					
	LAKELAN	Spanen	/	O	<u> </u>			Sampling Initiated at:	1333	Sampling Ended at:	1337
	ump or Tubing Dept	th in well (feet):	20.35	Tubing Materia	1 Code	TE	Fleid-Filtere Filtration Ed	d: Y (N) juipment Type		Filter Size:_	um
			1						Dun	licate: Y	(N)
FI	eld Decontamination	n: Y (N)			Tubin	(Y) N (replaced)		500		
	Sample Container		Volume	Preserv. Used	Sample Po	reservation Added in Field	replaced) Final pH	Intended Analysis and/or Method	Sampling Equipment Code		rate minute)
Sample I.D. Code	Sample Container	Specification		Preserv. Used	Sample Po	reservation		Analysis and/or	Sampling Equipment	flow	rate minute)
Sample I.D. Code	Sample Container 5 # Containers	Specification Material Code	Volume 500 ml	ICE	Sample Po Total Volume (n	Added in Field	Final pH	Analysis and/or Method TDS, CI	Sampling Equipment Code	flow (mL per	rate minute)
Sample I.D. Code	Sample Container \$	Specification Material Code	Volume		Sample Po	reservation Added in Field	Final pH	Analysis and/or Method	Sampling Equipment Code	flow (mL per	rate minute)
Sample I.D. Code 1010101-11A 1010101-11B 1010101-11C	# Containers # Containers 1 1	Material Code PP	Volume 500 ml 250mL 250mL	ICE HNO3 HNO3	Sample Po Total Volume (n None	Added in Field nL) None None	Final pH NA NA	Analysis and/or Method TDS, CI Metal Inhouse	Sampling Equipment Code RFPP	flow (mL per	rate minute)
Sample I.D. Code 1010101-11A 1010101-11B	Sample Container \$ # Containers 1	Material Code PP PP PP	Volume 500 ml 250ml	ICE HNO3	Sample Po Total Volume (n None None	Added in Field nL) None None None	Final pH NA NA NA	Analysis and/or Method TDS, CI Metal Inhouse	Sampling Equipment Code RFPP RFPP	flow (mL per	rate minute)

Sampling EQUIPMENT CODES: APP= After (Through) Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Peristaltic Pump; SM=Straw Method(tubing Gravity Drain); O=Other (Specify)

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

^{2.} Stabilization Criteria for Range of Variation of Last Three Consecutive Readings (See FS 2212, section 3):

Well Volume Purge: One well volume = Equipment Volume Purge: 1 equipment volume = 0.06 Initial pump or tubing Depth in well (feet): (Military) Vol. Purged (gal) Purger (Military) 1400 0.74 0 (404 .33 1.41) 1408 .33 1.41	Tubing Di (inches) total well	iameter	Sample ID:	1010101-12 PURGING	2 DATA		Date:		1/21/21	
Well Volume Purge: One well volume Purge: One well volume Purge: 1 equipment volume Purge: 20.4 Time (Military) 1 equipment volume Purge: 1 equipment volume Purge: 20.4 Well Capacity (Gallons per Foot): 1 equipment volume Purge: 20.4 Time (Military) 20.4 T	(inches)				2 DATA				1 1-101-11	
Well Volume Purge: One well volume = Equipment Volume Purge: 1 equipment volume = 0.06 Initial pump or tubing Depth in well (feet): (Millitary) Vol. Purged (gal) Purger (Millitary) 1400 0.74 0 1404 .33 1.4 1405 .33 1.4 1406 .33 1.4 1406 .33 1.4 1408 .33 1.4	(inches)				JUNIN				11000	
Well Volume Purge: One well volume = Equipment Volume Purge: 1 equipment volume = 0.06 Initial pump or tubing Depth in well (feet): (Military) Vol. Purged (gal) Purged		3/8		AAGII OCLEG	en interval		Static depth to	water	Purge pump	type
Well Volume Purge: One well volume = Equipment Volume Purge: 1 equipment volume = 0.06 Initial pump or tubing Depth in well (feet): (Military) Vol. Purged (gal) Purged	total well		Depth:	15.7	to	25.2	(feet):	5.58	Р	P
Equipment Volume Purge: 1 equipment volume = 0.06 Initial pump or tubing Depth in well (feet): 20.4 Time (Military) Vol. Purged (gal) Purged (Gallors per Foot): 1400 1400 1400 1400 1400 1400 1400 14	depth		static depth to water			well capacity (gal/ft)				
Purge: 1 equipment volume = 0.06 Initial pump or tubing Depth in well (feet): 20.4 Time (Military) Vol. Purged (gal) Purget Vol. Purged (gal) Purget Vol. Purged (gal) Vol. Purged (gal) Purget Vol. Purget V		-			x		=	0	gal	
Initial pump or tubing Depth in well (feet): 20.4 Time (Military) Vol. Purged (gal)	pump vol (gal)		flow cell volume (gal)		tubing length (ft)		Tubing capacity			
Time (Military) Vol. Purged (gal) Purged (+	0.101	gal +	25.75	x	0.006	=	0.3155	gal
Time (Military) Vol. Purged (gal) Purget (Military) Vol. Purged (gal) Purget (Military) Vol. Purged (gal) Purget O. 7 4 0 (Gallow) I 4 6 8 .33		Final pump	or tubing		Furging Initia		Purging		Total Volume	-
Well Capacity (Gallons per Foot): 0.75" Tubing inside Dia. Capacity (Gal.JFt.): 1/2 PURGING EQUIPMENT CODES: B=Baller, Sampled By (Print) Affiliation: D. Bass / Lale And Pump or Tubing Depth in the control of the co	20.45	Depth	in well (feet):	0045	at:	1351	Ended at:	1462	Purged (gallons):	1.73
Well Capacity (Gallons per Foot): 0.75" Tubing inside Dia. Capacity (Gal./Ft.): 1// PURGING EQUIPMENT CODES: B=Baller, Sampled By (Print) Affiliation: D. B. L.	Cumul. Vol. Purged (gals)	Purge Rate (gpm)	Depth to Water (ft)	Temp ° C	Cond. (µS/cm)	pH (SU)	Color by observation	mg/L³r %	Turbidity (NTUs)	Sheen by observation
Well Capacity (Gallons per Foot): 0.75" Tubing inside Dia. Capacity (Gal.JFt.): 1/2 PURGING EQUIPMENT CODES: B=Baller, Sampled By (Print) Affiliation: D. B. L.	0.74	.083	6.52	233	1713	6.46	Cloudy	0.23	5,02	NOW
Well Capacity (Gallons per Foot): 0.75" Tubing Inside Dia. Capacity (Gal./Ft.): 1// PURGING EQUIPMENT CODES: B=Bailer, Sampled By (Print) Affiliation: D. B. L.	101	083	6.53	23.8	2379	6.49	Clare	0.14	1.42	Nane
Well Capacity (Gallons per Foot): 0.75". Tubing Inside Dia. Capacity (Gall/Ft.): 1/PURGING EQUIPMENT CODES: B=Baller, Sampled By (Print) Affiliation: D. Bay / Lake And Pump or Tubing Depth in v	1.40	.083	6.53	23.9	2386	6.50	Clan	0.21	1.51	MANG
Well Capacity (Gallons per Foot): 0.75" Tubing Inside Dia. Capacity (Gal./Ft.): 1// PURGING EQUIPMENT CODES: B=Bailer, Sampled By (Print) Affiliation: D. B. L.	173	.083	657	239	2392	6.50	CEAR	0.16	213	NEN
Well Capacity (Gallons per Foot): 0.75". Tubing Inside Dia. Capacity (GalJFt.): 1// PURGING EQUIPMENT CODES: B=Bailer, Sampled By (Print) Affiliation: D. Buss / Lake And Pump or Tubing Depth in v	2.1	.087	0.30	١٨٥	000	0.50	Cern		0.	
Tubing Inside Dia. Capacity (Gal./Ft.): 1/PURGING EQUIPMENT CODES: B=Baller, Sampled By (Print) Affiliation: D. Buy Lake And Pump or Tubing Depth in v	2.00	.00/								
Tubing Inside Dia. Capacity (Gal./Ft.): 1/PURGING EQUIPMENT CODES: B=Baller, Sampled By (Print) Affiliation: D. Buy Lake Lake Pump or Tubing Depth in v										,
Tubing inside Dia. Capacity (Gal./Ft.): 1/PURGING EQUIPMENT CODES: B=Bailer, Sampled By (Print) Affiliation: D. B. La										
Sampled By (Print) Affiliation: D. Buy Lake Lake Pump or Tubing Depth in v	75" = 0.02; 1	" = 0.04; 1.2	5" = 0.06; 2" =	0.16; 3" =	0.37; 4" = 0.6	5; 5" = 1.02	; 6" = 1.47; 12"	= 5.88		
Sampled By (Print) Affiliation: D. Bays / Lake have Pump or Tubing Depth in v						" = 0.006: 1/2"		0.016		
D. Begs/ Lake LAND	lier, BP=Bladd	er Pump ESP=	Elecuic Submer	SAMPLIN		np G-obier(sp	cenyy			
Pump or Tubing Depth in v	,		Sampler(s) Sig	mature(s):			Sampling		Sampling	
Pump or Tubing Depth in v	W Ra	Dec ,	(4)		W. G.		Initiated at:	1412	Ended at:	1416
	in well (feet):	20.45	Tubing Materia	il Code	PE	Field-Filtere Filtration E			Filter Size:_	um
	1	1		Tubin	g (Y) N (replaced)		Dup	ilicate: Y	(N)
Sample Container Speci	pecification	/		Sample P	reservation		Intended	Sampling		e pump rate
Sample I.D. Code # Containers Mate	Material Code	Volume	Preserv. Used		Added in Field	Final pH	Analysis and/or Method	Equipment Code	(mL per	minute) x 3785
1010101-12A 1	PP	500 ml	ICE	None	None	NA	TDS, CI	RFPP		
1010101-12B 1	PP	250mL	HNO3	None	None	NA	Metal Inhouse	RFPP		
1010101-12C 1		250mL	HNO3	None	None	NA	Matals II +	RFPP		
1010101-12D 1	PP	250 mL	lce	None	None	NA	Fluoride	RFPP		
-1010101-129E 1	PP PP	230 IIIL			Nene	NA	Ra 226+ 228	REPP		
Remarks:		2000 ml	HNO3	None	None		and the second s			

Sampling EQUIPMENT CODES: APP= After (Through) Peristaltic Pump; B = Baller; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Peristaltic Pump; SM=Straw Method(tubing Gravity Drain); O=Other (Specify)

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

Site Name:	McIntosh Power P	lant				Site Location:		Lakeland, FL		2 /	
Well No:	CCR-13			Sample ID:	1010101-13			Date:		15/8/21	
					PURGIN	G DATA		1	4		
Well Diameter		Tubing D	iameter		Well Scree	en Interval		Static depth to	water	Purge pump	
(inches)	2	(inches)	3/8	Depth:	15.6	to	25.1	(feet):	6.70	F	PP
Well Volum	ne Purge:	total well depth		static depth to water			well capacity (gal/ft)				
(One well volume =					Х		=	0	gal	
Equipment Purge:	Volume	pump vol (gal)		flow cell volume (gal)		tubing length (ft)		Tubing capacity			
1 eq	uipment volume =	0.06	+	0.101	gal +	25.66	X	0.006	=	0.31496	gal
Initial pump o	r tubing epth in well (feet):	20.25	Final pump Depth	or tubing in well (feet):	20.2	Purging Initia	1101	Purging Ended at:	1442	Total Volume Purged (gallons):	127
Time (Military)	Vol. Purged (gal)	Cumul. Vol. Purged (gals)	Purge Rate (gpm)	Depth to Water (ft)	Temp ° C	Cond. (μS/cm)	pH (SU)	Color by observation	ng/L or %	Turbidity (NTUs)	Sheen by observation
1424	.66	66	.083	6.92	24.2	3068	3,99	Clear	0.11	1).1	KEN
1428	23	,99	.083	6.93	24,2	3052	398	Clea	0.10	8.14	Now
11 111	(33	132	083	694	242	3046	3.99	Clear	0.09	803	NONE
		0.75" = 0.02; 1				0.37; 4" = 0.6			= 5.88		
	a. Capacity (Gal./Ft.) MENT CODES: B=B					6" = 0.004: 3/8'			0.016		
PORGING EQUIP	MENT CODES: B-B	allel, Br-Bladu	er Fullip ESF =	Liecuic Submer	SAMPLIN		ip C - culo (op	30.17	SA		
Sampled By (Pri	1 ,	and slee	Tec ,	Sampler(s) Sign	nature(s):			Sampling Initiated at:	1442	Sampling Ended at:	1448
	/ Pump or Tubing Dep	th in well (feet):	20.25	Tubing Materia	I Code	PE	Field-Filtere Filtration E	ed: Y (N) quipment Type		Filter Size:_	um
F	ield Decontaminatio	n: Y (N			Tubin	g (Y) N (replaced)		Dup	licate: Y	(N)
	Sample Container	Specification	/		Sample P	reservation		Intended	Sampling		e pump rate
Sample I.D. Cod	e # Containers	Material Code	Volume	Preserv. Used		Added in Field nL)	Final pH	Analysis and/or Method	Equipment Code		minute) x 3785
	1	PP	500 ml	ICE	None	None	NA	TDS, CI	RFPP		
1010101-13A	1	PP	250mL	HNO3	None	None	NA	Metal Inhouse	RFPP		
1010101-13A 1010101-13B			250mL	HNO3	None	None	NA	Metals II +	RFPP		
-	1	PP	ZOUIL								
1010101-13B		PP PP	250 mL	Ice	None	None	NA	Fluoride	RFPP		

Sampling EQUIPMENT CODES: APP= After (Through) Peristaltic Pump; B = Baller; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Peristaltic Pump; SM=Straw Method(tubing Gravity Drain); O=Other (Specify)

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Site Name:	McIntosh Power P	lant				Site Location:		Lakeland, FL	1		
Well No:	CCR-15			Sample ID:	1010101-15			Date:	1/29	2/21	
					PURGIN	G DATA					
Well Diameter		Tubing D	iameter		Well Scre	en Interval		Static depth to	water /	Purge pump	type
inches)	2	(inches)	3/8	Depth:	15.4	to	25	(feet):	16.75	F	P
Well Volum	e Purge:	total well depth		static depth to water			well capacity (gal/ft)			1.4	260
0	ne well volume =	256	-	10:10		X	16	=	0	gal *	
Equipment Purge:	Volume	pump vol (gal)		flow cell volume (gal)		tubing length (ft)		Tubing capacity	10 1	18V.D3	bace
1 equ	ipment volume =	0.08	+	0.101	gal +	25.67	X	0.006	=	0.31502	gal
nitial pump or	tubing		Final pump o		_	Purging Initia		Purging		Total Volume	-
De	pth in well (feet):	2002 18 (Depth	in well (feet):	18,0	at:	0758	Ended at:	0830	Purged (gallons):	1.9
Time (Military)	Vol. Purged (gal)	Cumul. Vol. Purged (gals)	Purge Rate (gpm)	Depth to Water (ft)	Temp ° C	Cond. (μS/cm)	pH (SU)	Color by observation	mg/L or %	Turbidity (NTUs)	Sheen by observation
089(143	143	10625	16.78	23.6	418.8	3.81	Cloudy	1.16	262	NE
0824	18	1.61	.0625	1678	23.6	463	3.83	Clarpy	.73	19.8	NO
0827	.18	179	.0195	16.77	23.6	462	384	n r	.68	159	No
08 28	31.	191	.0635	16.78	23.8	492	3.84	u ii	.64	13.7	
0833	18	215	.0125	101.0	0=.0			R ct	- (
Well Capacity (Ga	llons per Foot): (0.75° = 0.02; 1°	" = 0.04; 1.25	" = 0.06; 2" =	0.16; 3"=	0.37; 4" = 0.69	5; 5" = 1.02;	6" = 1.47; 12" :	= 5.88		
	. Capacity (Gal./Ft.)						= 0.006: 1/2"		0.016		
URGING EQUIP	MENT CODES: B=Ba	ailer, BP=Bladde	er Pump ESP=E	lectric Submers	SAMPLIN		p O=otner(spe	спу)			
Sampled By (Prin	t) Affiliation:			Sampler(s) Sig				Sampling		Sampling	
D Bagg	1.14.1	Fleeren		6		. /	1	Initiated at:	0830	Ended at:	0834
1	ump or Tubing Dept		.0.	Tubing Materia	al Code	PE	Field-Filtere	d: Y (N)	- v Ju	Filter Size:	um
	eld Decontamination		1		Tubir	ng (Y) N (replaced)	dubinent Type	Dup	licate: Y	(N)
	Sample Container 5		_			reservation	торишооцу	Intended	Sampling	Samp	e pump
Sample I.D. Code	# Containers	Material Code	Volume	Preserv. Used	Total Volume	Added in Field	Final pH	Analysis and/or Method	Equipment Code	(mL per	rate · minute) x 3785
1010101-15A	1	PP	500 ml	ICE	None	None	NA	TDS, CI	RFPP		
1010101-15B	1	PP	250mL	ниоз	None	None	NA	Metal Inhouse	RFPP		
1010101-15C	1	PP	250mL	HNO3	None	None	NA	Metals II +	RFPP		
1010101-15D	1	PP	250 mL	Ice	None	None	NA	Fluoride	RFPP		
temarks:											

Sampling EQUIPMENT CODES: APP= After (Through) Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Peristaltic Pump; SM=Straw Method(tubing Gravity Drain); O=Other (Specify)

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

Site Name:	McIntosh Power P	lant				Site Location:		Lakeland, FL		,	
Well No:	CCR-16			Sample ID:	1010101-16	art.		Date:		1281	21
CE TO					PURGIN	G DATA		4			
Well Diameter		Tubing D	iameter		Well Scre	en Interval		Static depth to	water 10	Purge pump	type
(inches)	2	(inches)	3/8	Depth:	15.3	to	24.9	(feet):	151	F	P
Well Volum	e Purge:	total well	_	static depth to water	q	x	well capacity (gal/ft)	-	0	gal I.D	0 GA
Equipment Purge:	Volume	pump vol (gal)		flow cell volume (gal)		tubing length (ft)		Tubing capacity			
	ipment volume =	0.06	+	0.101	gal +	25.64	X	0.006	=	0.31484	gal
Initial pump or De	tubing pth in well (feet):	2001 6	Final pump Depth	or tubing in well (feet):	16.75	Purging Initia at:		Purging Ended at:	PAIO	Total Volume Purged (gallons):	-
Time (Military)	Vol. Purged (gal)	Cumul. Vol. Purged (gals)	Purge Rate (gpm)	Depth to Water (ft)	Temp ° C	Cond. (μS/cm)	pH (SU)	Color by observation	mg/l/ or %	Turbidity (NTUs)	Sheen by observation
0902	1.7	17	-1	15.35	239	9396	3.76	CER	.63	9.97	Mare
0906	.u	2,10	ıt	15.21	23.8	9410	3.76	CEAR	-58	7.22	ADN
0910	u	2.5	1.	15.35	239	9430	3.77		,51	1 19	NICE
Tubing inside Dia	allons per Foot): a. Capacity (Gal./Ft.) MENT CODES: B=B		6: 3/16" = 0.	0014: 1/4" = 0	0.0026: 5/10 sible Pump, Pl SAMPLIN	P=peristaltic Pur	" = 0.006: 1/2"	= 0.010: 5/8" =	= 5.88 0.016		
Sampled By (Prin		akidaw i	elome.	Sampler(s) Sig	nature(s):			Sampling Initiated at:	0910	Sampling Ended at:	0914
	ump or Tubing Dep		11-11	Tubing Materia	al Code	PE	Fleid-Filtere Flitration E			Filter Size:	um
Fi	eld Decontamination	n: Y (N)			Tubir	19 (Y) N	(replaced)		Dup	licate: Y	(N)
	Sample Container	Specification				reservation Added in Field		Intended Analysis and/or	Sampling Equipment	flow	rate minute)
Sample I.D. Code		Material Code		Preserv. Used	(1	mL)	Final pH	Method	Code		x 3785
1010101-16A	1	PP	500 ml	ICE	None	None	NA	TDS, CI	RFPP		
1010101-16B	1	PP	250mL	HNO3	None	None	NA	Metal Inhouse	RFPP		
1010101-16C	1	PP	250mL	HNO3	None	None	NA	Metals il +	RFPP		
1010101-16D	1	PP	250 mL	Ice	None	None	NA	Fluoride	RFPP		
1010101-16E	-1	PP	2000 ml	HNO3	-None	None	NA	Ra 226± 228	REPP		
Remarks:										i,	

Sampling EQUIPMENT CODES: APP= After (Through) Peristaltic Pump; B = Baller; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Peristaltic Pump; SM=Straw Method(tubing Gravity Drain); O=Other (Specify)

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

	McIntosh Power P	lant				Site Location:		Lakeland, FL		,	
	CCR-17			Sample ID:	1010101-17			Date:		1/28	1/21
1					PURGING	G DATA			200		
Diameter		Tubing D	iameter		Well Scree	en Interval	1	Static depth to	water 0	Purge pump	-
ınches)	2	(inches)	3/8	Depth:	15.4	to	25	(feet):	N'7"	P	P
Well Volum	e Purge:	total well depth		static depth to water			well capacity (gal/ft)		14.01		
C	ne well volume =		-			х		=	0	gal	
Equipment Purge:	Volume	pump vol (gal)		flow cell volume (gal)		tubing length (ft)		Tubing capacity			
1 equ	ipment volume =		+	0.101	gal +	25.67	x	0.006	=	0.31502	gal
nitial pump or	tubing		Final pump	or tubing		Purging Initia		Purging		Total Volume	
De	epth in well (feet):	20.2	Depth	in well (feet):	202	at:	1256	Ended at:	1314	Purged (gallons):	1.49
Time (Military)	Vol. Purged (gal)	Cumul. Vol. Purged (gals)	Purge Rate (gpm)	Depth to Water (ft)	Temp ° C	Cond. (µS/cm)	pH (SŲ)	Color by observation	mg/L or %	Turbidity (NTUs)	Sheen by observation
1306	0.83	0.83	,083	14.08	26.9	1136	6.40	CEAR	1.36	7.18	NOW
1310	.33	.1.16	083	14.68	26.7	1105	6.35	CLER	1.36	4.22	NOW
1314	37	Ца	.083	Wor	26.8	1108	6.36	CLEDE	1.32	449	Nane
12.	, ,			14,05		•					
14											
Well Capacity (G	iallons per Foot):	0.75" = 0.02;	" = 0.04; 1.2	5" = 0.06; 2" =	0.16; 3**=	0.37; 4" = 0.0	65; 5" = 1.02	; 6" = 1.47; 12"	= 5.88		
Tubing Inside Di	a. Capacity (Gal./Ft.)	: 1/8" = 0.000	6: 3/16" = 0.			6" = 0.004: 3/8			0.016		
PURGING EQUIF	MENT CODES: B=B	aller, BP=Blado	ler Pump ESP=	Electric Submer	SAMPLIN		nip O=outer(sp	ecily)			
Sampled By (Pri	nt) Affiliation:			Sampler(s) Sig	nature(s):			Sampling		Sampling	
D. B. 6	as/ Lake	are 91	1000	X		~_		Initiated at:	1314	Ended at:	138
	Pump or Tubing Dep			Tubing Materia	al Code	PE	Field-Filter Filtration E	ed: Y (N) quipme at Type		Filter Size:_	um
F		- /							Dun	olicate: Y	(N)
	ield Decontaminatio	n: Y (N			Tublr	ng (Y) N	(replaced)	•	Бар		
	ield Decontaminatio					reservation	(replaced)	Intended Analysis and/or	Sampling	flow	
	Sample Container			Preserv. Used	Sample P	(/	(replaced)	Intended Analysis and/or Method		flow	rate minute)
F	Sample Container # Containers	Specification		Preserv. Used	Sample P	reservation Added in Field		Analysis and/or	Sampling Equipment	flow (mL per	rate minute)
F Sample I.D. Code	Sample Container # Containers	Specification Material Code	Volume	-	Sample P Total Volume (I	reservation Added in Field	Final pH	Analysis and/or Method	Sampling Equipment Code	flow (mL per	rate minute)
F Sample I.D. Cod 1010101-17A	Sample Container # Containers 1	Specification Material Code	Volume 500 ml	ICE	Sample P Total Volume (I	Added in Field nL) None	Final pH	Analysis and/or Method TDS, CI	Sampling Equipment Code	flow (mL per	rate minute)
Sample I.D. Cod 1010101-17A 1010101-17B	Sample Container # Containers 1 1	Specification Material Code PP PP	Volume 500 ml 250mL	ICE HNO3	Sample P Total Volume (I None	Added in Field nL) None None	Final pH NA NA	Analysis and/or Method TDS, CI Metal Inhouse	Sampling Equipment Code RFPP	flow (mL per	rate minute)
F Sample I.D. Cod 1010101-17A 1010101-17B 1010101-17C	Sample Container # Containers 1 1 1	Specification Material Code PP PP	Volume 500 ml 250mL 250mL	ICE HNO3 HNO3	Sample P Total Volume (t None None	Added in Field mL) None None None	Final pH NA NA NA	Analysis and/or Method TDS, CI Metal Inhouse Metals II +	Sampling Equipment Code RFPP RFPP	flow (mL per	rate minute)

Sampling EQUIPMENT CODES: APP= After (Through) Peristaltic Pump; B = Baller; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Peristaltic Pump; SM=Straw Method(tubing Gravity Drain); O=Other (Specify)

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

^{2.} Stabilization Criteria for Range of Variation of Last Three Consecutive Readings (See FS 2212, section 3):

pH = +/- 0.2; Temperature = +/- 0.2°; Specific Conductance = +/- 5%, Dissolved Oxygen = ≤20% saturation(see Table FS 2200-2): optionally, +/-0.2 mg/L or 10% (whichever is greater). Turbidity: all readings ≤20 NTU: optionally +/- 5 NTU or +/- 10 % (whichever is greater)

:	McIntosh Power P	lant				Site Location:		Lakeland, FL			
-	CCR-18			Sample ID:	1010101-18			Date:	1/	77/21	
	CON-30			Gample ib:	PURGIN	G DATA	-		1/0	1111	
iameter		Tubing D	iameter			en Interval		Static depth to	WEREN PR	Purge pump	type
es)	2	(inches)	3/8	Depth:	15.6	to	25.2	(feet):	(C)	F	P
all Volume	Purge:	total well depth		static depth to water			well capacity (gal/ft)				
Oi	e well volume =		-			X		=	0	gal	
Equipment 'Purge:	/olume	pump vol (gal)		flow cell volume (gal)		tubing length (ft)		Tubing capacity			
1 equi	pment volume =	0.06	+	0.101	gal +	25.91	x	0.006	-	0.31646	gal
nitial pump or			Final pump	or tubing	20.4	Purging Initi	ated 07 43			Total Volume	-
Dej	th in well (feet):	20.4	Depth	in well (feet):	C7 43	at:	oset	Ended at:	0801	Purged (gallons):	
Time (Military)	Vol. Purged (gal)	Cumul. Vol. Purged (gals)	Purge Rate (gpm)	Depth to Water (ft)	Temp ° C	Cond. (μS/cm)	pH (SU)	Color by observation	DO	Turbidity (NTUs)	Sheen by observatio
0753	.83	.83	,083	8,39	23.7	383.6	6.47	Clisan	.0:39	307	NOW
0757	.33	1.16	.083	8.40	23.8	381.2	644	Clan	0.2	3,59	RENY
084	33	1.49	,083	8.40	33.8	379.2	6.45	Clar	0.30	394	NON
	llons per Foot):					0.37; 4" = 0.6 5" = 0.004: 3/8	35; 5" = 1.02 " = 0.006: 1/2"		= 5.88		
	Capacity (Gal./Ft.) IENT CODES: B=B								0.010		
and O. (Dda	Affiliation		A	Sampler(s) Sig	SAMPLIN	G DATA					
Sampled By (Prin	/ ,	il gleat	hc .	d	Jacui e(s).			Sampling Initiated at:	8:01	Sampling Ended at:	3.05
	mp or Tubing Dep		1/10	ubing Materia	al Code	联	Field-Filtere Filtration E	ed: Y (N) quipmen Type		Filter Size:_	um
Fie	ld Decontaminatio	n: Y (N)	1	Tubir	ig (Y) N	(replaced)		Dup	licate: Y	(N)
Sample I.D. Code	Sample Container # Containers	Specification Material Code	Volume	Preserv. Used	Total Volume	reservation Added in Field nL)	Final pH	Intended Analysis and/or Method	Sampling Equipment Code	flow (mL per	e pump rate rminute) x 3785
1010101-18A	1	PP	500 m1	ICE	None	None	NA	TDS, CI	RFPP		
1010101-18B	1	PP	250mL	HNO3	None	None	NA	Metal Inhouse	RFPP		
1010101-18C	1	PP	250mL	HNO3	None	None	NA	Metals li +	RFPP		
1010101-18D	1	PP	250 mL	Ice	None	None	NA	Fluoride	RFPP		
Remarks:											

Sampling EQUIPMENT CODES: APP= After (Through) Peristaltic Pump; B = Baller; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Peristaltic Pump; SM=Straw Method(tubing Gravity Drain); O=Other (Specify)

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

Site Name:	McIntosh Power P	lant				Site Location:		Lakeland, FL		, ,	
Well No:	CCR-19			Sample ID:	1010101-19			Date:	1/.	וטרכ	
700 100					PURGINO	DATA					
Well Diameter		Tubing D	lameter		Well Scree		V.	Static depth to	water	Purge pump	type
(inches)	2	(inches)	3/8	Depth:	15.5	to	25.1	(feet):	4/5/	I	PP
Well Volume	Purge:	total well depth		static depth to water		x	well capacity (gal/ft)	_	o	gal	
			-								
Equipment ' Purge:	Volume	pump vol (gal)		flow cell volume (gal)		tubing length (ft)		Tubing capacity			
1 equi	pment volume =	0.06	+	0.101	gal +	25.82	x	0.006	=	0.31592	gal
Initial pump or	tubing		Final pump	or tubing	-00	Purging Initia		Purging		Total Volum	е
Dej	oth in well (feet):	20.3	Depth	in well (feet):	203	at:	0815	Ended at:	0833	Purgeo (gallons)	
Time (Military)	Vol. Purged (gal)	Cumul. Vol. Purged (gals)	Purge Rate (gpm)	Depth to Water (ft)	Temp ° C	Cond. (μS/cm)	pH (SU)	Color by observation	mg/ij or %	Turbidity (NTUs)	Sheen by observation
CROS	.83	.83	.083	4.63	23,3	5926	4.19	CLEAN	0.10	123	NONE
0876	22	111	089	4.63	233	5954	421	Clear	0.08	8.80	NOW
C# 33	22	149	082	4.63	23.4	5941	4.21	CISAR	0 09	7.30	NON
PURGING EQUIPM Sampled By (Print	. Capacity (Gal./Ft.) MENT CODES: B=B	ailer, BP=Bladd	6: 3/16" = 0. ler Pump ESP=	0014: 1/4" = 0	sible Pump, PP SAMPLIN	" = 0.004: 3/8' Peperistaltic Pur	" = 0.006: 1/2"	= 0.010: 5/8" =		Sampling Ended at:	9536
	Imp or Tubing Dep		20	Jubing Materia	al Code	Pr	Field-Filter	ed: Y (N)	003	Filter Size:_	um
		-	-	1	Tubin	9 (8)	(replaced)	darbment 43he	Dur	ilicate: Y	(N)
	ld Decontaminatio)				(терласси)				g-pump
	Sample Container					reservation Added In Field		Intended Analysis and/or	Sampling Equipment Code	flov	v rate r minute)
Sample I.D. Code	# Containers	Material Code	Volume	Preserv. Used		nL)	Final pH	Method		gpm	x 3785
1010101-19A	1	PP	500 ml	ICE	None	None	NA	TDS, CI	RFPP		
1010101-19B	1	PP	250mL	HNO3	None	None	NA	Metal Inhouse	RFPP		
1010101-19C	1	PP	250mL	HNO3	None	None	NA	Metals li +	RFPP		
1010101-19D	1	PP	250 mL	Ice	None	None	NA	Fluoride	RFPP		
Remarks:											

Sampling EQUIPMENT CODES: APP= After (Through) Peristaltic Pump; B = Baller; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Peristaltic Pump; SM=Straw Method(tubing Gravity Drain); O=Other (Specify)

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

Site Name:	McIntosh Power P	lant				Site Location:		Lakeland, FL			
Well No:	CCR-20			Sample ID:	1010101-20			Date:	1/27	bı	
					PURGIN	G DATA					
Well Diameter		Tubing D	lameter		Well Scree	en Interval		Static depth to	water	Purge pump	type
(inches)	2	(inches)	3/8	Depth:	14.9	to	24.5	(feet):		1	P
Well Volum	e Purge:	total well depth		static depth to water			well capacity (gal/ft)				
C	one well volume =		-	4.1		X		=	0	gal	
Equipment Purge:	Volume	pump vol (gal)		flow cell volume (gal)		tubing length (ft)		Tubing capacity			
1 equ	uipment volume =	0.06	+	0.101	gal +	25.21	х	0.006	=	0.31226	gal
Initial pump or			Final pump	-	18.1	Purging Initia	T	Purging		Total Volum	P
De	epth in well (feet):	19.7	Depth	in well (feet):	19+	at:	(335	Ended at:		Purgeo (gallons)	
Time (Military)	Vol. Purged (gal)	Cumul. Vol. Purged (gals)	Purge Rate (gpm)	Depth to Water (ft)	Temp ° C	Cond. (μS/cm)	pH (SU)	Color by observation	mg/L or %	Turbidity (NTUs)	Sheen by observation
1345	.83	83	.083	4.82	24.0	4426	4.82	Cloudy	0.19	30.8	NON
12115	23	1.16	,083	4.82	24.0	4468	4.79	Cloudy	0.25	30.6	NON
252	.33	1.49	.083	4.82	23.9	4470	4.78	Claror	6.32	30.5	AICAL
Tubing inside Di	a. Capacity (Gal./Ft.) MENT CODES: B=B	0.75" = 0.02; 1 :: 1/8" = 0.0000 ailer, BP=Bladd	6: 3/16" = 0.0	014: 1/4" = 0	0.0026: 5/16 sible Pump, PP SAMPLIN		= 0.006: 1/2*	= 0.010: 5/8" = 0 cify)	= 5.88 0.016		
D. Bes	,	w Har	Mc	8	<i>)</i> 	~/		Sampling Initiated at:	1357	Sampling Ended at:	135
F	Pump or Tubing Dep	th in well (feet):	MI	Tubing Materia	al Code	PE	Field-Filtere Filtration E	ed: Y (N) quipment Type		Filter Size:_	um
F	ield Decontaminatio	n: Y ((N)) '		Tubir	ng (Y) N (replaced)		Dup	licate: Y	(N)
	Sample Container	Specification			Sample P	reservation		Intended	Sampling		le pump v rate
	# Containers	Material Code	Volume	Preserv. Used		Added in Field	Final pH	Analysis and/or Method	Equipment Code		r minute) x 3785
Sample I.D. Code	1	PP	500 ml	ICE	None	None	NA	TDS, CI	RFPP		
Sample I.D. Code 1010101-20A			250mL	HNO3	None	None	NA	Metal Inhouse	RFPP		
	1	PP	250IIIL			1					
1010101-20A 1010101-20B				HNO3	None	None	NA	Metals Ii +	RFPP		
1010101-20A	1 1	PP PP	250mL 250 mL		None None	None None	NA NA	Metals li +	RFPP		

Sampling EQUIPMENT CODES: APP= After (Through) Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Peristaltic Pump; SM=Straw Method(tubing Gravity Drain); 0=Other (Specify)

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

^{2.} Stabilization Criteria for Range of Variation of Last Three Consecutive Readings (See FS 2212, section 3):

Site Name:	McIntosh Power P	lant				Site Location:		Lakeland, FL			
Well No:	CCR-21			Sample ID:	1010101-21			Date:		1/27/2	
		7.11.		-	PURGIN	G DATA en Interval		Static depth to	water	Durge pump	funo
Well Diameter		Tubing D		Danth	15.6	to	25.2	(feet):	5/5	Purge pump	р
(inches) Well Volum	e Purge:	total well	3/8	Static depth to water	15.6	to	well capacity (gal/ft)	(leet).	2.03		
C	ne well volume =					X		=	0	gal	
Equipment Purge:	Volume	pump vol (gal)		flow cell volume (gal)		tubing length (ft)		Tubing capacity			
1 equ	ipment volume =	0.06	+	0.101	gal +	25.87	X	0.006		0.31622	gal
Initial pump or De	tubing epth in well (feet):	20.4	Final pump o	or tubing in well (feet):	204	Purging Initia at:	1405	Purging Ended at:	1493	Total Volume Purged	28
Time (Military)	Vol. Purged (gal)	Cumul. Vol. Purged (gals)	Purge Rate (gpm)	Depth to Water (ft)	Temp ° C	Cond. (μS/cm)	pH (SU)	Color by observation	ng/L gr %	Turbidity (NTUs)	Sheen by observation
1415	.083	.083	.083	6.10	24.2	2045	6.21	CLEAR	0.07	2.45	NON
1419	33	1.16	.083	6.10	240	2039	621	CLEAR	0.06	468	NEND
1423	.33	1,49	.083	6.10	244	2036	6.01	Clan	0.05	41.2	NONE
1427	.33	1.82	.083	6.10	24.2	2050	6.21	(· · · ·	005	20.9	New
143(.33	2.15	083	6.10	242	2056	6.21	10 11	0.05	19.8	NON
1435	33	2.48	.083	6.10	242	2050	620	-, -,	0.05	120	NCM
1439	33	2.81	083	6.60	242	2048	6.20	to eq	0.05	806	NON
11143	33	314	,83	6.10	242	2054	6.20	(0.04	8.08	NUN
1447	37	341	10,	0		0	- 0	4 1		0.0	NeN
1451	.33	3.90						uci			NCA
1//).75" = 0.02; 1	" = 0.04; 1.25	5" = 0.06; 2" =	0.16; 3" =	0.37; 4" = 0.65	5; 5° = 1.02;	6" = 1.47; 12"	= 5.88		
Tubing inside Di	a. Capacity (Gal./Ft.)	: 1/8" = 0.0006	6: 3/16" = 0.0				= 0.006: 1/2*		0.016		
PURGING EQUIP	MENT CODES: B=B	aller, BP=Bladd	er Pump ESP=	Electric Submer	SAMPLIN		p O=omer(spe	city)			
Sampled By (Prin	nt) Affiliation:	Eleca	۲	Sampler(s) Sig	nature(s):			Sampling Initiated at:	1443	Sampling Ended at:	1446
P	rump or Tubing Dep	th in well (feet):	20.4	Tubing Materia	al Code	PE	Field-Filter Filtration E	ed: (N) quipment Type		Filter Size:	um
Fi	ield Decontaminatio	n: Y (N)			Tubir	ıg (Y) N (replaced)		Dup	olicate: Y	(N)
	Sample Container	Specification	/		Sample P	reservation		Intended	Sampling		e pump rate
Sample I.D. Code	# Containers	Material Code	Volume	Preserv. Used		Added in Field nL)	Final pH	Analysis and/or Method	Equipment Code	(mL per	minute) x 3785
1010101-21A	1	PP	500 ml	ICE	None	None	NA	TDS, CI	RFPP		
1010101-21B	1	PP	250mL	HNO3	None	None	NA	Metal Inhouse	RFPP		
1010101-21C	1	PP	250mL	HNO3	None	None	NA	Metals II +	RFPP		
1010101-21D	1	₽P	250 mL	Ice	None	None	NA	Fluoride	RFPP		
Remarks:											

Sampling EQUIPMENT CODES: APP= After (Through) Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Peristaltic Pump; SM=Straw Method(tubing Gravity Drain); O=Other (Specify)

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

^{2.} Stabilization Criteria for Range of Variation of Last Three Consecutive Readings (See FS 2212, section 3):
pH = +/- 0.2; Temperature = +/- 0.2°; Specific Conductance = +/- 5%, Dissolved Oxygen = ≤20% saturation(see Table FS 2200-2): optionally, +/-0.2 mg/L or 10% (whichever is greater). Turbidity:
all readings ≤20 NTU: optionally +/- 5 NTU or +/- 10 % (whichever is greater)

Site Name:	McIntosh Power P	lant				Site Location:		Lakeland, FL			
Well No:	CCR-22			Sample ID:	1010101-22			Date:		1/27/2	1
		2.77		apr.	PURGIN						-
Well Diameter	*	Tubing D	iameter		Well Scre	en Interval		Static depth to		Purge pump	
inches)	2	(inches)	3/8	Depth:	14.8	to	24.4	(feet):	6.45	V	PP
Well Volum	e Purge:	total well depth		static depth to water			well capacity (gal/ft)				
C	ne well volume =		-			X		=	0	gal	
Equipment Purge:	Volume	pump vol (gal)		flow cell volume (gai)		tubing length (ft)		Tubing capacity			
1 equ	ipment volume =	0.06	+	0.101	gal +	25.13	X	0.006	=	0.31178	gal
nitial pump or	tubing		Final pump			Purging Initia		Purging		Total Volum	
De	epth in well (feet):	19.6	Depth	in well (feet):	196	at:	1454	Ended at:	1528	Purgeo (gallons)	28
Time (Military)	Vol. Purged (gal)	Cumul. Vol. Purged (gals)	Purge Rate (gpm)	Depth to Water (ft)	Temp ° C	Cond. (μS/cm)	pH (SU)	Color by observation	mg/L or %	Turbidity (NTUs)	Sheen by observation
1504	.83	.83	.082	6.54	243	2115	4.40	CLEAR	0.05	33.7	NONE
1508	.33	1.16	083	6.55	244	2136	4.40	Class	0.04	42.8	NON
1512	33	1.49	.083	6.55	244	2134	4.40	1- "	0.04	28.6	Nue
1518	.33	1.82	083	6.55	24,4	2138	4.39	[c +1	0.04	20.1	NON
1520	.33	2.15	.083	6.55	24,4	2132	4.35	10 11	0,04	11.3	NENG
1524	-33	2.48	.083	6.55	24.4	2142	4.39	16 50	0.04	9.46	NON
1528	,33	2.81	.083,	6.55	24.3	2133	4.38	1	ory	7.66	NOM
(532	33	314	683					. ~			NONE
		758 - 0.00. 4	T = 0.04. 4.21	5" = 0.06; 2" =	0.16; 3" =	0.37; 4" = 0.69	5. 5" = 4.02.	6" = 1.47; 12" :	= 5.88		
	allons per Foot): (a. Capacity (Gal./Ft.)	0.75" = 0.02; 1 : 1/8" = 0.0006					= 0.006: 1/2"				
	MENT CODES: B=B			Electric Submers			p O=other(spe	cify)			
Sampled By (Pri	nt) Affiliation:			Sampler(s) Sig	SAMPLIN	G DATA				-	
ampica by (i iii	11 11 1	1		5				Sampling Initiated at:	1-0C	Sampling Ended at:	1/22
D. B.911	LAMAAN	HATM		V	-				1528		15.5%
F	Pump or Tubing Dept	th in well (feet):	19.6	Tubing Materia	il Code	PE	Field-Filtere Filtration Ed	d: Y (N) quipment Type		Filter Size:_	um
F	ield Decontaminatio	n: Y (N))		Tubir	ng (YY) N (replaced)	1	Dup	licate: Y	(y)
	Sample Container	Specification			Sample P	reservation		Intended Analysis and/or	Sampling Equipment	flov	le pump v rate
Sample I.D. Code	# Containers	Material Code	Volume	Preserv. Used		Added in Field nL)	Final pH	Method	Code		r minute) x 3785
1010101-22A	1	PP	500 ml	ICE	None	None	NA	TDS, CI	RFPP		
1010101-22B	1	PP	250mL	HNO3	None	None	NA	Metal Inhouse	RFPP		
1010101-22C	1	PP	250mL	HNO3	None	None	NA	Metals li +	RFPP		
1010101-22D	1	PP	250 mL	Ice	None	None	NA	Fluoride	RFPP		
				-		-		-			

Sampling EQUIPMENT CODES: APP= After (Through) Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Peristaltic Pump; SM=Straw Method(tubing Gravity Drain); O=Other (Specify)

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

^{2.} Stabilization Criteria for Range of Variation of Last Three Consecutive Readings (See FS 2212, section 3):

pH = +/- 0.2; Temperature = +/- 0.2°; Specific Conductance = +/- 5%, Dissolved Oxygen = ≤20% saturation(see Table FS 2200-2): optionally, +/-0.2 mg/L or 10% (whichever is greater). Turbidity:

all readings ≤20 NTU: optionally +/- 5 NTU or +/- 10 % (whichever is greater)

7	McIntosh Power P	lant				Site Location:		Lakeland, FL			
1	GGR-23			Sample ID:	1010101-23			Date:		1/28	121
					PURGIN	G DATA					
Well Diameter		Tubing D	iameter		Well Scree	en Interval		Static depth to	water 1 1 U	Purge pump	type
(inches)	2	(inches)	3/8	Depth:	15.1	to	24.7	(feet):	110	P	P
Well Volum	e Purge:	total well depth		static depth to water			well capacity (gal/ft)				
O	ne well volume =		-			Х		=	0	gal	
Equipment Purge:	Volume	pump vol (gal)		flow cell volume (gal)		tubing length (ft)		Tubing capacity			
1 equ	ipment volume =	0.06	+	0.101	gal +	25.44	x	0.006	=	0.31364	gal
nitial pump or	tubing		Final pump	or tubing	00	Purging Initia		Purging		Total Volume	7.
De	epth in well (feet):	19.9	Depth	in well (feet):	MI	at:	1330	Ended at:	1348	Purged (gallons):	149
Time (Military)	Vol. Purged (gal)	Cumul. Vol. Purged (gals)	Purge Rate (gpm)	Depth to Water (ft)	Temp ° C	Cond. (µS/cm)	pH (SU)	Color by observation	mg/L of %	Turbidity (NTUs)	Sheen by observation
1340	.83	-83	.083	591	3.6	1680	5.12	Clare	0.14	1.90	XCNA
1244	.33	1-16	083	5.96	23.7	1590	5.12	Clea	014	1.64	NON
1348	-33	149	.083	5.92	237	1689	5.12	CLEOR	0.12	1.31	NON
		0.75" = 0.02; 1		5" = 0.06; 2" =					= 5.88		
	a. Capacity (Gal./Ft.)						" = 0.006; 1/2"		0.016		
PURGING EQUIP	MENT CODES: B=B	aller, br=blado	er Fump ESF-	Electric Submers	SAMPLIN		ip O-Other(spe	olly)			
Sampled By (Prin	1	land Eli	ectric	Sampler(s) Sig				Sampling Initiated at:	1348	Sampling Ended at:	1352
	ump or Tubing Dep		190	Tubing Materia	l Code	PE	Field-Filter Filtration E	ed: Y (N) quipment Type		Filter Size:	um
	ield Decontaminatio	n: Y (N)		Tubir	(Y) N	(replaced)		Dup	licate: Y	(N)
Fi			/		Sample P	reservation		Intended	Sampling		nate
Fi	Sample Container	Specification				Added to Field		Analysis and/or	Equipment Code	(mL per	minute)
Fi	Sample Container	Specification Material Code	Volume	Preserv. Used	Total Volume		Final pH	Method	Code	gpm :	c 3785
Sample I.D. Code	# Containers		Volume 500 ml	Preserv. Used		nL) None	Final pH NA	TDS, CI	RFPP	gpm:	c 3785
Sample I.D. Code 1010101-23A	# Containers	Material Code	500 ml	-	(1	nL)			_	gpm	x 3785
Sample I.D. Code 1010101-23A 1010101-23B	# Containers	Material Code PP PP	500 ml 250mL	ICE HNO3	None	nL) None	NA	TDS, CI	RFPP	gpm	c 3785
Sample I.D. Code 1010101-23A	# Containers	Material Code	500 ml	ICE	None None	None	NA NA	TDS, CI	RFPP	gpm :	c 3785

Sampling EQUIPMENT CODES: APP= After (Through) Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Peristaltic Pump; SM=Straw Method(tubing Gravity Drain); O=Other (Specify)

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

^{2.} Stabilization Criteria for Range of Variation of Last Three Consecutive Readings (See FS 2212, section 3):

	L			FD 9000-2		1		Lakeland, FL			
Site Name:	McIntosh Power P	lant				Site Location:		Lakeland, FL		100	-
Vell No:	SW 100			Sample ID:				Date:		1/28/	2
		Tubing D	lometer		PURGING Well Scree			Static deptarte	AH.	Purge pump	tyne
Well Diameter inches)	2	(inches)	3/8	Depth:	vien ociee	to		(feet):	1	PP	.ypc
Well Volum		total well		static deptito	94		well capacity (gal/ft)			2.	67-9
0	ne well volume =	26.1		6.0		x	0.16	5	3.11	gal	/
Equipment Purge:	Volume	pump vol (gal)		flow cell volume (gal)		tubing length (ft)		Tubing capacity			
1 equ	ipment volume =		+		gal +		x		=	0	gal
nitial pump or De	tubing pth in well (feet):		Final pump Depth	or tubing in well (feet):		Purging Initia at:	+ 1444	Purging Ended at:	1510	Total Volume Purged (gallons):	5.4
Time (Military)	Vol. Purged (gal)	Cumul. Vol. Purged (gals)	Purge Rate (gpm)	Depth to Water (ft)	Temp ° C	Cond. (μS/cm)	pH (SU)	Color by observation	DO mg/L)or %	Turbidity (NTUs)	Sheen by observation
1 24	2.67	2.67	ol.	10.32	22.0	131.6	5.85	Clarry	.83	125	NU
MIN	.4	3.07	.10	10.32	220	129.9	5.79	in ve	.80	108	NU
1448	d	3.47	10	10.32	221	128	5.76		.78	842	nko
1452	'u	3.87	.10	10.31	22,1	128.7	575	4	.78	76.9	NO
	4	7,01	.10	10.31	22.1	127.7	5.73	bi ci	.76	64.3	NO
1456.	1	4.7		10.32	222	126.6	573	1.00	.72	59.8	No
1507	, ()	501	.10					(* *	.72	55.9	No
1506	u	/	.10	10.32	22.1	125.5	5.71			57.3	NC
1510	, α	5.47	.10	10.31	22.1	128.2	5.71		.78	26.7	/0-
	allons per Foot): (a. Capacity (Gal./Ft.) MENT CODES: B=B		3/16" = 0.0	0014: 1/4" = 0		" = 0.004: 3/8°	" = 0.006: 1/2"	= 0.010: 5/8" = 1	= 5.88).016		
					SAMPLIN						
Sampled By (Prin	it) Affiliation:			Sampler(s) Sig)			Sampling		Sampling	
D.B.	as/ LAK	land slea	ruc	80				Initiated at:	1510	Ended at:	1314
	ump or Tubing Dep	th in well (feet):	12.0	Tubing Materia	l Code	RE	Field-Filtere Filtration E	ed: Y (N) quipmen Type		Filter Size:_	um '
Fie	eld Decontamination	n: Y (N)		Tubin	(Y) N	(replaced)		Dup	licate: Y	(N)·)
ample I.D. Code	Sample Container	Specification Material Code	Volume	Preserv. Used	Total Volume	Added in Field	Final pH	Intended Analysis and/or Method	Sampling Equipment Code	Sample flow (mL per gpm o	minute)
	1	PP	500 ml	ICE	None	None	NA	TDS, CI	RFPP		
	1	PP	250mL	HNO3	None	None	NA	Metal Inhouse	RFPP		
			250mL	HNO3	None	None	NA	Metals II +	RFPP		
		PP				1					
	1	PP PP	250 mL	lce	None	None	NA	Fluoride	RFPP		
Remarks:	1			Ice	None	None	NA	Fluoride	RFPP		

Sampling EQUIPMENT CODES: APP= After (Through) Peristaltic Pump; B = Baller; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Peristaltic Pump; SM=Straw Method(tubing Gravity Drain); O=Other (Specify)

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

^{2.} Stabilization Criteria for Range of Variation of Last Three Consecutive Readings (See FS 2212, section 3):
pH = +/- 0.2; Temperature = +/- 0.2°; Specific Conductance = +/- 5%, Dissolved Oxygen = ≤20% saturation(see Table FS 2200-2): optionally, +/-0.2 mg/L or 10% (whichever is greater). Turbidity:
all readings ≤20 NTU: optionally +/- 5 NTU or +/- 10 % (whichever is greater)

Site Name:	McIntosh Power P	lant				Site Location:		Lakeland, FL			
Well No:	CCR-EQ BLK			Sample ID:	1010101-25			Date:	126	5.21	
					PURGINO	G DATA				The late	
Well Diameter		Tubing D	iameter		Well Scree	en Interval		Static depth to	water	Purge pump	type
inches)		(inches)	3/8	Depth:		to		(feet):		F	P
Well Volum	e Purge:	total well depth		static depth to water			well capacity (gal/ft)				
0	ne well volume =		_			х		=	0	gal	
Equipment Purge:	Volume	pump vol (gal)		flow cell volume (gal)		tubing length (ft)		Tubing capacity			
1 equ	ipment volume =	0.6	+	.10/	gal +		х	0.006	=	0	gal
nitial pump or	tubing		Final pump	or tubing		Purging Initia	ited	Purging		Total Volum	-
De	pth in well (feet):	-	Depth	in well (feet):		at:		Ended at:		Purged (gallons):	
Time (Military)	Vol. Purged (gal)	Cumul. Vol. Purged (gals)	Purge Rate (gpm)	Depth to Water (ft)	Temp ° C	Cond. (µS/cm)	pH (SU)	Color by observation	mg/l or %	Turbidity (NTUs)	Sheen by observation
8:06	_			_	222	O.Z	5.61	C1248	0.30	0.49	NONE
ibing inside Dia JRGING EQUIP	i. Capacity (Gal./Ft.) MENT CODES: B=B	ailer, BP=Bladd	6: 3/16" = 0. ler Pump ESP=	0014: 1/4" = 0 Electric Submer	0.0026: 5/16 sible Pump, PF SAMPLIN		= 0.006: 1/2"	= 0.010: 5/8* = 0	= 5.88		
// 10	REW Z	SABRO	1/1-		//	1	_	Sampling	Cian	Sampling Ended at:	100
1100	KEN /	<i>)</i> ,,,,	ILE	E	100	1		Initiated at:	809	Ended at:	8/
P	ump or Tubing Dept	th in well (feet):		Tubing Materia	al Code	TE		ed: Y (N) quipment Type)	Filter Size:_	um
FI	eld Decontamination	n: Y (N	0		Tytoin	g (Y) N (replaced)		Dup	licate: Y	(N)
	Sample Container	Specification				reservation		Intended Analysis and/or	Sampling Equipment	flov	e pump v rate r minute)
ample I.D. Code	# Containers	Material Code	Volume	Preserv. Used		Added in Fleid nL)	Final pH	Method	Code		x 3785
010101-25A	1	PP	500 ml	ICE	None	None	NA	TDS, CI	RFPP		
010101-25B	1	PP	250mL	HNO3	None	None	NA	Metal Inhouse	RFPP		
010101-25C	1	PP	250mL	HNO3	None	None	NA	Metals 11 +	RFPP		
1010101-25D	1	PP	250 mL	lce	None	None	NA	Fluoride	RFPP		
		pp	2000 ml	HNO3	None	None	NA	Ra-226+ 228	REPP	No. C.	1/ >
1010101-25E											

Sampling EQUIPMENT CODES: APP= After (Through) Peristaltic Pump; B = Baller; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Peristaltic Pump; SM=Straw Method(tubing Gravity Drain); O=Other (Specify)

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

^{2.} Stabilization Criteria for Range of Variation of Last Three Consecutive Readings (See FS 2212, section 3):

Well No:		lant				Site Location:		Lakeland, FL	1	1	
	CCR-1			Sample ID:	1010101-01			Date:	07/2	2/20	21
Well Diameter					PURGINO	G DATA	-	-	0 1 / 0	. W W C	
Diametel		Tubing D	lameter		Well Scree	en Interval		Static depth to	water	Purge pump	type
(inches)	2	(inches)	3/8	Depth:	15.7	to	25.2	(feet):	11.48	PP	
Well Volum	e Purge:	total well depth		static depth to water			well capacity (gal/ft)				
0	ne well volume =		-	11.48		X		=	0	gal	
Equipment Purge:	Volume	pump vol (gal)		flow cell volume (gal)		tubing length (ft)		Tubing capacity			
1 equ	ipment volume =	0.06	+	0.101	gal +	25.71	X	0.006	=	0.31526	gal
Initial pump or De	tubing pth in well (feet):	20.45	Final pump o Depth	or tubing in well (feet):	19.45	Purging Initi at:		Purging Ended at:	0855	Total Volume Purged (gallons):	-
Time (Military)	Vol. Purged (gal)	Cumul. Vol. Purged (gals)	Purge Rate (gpm)	Depth to Water (ft)	Temp ° C	Cond. (μS/cm)	pH (SU)	Color by observation	DO mg/L or %	Turbidity (NTUs)	Sheen by observation
0849	2.0	2.0	0.20	11.57	25.9	328	5.63	Clear	0.44	0.60	NON
0852	0.6	2.6	0.20	11.57	259	329	5.75	Meas	0.41	0.66	NON
0855	0.6	3.2	0.20	11.57	25.9	323	5.81	clear	0.40	0.83	NON
Tubing Inside Dia PURGING EQUIP Sampled By (Prir	allons per Foot): a. Capacity (Gal /Ft.) MENT CODES: B=B at) Affiliation:	: 1/8" = 0.0000 ailer, BP=Bladd	6: 3/16" = 0 .0		0.0026: 5/16 sible Pump, PF SAMPLIN nature(s):	=peristaltic Pu	mp O=other(sp	= 0.010: 5/8" = (ecify) Sampling Initiated at:		Sampling Ended at:	
Tubing Inside Dia PURGING EQUIP Sampled By (Prin	a. Capacity (Gal./Ft.) MENT CODES: B=B nt) Affiliation:	: 1/8" = 0.0004 aller, BP=Bladd	6: 3/16* = 0.6	0014: 1/4" = (Electric Submer Sampler(s) Sig	0.0026: 5/16 sible Pump, PP SAMPLIN nature(s):	" = 0.004: 3/8 =peristaltic Pur	mp O=other(sp	= 0.010: 5/8" = 0 ecify)	0.016		0902 um
Tubing Inside Dia PURGING EQUIP Sampled By (Prin	a. Capacity (Gal JFt.) MENT CODES: B=B at) Affiliation:	: 1/8" = 0.0000 aller, BP=Bladd	6: 3/16" = 0.6	0014: 1/4" = (Electric Submer Sampler(s) Sig	0.0026: 5/16 sible Pump, PF SAMPLIN nature(s):	i" = 0.004: 3/8 P=peristaltic Pur G DATA	mp O=other(sp	= 0.010: 5/8" = (ecify) Sampling Initiated at:	0855	Ended at:	
Tubing Inside Dia PURGING EQUIP Sampled By (Prin	a. Capacity (Gal JFt.) MENT CODES: B=B at) Affiliation: ump or Tubing Depi	th in well (feet):	6: 3/16" = 0.6	0014: 1/4" = (Electric Submer Sampler(s) Sig	0.0026: 5/16 sible Pump, PF SAMPLIN nature(s): al Code Tubin Sample Pi	g = 0.004: 3/8 =peristaltic Pur G DATA G DATA N reservation Added in Field	" = 0.006: 1/2" mp O=other(spi Field-Filtere Filtration E	= 0.010: 5/8" = (ecify) Sampling Initiated at:	0855	Filter Size:_ licate: Y Sample flow (mL per	um e pump rate minute)
Tubing Inside Dia PURGING EQUIP Sampled By (Prin Chad P	a. Capacity (Gal JFt.) MENT CODES: B=B at) Affiliation: ump or Tubing Depi	th in well (feet):	6: 3/16" = 0.1	0014: 1/4" = (Electric Submer Sampler(s) Sig Tubing Materia	0.0026: 5/16 sible Pump, PF SAMPLIN nature(s): al Code Tubin Sample Pi	g = 0.004: 3/8 Peperistaltic Pur G DATA Og (Y) N reservation	" = 0.006: 1/2" mp O=other(spi Field-Filtere Filtration E (replaced)	= 0.010: 5/8" = (ecify) Sampling Initiated at: ed: Y (N) quipment Type Intended Analysis and/or	0.016 OSSS Dup Sampling Equipment	Filter Size:_ licate: Y Sample flow (mL per	um e pump
Tubing Inside Dia PURGING EQUIP Sampled By (Prin P Fi Sample I.D. Code	a. Capacity (Gal JFt.) MENT CODES: B=B It) Affiliation: Tump or Tubing Depi	th in well (feet): "YN Naterial Code	6: 3/16" = 0.1	0014: 1/4" = (Electric Submers Sampler(s) Sig Tubing Materia	0.0026: 5/16 sible Pump, PF SAMPLIN nature(s): al Code Tubin Sample PI Total Volume	g = 0.004: 3/8 Peperistaltic Pur G DATA G DATA N reservation Added in Field nl.	" = 0.006: 1/2" mp O=other(spi Field-Filter Filtration E (replaced)	= 0.010: 5/8" = (ecify) Sampling Initiated at: ed: Y (N) quipment Type Intended Analysis and/or	O S S S Dup Sampling Equipment Code	Filter Size:_ licate: Y Sample flow (mL per	um e pump
Tubing Inside Dia PURGING EQUIP Sampled By (Prir Public And Public Publi	a. Capacity (Gal JFt.) MENT CODES: B=B at) Affiliation: ump or Tubing Depicted Decontamination Sample Containers # Containers	th in well (feet): "YN" = 0.0000 Aller, BP=Bladd "He in well (feet): "N" N "Specification Material Code "PP"	6: 3/16" = 0.1	D014: 1/4" = (Electric Submers Sampler(s) Sig Tubing Materia Preserv. Used 1:1 HNO ₃	0.0026: 5/16 stble Pump, PF SAMPLIN nature(s): al Code Tubin Sample Pi Total Volume (n	g = 0.004: 3/8 Peperistaltic Pur G DATA G DATA None	Field-Filtere Fitration E (replaced)	= 0.010: 5/8" = (ecify) Sampling Initiated at: ed: Y (N) quipment Type Intended Analysis and/or	Dup Sampling Equipment Code ESP	Filter Size:_ licate: Y Sample flow (mL per	um e pump

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

	McIntosh Power P	lant				Site Location:		Lakeland, FL	1	1	
Well No:	CCR-2			Sample ID:	1010101-02			Date:	07/2	2/202	2/
					PURGINO	G DATA			0 1 0	100	
Well Diameter		Tubing D	lameter		Well Scree	n Interval		Static depth to	water	Purge pump	type
(inches)	2	(inches)	3/8	Depth:	15.7	to	25.7	(feet):	10.47	PP	
Well Volum		total well depth		static depth to water		x	well capacity (gal/ft)			lant	
Equipment	volume =	pump vol	-	10,47 flow cell		tubing		Tubing		gal	
Purge:		(gal)		volume (gal)		length (ft)		capacity		AD IN COLUMN	E.v.
	ipment volume =	0.06	+	0.101	gal +	25.71	X	0.006	=	0.31526	gal
Initial pump or De	tubing pth in well (feet):	20.45	Final pump o	in well (feet):	20,95 19.95	Purging Initia		Purging Ended at:	0950	Total Volume Purged (gallons):	
Time (Military)	Vol. Purged (gal)	Cumul. Vol. Purged (gals)	Purge Rate (gpm)	Depth to Water (ft)	Temp ° C	Cond. (µS/cm)	pH (SU)	Color by observation	DO mg/L or %	Turbidity (NTUs)	Sheen by observation
0938	1.11	1.11	0.11	10.62	27.2	417	5.66	JE10134	0.63	2.59	NONE
0942	0 44	1.55	0.11	10.62	27.1	432	5.63	Yellowish	0.55	2.18	NONE
0946	0.44	1.99	0.11	10.62	27.2	440	5.60	yellowish	0.51	2.31	NONE
0950	0.44	2.43	0.11	10.62	27.3	446	X560	Yellowish	0.49	1.90	NON
						0.37: 4" = 0.6	SH 4.00	6" = 1,47; 12"	= 5.88		
Well Capacity (Ga Tubing Inside Dia	. Capacity (Gal./Ft.)	0.75" = 0.02; 1 : 1/8" = 0.0000			,	0.37; 4" = 0.6 " = 0.004: 3/8					
PURGING EQUIPI	MENT CODES: B=B	ailer, BP=Bladd	ler Pump ESP=	Electric Submer	sible Pump, PP SAMPLIN		np O=other(spe	ecify)			
						GDATA		ri-			
Sampled By (Prin	t) Affiliation:	10		Sampler(s) Sig							
11.	1 11/	12		/	nature(s):			Sampling Initiated at:	0950	Sampling Ended at:	1000
Sampled By (Prin	1 11/	hliss		Sampler(s) Sig			FILL FIRE	Initiated at:	0950	Ended at:	1000
Chao	1 11/		20.95	/	nature(s):		Field-Filtere Filtration Eq	Initiated at:	0950		1000 _um
Chao	Hote	th in well (feet):		Street	al Code			Initiated at:		Ended at:	
Chan	Hote	th in well (feet):		Street	nature(s):		Filtration Eq	d: Y (N) pulpment Type	Dupl Sampling	Filter Size:	um (N)
Chao Pi	Imp or Tubing Depi	th in well (feet):		Street	al Code Tubin Sample Pi	g (v) N (reservation	Filtration Eq	d: Y (N)	Dupl	Ended at: Filter Size:_	um pump rate minute)
Chao Pi	ump or Tubing Depi	th in well (feet): n: Y (N) Specification		Tubing Materia	al Code Tubin Sample Pi	g (v) N (Filtration Eq	Initiated at: d: Y (N) uipment Type Intended Analysis and/or	Dupl Sampling Equipment	Filter Size:_ icate: Y Sample flow (mL per	um pump rate minute)
Pro Fie	Imp or Tubing Depi	th in well (feet): n: Y N Specification Material Code		Tubing Material	al Code Tubin Sample Pi Total Volume	g (v) N (reservation	Filtration Eq	Initiated at: d: Y (N) uipment Type Intended Analysis and/or	Dupl Sampling Equipment Code	Filter Size:_ icate: Y Sample flow (mL per	um pump rate minute)
Pi Fid Sample I.D. Code CCR-2A	ump or Tubing Depi	th In well (feet): n: Y (N) Specification Material Code PP		Tubing Materia Preserv. Used 1:1 HNO ₃	Tubin Sample Pr Total Volume (n	g (Y) N (reservation Added in Field nL) None	Filtration Eq (replaced) Final pH NA	Initiated at: d: Y (N) uipment Type Intended Analysis and/or	Sampling Equipment Code RFPP	Filter Size:_ icate: Y Sample flow (mL per	um pump rate minute)
Pro File Sample I.D. Code CCR-2A CCR-2B	ump or Tubing Depi	th In well (feet): n: Y (N) Specification Material Code PP		Tubing Materia Preserv. Used 1:1 HNO ₃	Tubin Sample Pr Total Volume (n	g (Y) N (reservation Added in Field nL) None	Filtration Eq (replaced) Final pH NA	Initiated at: d: Y (N) uipment Type Intended Analysis and/or	Sampling Equipment Code RFPP	Filter Size:_ icate: Y Sample flow (mL per	um pump rate minute)
Pic File Sample I.D. Code CCR-2A CCR-2B	ump or Tubing Depi	th In well (feet): n: Y (N) Specification Material Code PP		Tubing Materia Preserv. Used 1:1 HNO ₃	Tubin Sample Pr Total Volume (n	g (Y) N (reservation Added in Field nL) None	Filtration Eq (replaced) Final pH NA	Initiated at: d: Y (N) uipment Type Intended Analysis and/or	Sampling Equipment Code RFPP	Filter Size:_ icate: Y Sample flow (mL per	um pump rate minute)
Sample I.D. Code CCR-2A CCR-2B	Imp or Tubing Depi	th in well (feet): n: Y N Specification Material Code PP PP	Volume 250ml 250a	Preserv. Used 1:1 HNO ₃ 1:1 HNO	Tubin Sample Pr Total Volume (n None	g N N N N N N N N N N N N N N N N N N N	Filtration Eq	Initiated at: d: Y ulpment Type Intended Analysis and/or Method	Sampling Equipment Code RFPP RFPP	Filter Size:_ icate: Y Sample flow (mL per	um pump rate minute)
Fig. Sample I.D. Code CCR-2A CCR-2B Remarks:	ump or Tubing Depi	th in well (feet): The specification Material Code PP PP CG = Clear Gl	Volume 250ml 250ml	Preserv. Used 1:1 HNO ₃ 1:1 HNO ₃	Total Volume None None	g N reservation Added in Field nL) None None	Filtration Eq replaced) Final pH NA NA	Initiated at: d: Y N uipment Type Intended Analysis and/or Method O = Other (Specific	Dupl Sampling Equipment Code RFPP RFPP	Filter Size:_ licate: Y Sample flow (mL per gpm x	um e pump rate minute) (3785

Site Name:	McIntosh Power P	lant				Site Location:		Lakeland, FL			
Well No:	CCR-4			Sample ID:	1010101-04			Date:	07/2	2 /202	51
					PURGIN	G DATA	- 1376		1/0	01000	X 1
Well Diameter	,	Tubing D	iameter		Well Scre	en Interval		Static depth to	water	Purge pump	type
(inches)	2	(inches)	3/8	Depth:	15.6	to	25.1	(feet):	14.60	F	P
Well Volum	e Purge:	total well depth		static depth to water			well capacity (gal/ft)				
0	ne well volume =		-	14.60		х		=	0	gal	
Equipment Purge:	Volume	pump vol (gal)		flow cell volume (gal)		tubing length (ft)		Tubing capacity			
1 equ	ipment volume =	0.06	+	0.101	gal +	25.69	х	0.006	=	0.31514	gal
Initial pump or			Final pump	or tubing		Purging Initi	ated	Purging	i.	Total Volume	
De	pth in well (feet):	20.35	Depth	in well (feet):	20,85	at:	1040	Ended at:	1107	Purged (gallons):	
Time (Military)	Vol. Purged (gal)	Cumul. Vol. Purged (gals)	Purge Rate (gpm)	Depth to Water (ft)	Temp ° C	Cond. (µS/cm)	pH (SU)	Color by observation	DO mg/L or %	Turbidity (NTUs)	Sheen by observation
1051	0.913	2.913	.083	15.65	27.0	15445	4.05	Meat	0.80	1.75	Nonz
1055	0.332	1336	45,083	15.70	27.3	15678	1	Mar	0.71	1.64	NONE
1059	0.338	1.577		15.70	27.0	15700	4.04	Meas	0.60	139	NON
1103	0.332	1.909	.083	15.70	27.1	15705	4103	Clear	0.55	1.45	NON
1101	0.332	2.241	1083	15.70	-	15728		Char	0.53	175	Non
Tubing inside Dia	allons per Foot): a. Capacity (Gal./Ft. MENT CODES: B=B		6: 3/16** = 0.0	0014: 1/4" =	0.0026: 5/10 rsible Pump, Pl	P=peristaltic Pu	3" = 0.006: 1/2"	= 0.010: 5/8" =	= 5.88 0.016		
Sampled By (Prin	t) Affiliation:			Sampler(s) Sig	SAMPLIN mature(s):	IG DATA					
11.0	11.41/	/		1	//	_		Sampling Initiated at:	1107	Sampling Ended at:	1117
Chad	Hotchki	35		Co	at a			1	1107		
Р	ump or Tubing Dep	th in well (feet):	20.85	Tubing Materia	al Code		Field-Filtere Filtration E	ed: Y (N) quipment Type		Filter Size:_	um
Fi	eld Decontaminatio	n: Y (N			Tubir	ng (Y) N	(replaced)		Dup	olicate: Y	(N)
Sample I.D. Code	Sample Container	Specification Material Code	Volume	Preserv. Used	Total Volume	reservation Added in Fleid	Final pH	Intended Analysis and/or Method	Sampling Equipment Code	flow (mL per	e pump rate minute)
CCR-4A	1	PP		1:1 HNO ₃	None	ML) None	NA NA		ESP	gpm	x 3785
CCR-4B	1	PP		1:1 HNO ₃	None	None	NA		ESP		
0011-45					None						
Remarks:		al.		1	1						
Remarks:											

Sampling EQUIPMENT CODES: APP= After (Through) Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Peristaltic Pump; SM=Straw Method(tubing Gravity Drain); O=Other (Specify)

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

^{2.} Stabilization Criteria for Range of Variation of Last Three Consecutive Readings (See FS 2212, section 3):

	McIntosh Power P	lant				Site Location:		Lakeland, FL	1	1	
Well No:	CCR-5			Sample ID:				Date:	07/0	7/200	1
					PURGIN	G DATA		N. C. C.	- / / 4	7,000	
Well Diameter		Tubing D	iameter		Well Scre	en interval		Static depth to	water	Purge pump	type
(inches)	2	(inches)	3/8	Depth:	16.2	to	25.7	(feet):	10.57	P	P
Well Volum	e Purge:	total well depth		static depth to water			well capacity (gal/ft)				
C	ne well volume =	26.2	-	10.57		х		=	0	gal	
Equipment Purge:	Volume	pump voi (gal)		flow cell volume (gal)		tubing length (ft)		Tubing capacity			
1 equ	ipment volume =	0.06	+	0.101	gal +	26.21	X	0.006	=	0.31826	gal
Initial pump or De	tubing pth in well (feet):	20.95	Final pump Depth	or tubing in well (feet):	21,35	Purging Initia		Purging Ended at:	0931	Total Volume Purged (gallons):	
Time (Military)	Vol. Purged (gal)	Cumul. Vol. Purged (gals)	Purge Rate (gpm)	Depth to Water (ft)	Temp ° C	Cond. (µS/cm)	pH (SU)	Color by observation	DO mg/L or %	Turbidity (NTUs)	Sheen by observation
0923	0.996	0.9910	. 083	11.2	25.7	16.499	5.17	Clear	0.79	5.80	NON
0927	1.225	1.328	083	11.4	25.8		5 9	Olen	069	491.	NON
0931	0,332	1,660	.083	11.4	25.8	16621	5.19	Class.	0.63	7 59	NOR
	allons per Foot): (a. Capacity (Gal./Ft.)		3/16" = 0.0	0014: 1/4" = (0.0026: 5/16 sible Pump, PP		= 0.006: 1/2"	= 0.010: 5/8" =	= 5.88 0.016		
PURGING EQUIP	MENT CODES: B=B	ailer, BP=Bladd		Sampler(s) Sig	SAMPLIN nature(s):	JUATA					
PURGING EQUIP	MENT CODES: B=B	1/		Sampler(s) Sig		/		Sampling Initiated at:	6931	Sampling Ended at:	0946
Sampled By (Prin	MENT CODES: B=B	hhis	5	/	nature(s):	/	Fleid-Filtere	, .	693/	Sampling Ended at: Filter Size:	0940 um
PURGING EQUIP	MENT CODES: B=B	th in well (feet):	20.95	4	nature(s):		Field-Filtere Filtration Ed	Initiated at:		Ended at:	0940 um
PURGING EQUIP Sampled By (Prin	MENT CODES: B=B. Affiliation: ump or Tubing Dept eld Decontamination Sample Container S	th in well (feet):	5 20.95	Tubing Materia	nature(s): il Code Tubin Sample Pi Total Volume	(Y) N (reservation	Filtration Ec	Initiated at:	Dup Sampling Equipment	Filter Size:	(N) pump rate minute)
PURGING EQUIP Sampled By (Prir P Fi	MENT CODES: B=B. Affiliation: ump or Tubing Dept eld Decontamination Sample Container \$ # Containers	th in well (feet): The results of the control of t	20.95 Volume	Tubing Materia Preserv. Used	nature(s): Il Code Tubin Sample Pi Total Volume (n	(Y) N (neservation Added in Field	Filtration Equation Equ	Initiated at: d: (N) pulpment Type Intended Analysis and/or Method	Dup Sampling Equipment Code	Filter Size:	(N) pump rate minute)
PURGING EQUIP Sampled By (Prin P Fi Sample I.D. Code CCR-5A	MENT CODES: B=B. It) Affiliation: Jump or Tubing Dept eld Decontamination Sample Container S # Containers 1	th in well (feet): The second of the second	20 .95 Volume 250 mL	Tubing Materia Preserv. Used 1:1 HNO ₃	Tubin Sample Pr Total Volume (n	(Y) N (reservation Added in Field LL) None	Filtration Ed replaced) Final pH NA	Initiated at: d: Y(N)) pulpment Type Intended Analysis and/or Method Metals B. CA. CLE. DOL 108.	Dup Sampling Equipment Code	Filter Size:	(N) pump rate minute)
PURGING EQUIP Sampled By (Prir P Fi	MENT CODES: B=B. Affiliation: ump or Tubing Dept eld Decontamination Sample Container \$ # Containers	th in well (feet): The results of the control of t	20.95 Volume	Tubing Materia Preserv. Used	nature(s): Il Code Tubin Sample Pi Total Volume (n	(Y) N (neservation Added in Field	Filtration Equation Equ	Initiated at: d: Y(N) pulpment Type Intended Analysis and/or Method Metals	Dup Sampling Equipment Code	Filter Size:	(N) pump rate minute)
PURGING EQUIP Sampled By (Prir P Fi Sample I.D. Code	MENT CODES: B=B. It) Affiliation: Jump or Tubing Dept eld Decontamination Sample Container S # Containers 1	th in well (feet): The second of the second	20 .95 Volume 250 mL	Tubing Materia Preserv. Used 1:1 HNO ₃	Tubin Sample Pr Total Volume (n	(Y) N (reservation Added in Field LL) None	Filtration Ed replaced) Final pH NA	Initiated at: d: Y(N)) pulpment Type Intended Analysis and/or Method Metals B. CA. CLE. DOL 108.	Dup Sampling Equipment Code	Filter Size:	(N purate

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

Site Name:	McIntosh Power P	lant				Site Location:		Lakeland, FL			
Well No:	CCR-6			Sample ID:	1010101-06	3.00 20000011		Date:	07/	27/20	271
Well No.	-	_	_	Sample ID.	PURGIN	G DATA		Date.	1/1	21/20	21
Well Diameter		Tubing D	lameter			en interval		Static depth to	water	Purge pump	type
(inches)	2	(inches)	3/8	Depth:	15.7	to	25.2	(feet):	9.50	ı	PP PP
Well Volum	e Purge:	total well depth		static depth to water			well capacity (gal/ft)				
0	ne well volume =			9.50		x		=	0	gal	
Equipment Purge:	Volume	pump vol (gal)		flow cell volume (gal)		tubing length (ft)		Tubing capacity			
1 equ	ipment volume =	0.06	+	0.101	gal +	25.72	x	0.006		0.31532	gal
Initial pump or	tubing		Final pump	or tubing		Purging Initi	ated	Purging		Total Volum	e
De	pth in well (feet):	20.45	Depth	in well (feet):	20,85	at	1023	Ended at:	1107	Purged (gallons):	
Time (Military)	Vol. Purged (gal)	Cumul. Vol. Purged (gals)	Purge Rate (gpm)	Depth to Water (ft)	Temp ° C	Cond. (μS/cm)	pH (SU)	Color by observation	DO mg/L or %	Turbidity (NTUs)	Sheen by observation
1035	0492	0.996	.083	9.55	26.6	3250	6.21	Meat	1.33	2.23	NONE
1039	0.332	1.328	.083	9.55	26.5	4116	6,19	1/001	1.21	1.55	Nou
1043	0.332	1.660	,083	9.55	26.5	4512	6.14	Mal	1.15	1.45	NOW
1047	0,332	1.992	.083	9.55	26.6	4870	6.10	Meas	1.12	1.39	NON
1051	2.332	2 324	.083	9.55	26.6	4600	6.13	Clear	1.09	1.47	NOW
1055	0.332	2.656	.083	9.56	26.6	4950	6.11	Clear	1,06	1,45	NON
1059	0.332	2,988	, 083	9.56	26.5	5108	6,10	Alegir	1.02	1.24	NON
1103	01332	3,320	,083	9,56	26.5	3 333	6.11	Meat	1.01	1.20	NOW
1107	01332	3.652	.083	9.56	26.4	5220	6.13	Clear	0.98	0.98	NONE
										1.09	
Well Capacity (Ga Tubing inside Dia	lions per Foot): (. Capacity (Gal./Ft.)	0.75" = 0.02; 1 : 1/8" = 0.0000				0.37; 4" = 0.6 6" = 0.004; 3/8	55; 5" = 1.02 " = 0.006: 1/2"		= 5.88 0.016		
	MENT CODES: B=B				sible Pump, PF	P=peristaltic Pur			0.010		
Sampled By (Prin) Affiliation:	,		Sampler(s) Sign	SAMPLIN	G DATA					
11	011	111		1	1-1	/		Sampling	11.7	Sampling Ended at:	11.07
Cha	& Hos	chki	55	Ch	at h			Initiated at:	1101	Ended at.	1114
Pı	ımp or Tubing Dept		20.93	Tubing Materia			Field-Filtere Filtration E	ed: Y (N) quipment Type		Filter Size:_	um
Fie	ld Decontamination	n: Y (N	D.		Tubin	g (Y) N	(replaced)		Dup		(N)
	Sample Container S	Specification Material Code	W.1			reservation Added in Field		Intended Analysis and/or Method	Sampling Equipment Code	flow	e pump rate minute)
Sample I.D. Code CCR-6A	# Containers	PP PP	Volume 250 mL	Preserv. Used	(n	nL)	Final pH			gpm	k 3785
CCR-6B	1	PP	250 mL	1:1 HNO ₃	None	None	NA NA	Metals B, Ca, Cl, Fr, 804, YDS,	RFPP		
CON-0D			250 IIIL	Ice	None	None	NA	bicarbonate, alkalinity	KFFF		
				119							
Remarks:	247 1	x 1 /	a //n	>							
7	0.12 6		_ //0	7							
1	243 c	cebidi4	10 A 1	107							
			/ _								

Sampling EQUIPMENT CODES: APP= After (Through) Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Peristaltic Pump; SM=Straw Method(tubing Gravity Drain); O=Other (Specify)

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

^{2.} Stabilization Criteria for Range of Variation of Last Three Consecutive Readings (See FS 2212, section 3):

	Mcintosh Power F	Plant				Site Location:		Lakeland, FL	y-	,	
Well No:	CCR-7			Sample ID:				Date:	17/5	7/2021	
					PURGING	G DATA		1000	01/2	1 100 d.J.	700
Well Diameter		Tubing D	iameter		Well Scree	en Interval		Static depth to	water	Purge pump	type
(inches)	2	(inches)	3/8	Depth:	15.7	to	25.2	(feet):	9.73	P	P
Well Volum	e Purge:	total well depth		static depth to water			well capacity (gal/ft)				
0	ne well volume =		-	9.73		X		=	0	gal	
Equipment Purge:	Volume	pump vol (gal)		flow cell volume (gal)		tubing length (ft)		Tubing capacity			
1 equ	ipment volume =	0.06	+	0.101	gal +	25.79	×	0.006	=	0.31574	gal
Initial pump or	tubing		Final pump	or tubing		Purging Initia	ated	Purging		Total Volume	
De	pth in well (feet):	20.45	Depth	in well (feet):	20.65	at:	1318	Ended at:		Purged (gallons):	
Time (Military)	Vol. Purged (gal)	Cumul. Vol. Purged (gals)	Purge Rate (gpm)	Depth to Water (ft)	Temp ° C	Cond. (μS/cm)	pH (SU)	Color by observation	DO mg/L or %	Turbidity (NTUs)	Sheen by observation
1330	0.996	0996	.083	9,74	26.8	1777	4.84	Clear	0.83	1.64	Nove
1334	0.332	1.328	×083	9.75	26.8	2250	4,79	Clear	0.62	1.83	NON
1338	0.332	1.460	,083	9,75	26.9	1835	4.82	(100)	0.51	147	NoL
1342	0.332	1.992	.083	976	269	1689	4,82	Clear	0.49	149	NON
1346	0,332	2.324	1083	9.76	26.9	1369	4.85	Clear	0.46	136	NON
1350	0.332	2.656	.083	9.76	26.9	1515	4.82	Class	0.47	1.51	HON
1264	0-332	2,988	.083	976	26.9	1657	4.82	Clent	0.44	1.58	NON
1358	0.332	3.320	.083	9.76	26,8	1722	480	Char	0.39	166	NOK
1402	0.332	3.452	.083	9.76	24,9	1736	4,82	Chear	0.40	1.52	NOW
1702	0 47.70	21470	.00	1110	11, 4-	170	7,000	2.5.01	- 10	1100	10
Well Capacity (Ga	llons per Foot):	0.75" = 0.02; 1	" = 0.04; 1.25	i" = 0.06; 2" =	0.16; 3**=	0.37; 4" = 0.6	5; 5" = 1.02;	6" = 1.47; 12"	= 5.88		
	. Capacity (Gal./Ft.)						' = 0.006: 1/2"		0.016		
PURGING EQUIPI	MENT CODES; B=B	aller, BP=Bladd	er Pump ESP=I	Electric Submer			np O=other(spe	ecify)			
				Sampler(s) Sig	SAMPLING nature(s):	DATA					
Sampled By (Prin	t) Affiliation:			/	/ /			Sampling			
	1/1 1	lecci		//	1/2				111 -	Sampling Ended at:	1.6.1
4.	Hotche	1:35		Un	f he			Initiated at:	1402	Sampling Ended at:	1411
Chad	1/1 1		20.45	Tubing Materia			Field-Filtere Filtration Eq	Initiated at:	1402		141/ um
Pt	Hotche	th in well (feet):	1000		I Code	g (Y) N (Initiated at:		Ended at:	19/1
Phad Pr	HOTCLE Imp or Tubing Depi	th in well (feet):			l Code Tubin	g (Y) N (Filtration Eq	Initiated at:	Dup	Filter Size:	umum
Phad Pr	Hotel & Land of the Composition of Tubing Depi	th in well (feet):			Tubin Sample Pr	reservation Added in Field	Filtration Eq	d: Y N)		Filter Size: licate: Y Sample flow (mL per	um (N) pump rate minute)
Chad PH	imp or Tubing Depi	th in well (feet): n: Y N Specification)	Tubing Materia	Tubin Sample Pr	reservation	Filtration Eq	Initiated at: d: Y (N) uipment Type Intended Analysis and/or	Dup Sampling Equipment	Filter Size:	um (N) pump rate minute)
Pro Fix Sample I.D. Code	imp or Tubing Depi	th In well (feet): n: Y N Specification Material Code	Volume 250 mL	Tubing Materia Preserv. Used 1:1 HNO ₃	Tubin: Sample Pr Total Volume (m	Added in Field nL)	Filtration Eq replaced) Final pH NA	Initiated at: d: Y (N) ulpment Type Intended Analysis and/or Method Metals B. Ca, Cl.F. 804, 708,	Dup Sampling Equipment Code RFPP	Filter Size: licate: Y Sample flow (mL per	um (N) pump rate minute)
Professional Profe	imp or Tubing Depi	th in well (feet): n: Y N Specification Material Code	Volume	Tubing Materia	Tubin Sample Pr Total Volume (m	reservation Added in Field	Filtration Eq replaced) Final pH	Initiated at: d: Y (N) uipment Type Intended Analysis and/or Method Metals	Dup Sampling Equipment Code	Filter Size: licate: Y Sample flow (mL per	um (N) pump rate minute)
Professional Profe	imp or Tubing Depi	th in well (feet): n: Y N Specification Material Code	Volume 250 mL	Tubing Materia Preserv. Used 1:1 HNO ₃	Tubin: Sample Pr Total Volume (m	Added in Field nL)	Filtration Eq replaced) Final pH NA	Initiated at: d: Y (N) ulpment Type Intended Analysis and/or Method Metals B. Ca, Cl.F. 804, 708,	Dup Sampling Equipment Code RFPP	Filter Size: licate: Y Sample flow (mL per	um (N) pump rate minute)
Professional Profe	imp or Tubing Depi	th in well (feet): n: Y N Specification Material Code	Volume 250 mL	Tubing Materia Preserv. Used 1:1 HNO ₃	Tubin: Sample Pr Total Volume (m	Added in Field nL)	Filtration Eq replaced) Final pH NA	Initiated at: d: Y (N) ulpment Type Intended Analysis and/or Method Metals B. Ca, Cl.F. 804, 708,	Dup Sampling Equipment Code RFPP	Filter Size: licate: Y Sample flow (mL per	um (N) pump rate minute)

Gravity Drain); O=Other (Specify)

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

Site Name:	McIntosh Power P	lant				Site Location:		Lakeland, FL	,	,	
Well No:	CCR-a			Sample ID:				Date:	07/2	8/205)/
Sala					PURGIN	G DATA			o i i u	1 /000	
Well Diameter		Tubing D	iameter		Well Scre	en Interval		Static depth to	water	Purge pump	type
(inches)	2	(inches)	3/8	Depth:	15.9	to	25.4	(feet):	9.48		PP
Well Volum	e Purge:	total well depth		static depth to water			well capacity (gal/ft)				
0	ne well volume =	25.9	-	9.48		х		=	0	gal	
Equipment Purge:	Volume	pump vol (gai)		flow cell volume (gal)		tubing length (ft)		Tubing capacity			
1 equ	ipment volume =	0.06	+	0.101	gal +	25.96	X	0.006	=	0.31676	gal
nitial pump or De	tubing pth in well (feet):		Final pump	or tubing in well (feet):		Purging Initiate		Purging Ended at:		Total Volum Purged	
	pari ili weli (leet).	20.65	Берин	III well (leet).	20.85	, at.	0833	Lilued at.	0857	(gallons)	
Time (Military)	Vol. Purged (gal)	Cumul. Vol. Purged (gals)	Purge Rate (gpm)	Depth to Water (ft)	Temp ° C	Cond. (µS/cm)	pH (SU)	Color by observation	DO mg/L or %	Turbidity (NTUs)	Sheen by observation
0845	0.996	0.996	.083	9.53	25.9	508	6.12	Meur	1.42	3.37	ShON
0849	D.330	1.328	1083	9.54	25.8	507	6,25	Clear	1,28	1.22	Nous
0853	0.332	1.100	.083	9.54	25.8	579	6,26	Clear	1.25	078	NONE
0857	0.332	1997	.083	9.54	25.8	581	6,32	Meas	1,26	0.65	NONE
	-										
ıbing inside Dia	llons per Foot): (Capacity (Gal./Ft.) MENT CODES: B=B		i: 3/16" = 0.0	014: 1/4" = 0	.0026: 5/16 sible Pump, PP	=peristaltic Pun	= 0.006: 1/2"	= 0.010: 5/8" =	= 5.88 0.016		
mpled By (Prin	i) Affiliation:			Sampler(s) Sign	SAMPLIN nature(s):/	G DATA					
11	1111	11.		1	//			Sampling	. 0	Sampling Ended at:	-0
had	Hotch	11.55		Chi	h			Initiated at:	0857	Ended at.	0902
Pu	mp or Tubing Dept	h in well (feet):	20.45	Tubing Materia	Code		Field-Filtere Filtration Eq	d: Y (N) uipment Type		Filter Size:_	um
Fle	d Decontamination	: Y (N)	>		Tubin	8 (Y) N (replaced)		Dup	licate: Y	(N)
	Sample Container S	pecification				reservation		intended Analysis and/or	Sampling Equipment		e pump v rate
ample I.D. Code	# Containers	Material Code	Volume	Preserv. Used	(п	Added in Field iL)	Final pH	Method	Code		minute) x 3785
CCR-8A	1	PP	250 mL	1:1 HNO ₃	None	None	NA	Metals	RFPP		
CCR-8B	1	PP	250 mL	Ice	None	None	NA	B, Ca, Cl, F-, 804, T05, bicarbonate, alkalinity	RFPP		
emarks:		-									
Remarks:											

Sampling EQUIPMENT CODES: APP= After (Through) Peristaltic Pump; B = Baller; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Peristaltic Pump; SM=Straw Method(tubing Gravity Drain); O=Other (Specify)

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

Site Name:	McIntosh Power P	lant				Site Location:		Lakeland, FL	1	,	
Well No:	CCR+9			Sample ID:		4		Date:	07/2	8/202	21
	/				PURGING	G DATA					
Well Diameter		Tubing D	lameter		Well Scree	en Interval		Static depth to		Purge pump	
(inches)	2	(inches)	3/8	Depth:	15.5	to	25	(feet):	10,18		PP
Well Volume	Purge:	total well depth		static depth to water			capacity (gal/ft)				
Oı	ne well volume =	25.6	-	10.18		X			0	gal	
Equipment ' Purge:	Volume	pump vol (gal)		flow cell volume (gal)		tubing length (ft)		Tubing capacity			
1 equi	pment volume =		+		gal +	25.61	х		=	0	gal
Initial pump or	tubing		Final pump		2	Purging Initi		Purging	NO m.I.	Total Volum	
Del	oth in well (feet):	20.25	Depth	in well (feet):	20.50	at:	0931	Ended at:	0951	Purged (gallons)	
Time (Military)	Vol. Purged (gal)	Cumul. Vol. Purged (gals)	Purge Rate (gpm)	Depth to Water (ft)	Temp ° C	Cond. (μS/cm)	pH (SU)	Color by observation	DO mg/L or %	Turbidity (NTUs)	Sheen by observation
0943	0.996	0.996	083	10.28	27.3	4272	5.18	Clear	0.39	11.6	Now
0947	0.332	1.328	.083	10,29	27.2	4289	5.18	Clear	0 40	8.03	None
0951	0.332	1.660	.083	10.29	27.2	4219	5.14	Clear	0.41	6.25	NON
								-			
	-						-				-
Well Capacity (Ga	llons per Foot): (0.75" = 0.02: 1	" = 0.04: 1.2!	5" = 0.06; 2" =	0.16; 3"=	0.37; 4" = 0.6	65: 5" = 1.02	2: 6" = 1.47: 12"	= 5.88		
Tubing inside Dia	Capacity (Gal./Ft.)	: 1/8" = 0.0000	6: 3/16" = 0.0	0014: 1/4" = (0.0026: 5/16	" = 0.004: 3/8	" = 0.006: 1/2"		0.016		
PURGING EQUIPI	MENT CODES: B=B	ailer, BP=Bladd	er Pump ESP=	Electric Submer	SAMPLIN		mp O≃other(sp	ecify)			
Sampled By (Print) Affiliation:			Sampler(s) Sig		CDATA					_
Chad	Hotchk	1111		1	the			Sampling Initiated at:	2951	Sampling Ended at:	1000
Criver	MOTONIC	-157		C.fw			Field Filter	ed: Y (N)	0 131	Filter Size:	
Pu	mp or Tubing Dept	th in well (feet):	20,25	Tubing Materia	I Code			quipment Type		Filter Size.	um
Fie	ld Decontamination	n: Y (N			Tubin	g @ N	(replaced)		Dup	licate: Y	(N)
	Sample Container	Specification			Sample P	reservation		Intended	Sampling		e pump v rate
Sample I.D. Code	# Containers	Material Code	Volume	Preserv. Used		Added in Field nL)	Final pH	Analysis and/or Method	Equipment Code	(mL per	r minute) x 3785
CCR-9A	1	PP	250 mL	1:1 HNO ₃	None	None	NA	Metals	RFPP	94	
CCR-9B	1	PP	250 mL	Ice	None	None	NA	B, Ca, Cl, F-, SO4, YDS, bicarbonate, alkalinity	RFPP		

Sampling EQUIPMENT CODES: APP= After (Through) Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Peristaltic Pump; SM=Straw Method(tubing Gravity Drain); O=Other (Specify)

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

		1	DEP Form	FD 9000-2	24; GROU	NDWATE	R SAMPLI	NG LOG			
Site Name:	McIntosh Power P	lant			15	Site Location:		Lakeland, FL	· ·	1	
Well No:	CCR-11			Sample ID:				Date:	07/29	12021	
		ovena.			PURGING		\$ 1851 to		STATE OF		
Well Diameter		Tubing D			Well Scree	en interval		Static depth to		Purge pump	
(inches)	2	(inches)	3/8	Depth:	15.6	to	25.1	(feet):	6,65	Р	P
Well Volume	e Purge:	total well depth		static depth to water			well capacity (gal/ft)				
0	ne well volume =			6.65		X		=	0	gal	
Equipment Purge:	Volume	pump vol (gal)		flow cell volume (gal)		tubing length (ft)		Tubing capacity			
1 equ	ipment volume =		+	0.101	gal +	25.64	x	0.006	-	0.31484	gal
Initial pump or			Final pump of	or tubing	20.40	Purging Initia	ated	Purging		Total Volume	
De	pth in well (feet):	20.35	Depth	in well (feet):	30.40		1318	Ended at:		Purged (gallons):	
Time (Military)	Vol. Purged (gal)	Cumul. Vol. Purged (gals)	Purge Rate (gpm)	Depth to Water (ft)	Temp ° C	Cond. (µS/cm)	pH (SU)	Color by observation	DO mg/L or %	Turbidity (NTUs)	Sheen by observation
1330	0,996	0.996	.083	6.85	26.2	5297	3.91	Clear	0.34	59.6	None
1334	0.332	1.328	,183	6.86	26.1	5277	3.99	Mear	0.39	42.1	NONE
1338	0.332	1.460	1083	6.86	25.9	5264	4.09	Clear	0.42	45.7	None
1342	0,332	1.992	1083		24.1	5258	191100 000		0.46		
1346	0.33&	2,324	1083	6.87	2.6.1	5301	4.13	Clear	0.46	45.6	Nove
Well Capacity (Ga		0.75" = 0.02; 1			0.16; 3"=				= 5.88		
	. Capacity (Gal./Ft.)						" = 0.006: 1/2" np O=other(sp		0.016		
	Marin Tolland	period (also	4.0449		SAMPLIN			SELECTED SE			an Wais
Sampled By (Prin	Holch	1/35		Sampler(s) Sig	nature(s):			Sampling Initiated at:	1346	Sampling Ended at:	1352
Pe	ump or Tubing Dept		20,35	Tubing Materia	nl Code	PE		ed: Y (N) quipment Type		Filter Size:_	um
Fic	eld Decontamination	n: Y (N))		Tubin	g (m) N	replaced)		Dup	licate: Y	(N)
Sample I.D. Code	Sample Container	Specification Material Code	Volume	Preserv. Used		reservation Added in Field	Final pH	Intended Analysis and/or Method	Sampling Equipment Code	Sample flow (mL per	rate minute)
CCR-11A	# Containers	PP	250 mL	1:1 HNO ₃	None (n	None	NA NA	Metals	RFPP	gpm x	3785
CCR-11B	1	PP	250 mL	Ice	None	None	NA.	B, Ca, Cl, F-, SD4, TD8,	RFPP		
Remarks: Pu	emp tel started eter 4 AG = Amber Glass;	Mporas Ewith minut	y 5to	spped seco	duri onds,	Ng 13	342 r	lading t	orgother	punj reel	ing .

Sampling EQUIPMENT CODES: APP= After (Through) Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Peristaltic Pump; SM=Straw Method(tubing Gravity Drain); O=Other (Specify)

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

^{2.} Stabilization Criteria for Range of Variation of Last Three Consecutive Readings (See FS 2212, section 3):

		lant				Site Location:		Lakeland, FL			
Well No:	CCR-12			Sample ID:				Date:	07/8	8/200)/
					PURGING	G DATA				0/200	
Well Diameter		Tubing D	iameter		Well Scree	en Interval		Static depth to	1 7	Purge pump	type
(inches)	2	(inches)	3/8	Depth:	15.7	to	25.2	(feet):	6.62	F	P
Well Volum		total well depth		static depth to water			well capacity (gal/ft)				
C	ne well volume =		-	6.62		X		=	0	gal	
Equipment Purge:	Volume	pump vol (gal)		flow cell volume (gal)		tubing length (ft)		Tubing capacity			
1 equ	uipment volume =	0.06	+	0.101	gal +	25.75	X	0.006	3	0.3155	gal
Initial pump or De	tubing epth in well (feet):	20.45	Final pump of Depth	or tubing in well (feet):	20.55	Purging Initiate	6-	Purging Ended at:	1344	Total Volume Purged (gallons):	
Time (Military)	Vol. Purged (gal)	Cumul. Vol. Purged (gals)	Purge Rate (gpm)	Depth to Water (ft)	Temp ° C	Cond. (μS/cm)	pH (SU)	Color by observation	DO mg/L or %	Turbidity (NTUs)	Sheen by observation
1334	0.996	0.996	.083	7.09	26.1	3046	6.56	Mucky	0.26	5.63	NONE
1340	0.332	1.328		7.10	26.1	3083		Black	0.24	9.04	None
1344	0.332	1.660		7.10	26.0	3104	6.59	Murky	0.01	9.92	NON
Tubing inside Dia PURGING EQUIP Sampled By (Prir		: 1/8" = 0.0000 ailer, BP=Bladd	6: 3/16" = 0.0	0014: 1/4" = 0	SAMPLIN	" = 0.004: 3/8" "=peristaltic Pun	= 0.006: 1/2"	= 0.010: 5/8" = 1 polify) Sampling		Sampling	
Tubing inside Dia PURGING EQUIP Sampled By (Prir	a. Capacity (Gal./Ft.) MENT CODES: B=B	: 1/8" = 0.0000 ailer, BP=Bladd	6: 3/16" = 0.0	0014: 1/4" = (Electric Submer	0.0026: 5/16 sible Pump, PP SAMPLIN nature(s):	" = 0.004: 3/8" "=peristaltic Pun	= 0.006: 1/2" np O=other(spe	= 0.010: 5/8" * selfy) Sampling Initiated at:		Sampling Ended at:	1349
Tubing inside Dia PURGING EQUIP Sampled By (Prin	a. Capacity (Gal./Ft.) MENT CODES: B=B nt) Affiliation:	: 1/8" = 0.0000 ailer, BP=Bladd	6: 3/16" = 0.0	0014: 1/4" = (Electric Submer Sampler(s) Sig	0.0026: 5/16 sible Pump, PP SAMPLIN nature(s):	" = 0.004: 3/8" "=peristaltic Pun	= 0.006: 1/2" np O=other(spe	= 0.010: 5/8" = 0	0.016		1349 um
Tubing inside Dia PURGING EQUIP Sampled By (Prin	a. Capacity (Gal.Ft.) MENT CODES: B=B nt) Affiliation: Hotch	: 1/8" = 0.0000 ailer, BP=Bladd	8: 3/16" = 0.0 ler Pump ESP=	2014: 1/4" = (Electric Submer	0.0026: 5/16 sible Pump, PP SAMPLIN nature(s):	= 0.004: 3/8* =peristaltic Pun G DATA	= 0.006: 1/2" np O=other(spe	= 0.010: 5/8" × selfy) Sampling Initiated at:	1344	Ended at:	1349
Tubing inside Dia PURGING EQUIP Sampled By (Prin	a. Capacity (Gal.Ft.) MENT CODES: B=B nt) Affiliation: Hotch ump or Tubing Dept	th in well (feet):	8: 3/16" = 0.0 ler Pump ESP=	2014: 1/4" = (Electric Submer	0.0026: 5/16 sible Pump, PP SAMPLIN nature(s):	= 0.004: 3/8* =peristaltic Pun G DATA	Field-Filtere	= 0.010: 5/8" × 1 selfy) Sampling Initiated at: d: Y (N) ulpment Type Intended	0.016 /344 Dup Sampling	Filter Size:_ licate: Y	um
Tubing inside Dia PURGING EQUIP Sampled By (Prir	a. Capacity (GalJFt.) MENT CODES: B=B nt) Affiliation: Hotch ump or Tubing Dept leid Decontamination Sample Container S	th in well (feet):	8: 3/16" = 0.0 ler Pump ESP=	2014: 1/4" = (Electric Submer	0.0026: 5/16 sible Pump, PP SAMPLIN nature(s): Il Code Tubin Sample Pi	= 0.004: 3/8* =peristaltic Pun G DATA	Field-Filtere	= 0.010: 5/8" × tocify) Sampling Initiated at: d: Y N	0.016	Filter Size:_	um (N) e pump rate minute)
Tubing inside Dia PURGING EQUIP Sampled By (Prir Chad	a. Capacity (GalJFt.) MENT CODES: B=B nt) Affiliation: Hotch ump or Tubing Dept leid Decontamination Sample Container S	th in well (feet):	6: 3/16" = 0.4 der Pump ESP=	2014: 1/4" = (Electric Submer Sampler(s) Sig Tubing Materia	0.0026: 5/16 sible Pump, PP SAMPLIN nature(s): Il Code Tubin Sample Pi	= 0.004: 3/8* =peristaltic Pun G DATA g N (reservation Added in Field	= 0.006; 1/2" np O=other(spann) Field-Filtere Filtration Editorial	= 0.010: 5/8" × scify) Sampling Initiated at: d: Y (N) ulipment Type Intended Analysis and/or	0.016 /344 Dup Sampling Equipment	Filter Size:_ licate: Y Sample flow (mL per	um (N) e pump rate minute)
Tubing inside Dia PURGING EQUIP Sampled By (Prin P Fi Sample I.D. Code	a. Capacity (Gal./Ft.) MENT CODES: B=B It) Affiliation: Hotch ump or Tubing Dept leid Decontamination Sample Containers # Containers	th in well (feet): The specification Material Code	8: 3/16" = 0.0 ler Pump ESP=	2014: 1/4" = (Electric Submer Sampler(s) Sig Tubing Materia	0.0026: 5/16 sible Pump, PP SAMPLIN nature(s): Il Code Tubin Sample Pr Total Volume (m	g N (reservation	= 0.006: 1/2" np O=other(spa	Sampling Initiated at: d: Y (N) Intended Analysis and/or Method	Dup Sampling Equipment Code	Filter Size:_ licate: Y Sample flow (mL per	um (N) e pump rate minute)
Tubing inside Dia PURGING EQUIP Sampled By (Prir Phad P Fi Sample I.D. Code CCR-12A	a. Capacity (GalJFt.) MENT CODES: B=B nt) Affiliation: Hotch ump or Tubing Dept leid Decontamination Sample Containers # Containers	th in well (feet): The control of t	20.45 Volume	DO14: 1/4" = (Electric Submer Sampler(s) Sig Tubing Materia Preserv. Used 1:1 HNO ₃	0.0026: 5/16 sible Pump, PP SAMPLIN nature(s): Il Code Tubin Sample Pr Total Volume (m	g N (reservation Added in Field None	Field-Filtere Filtration Ec replaced) Final pH NA	sampling Initiated at: d: Y (N) Unitiated Analysis and/or Method Metals	Dup Sampling Equipment Code RFPP	Filter Size:_ licate: Y Sample flow (mL per	um (N) e pump rate minute)
Tubing inside Dia PURGING EQUIP Sampled By (Prir Phad P Fi Sample I.D. Code CCR-12A	a. Capacity (GalJFt.) MENT CODES: B=B nt) Affiliation: Hotch ump or Tubing Dept leid Decontamination Sample Containers # Containers	th in well (feet): The specification of the specif	20.45 Volume	DO14: 1/4" = (Electric Submer Sampler(s) Sig Tubing Materia Preserv. Used 1:1 HNO ₃	0.0026: 5/16 sible Pump, PP SAMPLIN nature(s): Il Code Tubin Sample Pr Total Volume (m	g N (reservation Added in Field None	Field-Filtere Filtration Ec replaced) Final pH NA	sampling Initiated at: d: Y (N) Unitiated Analysis and/or Method Metals	Dup Sampling Equipment Code RFPP	Filter Size:_ licate: Y Sample flow (mL per	um (N) e pump rate minute)

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

^{2.} Stabilization Criteria for Range of Variation of Last Three Consecutive Readings (See FS 2212, section 3):

pH = +/- 0.2; Temperature = +/- 0.2°; Specific Conductance = +/- 5%, Dissolved Oxygen = ≤ 20% saturation(see Table FS 2200-2): optionally, +/-0.2 mg/L or 10% (whichever is greater). Turbidity: all readings ≤20 NTU: optionally +/- 5 NTU or +/- 10 % (whichever is greater)

Site Name:	McIntosh Power P	lant				Site Location:		Lakeland, FL			
Well No:	CCR-13			Sample ID:		-		Date:	07/2	8/202	1
					PURGING	G DATA					
Well Diameter		Tubing D	iameter		Well Scree	en interval		Static depth to	1	Purge pump	
(inches)	2	(inches)	3/8	Depth:	15.6	to	25.1	(feet):	7.74	F	PP
Well Volum	e Purge:	total well depth		static depth to water			well capacity (gal/ft)				
C	ne well volume =		-	7.74		X		=	0	gal	
Equipment Purge:	Volume	pump voi (gai)		flow cell volume (gal)		tubing length (ft)		Tubing capacity			
1 equ	ipment volume =	0.06	+	0.101	gal +	25.66	х	0.006	=	0.31496	gal
Initial pump or	tubing		Final pump	or tubing in well (feet):		Purging Initia		Purging	11/01	Total Volume	
De	th in well (feet): 20.25		Depth	in well (reet):	20.40	at:	1406	Ended at:	1426	Purged (gallons):	
Time (Military)	Vol. Purged (gal)	Cumul. Vol. Purged (gals)	Purge Rate (gpm)	Depth to Water (ft)	Temp ° C	Cond. (μS/cm)	pH (SU)	Color by observation	DO mg/L or %	Turbidity (NTUs)	Sheen by observation
1418	0.996	0.991	,083	7.86	25.3	3502	4.28	Meas	0.18	9.85	NON
1422	0.332	1.328	.083	7.87	25.3	3469	4.30	Clear	0.17	9,23	NON
1426	0.332	1.660	.083	7.87	25.3	3465	1111	Chear	0.17	9.44	NON
Well Capacity (G	allons per Foot): (0.75" = 0.02; 1	" = 0.04; 1.2:	5" = 0.06; 2" =	0.16; 3" =	0.37; 4" = 0.6	55; 5" = 1.02;	6" = 1.47; 12"	= 5.88		
	a. Capacity (Gal./Ft.)						" = 0.006: 1/2"		0.016		
PURGING EQUIP	MENT CODES: B=B	aller, BP≃Bladd	er Pump ESP=	Electric Submer	sible Pump, PF SAMPLIN		np O=other(spe	ecify)			
Sampled By (Prin		,		Sampler(s) Sig		/		Camalina		Campling	
Chal	Hotch	650		1	1/			Sampling Initiated at:	1426	Sampling Ended at:	1432
					en		Field-Filtere	di V (AN)	106	Filter Size:	um
Р	ump or Tubing Dept	th in well (feet):	20.25	Tubing Materia	d Code			uipment Type		Tittel Olze	
Fi	eld Decontamination	n: Y (N)			Tubin	g (Y) N	(replaced)		Dup	licate: Y	(N)
	Sample Container S	Specification			Sample P	reservation		Intended	Sampling		e pump rate
Sample I.D. Code	# Containers	Material Code	Volume	Preserv. Used		Added in Field	Final pH	Analysis and/or Method	Equipment Code	(mL per	minute) x 3785
CCR-13A	1	PP	250 mL	1:1 HNO ₃	None	None	NA	Metals	RFPP	95-111	
CCR-13B	1	PP	250 mL	Ice	None	None	NA	B, Ca, Cl, F-, SO4, YDS, bicarbonete, alkelinity	RFPP		
								bearpoisse, alcaurity			
Remarks:											

Gravity Drain); O=Other (Specify)

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

Tubing Dinches) total well depth pump vol (gal) .06 Cumul. Vol. Purged (gals) 1.43 1.47 1.804	3/8 25.67 -	Depth to Water (ft) 16.90 16.91	gal + 21.5 Temp°C 28.4 28.5	Site Location: G DATA en Interval to X tubing length (ft) 25.67 Purging Initiation at: Cond. (μS/cm) / 98 205 205	P	Lakeland, FL Date: Static depth to v (feet): Tubing capacity 0.006 Purging Ended at: Color by observation I out y I out y I out y	0	Purge pump	type PP /6
total well depth pump vol (gal) .06 Cumul. Vol. Purged (gals) 1,43 1.617	3/8 25.67 - Final pump of Depth Purge Rate (gpm) 20625 20625	Depth: static depth to water 16.89 flow cell volume (gal) 0.101 or tubing in well (feet): Depth to Water (ft) 16.91 16.91	PURGIN Well Scre 15.4 gal + 21.5 Temp°C 28.4 28.5 28.4	tubing length (ft) 25.67 Purging Initiat: Cond. (µS/cm)	well capacity (gal/ft) Collor x ated PH (SU) 4.1/ 4.02 4.68	Static depth to v (feet): = Tubing capacity 0.006 Purging Ended at: Color by observation Albudy Aloudy	14/2 DO mg/L or % 0.83 0.86 6.88	purge pump gal / / / 0.31502 Total Volume Purged (gallons): Turbidity (NTUs) 26.9 20.8	gal e Sheen by observation None None
total well depth pump vol (gal) .06 Cumul. Vol. Purged (gals) 1,43 1.617	3/8 25.67 - Final pump of Depth Purge Rate (gpm) 20625 20625	static depth to water 16.89 flow cell volume (gal) 0.101 or tubing in well (feet): Depth to Water (ft) 16.91 16.91	well Scree 15.4 gal + 2 .5 Temp ° C 28.4 28.5 28.4	tubing length (ft) 25.67 Purging Initiat: Cond. (µS/cm)	well capacity (gal/ft) Collor x ated PH (SU) 4.1/ 4.02 4.68	(feet): = Tubing capacity 0.006 Purging Ended at: Color by observation	16,89 14/2 DO mg/L or % 0.83 0.86 6.88	gal / 4 0.31502 Total Volume Purged (gallons): Turbidity (NTUs) 26.9 20.8	gal e Sheen by observation None
total well depth pump vol (gal) .06 Cumul. Vol. Purged (gals) 1,43 1.617	3/8 25.67 - Final pump of Depth Purge Rate (gpm) 20625 20625	static depth to water 16.89 flow cell volume (gal) 0.101 or tubing in well (feet): Depth to Water (ft) 16.91 16.91	gal + 21.5 Temp°C 28.4 28.5 28.4	tubing length (ft) 25.67 Purging Initiat: Cond. (µS/cm)	well capacity (gal/ft) Collor x ated PH (SU) 4.1/ 4.02 4.68	(feet): = Tubing capacity 0.006 Purging Ended at: Color by observation	16,89 14/2 DO mg/L or % 0.83 0.86 6.88	gal / 4 0.31502 Total Volume Purged (gallons): Turbidity (NTUs) 26.9 20.8	gal e Sheen by observation None
total well depth pump vol (gal) .06 0.2 21.5 Cumul. Vol. ourged (gals) 1.43 1.617 1.804	25.67 Final pump of Depth Purge Rate (gpm) 20625 20625	static depth to water 16.89 flow cell volume (gal) 0.101 or tubing in well (feet): Depth to Water (ft) 16.91 16.91	gal + 21.5 Temp°C 28.4 28.5 28.4	tubing length (ft) 25.67 Purging Initia at: Cond. (µS/cm)	well capacity (gal/ft) Collor x ated PH (SU) 4.1/ 4.02 4.68	Tubing capacity 0.006 Purging Ended at: Color by observation // owly	0 14/2 DO mg/L or% 0.83 0,86 6.88	gal / 4 0.31502 Total Volume Purged (gallons): Turbidity (NTUs) 26.9 20.8	gal e Sheen by observation None
pump vol (gal) .06 0.2 21.5 Cumul. Vol. ourged (gals) 1.43 1.617	Final pump of Depth Purge Rate (gpm) 20625 20625	flow cell volume (gal) 0.101 or tubing in well (feet): Depth to Water (ft) 16.91 16.91	gal + 21.5 Temp°C 28.4 28.5 28.4	tubing length (ft) 25.67 Purging Initia at: Cond. (µS/cm)	capacity (gal/ft) Collor x ated 1340 pH (su) 4.11 4.02 4.68	Tubing capacity 0.006 Purging Ended at: Color by observation // out/	14/2 DO mg/L or % 0.83 0,86 6.88	0.31502 Total Volume Purged (gallons): Turbidity (NTUs) 26.9 20.8	Sheen by observation
(gal) .06 .02 21.5 Cumul. Vol. Purged (gals) 1,43 1.617	Final pump of Depth Purge Rate (gpm) . 0625 .0625	flow cell volume (gal) 0.101 or tubing in well (feet): Depth to Water (ft) 16.91	gal + 21.5 Temp°C 28.4 28.5 28.4	tubing length (ft) 25.67 Purging Initia at: Cond. (µS/cm)	x ated 1340 pH (SU) 4.11 4.02 4.68	Tubing capacity 0.006 Purging Ended at: Color by observation // out/	14/2 DO mg/L or % 0.83 0,86 6.88	0.31502 Total Volume Purged (gallons): Turbidity (NTUs) 26.9 20.8	gal e Sheen by observation NoN
(gal) .06 .02 21.5 Cumul. Vol. Purged (gals) 1,43 1.617	Final pump of Depth Purge Rate (gpm) . 0625 .0625	volume (gal) 0.101 or tubing in well (feet): Depth to Water (ft) 16.91 16.91	21.5 Temp°C 28.4 28.5 28.4	length (ft) 25.67 Purging Initia at: Cond. (µS/cm)	pH (SU) 4.11 4.02 4.68	capacity 0.006 Purging Ended at: Color by observation Aloudy Cloudy	1412 DO mg/L or % 0.83 0,86 6.88	Total Volume Purged (gallons): Turbidity (NTUs) 26.9 20.8	Sheen by observation
0.2 21.5 Cumul. Vol. Purged (gals) 1.43 1.617 1,804	Final pump of Depth Purge Rate (gpm) . 0625 .0625	Depth to Water (ft) 16.91	21.5 Temp°C 28.4 28.5 28.4	Purging Initia at: Cond. (µS/cm) 198 202	pH (SU) 4.11 4.02 4.68	Purging Ended at: Color by observation Aloudy Cloudy	1412 DO mg/L or % 0.83 0,86 6.88	Total Volume Purged (gallons): Turbidity (NTUs) 26.9 20.8	Sheen by observation
Cumul. Vol. Purged (gals) 1.43 1.617	Depth Purge Rate (gpm)	Depth to Water (ft) 16.90 16.91	28.4 28.5 28.4	at: Cond. (µS/cm) 198 202 205	1340 ph (su) 4.11 4.02 4.68	Color by observation Abush Aloush Cloudy	DO mg/L or % 0.83 0,86 6.88	Purged (gallons): Turbidity (NTUs) 26.9 20.8	Sheen by observation
Cumul. Vol. Purged (gals) 1.43 1.617	Purge Rate (gpm) 0625 0625	Depth to Water (ft) 16.90 16.91 16.92	28.4 28.5 28.4	Cond. (µ\$/cm) 198 202	pH (SU) 4.11 4.09 4.48	Color by observation Mouly Mouly	DO mg/L or % 0.83 0,86 6.88	(gallons): Turbidity (NTUs) 26.9 20.8	Sheen by observation
1.43 1.617 1.804	(gpm) .0625 .0625	Water (ft) 16,90 16.91 14.92	28.4 28.5 28.4	198 202 205	4.11 4.02 4.68	Mouly Mouly Mouly	0.83 0.86 6.88	26.9 20.8 18.3	NON!
1.617	.0625	16.91	28.5	202	4.08	Cloudy	0.88	20.8	NONE
1.617	.0625	16.91	28.5	202	4.08	Cloudy	0.88	20.8	NONE
1.804	.0625	16.92	28.4	205	4.68	Cloudy	6.88	18.3	NONE
		1.		The second secon		-			NONE
7.7.1	1000	16,12		800	7.0 7		0.01	707	
'5" = 0.02; 1	[™] = 0.04; 1.25	" = 0.06; 2" =	0.16; 3"=	0.37; 4" = 0.68	5; 5" = 1.02;	6" = 1.47; 12" =	5.88		
1/8" = 0.0006				" = 0.004: 3/8" =peristaltic Pum	= 0.006: 1/2"		.016		
er, br - bladde	er rump cor-c	nectric Submers	_		p o-omer(spe	cnyj			
		Sampler(s) Sign	natuse(s):			Sampling		Sampling	
6		Cut	m			Initiated at:	1412	Ended at:	1418
in well (feet):	21,5	Tubing Materia	l Code					Filter Size:	um
Y (N))		Tubir	n (m e	replaced)		Dupl	licate: Y	(N)
ecification			Sample P	reservation		Intended	Sampling		e pump
laterial Code	Volume	Preserv. Used			Final pH	Analysis and/or Method	Equipment Code	(mt. per	minute) x 3785
PP	250 mL	1:1 HNO ₃	None	None	NA	Metals	ESP		
PP	250 mL	Ice	None	None	NA	CI, F-, SO4, TDS	ESP		
		-							
e	Y (N) cification terial Code	Y (N) cification terial Code Volume PP 250 mL	well (feet): 21,5 Tubing Materia Y (N) iffication terial Code Volume Preserv. Used PP 250 mL 1:1 HNO ₃	Sampler(s) Signature(s): well (feet): 21,5 Tubing Material Code Y (N) Tubing Material Code Y (N) Tubing Material Code Tubing Material Code Y (N) Tubing Material Code Tubing Material Code Y (N) None	well (feet): 21,5 Tubing Material Code Y (N) Tubing Material Code Tubing (Y) N Sample Preservation terial Code Volume Preserv. Used (mL) PP 250 mL 1:1 HNO ₃ None None	Sampler(s) Signature(s): Y (N) Tubing Material Code Tubing Y N (replaced) Sample Preservation terial Code Volume Preserv. Used Total Volume Added in Field (mL) PP 250 mL 1:1 HNO ₃ None None NA	Sampler(s) Signature(s): Well (feet):	Sampler(s) Signature(s): Sampler(s) Signature(s): Sampling Initiated at:	Sampling Initiated at: Well (feet): 21,5 Tubing Material Code Field-Filtered: Y N Filtration Equipment Type Filter Size:

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

^{2.} Stabilization Criteria for Range of Variation of Last Three Consecutive Readings (See FS 2212, section 3):

			DEP Form	n FD 9000-2	24; GROU	INDWATE	R SAMPL	ING LOG			
Site Name:	McIntosh Power P	lant				Site Location:		Lakeland, FL		,	
Well No:	CCR-16			Sample ID:	1010101-16			Date:	07/2	2/200	
T. James					PURGIN						
Well Diameter		Tubing D		-		en Interval		Static depth to		Purge pump	
(inches)	2	(inches)	3/8	Depth:	15.3	to	24.9 well	(feet):	15.39	F	P
Well Volume	e Purge:	total well depth		static depth to water			capacity (gal/ft)			1 ~	- 0
0	ne well volume =	249	_	15.39		X	0.16	=	0	gal /15	d
Equipment Purge:	Volume	pump vol (gal)		flow cell volume (gal)		tubing length (ft)		Tubing capacity			
4- हव्य	ipment volume	0.06	+	0.101	gal +	25:84	×	0.000	=	0.31484	gal
Initial pump or	tubing		Final pump	-)		Purging Initi		Purging		Total Volume	200
De	pth in well (feet):	20,1, 99	Depth	in well (feet):	20.0	at:	1455	Ended at:		Purged (gallons):	
Time (Military)	Vol. Purged (gal)	Cumul. Vol. Purged (gals)	Purge Rate (gpm)	Depth to Water (ft)	Temp ° C	Cond. (µS/cm)	pH (SU)	Color by observation	DO mg/L or %	Turbidity (NTUs)	Sheen by observation
1510	1.60	1.60	-1	15.45	27.3	12500	4.03	Megi	0.74	2.19	NOW
1515	0.4	2.00	. 1	15,47	27.4	12495		Clear	0.10	2.43	NoNa
1519	D.4	2.40	. /	15.48	27.5		1	Creat	0.55	3.78	
	alions per Foot): a. Capacity (Gal./Ft.) MENT CODES: B=B		6: 3/16" = 0.	0014: 1/4" = 0).0026: 5/16 sible Pump, Pi	P=peristaltic Pu	" = 0.006; 1/2"	= 0.010: 5/8* =	= 5.88 0.016		
Sampled By (Prin	nt) Affiliation:			Sampler(s) Sig	SAMPLIN nature(s):	G DATA					
11	0111	1/		A	11			Sampling Initiated at:		Sampling Ended at:	1
Char	Hotel	12.45		le	1 1			1	1514	Ended at.	1524
Pt	ump or Tubing Dep	th in well (feet):	20.0	Tubing Materia	Code .			ed: Y (N) quipment Type		Filter Size:_	um
Ct.	eld Decontaminatio	n: Y (N		-	Tubin	N (N) B	(replaced)	quipment Type	Dun	licate: Y	(N)
				-			(replaced)	-			e pump
Sample I.D. Code	# Containers	Material Code	Volume	Preserv. Used	Total Volume	reservation Added in Field nL)	Final pH	Intended Analysis and/or Method	Sampling Equipment Code	flow (mL per	rate minute) x 3785
CCR-16A	1	PP	250 mL	1:1 HNO ₃	None	None	NA	Metals	ESP		
CCR-16B	1	PP	250 mL	Ice	None	None	NA	CI, F-, SO4, TDS	ESP		
								Buch born	ila		
Remarks:											
				•				; O = Other (Specificible Pump; RFPP =		np; SM=Straw I	Method(tubir

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

^{2.} Stabilization Criteria for Range of Variation of Last Three Consecutive Readings (See FS 2212, section 3):

Well Diameter (inches) 2 Well Volume F One v Equipment Volume: 1 equipm Initial pump or tubin Depth Time (Milltary) volume Vo	well volume = lume ent volume = ing in well (feet): d. Purged (gal)		3/8 - + Final pump o	Sample ID: Depth: static depth to water flow cell volume (gal) 0.101 or tubing in well (feet):	15.4	tubing length (ft) 25.67 Purging Initi	25 well capacity (gal/ft)	Static depth to (feet): = Tubing capacity 0.006	4.47	Purge pump F gal	
Well Diameter (inches) 2 Well Volume F One v Equipment Volume: 1 equipm Initial pump or tubin Depth Time (Military) Volume 0 837 0	Purge: well volume = lume ent volume = ing in well (feet): d. Purged (gal)	total well depth pump vol (gal) 0.06 20.2 Cumul. Vol. Purged (gals)	+ Final pump o Depth	Depth: static depth to water flow cell volume (gal) 0.101 or tubing in well (feet):	Well Screen	tubing length (ft) 25.67 Purging Initi	well capacity (gal/ft)	Static depth to (feet):	4.47	Purge pump F	type
Well Volume F One v Equipment Vo Purge: 1 equipm nitial pump or tubi Depth Time (Milltary) Vo	well volume = lume ent volume = ing in well (feet): d. Purged (gal)	total well depth pump vol (gal) 0.06 20.2 Cumul. Vol. Purged (gals)	+ Final pump o Depth	static depth to water flow cell volume (gal) 0.101 or tubing in well (feet):	Well Screen	tubing length (ft) 25.67 Purging Initi	well capacity (gal/ft)	(feet):	14.47 o	gal	-
Well Volume F One v Equipment Volume: 1 equipm Initial pump or tubin Depth Time (Milltary) Volume 0 837	well volume = lume ent volume = ing in well (feet): d. Purged (gal)	total well depth pump vol (gal) 0.06 20.2 Cumul. Vol. Purged (gals)	+ Final pump of Depth	static depth to water flow cell volume (gal) 0.101 or tubing in well (feet):	gai +	tubing length (ft) 25.67 Purging Initi	well capacity (gal/ft)	Tubing capacity	0	gal	P
One very series of the series	well volume = lume ent volume = ing in well (feet): d. Purged (gal)	pump vol (gal) 0.06 20.2 Cumul. Vol. Purged (gals)	+ Final pump o Depth	flow cell volume (gal) 0.101 or tubing in well (feet):	gal +	tubing length (ft) 25.67 Purging Initi	capacity (gal/ft)	Tubing capacity			
Equipment Volume: 1 equipm Initial pump or tubin Depth Time (Milltary) 0837	ent volume = ing in well (feet): J. Purged (gal)	(gal) 0.06 20.2 Cumul. Vol. Purged (gals)	+ Final pump o Depth	volume (gal) 0.101 or tubing in well (feet):	gal +	tubing length (ft) 25.67 Purging Initi	×	Tubing capacity			
Purge: 1 equipm Initial pump or tubin Depth Time (Military) Vo	ent volume = ing in well (feet): ol. Purged (gal)	(gal) 0.06 20.2 Cumul. Vol. Purged (gals)	Final pump on Depth	volume (gal) 0.101 or tubing in well (feet):	3	length (ft) 25.67 Purging Initi	x	capacity	-	0.31502	
Time (Military)	ing in well (feet): ol. Purged (gal)	20.2 Cumul. Vol. Purged (gals)	Final pump on Depth	or tubing in well (feet):	3	Purging Initi	x	0.006	=	0.31502	
Depth Time (Military) vo 0837 0	in well (feet): J. Purged (gal) 332	Cumul. Vol. Purged (gals)	Depth Purge Rate	in well (feet):	20.6	-				0.51302	gal
Time (Military) Vo	1. Purged (gal)	Cumul. Vol. Purged (gals)	Purge Rate		20.6		ated	Purging		Total Volume	
(Military) Vo	1.996	Purged (gals)		Depth to		at:	0825	Ended at:	0845	Purged (gallons):	
0841 0		0.996		Water (ft)	Temp ° C	Cond. (μS/cm)	pH (SU)	Color by observation	DO mg/L or %	Turbidity (NTUs)	Sheen by observatio
0841 0			,083	14.48	27.4	1495	6.59	Clear.	0.77	0.62	HONE
011-	_ ^	1.328	1083	1448	27.4	1492	6.59	Char	0.71	0.58	NON
0845 0	.332	1.660	1083	14.48	27.4	1485	6.60	11800	0.69	0.44	None
								4			
Well Capacity (Gallon Tubing inside Dia. Ca	pacity (Gal./Ft.):	1/8" = 0.0006	6: 3/16" = 0.0	014: 1/4" = 0	.0026: 5/16		" = 0.006: 1/2"	= 0.010: 5/8** = 0	= 5.88 0.016		
PURGING EQUIPMEN	T CODES: B=Ba	iller, BP=Bladd	er Pump ESP=	Electric Submen	sible Pump, PP SAMPLIN		mp O=other(spe	ecify)			
Sampled By (Print) Af	Hotch &	1.55		Sampler(s) Sign	nature(s):	GDATA		Sampling Initiated at:	0845	Sampling Ended at:	085/
	or Tubing Depti		20.2	Tubing Materia	l Code		Field-Filtere Filtration Ed			Filter Size:_	um
Field D	econtamination	: Y (N)	2		Tubin	g (Y) N	(replaced)		Dup	icate: Y	(N)
	ple Container S	pecification				reservation Added in Field		Intended Analysis and/or	Sampling Equipment	Sample flow (mL per	rate
		Material Code	Volume	Preserv. Used	(n	nL)	Final pH	Method	Code	gpm >	3785
CCR-17A	1	PP	250 mL 250 mL	1:1 HNO ₃	None	None	NA NA	Metals CI, F-, SO4, TDS	ESP		
CON-17B	•		250 HIL	Ice	None	None	MA.	61, 1-, 304, 106	Lor		
Damask											
Remarks:											

Sampling EQUIPMENT CODES: APP= After (Through) Peristaltic Pump; B = Baller; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Peristaltic Pump; SM=Straw Method(tubing Gravity Drain); O=Other (Specify)

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

Site Name: Well No:	McIntosh Power P	Plant				Site Location:		Lakeland, FL			
Well No:	CCR-18			Sample ID:		-		Date:	07/2	6/202	1
					PURGIN	G DATA			1/0	07002	
Well Diameter		Tubing D	lameter		Well Scree	en Interval		Static depth to	water	Purge pump	type
(inches)	2	(inches)	3/8	Depth:	15.6	to	25.2	(feet):	8.58	F	P
Well Volum		total well depth		static depth to water			well capacity (gal/ft)				
	ne well volume =		-	8.58		X		=	0	gal	
Equipment Purge:	Volume	pump vol (gal)		flow cell volume (gal)		tubing length (ft)		Tubing capacity			
1 equ	uipment volume =	0.06	+	0.101	gal +	25.91	x	0.006	=	0.31646	gal
Initial pump or De	tubing epth in well (feet):	20.4	Final pump Depth	or tubing in well (feet):		Purging initiate:		Purging Ended at:	0934	Total Volume Purged (gallons):	
Time (Military)	Vol. Purged (gal)	Cumul. Vol. Purged (gals)	Purge Rate (gpm)	Depth to Water (ft)	Temp ° C	Cond. (µS/cm)	pH (SU)	Color by observation	DO mg/L or %	Turbidity (NTUs)	Sheen by observation
0926	0.996	0.99%	.083	8.43	26,2	347	6.47	Hellowing	0.73	1.94	NONE
0930	0.332	1.328	.083	8.64	26,3	347	6.48	Clear	0.69	1.93	NON
0934	n.332	1.660	.083	864	24.2	346	646	Meas	0.64	1.83	Nou
Tubing inside Dia PURGING EQUIP Sampled By (Prin	a. Capacity (Gal./Ft.) MENT CODES: B=B nt) Affiliation:	aller, BP=Bladd	6: 3/16" = 0.0	0014: 1/4" = 0	0.0026: 5/16 sible Pump, PP SAMPLIN	=peristaltic Pun	* = 0.006: 1/2*	= 0.010: 5/8" = (eclfy)	= 5.88 0.016		
Tubing inside Dia PURGING EQUIP Sampled By (Prin	a. Capacity (Gal./Ft.) MENT CODES: B=B nt) Affiliation:	: 1/8" = 0.0006 aller, BP=Bladd	6: 3/16" = 0.0	0014: 1/4" = 0 Electric Submen	0.0026: 5/16 sible Pump, PP SAMPLIN nature(s):	" = 0.004: 3/8' =peristaltic Pun	* = 0.006: 1/2*	= 0.010: 5/8" = 0	D.016	Sampling Ended at:	0940
Tubing inside Dia PURGING EQUIP Sampled By (Prin	a. Capacity (Gal./Ft.) MENT CODES: B=B	: 1/8" = 0.0006 aller, BP=Bladd	6: 3/16" = 0.0	D014: 1/4" = 0 Electric Submern Sampler(s) Sign	0.0026: 5/16 sible Pump, PP SAMPLIN nature(s):	" = 0.004: 3/8' =peristaltic Pun	"= 0.006: 1/2" np O=other(specific points)	= 0.010: 5/8" = 0 acify)	D.016	Sampling Ended at: Filter Size:_	0940 um
Tubing inside Dia PURGING EQUIP Sampled By (Prin	a. Capacity (Gal./Ft.) MENT CODES: B=B it) Affiliation:	: 1/8" = 0.0006 aller, BP=Bladd / // // th in well (feet):	6: 3/16" = 0.0 er Pump ESP=	30014: 1/4" = 0 Electric Subment	0.0026: 5/16 sible Pump, PP SAMPLIN nature(s):	" = 0.004: 3/8" r=peristattic Pun G DATA	= 0.006: 1/2" ap O≃other(spo	= 0.010: 5/8" = (scify) Sampling Initiated at:	0.016	Ended at: Filter Size:_	
Tubing inside Dia PURGING EQUIP Sampled By (Prir Chad P	a. Capacity (Gal./Ft.) MENT CODES: B=B it) Affiliation: Hotchel, ump or Tubing Depi	th in well (feet): n: Y (N) Specification	s: 3/16" = 0.0	D014: 1/4" = 0 Electric Subment Sampler(s) Sign Tubing Materia	0.0026: 5/16 sible Pump, PP SAMPLIN nature(s): I Code Tubin Sample Pt	= 0.004: 3/8" =peristaltic Pun G DATA	= 0.006: 1/2" ap O≖other(specific properties of the properties o	= 0.010: 5/8" = 0 scify) Sampling Initiated at: d: Y (N) uipment Type Intended Analysis and/or	Dup Sampling Equipment	Filter Size:_	um (N) e pump rate minute)
Tubing inside Dia PURGING EQUIP Sampled By (Prin	a. Capacity (Gal./Ft.) MENT CODES: B=B it) Affiliation: Hotchel, ump or Tubing Depi	th in well (feet):	3: 3/16" = 0.1 er Pump ESP=	30014: 1/4" = 0 Electric Subment	0.0026: 5/16 sible Pump, PP SAMPLIN nature(s): I Code Tubin Sample Pi Total Volume (n	= 0.004: 3/8* ==peristaltic Pun G DATA 20.5 (a) N (c) (c) reservation Added in Field hL)	* = 0.006: 1/2** np O≕other(spo	sampling Initiated at: Intended Analysis and/or Method	Dup Sampling Equipment Code	Filter Size:_	um (N) e pump rate minute)
Tubing inside Dia PURGING EQUIP Sampled By (Prin Purchad P	a. Capacity (Gal./Ft.) MENT CODES: B=B It) Affiliation: Ump or Tubing Dept eld Decontamination Sample Container:	th in well (feet): TY (N) Specification Material Code	s: 3/16" = 0.0	D014: 1/4" = () Electric Submern Sampler(s) Sign Tubing Materia	0.0026: 5/16 sible Pump, PP SAMPLIN nature(s): I Code Tubin Sample Pi	= 0.004: 3/8" =peristaltic Pun G DATA Q 0.5 g AY) N (reservation	= 0.006: 1/2" ap O≖other(specific properties of the properties o	= 0.010: 5/8" = 0 scify) Sampling Initiated at: d: Y (N) uipment Type Intended Analysis and/or	Dup Sampling Equipment	Filter Size:_	um (N) e pump rate minute)
Tubing inside Dia PURGING EQUIP Sampled By (Prir Ahad P Fi Sample I.D. Code CCR-18A	a. Capacity (Gal./Ft.) MENT CODES: B=B It) Affiliation: Hotchel, ump or Tubing Depl eld Decontamination Sample Container S # Containers	th in well (feet): n: Y (N) Specification Material Code	3: 3/16" = 0.0 er Pump ESP= 20, 4 Volume 250 mL	Do14: 1/4" = 0 Electric Submern Sampler(s) Sign Tubing Materia Preserv. Used 1:1 HNO ₃	0.0026: 5/16 sible Pump, PP SAMPLIN naturele): Il Code Tubin Sample Pi Total Volume (n	= 0.004: 3/8" =peristaltic Pun G DATA Q J S (Y) N (reservation Added in Field nL) None	Field-Filtere Filtration Ed Final pH NA	scify) Sampling Initiated at: d: Y Intended Analysis and/or Method Metals	Dup Sampling Equipment Code ESP	Filter Size:_	um (N) e pump rate minute)
Tubing inside Dia PURGING EQUIP Sampled By (Prir Thad P Fi Sample I.D. Code CCR-18A	a. Capacity (Gal./Ft.) MENT CODES: B=B It) Affiliation: Hotchel, ump or Tubing Depl eld Decontamination Sample Container S # Containers	th in well (feet): n: Y (N) Specification Material Code	3: 3/16" = 0.0 er Pump ESP= 20, 4 Volume 250 mL	Do14: 1/4" = 0 Electric Submern Sampler(s) Sign Tubing Materia Preserv. Used 1:1 HNO ₃	0.0026: 5/16 sible Pump, PP SAMPLIN naturele): Il Code Tubin Sample Pi Total Volume (n	= 0.004: 3/8" =peristaltic Pun G DATA Q J S (Y) N (reservation Added in Field nL) None	Field-Filtere Filtration Ed Final pH NA	scify) Sampling Initiated at: d: Y Intended Analysis and/or Method Metals	Dup Sampling Equipment Code ESP	Filter Size:_	um (N) e pump rate minute)

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

Well No:		lant				Site Location:		Lakeland, FL		,	
	CCR-19			Sample ID:		-		Date:	07/5	26/20	21
					PURGING	G DATA			01/0	10/40	Q I
Well Diameter		Tubing D	iameter		Well Scree	en Interval		Static depth to	water	Purge pump	type
(inches)	2	(inches)	3/8	Depth:	15.5	to	25.1	(feet):	5.20	P	P
Well Volum		total well depth		static depth to water			well capacity (gal/ft)				
0	ne well volume =		-	5.20		X		=	0	gal	
Equipment Purge:	Volume	pump vol (gal)		flow cell volume (gal)		tubing length (ft)		Tubing capacity			
1 equ	ipment volume =	0.06	+	0.101	gal 🛨	25.82	×	0.006	=	0.31592	gal
initial pump or De	tubing pth in well (feet):	20.3	Final pump o	or tubing in well (feet):		Purging Initi at:	-	Purging Ended at:	1026	Total Volume Purged (gallons):	
Time (Military)	Vol. Purged (gal)	Cumul. Vol. Purged (gals)	Purge Rate (gpm)	Depth to Water (ft)	Temp ° C	Cond. (μS/cm)	nH	Color by observation	DO mg/L or %	Turbidity (NTUs)	Sheen by observation
1018	0.996	0.996	.083	5.22	26.0	5772	4.76	Clear	0.40	11.6	NONE
1022	0.332	1.328	.083	5.22	26,2	5875	4.77	Clear	0,37	741	NON
1026	0.332	1.660	.083	5.22	24.2	5834	4.78	11861	0.37	5.92	NOK
Tubing inside Dia	allons per Foot): (1. Capacity (Gal./Ft.) MENT CODES: B=B		6: 3/16" = 0.0	014: 1/4" = 0	sible Pump, PP	" = 0.004: 3/8" =peristaltic Pur	"= 0.006: 1/2"	= 0.010: 5/8" = 0	= 5.88 0.016		
Tubing inside Dia PURGING EQUIPI	a. Capacity (Gal./Ft.) MENT CODES: B=B	: 1/8** = 0.0006	6: 3/16" = 0.0	014: 1/4" = (Electric Submer	0.0026: 5/16 sible Pump, PP SAMPLING	" = 0.004: 3/8" =peristaltic Pur	"= 0.006: 1/2"	= 0.010: 5/8" = 0			
Tubing inside Dia PURGING EQUIPI Sampled By (Prin	a. Capacity (Gal./Ft.) MENT CODES: B=B. ht) Affiliation:	: 1/8" = 0.0006 ailer, BP=Bladd	6: 3/16" = 0.0 ler Pump ESP=I	014: 1/4" = 0	0.0026: 5/16' sible Pump, PP SAMPLING nature(s):	" = 0.004: 3/8" =peristaltic Pur	"= 0.006: 1/2"	= 0.010: 5/8" = (cify)	0.016	Sampling Ended at:	1032
Fubing Inside Dia	a. Capacity (Gal./Ft.) MENT CODES: B=B. ht) Affiliation:	: 1/8" = 0.0006 ailer, BP=Bladd	6: 3/16" = 0.0 ler Pump ESP=I	014: 1/4" = (Electric Submern Sampler(s) Sig	0.0026: 5/16' sible Pump, PP SAMPLINO nature(s):	" = 0.004: 3/8" =peristaltic Pur	" = 0.006: 1/2" inp O=other(spe	= 0.010: 5/8" = 0 clfy)	0.016		100 2001
Tubing inside Dia PURGING EQUIPI Sampled By (Prin	n. Capacity (Gal./Ft.) MENT CODES: B=B at) Affiliation:	th in well (feet):	6: 3/16" = 0.0	014: 1/4" = (Electric Submer	0.0026: 5/16' sible Pump, PP SAMPLINO nature(s):	= 0.004: 3/8 =peristaltic Pur G DATA	" = 0.006: 1/2" inp O=other(spe	= 0.010: 5/8" = (cify) Sampling initiated at:	1024	Ended at:	1032
Tubing inside Dia PURGING EQUIPI Sampled By (Prin	a. Capacity (Gal./Ft.) MENT CODES: B=B at) Affiliation:	th in well (feet):	6: 3/16" = 0.0	014: 1/4" = (Electric Submer	0.0026: 5/16'sible Pump, PP SAMPLING nature(s):	= 0.004: 3/8 =peristaltic Pur G DATA	" = 0.006: 1/2" np O=other(spe Field-Filtere Filtration Eq	= 0.010: 5/8" = (cify) Sampling initiated at:	1024	Ended at: Filter Size: icate: Y Sample	um
Tubing inside Dia PURGING EQUIPI Sampled By (Prin	a. Capacity (Gal./Ft.) MENT CODES: B=B at) Affiliation: ump or Tubing Dept	th in well (feet):	6: 3/16" = 0.0	014: 1/4" = (Electric Submer	0.0026: 5/16' sible Pump, PP SAMPLING nature(s):	= 0.004: 3/8* =peristaltic Pur G DATA ONE OF THE PURPLE O	" = 0.006: 1/2" np O=other(spe Field-Filtere Filtration Eq	= 0.010: 5/8" = (cify) Sampling Initiated at: d: Y (N)) ulpment Type	0.016	Ended at:	umumpump rate minute)
Tubing inside Dia PURGING EQUIPI Sampled By (Prin	a. Capacity (Gal./Ft.) MENT CODES: B=B at) Affiliation: ump or Tubing Dept	th in well (feet):	6: 3/16" = 0.0	014: 1/4" = (Electric Submer Sampler(s) Sig Tubing Materia	0.0026: 5/16' sible Pump, PP SAMPLING nature(s): I Code Tubin Sample Pr Total Volume	= 0.004: 3/8* =peristaltic Pur G DATA ONE OF THE O	" = 0.006: 1/2" np O=other(spe	= 0.010: 5/8" = (cify) Sampling Initiated at: d: (N) / ulpment Type Intended Analysis and/or	Dupl Sampling Equipment	Ended at: Filter Size: icate: Y Sample flow (mL per	um (N) pump rate minute)
Tubing inside Dia PURGING EQUIP Sampled By (Prin Prin Fin	a. Capacity (Gal./Ft.) MENT CODES: B=B at) Affiliation: ump or Tubing Dept eld Decontamination Sample Containers # Containers	th in well (feet): The property of the proper	S: 3/16" = 0.0 er Pump ESP=I	014: 1/4" = (Electric Submern Sampler(s) Sig Tubing Materia	0.0026: 5/16' sible Pump, PP SAMPLING nature(s): I Code Tubing Sample Pr Total Volume (m)	= 0.004: 3/8: =peristaltic Pur G DATA (Y) N (eservation Added in Field	"= 0.006: 1/2" np O=other(spe Field-Filterer Filtration Eq replaced) Final pH	Sampling Initiated at: d: Y(N) Intended Analysis and/or Method	Dupl Sampling Equipment Code	Ended at: Filter Size: icate: Y Sample flow (mL per	um (N) pump rate minute)
Fubing inside Dia PURGING EQUIPI Sampled By (Prin Prin Fid Sample I.D. Code CCR-19A	a. Capacity (Gal./Ft.) MENT CODES: B=B at) Affiliation: ump or Tubing Depleted Decontamination # Containers 1	th in well (feet): "" Y N Specification Material Code	Volume	Sampler(s) Sig Tubing Materia Preserv. Used 1:1 HNO ₃	0.0026: 5/16' sible Pump, PP SAMPLING nature(s): i Code Tubing Sample Pr Total Volume (m) None	= 0.004: 3/8 =peristaltic Pur G DATA (Y) N (eservation Added in Field a).	" = 0.006: 1/2" inp O=other(specific properties of the properties	Sampling initiated at: d: (N) ulpment Type Intended Analysis and/or Method Metals	Dupl Sampling Equipment Code ESP	Ended at: Filter Size: icate: Y Sample flow (mL per	umumpump rate minute)

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

^{2.} Stabilization Criteria for Range of Variation of Last Three Consecutive Readings (See FS 2212, section 3):

Site Name:	McIntosh Power P	lant				Site Location:		Lakeland, FL		1	
Well No:	CCR-20			Sample ID:		-		Date:	07/2	6/202	1
1000					PURGIN	G DATA			0 , / 00	y say w	
Well Diameter		Tubing D	iameter		Well Scree	en Interval		Static depth to	water	Purge pump	type
(inches)	2	(inches)	3/8	Depth:	14.9	to	24.5	(feet):	5.85	ı	PP
Well Volum	e Purge:	total well depth		static depth to water			well capacity (gal/ft)				
0	ne well volume =		-	5.85		X		=	0	gal	
Equipment Purge:	Volume	pump vol		flow cell volume (gal)		tubing length (ft)		Tubing capacity			
1 equ	ipment volume =	0.06	+	0.101	gal +	25.21	X	0.006	=	0.31226	gal
initial pump or			Final pump	_		Purging Initi	ated	Purging		Total Volum	9
De	pth in well (feet):	19.7	Depth	in well (feet):	20.0	at:	1100	Ended at:	1128	Purged (gallons):	
Time (Military)	Vol. Purged (gal)	Cumul. Vol. Purged (gals)	Purge Rate (gpm)	Depth to Water (ft)	Temp ° C	Cond. (μS/cm)	pH (SU)	Color by observation	DO mg/L or %	Turbidity (NTUs)	Sheen by observation
1113	0.996	0.996	.083	5.92	26.1	5082	4.83	Mear	0.66	22.6	NoNe
1116	v.332	1.328	-083	5.92	26.1	5146	4.90	Clear	0.53	34 1	NON
1100	0.330	1.460	.083	5.93	25.8	5173	4.99	Clear	0.49	24.8	NON
1124	0.332	1.992		5.94	25.7	5187	4.95	Ciear	0.49	25.1	NON
1128	0.332	2.324	.083	5.94	25.7	5189	4.97	Clear	0.49	20.3	NOK
Mall Caracia (Co		751 - 0.00 4		,							
	allons per Foot): (a. Capacity (Gal./Ft.)				0.16; 3" = 0 0.0026: 5/16		5; 5" = 1.02; ' = 0.006: 1/2" :		= 5.88 .016		
PURGING EQUIP	MENT CODES: B=B	ailer, BP=Bladde	er Pump ESP=E	Electric Submers			p O=other(spe	cify)			
Sampled By (Prin	t) Affiliation:	_	-	Sampler(s) Sig	SAMPLIN nature(s):	G DATA	_				
Chad		k:35		1	(h			Sampling Initiated at:	1128	Sampling Ended at:	//33
P	ump or Tubing Dept		19.7	Tubing Materia	l Code			d: Y (N) quipment Type		Filter Size:	um
Fi	eld Decontamination	n: Y (N))		Tubin	9 (Y) N (replaced)		Dup	licate: Y	(N)
	Sample Container S	Specification			Sample Pa	reservation		Intended Analysis and/or	Sampling		e pump rate
Sample I.D. Code	# Containers	Material Code	Volume	Preserv. Used		Added in Field nL)	Final pH	Method	Equipment Code		minute) x 3785
CCR-16A	1	PP	250 mL	1:1 HNO ₃	None	None	NA	Metals	ESP		
CCR-18D	1	PP	250 mL	Ice	None	None	NA	CI, F-, 804, TD8,	ESP		
Remarks:											

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

			DEP Form	FD 9000-	24; GROL	INDWATE	R SAMPL	ING LOG			
Site Name:	McIntosh Power P	lant				Site Location:		Lakeland, FL		,	
Well No:	CCR-21			Sample ID:				Date:	07/21	2021	
					PURGIN						
Well Diameter		Tubing D				en Interval		Static depth to	water	Purge pump	
(inches)	2	(inches)	3/8	Depth:	15.6	to	25.2 well	(feet):	7-17	F	P
Well Volum		total well depth		static depth to water			capacity (gal/ft)				
(One well volume =		-	7.17		Х			0	gal	
Equipment Purge:	Volume	pump vol (gal)		flow cell volume (gal)		tubing length (ft)	1.	Tubing capacity			
1 eq	uipment volume =		+	0.101	gal +	25.87	×	0.006	=	0.31622	gal
Initial pump or	r tubing		Final pump of	or tubing		Purging Initi	ated	Purging		Total Volume	
D	epth in well (feet):	20.4	Depth	in well (feet):	205	at:		Ended at:	1347	Purged (gations):	_
Time (Military)	Vol. Purged (gal)	Cumul. Vol. Purged (gals)	Purge Rate (gpm)	Depth to Water (ft)	Temp ° C	Cond. (μS/cm)	pH (SU)	Color by observation	DO mg/L or %	Turbidity (NTUs)	Sheen by observation
1339	0.996	0.996	.083	7.23	27.0	2262	6.49	Mear	0.19	0.88	NON
1343	0.332	328	.083	7.24	27.0	226	6.49	Clear	0.21	0.93	NON
1347	0.332	1.660	.083		26.9	2262	6.46	Al-eat	0.19	0,62	NON
	allons per Foot):			"= 0.06; 2" =					= 5.88		
	a. Capacity (Gal./Ft.) MENT CODES: B=B						= 0.006: 1/2"		.016		
PURGING EQUIP	MENT CODES: B=B:	aller, 82=Bladdi	er Pump ESP=E	lectric Submers	SAMPLIN	-	np O≕other(spe	cny)			-97-
Sampled By (Prin	Hotch	16:35		Sampler(s) Sig	nature(s):			Sampling Initiated at:	1347	Sampling Ended at:	1351
P	ump or Tubing Dept	th in well (feet):	20.4	Tubing Materia	l Code		Field-Filter Filtration E	ed: Y (N) quipment Type		Filter Size:	um
F	ield Decontaminatio	n: Y (N))		Tubin	N (XX)	(replaced)		Dup	icate: Y	(N)
	Sample Container !					reservation Added in Field		Intended Analysis and/or	Sampling Equipment	Sample flow (mL per	rate
Sample I.D. Code	# Containers	Material Code	Volume 250 mL	1:1 HNO ₃		nL) None	Final pH NA	Method Metals	Code	gpm)	
CCR-21B	1	PP						B, Ca, Cl, F-, 804, TD8,			
CCR-ZIB		-	250 mL	Ice	None	None	NA	blcarbonate, alkalinity	ESP		
Remarks:	lou Ci							O = Other (Specify			

Sampling EQUIPMENT CODES: APP= After (Through) Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Peristaltic Pump; SM=Straw Method(tubing Gravity Drain); O=Other (Specify)

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

^{2.} Stabilization Criteria for Range of Variation of Last Three Consecutive Readings (See FS 2212, section 3):

	Well Dlameter	Site Name:	McIntosh Power P	lant				Site Location:		Lakeland, FL		9	
Well Diameter	Well Diameter Tubing Diameter Well Screen Interval Static depth to water Purge pump type Purge Well Screen Interval Static depth to water Purge pump type Well Volume Purge: total well Static depth Static	Well No:	CCR-22			Sample ID:		1.		Date:	07/2	4/202	1
Mell Volume Volum	Inches 2						PURGIN	G DATA			0114	0100-10	
Well Volume Purge: total well depth Con well volume Depth Con well volume Depth Con well volume Depth Con well volume Depth	Well Volume Purge:	Well Diameter		Tubing D	lameter		Well Scre	en Interval		Static depth to	water	Purge pump	type
Well Volume Purge:	Mell Volume Purge doeph Cone well volume	(inches)	2	(inches)	3/8	Depth:	14.8	to		(feet):	7.47	ı	PP
Equipment Volume	Equipment Volume Pump vol	Well Volume	e Purge:						capacity				
Purgie:	Pump of the color Pump	0	ne well volume =		-	7.47		Х		=	O.	gal	
Purging Initiated pump or tubing Depth in well (feet): 19.6 Purging Initiated pump or tubing Depth in well (feet): 19.6 Purging Initiated pump or tubing Depth in well (feet): 19.7 Purging Initiated at: 1/4/7 Ended at: 1/4/7 Goldenberg purged (gallon pump or tubing pump or tubing per foot pump or tubing pump pump pump or tubing pump pump pump pump pump pump pump pum	Purging Initiated Purging Purging Initiated Purging Ended st:		Volume							The second secon			
Depth in well (feet): 19.6 Depth in well (feet): 9.7 at: 1427 Ended at: 1447 Purged (gallons)	Depth in well (feet): Fig. 7	1 equ	pment volume =	0.06	+	0.101	gal +	25.13	×	0.006	-	0.31178	gal
Tine (Military) Vol. Purged (gal) Cumul. Vol. Purge Rate (ggm) Depth to (ggm) Purgae (gals) Purgae (Tirice (Milliary) Vol. Purged (gal) Purged (gals) Purged (nitial pump or	tubing		4	_		Purging Initi	ated	Purging		Total Volum	e
Waiter (ft) Temp of Cond. (us/cm) (SU) observation	Williamy Vol. Purged (gall) Purged (gall) (gpm) Water (ft) Temp** C Cond. (µS/cm) (SU) observation mg/i. or % (NTUs) observation (NTUs) obse	De	pth in well (feet):	19.6	Depti	n in well (feet):	19.7	at:	1427	Ended at:	1447		
Vell Capacity (Gallons per Foot): 0.75" = 0.02: 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88	1443 0.332 1.328 .083 7.53 2447 4.68 1.66 0.19 1.99 1.99 1.44 1.332 1.66 1.83 1.25 1.66 1.83 1.25 1.66 1.83 1.25 1.66 1.83 1.25 1.66 1.84 1.24 1.25		Vol. Purged (gal)				Temp ° C	Cond. (μS/cm)	pH				Sheen by observation
Vell Capacity (Gallons per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88	Neil Capacity (Gallons per Foot): 0.75"=0.02; 1"=0.04; 1.25"=0.06; 2"=0.16; 3"=0.37; 4"=0.85; 5"=1.02; 6"=1.47; 12"=5.88 Neil Capacity (Gallons per Foot): 0.75"=0.02; 1"=0.04; 1.25"=0.06; 2"=0.16; 3"=0.37; 4"=0.85; 5"=1.02; 6"=1.47; 12"=5.88 Neil Capacity (Gallons per Foot): 0.75"=0.002; 1"=0.004; 1.25"=0.006; 1.2"=0.016; 1.2"=0.010; 56"=0.016; 1.2"=0.016; 1.4"=0.002; 5"16"=0.004; 3"=0.006; 1.2"=0.010; 56"=0.016; 1.2"=0.010; 56"=0.016; 1.2"=0.016;	1439	0.996	0.996	083	7.52	26,2	2365	4.71	Mess	0.21	2.46	Nor
Nell Capacity (Gallons per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88	Veil Capacity (Gallons per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88	14/1/2	120 50 00	1					411-8	Mean			1
Well Capacity (Gallons per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88 Tubing inside Dia. Capacity (Gal/Ft): 1/6" = 0.0006: 3/16" = 0.0014: 1/4" = 0.0026: 5/16" = 0.004: 3/8" = 0.006: 1/2" = 0.010: 5/6" = 0.016 **URGING EQUIPMENT CODES: B=Baller, BP=Bladder Pump ESP=Electric Submersible Pump, PP=peristatic Pump O=other(specify) **SAMPLING DATA** Sampled By (Print) Affiliation: Sampled By (Print) Affiliation: Field Filtered: Y (N) Filtration Equipment Type Field Decontamination: Y (N) Sample Container Specification Sample Preservation Intended Analysis and/or Method (mL) Final pH Method Code # Containers Material Code Volume Preserv. Used CCR-22A 1 PP 250 mL 1:1 HNO ₃ None None NA Metals ESP CCR-22B 1 PP 250 mL 1:1 HNO ₃ None None NA Metals ESP	Neil Capacity (Gallons per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.85; 5" = 1.02; 6" = 1.47; 12" = 5.88	1945					4					- 1	NON
Tubing Inside Dia. Capacity (GalJFt.): 1/8" = 0.0006: 3/16" = 0.0014: 1/4" = 0.0026: 5/16" = 0.004: 3/8" = 0.006: 1/2" = 0.010: 5/8" = 0.016 PURGING EQUIPMENT CODES: B=Baller, BP=Bladder Pump ESP=Electric Submersible Pump, PP=peristaltic Pump O=other(specify) SAMPLING DATA Sampled By (Print) Affiliation: Pump or Tubing Depth in well (feet): 19	Tubing Inside Dia. Capacity (Gal/Ft.): 1/8" = 0.0006: 3/16" = 0.0014: 1/4" = 0.0026: 5/16" = 0.004: 3/8" = 0.006: 1/2" = 0.010: 5/8" = 0.016 PURGING EQUIPMENT CODES: B=Baller, BP=Bladder Pump ESP=Electric Submersible Pump, PP=peristaltic Pump O=other(specify) SAMPLING DATA Sampled By (Print) Affiliation: Pump or Tubing Depth in well (feet): 19	1991	0.332	1.660	1083	1,53	06.4	041)	7.08	21841	0,10	1.59	Noi
ubing Inside Dia. Capacity (Gal./Ft.): 1/8" = 0.0006: 3/16" = 0.0014: 1/4" = 0.0026: 5/16" = 0.004: 3/8" = 0.006: 1/2" = 0.010: 5/8" = 0.016 URGING EQUIPMENT CODES: B=Baller, BP=Bladder Pump ESP=Electric Submersible Pump, PP=peristaltic Pump O=other(specify) SAMPLING DATA ampled By (Print) Affiliation: Pump or Tubing Depth in well (feet): 9 Tubing Material Code Field-Filtered: Y (N) Filter Size:t Field Decontamination: Y (N) Sample Container Specification Sample Preservation Tubing (Y) N (replaced) Sampling Initiated at:	ubing inside Dia. Capacity (Gal./FL): 1/8" = 0.0006: 3/16" = 0.0014: 1/4" = 0.0026: 5/16" = 0.004: 3/8" = 0.010: 5/8" = 0.010: 5/8" = 0.016 URGING EQUIPMENT CODES: B=Baller, BP=Bladder Pump ESP=Electric Submersible Pump, PP=peristaltic Pump O=other(specify) SAMPLING DATA Sampler(s) Signature(s): Pump or Tubing Depth in well (feet): 19												
During Inside Dia. Capacity (Gal./Ft.): 1/8" = 0.0006: 3/16" = 0.0014: 1/4" = 0.0026: 5/16" = 0.004: 3/8" = 0.006: 1/2" = 0.010: 5/8" = 0.016 URGING EQUIPMENT CODES: B=Baller, BP=Bladder Pump ESP=Electric Submersible Pump, PP=peristaltic Pump O=other(specify) SAMPLING DATA ampled By (Print) Affiliation: Pump or Tubing Depth in well (feet): 19	ubing Inside Dia. Capacity (Gal./Ft.): 1/8" = 0.0006: 3/16" = 0.0014: 1/4" = 0.0026: 5/16" = 0.004: 3/8" = 0.010: 5/8" = 0.010: 5/8" = 0.016 URGING EQUIPMENT CODES: B=Baller, BP=Bladder Pump ESP=Electric Submersible Pump, PP=peristaltic Pump O=other(specify) SAMPLING DATA Sampler(s) Signature(s): Pump or Tubing Depth in well (feet): 19.												
ubing Inside Dia. Capacity (Gal./Ft.): 1/8" = 0.0006: 3/16" = 0.0014: 1/4" = 0.0026: 5/16" = 0.004: 3/8" = 0.006: 1/2" = 0.010: 5/8" = 0.016 URGING EQUIPMENT CODES: B=Baller, BP=Bladder Pump ESP=Electric Submersible Pump, PP=peristaltic Pump O=other(specify) SAMPLING DATA ampled By (Print) Affiliation: Pump or Tubing Depth in well (feet): 9 Tubing Material Code Field-Filtered: Y (N) Filter Size:t Field Decontamination: Y (N) Sample Container Specification Sample Preservation Tubing (Y) N (replaced) Sampling Initiated at:	ubing inside Dia. Capacity (Gal./FL): 1/8" = 0.0006: 3/16" = 0.0014: 1/4" = 0.0026: 5/16" = 0.004: 3/8" = 0.010: 5/8" = 0.010: 5/8" = 0.016 URGING EQUIPMENT CODES: B=Baller, BP=Bladder Pump ESP=Electric Submersible Pump, PP=peristaltic Pump O=other(specify) SAMPLING DATA Sampler(s) Signature(s): Pump or Tubing Depth in well (feet): 19										-		
Tubing Inside Dia. Capacity (Gal./Ft.): 1/8" = 0.0006: 3/16" = 0.0014: 1/4" = 0.0026: 5/16" = 0.004: 3/8" = 0.006: 1/2" = 0.010: 5/8" = 0.016 URGING EQUIPMENT CODES: B=Baller, BP=Bladder Pump ESP=Electric Submersible Pump, PP=peristaltic Pump O=other(specify) SAMPLING DATA Sampling Initiated at:	Tubing Material Code # Containers Specification Sample LD. Code # Containers Material Code Volume Preserv. Used Total Volume Added in Field (mt.) CCR-22A 1 PP 250 mL 1:1 HNO ₃ None None NA Metals ESP CCR-22B 1 PP 250 mL Ice None None NA Metals ESP URGING EQUIPMENT CODES: B=Baller, BP=Bladder Pump ESP=Electric Submersible Pump, PP=peristaltic Pump O=other(specify) SAMPLING DATA Sampling Initiated at:												
Tubing Inside Dia. Capacity (GalJFt.): 1/8" = 0.0006: 3/16" = 0.0014: 1/4" = 0.0026: 5/16" = 0.004: 3/8" = 0.006: 1/2" = 0.010: 5/8" = 0.016 PURGING EQUIPMENT CODES: B=Baller, BP=Bladder Pump ESP=Electric Submersible Pump, PP=peristaltic Pump O=other(specify) SAMPLING DATA Sampled By (Print) Affiliation: Pump or Tubing Depth in well (feet): 19	Tubing Inside Dia. Capacity (Gal/Ft.): 1/8" = 0.0006: 3/16" = 0.0014: 1/4" = 0.0026: 5/16" = 0.004: 3/8" = 0.006: 1/2" = 0.010: 5/8" = 0.016 PURGING EQUIPMENT CODES: B=Baller, BP=Bladder Pump ESP=Electric Submersible Pump, PP=peristaltic Pump O=other(specify) SAMPLING DATA Sampled By (Print) Affiliation: Pump or Tubing Depth in well (feet): 19												
PURGING EQUIPMENT CODES: B=Bailer, BP=Bladder Pump ESP=Electric Submersible Pump, PP=peristaltic Pump O=other(specify) SAMPLING DATA Sampled By (Print) Affiliation: Pump or Tubing Depth in well (feet): Field-Filtered: Y (N) Filter Size: Field Decontamination: Y (N) Sample Container Specification Sample I.D. Code # Containers Material Code Volume Preserv. Used Total Volume Added in Field (mL) Final pH CCR-22A 1 PP 250 mL 1:1 HNO ₃ None None NA Metals ESP Sample I.D. Code None NA Metals ESP Sample I.D. Code None NA Metals ESP	SAMPLING DATA Sampled By (Print) Affiliation: Pump or Tubing Depth in well (feet): Sample Container Specification Sample LD. Code # Containers Material Code Volume Preserv. Used Total Volume Added in Field (mL) CCR-22A 1 PP 250 mL 1:1 HNO ₃ None None NA Metals ESP CCR-22B 1 PP 250 mL Ice None None NA Metals ESP SAMPLING DATA Sampling Initiated at: July T Ended at: July T Filter Size: July T Ended at: July T En												
Sampler(s) Signature(s): Pump or Tubing Depth in well (feet): Field Decontamination: Sampler(s) Signature(s): Sampling Initiated at: Field-Filtered: Y (N) Filtration Equipment-Type Field Decontamination: Sample Preservation None None NA Metals ESP	Sampled By (Print) Affiliation: Pump or Tubing Depth in well (feet): Pump or Tubing Depth in well (feet): Pump or Tubing Depth in well (feet): Pilter Size: Implicate: Sampling Initiated at: Pilter Size: Implicate: Intended Analysis and/or Method CCR-22A PP 250 mL Intended (mL) None None None None None None None Non										0.016		
Pump or Tubing Depth in well (feet):	Pump or Tubing Depth in well (feet): Pump or Tubing Depth in well (feet): Pump or Tubing Depth in well (feet): Field Decontamination: Y (N) Tubing Material Code Field-Filtered: Y Filter Size: um Tubing (Y) N (replaced) Sample Preservation Sample Preservation Sample Preservation Sample Preservation Sample Preservation Final pH Material Code Wolume Preserv. Used Total Volume Added in Field (mL) CCR-22A 1 PP 250 mL 1:1 HNO ₃ None							·		,			
Pump or Tubing Depth in well (feet): 19 b Tubing Material Code Field-Filtered: Y (N) Field Decontamination: Y (N) Sample Container Specification Sample Preservation Sample Preservation Sample Preservation Sample Preservation Final pH Analysis and/or Method CCR-22A 1 PP 250 mL 1:1 HNO ₃ None None NA Metals ESP	Pump or Tubing Depth in well (feet): 19		71	1		Sampler(s) Sig	nature(s):	/		Sampling		Sampling	
Field Decontamination: Y (N) Sample Container Specification Sample Preservation Sample Preservation Sample I.D. Code # Containers Material Code Volume Preserv. Used Total Volume Added in Field (mL) CCR-22A 1 PP 250 mL 1:1 HNO ₃ None None NA Metals ESP CCR-22B 1 PP 250 mL Ico None NA Metals ESP	Field Decontamination: Y (N) Sample Container Specification Sample I.D. Code # Containers Material Code Volume Preserv. Used Total Volume Added in Field (mL) CCR-22A 1 PP 250 mL 1:1 HNO3 None None NA Metals ESP CCR-22B 1 PP 250 mL Ice None None NA B. Ca, Ci, F., Sol, TDS, Dicarbonett, attailorly Equipment Code (mL per minute) gpm x 3785	Chad	Hotch	4:26		14	th				1441		1055
Sample Container Specification Sample Preservation Sample Preservation Sample Preservation Sample Preservation Intended Analysis and/or Method Final pH CCR-22A 1 PP 250 mL 1:1 HNO ₃ None None NA Metals ESP CCR-22B 1 PP 250 mL 1:0 None None NA Metals ESP	Sample Preservation Sample Preservation Sample Preservation Sample Preservation Sample Preservation Sample Preservation Intended Analysis and/or Method Sampling Equipment Code (mL per minute gpm x 3785) CCR-22A 1 PP 250 mL 1:1 HNO ₃ None None NA Metals ESP CCR-22B 1 PP 250 mL Ice None None NA Bi.Ca, CI, F., 504, TDS, blearboards, situlinity ESP	Pu	imp or Tubing Dept	th in well (feet):	19.6	Tubing Materia	l Code		Field-Filtere Filtration Ec	ed: Y (N) quipment-Type	1771	Filter Size:_	um
Sample Container Specification Sample Preservation Sample Preservation Sample Interned a preservation Sample Interned a preservation Analysis and/or Method Code Final pH CCR-22A 1 PP 250 mL 1:1 HNO ₃ None Non	Sample I.D. Code # Containers Material Code Volume Preserv. Used Total Volume Analysis and/or Method Code Final pH Method Code Final pH Final	Fie	ld Decontaminatio	n: Y (N))		Tubin	g (Y) N (replaced)		Dup	licate: Y	(N)
cample I.D. Code # Containers Material Code Volume Preserv. Used Total Volume Added in Field (mL) Final pH Method Code (mL per minu gpm x 3785 CCR-22A 1 PP 250 mL 1:1 HNO ₃ None None NA Metals ESP	tample I.D. Code # Containers Material Code Volume Preserv. Used Total Volume Added in Field (mL) Final pH Method Code (mL per minute, gpm x 3785) CCR-22A 1 PP 250 mL 1:1 HNO ₃ None None NA Metals ESP CCR-22B 1 PP 250 mL Ice None None NA Bica, Cl. F., Sol., TDB, bicarbonete, alkalinity ESP		Sample Container S	Specification			Sample Pr	eservation		Intended	Sampling		
CCR-22R 1 PP 250 ml Ico None None NA B,Ca,Ci,F, 804,TD8, ESP	CCR-22B 1 PP 250 mL Ice None None NA B, Ca, Cl, F, S04, TD8, bicarbonete, altalinity ESP	ample I.D. Code	# Containers	Material Code	Volume	Preserv. Used			Final pH			(mL per	minute)
CCR-22B 1 PP 250 mL Ice None None NA B, Ca, Cl, F, SO4, TDS, bicarbonets, attailately ESP	bicarbonata, aftatinity	CCR-22A	1	PP	250 mL	1:1 HNO ₃	None	None	NA	Metals	ESP		
	lemarks:	CCR-22B	1	PP	250 mL	Ice	None	None	NA	B, Ca, Cl, F-, 804, TDS, bicarbonate, alkalinity	ESP		
	Remarks:												

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

2. <u>Stabilization Criteria for Range of Variation of Last Three Consecutive Readings (See FS 2212, section 3):</u>
pH = +/- 0.2; Temperature = +/- 0.2°; Specific Conductance = +/- 5%, Dissolved Oxygen = ≤ 20% saturation(see Table FS 2200-2): optionally, +/-0.2 mg/L or 10% (whichever is greater). Turbidity: all readings ≤20 NTU: optionally +/- 5 NTU or +/- 10 % (whichever is greater)

Site Name:	McIntosh Power P	lant				Site Location:		Lakeland, FL	,	1	
Well No:	GCR-23			Sample ID:		1		Date:	07/29	7/29/2021	
50					PURGIN	G DATA	- 3.3-		01/01	7400	1300
Well Diameter		Tubing D	iameter		Well Scre	en Interval		Static depth to			
(inches)	2	(inches)	3/8	Depth:	15.1	to	24.7	(feet):	6.03	P	P
Well Volum	e Purge:	total well depth		static depth to water			well capacity (gal/ft)				
0	ne well volume =		-	6.03		X		=	0	gal	
Equipment Purge:	Volume	pump vol (gal)		flow cell volume (gal)		tubing length (ft)		Tubing capacity			
1 equ	ipment volume =	0.06	+	0.101	gal +	25.44	X	0.006	=	0.31364	gal
nitial pump or			Final pump	_		Purging Initi	0-	Purging	Gran .	Total Volume	
De	pth in well (feet):	19.9	Depth	in well (feet):	19.7	at:	0830	Ended at:	0858	Purged (gallons):	
Time (Military)	Vol. Purged (gal)	Cumul. Vol. Purged (gals)	Purge Rate (gpm)	Depth to Water (ft)	Temp ° C	Cond. (μS/cm)	pH (SU)	Color by observation	DO mg/L or %	Turbidity (NTUs)	Sheen by observation
0842	0.996	0.996	.083	6.22	26.5	1772	5.12	Mear	0.26	21.5	Noke
0846	0.332	1,328	.083	6.23	24.5	1773	5.14	Mear	0.25	14.8	NON
0850	0,332	1.660	,083	6.24	26.5	1775	3.16	Creac	0.22	10.5	NON
0854		1.992	.083	6.24	26.5	1780	5.15	Clear	0.21	8.62	NON
0858	0.332	2.324	.083	0.25	26.5	1785	5.16	Mear	0020	6.75	NOW.
					4						
Tubing inside Dia	allons per Foot): a. Capacity (Gal./Ft.) MENT CODES: B=B		6: 3/16" = 0.0	0014: 1/4" = 0	.0026: 5/16		" = 0.006: 1/2"	= 0.010: 5/8" = 0	= 5.88 0.016		
Sampled By (Prin	t) Affiliation:			Sampler(s) Sig				Sampling		Sampling	
Charl	Hotold	515		(Int	to			Initiated at:	0858	Ended at:	0904
P	ump or Tubing Dep	th in well (feet):	19.9	Tubing Materia	I Code	PE	Field-Filtere Filtration E	ed: Y (N) quipment Type	- V-0	Filter Size:	um
Fi	eld Decontaminatio	n: Y (N			Tubir	ng (Y) N	(replaced)		Dup	licate: Y	(N)
Sample I.D. Code	Sample Container	Specification Material Code	Volume	Preserv. Used	Total Volume	reservation Added in Field	Final pH	Intended Analysis and/or Method	Sampling Equipment Code	flow (mL per	e pump rate minute) x 3785
CCR-23A	1	PP	250 mL	1:1 HNO ₃	None	None	NA	Metals	ESP	Shiii .	3,00
CCR-23B	1	PP	250 mL	Ice	None	None	NA	B, Ca, Cl, F-, 804, TDS,	ESP		
001(200			200 1112	1.00	100110			bicarbonate, alkalinity			
Remarks:	ample b	ottle 1	red S	is b stance	e inc	ders					

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

Sampling EQUIPMENT CODES: APP= After (Through) Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Peristaltic Pump; SM=Straw Method(tubing Gravity Drain); O=Other (Specify)

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

^{2.} Stabilization Criteria for Range of Variation of Last Three Consecutive Readings (See FS 2212, section 3):

pH = +/- 0.2; Temperature = +/- 0.2°; Specific Conductance = +/- 5%, Dissolved Oxygen = ≤ 20% saturation(see Table FS 2200-2): optionally, +/-0.2 mg/L or 10% (whichever is greater). Turbidity: all readings ≤20 NTU: optionally +/- 5 NTU or +/- 10 % (whichever is greater)

Site Name:	McIntosh Power P	lant				Site Location:		Lakeland, FL	1	1	
Well No:	CCREOBLE 5	W-106	à la	Sample ID:	72921CCR-E	BLK		Date:	7/29	12021	
	THE RESERVE				PURGIN						
Well Diamete		Tubing D			Well Scre	en Interval	2/1	Static depth to		Purge pump	
(inches)	a	(inches)	3/8	Depth:		to	26. well capacity	(feet):	12.7		PP
Well Volur	-	depth		to water			(gal/ft)		100		
	One well volume =	26.1	-	12.1		X	0.16	=	0	gal 2./	44
Equipmen Purge:	t Volume	pump vol (gal)		flow cell volume (gal)		tubing length (ft)		Tubing capacity		-	
1 ec	quipment volume =		+		gal +		х	0.006	=	0	gal
Initial pump of			Final pump o			Purging Initia	f-	Purging Ended at:	105:	Total Volum Purged	7-
	epth in well (feet):	15.0	Depth	in well (feet):	15.2	at:	1018	Ended at:	1056	(gallons)	
Time (Military)	Vol. Purged (gal)	Cumul. Vol. Purged (gals)	Purge Rate (gpm)	Depth to Water (ft)	Temp ° C	Cond. (μS/cm)	pH (SU)	Color by observation	DO mg/L or %	Turbidity (NTUs)	Si
1040	2.20	2,20	-100	12.86	23.9	121	5.58	Couly	0,62	37.7	N
1044	0.40	2.60	-100	12.86	23.8	120	5.56	Mear	0.59	34.3	1
1048	0.40	3.00	1100	12.86	23.9	118	5.56	aleas	0.57	29.5	1
1052	0,40	3.40	.100	12.86	23.9	119	5.56	Clear	0,56	25.9	1
1056	n 11.	3.80		12.87	23.9	117	5.59	Clear	0.55	25,1	1
Tubing inside D	Gallons per Foot): Dia. Capacity (Gal./Ft.): 1/8" = 0.000	6: 3/16" = 0.0	0014: 1/4" = (0.0026: 5/1		" = 0.006: 1/2"	= 0.010: 5/8" = 0	= 5.88 0.016		
PURGING EQU	IPMENT CODES: B=B	sailer, BP=Bladd	ier Pump ESP=I	Electric Submer	SAMPLIN		np O≕omer(sp	ecity)		V. Carlo	178
Sampled By (Pr	rint) Affiliation:	lehkis	5	Sampler(s) Sig	nature(s):	h		Sampling Initiated at:	1056	Sampling Ended at:	11
	Pump or Tubing Dep			Tubing Materia		PE	Field-Filter Filtration E	ed: Y (N) quipment Type		Filter Size:	1/1
	Field Decontaminatio	n: (N)		Tubi	ng (Y) N	(replaced)		Dup	licate: Y	(N)
	Sample Container	Specification			Sample I	Preservation		Intended	Sampling		le pum
Sample I.D. Coo	de # Containers	Material Code	Volume	Preserv. Used		e Added in Field	Final pH	Analysis and/or Method	Equipment Code	(mL pe	
921CCR-Eq B	L) 1	PP	250 mL	1:1 HNO ₃	None	None	NA	Metals	RFPP		
921CCR-Eq-B	L) 1	PP	250 mL	Ice	None	None	NA	8, Ca, Cl, F-, SO4, TD8, bicarbonete, alkalinity	RFPP		

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

Sampling EQUIPMENT CODES: APP= After (Through) Peristaltic Pump; B = Baller; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Peristaltic Pump; SM=Straw Method(tubing Gravity Drain); O=Other (Specify)

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

^{2.} Stabilization Criteria for Range of Variation of Last Three Consecutive Readings (See FS 2212, section 3):

pH = +/- 0.2; Temperature = +/- 0.2°; Specific Conductance = +/- 5%, Dissolved Oxygen = ≤20% saturation(see Table FS 2200-2): optionally, +/-0.2 mg/L or 10% (whichever is greater). Turbidity: all readings ≤20 NTU: optionally +/- 5 NTU or +/- 10 % (whichever is greater)

Site Name:	McIntosh Power P	lant				Site Location:		Lakeland, FL				
Well No:	CCR-EQ BLK			Sample ID:	72921CCR-EG	BLK		Date:				
PINT I					PURGIN	G DATA				Barri.		
Well Diameter		Tubing D	iameter		Well Scre	en Interval		Static depth to	water	Purge pump	type	
(inches)		(inches)	3/8	Depth:		to		(feet):	NA	F	P	
Well Volume		total well depth		static depth to water			well capacity (gal/ft)					
0	ne well volume =		-			X			0	gal		
Equipment Purge:	Volume	pump vol (gal)		flow cell volume (gal)		tubing length (ft)		Tubing capacity				
1 equ	ipment volume =		+		gal +		X	0.006	-	0	gal	
Initial pump or De	tubing pth in well (feet):		Final pump	or tubing n in well (feet):		Purging Initia	ited	Purging Ended at:		Total Volume Purged		
			/	1						(gallons):		
Time (Military)	Vol. Purged (gal)	Cumul. Vol. Purged (gals)	Purge Rate (gpm)	Depth to Water (ft)	Temp ° C	Cond. (µS/cm)	pH (SU)	Color by observation	DO mg/L or %	Turbidity (NTUs)	Sheen by observation	
3	-		.100		22.9	4.5	5.70	Clear	0.38	0.75	Non	
Tubing Inside Dia	. Capacity (Gal./Ft.) MENT CODES: B=B		6: 3/16" = 0.	0014: 1/4" = 0	0.0026: 5/16 sible Pump, Pl SAMPLIN	=peristaltic Pun	° = 0.006: 1/2°	= 0.010: 5/8" = ecify) Sampling		Sampling		
								Initiated at:		Ended at:		
Pi	ump or Tubing Dept	th in well (feet):		Tubing Materia	al Code		Field-Filtere	ed: Y (N) quipment Type		Filter Size:_	um	
Ei	eld Decontamination	n: Y (N			Tubir	ng (Y) N (replaced)	quipment rype	Dur	olicate: Y	(N)	
			,				Teplaceu/				e pump	
Sample I.D. Code	# Containers	Specification Material Code	Volume	Preserv. Used	Total Volume	reservation Added in Field nL)	Final pH	Intended Analysis and/or Method	Sampling Equipment Code	flow (mL per	rate minute) x 3785	
72921CCR-Eq BLKA	1	PP	250 mL	1:1 HNO ₃	None	None	NA	Metals	RFPP			
72921CCR-Eq BLKB	1	PP	250 mL	Ice	None	None	NA	B, Ca, Ci, F-, SO4, TD5, bicarbonate, alkalinky	RFPP			
Remarks:			1									

Gravity Drain); O=Other (Specify)

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

2. Stabilization Criteria for Range of Variation of Last Three Consecutive Readings (See FS 2212, section 3);
pH = +/- 0.2; Temperature = +/- 0.2°; Specific Conductance = +/- 5%, Dissolved Oxygen = ≤ 20% saturation(see Table FS 2200-2): optionally, +/-0.2 mg/L or 10% (whichever is greater). Turbidity: all readings ≤20 NTU: optionally +/- 6 NTU or +/- 10 % (whichever is greater)

	Elev		January Depth to	July Depth to	Well		Elevatio
Well ID	Тор	Ground	Water Reading	Water Reading	Depth (BGS)	top-ground	Water
CCR-1	141.30		11.27	11.42	25.71	,	
CCR-2	140.57		10.13	10.46	25.79		
CCR-3	137.04	1	6.88	7.56	25.80		
CCR-4	143.13		14.33	14.57	25.69		
CCR-5	141.07		10.45	10,59	26.21		4. 64
CCR-6	141.34		8.75	9.53	25.72		
CCR-7	142.10		9.14	9,56	25.79		
CCR-8	142.12		8.61	9.36	25.96		
CCR-9	141.67		9.36	9,28	25.61		
CCR-10R	133.56		2.36		24.70		
CCR-11	137.12		5.23	6.50	25.64		
CCR-12	136.99		5.28	6.25	25.75		
CCR-13	137.95		6.72	7,53	25.66		
CCR-14	138.70	V	8.25	8.78	25.51		
CCR-15	144.65		16.58	16.75	25.67		
CCR-16	144.10		15.22	15.35	25.64		
CCR-17	145.80	3	13.84	14.31	25.67		
CCR-18	140.81		8.12	8.40	25.91		
CCR-19	136.47		4.48	5,20	25.82		
CCR-20	136.05		4.62	5.67	25.21		
CCR-21	137.12		5.86	6.98	25.87		
CCR-22	137.51		6.36	7.36	25.13		
CCR-23	135.78		5.48	5.86	25.44		
MW-24S	143.91		10.72	11.32	21.54		300000000000000000000000000000000000000
MW-25S	144.40		14.59	14.73	26.09		
SW-106			24.34	12,10	38.40		

		ation	Depth to	Well		Elevation
Well ID	Тор	Ground	Water Reading	Depth (BGS)	top-ground	Water
CCR-1	141.30		11.27	25.71		130.3
CCR-2	140.57		10.13	25.79		130.44
CCR-3	137.04		6.88	25.80		130.6
CCR-4	143.13		14.33	25.69		128 80
CCR-5	141.07		10.45	26.21		130.62
CCR-6	141.34		8.75	25.72		132,59
CCR-7	142.10		9.14	25.79		132.96
CCR-8	142.12		8.61	25.96		133.5
CCR-9	141.67		9.36	25.61		132.31
CCR-10R	133.56		2.36	24.70		131,20
CCR-11	137.12		5.23	25.64		131,8
CCR-12	136.99		5.28	25.75		131,7
CCR-13	137.95		6.72	25.66		131,23
CCR-14	138.70		8.25	25.51		130,45
CCR-15	144.65		16.58	25.67		128.07
CCR-16	144.10		15.22	25.64		128.88
CCR-17	145.80		13.84	25.67		131,96
CCR-18	140.81		8.12	25.91		132.69
CCR-19	136.47		4.48	25.82		131,99
CCR-20	136.05		4.62	25.21		131.43
CCR-21	137.12		5.86	25.87		10013
CCR-22	137.51		6.36	25.13		13/15
CCR-23	135.78		5.48	25.44		130,30
MW-24S	143.91		10.72	21.54		133,19
MW-25S	144.40		14.59	26.09		139,81
SW-106			24.34	38.40		

U - Unobtainable





Memorandum

Date: 10 June 2021

To: Todd Kafka

From: Matthew Richardson

CC: J. Caprio

Subject: Stage 2A Data Validation - Level II Data Deliverables - Florida

Spectrum Environmental Services Lab Work Orders 21B0062 and

21B0063

SITE: McIntosh Power Plant

INTRODUCTION

This report summarizes the findings of the Stage 2A data validation of twenty-four water samples, and one equipment blank, collected 25-28 January 2021, as part of the McIntosh Power Plant project. The samples were analyzed at Florida Spectrum Environmental Services, Inc., Fort Lauderdale, Florida, for the following tests:

- Metals by United States (US) Environmental Protection Agency (EPA) Methods 3010A/200.7
- Mercury by US EPA Method 245.1
- Anions (Chloride, Fluoride and Sulfate as SO₄) by US EPA Method 300.0
- Bicarbonate and Total Alkalinity by US EPA Method 310.2
- Total Dissolved Solids (TDS) by US EPA Method 160.1 and Standard Methods (SM) 18 2540C

The laboratory also reported sample results for water level, color, sheen, specific conductance, dissolved oxygen, pH, temperature and turbidity in the electronic data deliverable (EDD). Since these are field parameters, these data were not validated.

EXECUTIVE SUMMARY

Overall, based on this Stage 2A data validation covering the quality control (QC) parameters listed below and based on the information provided, the data as qualified are usable for supporting project objectives, with the following exceptions.

The non-detect total alkalinity and bicarbonate results in CCR-15 and Equipment Blank were R qualified as rejected due to the temperature at sample receipt.

The qualified data that were not rejected should be used within the limitations of the qualifications

The data were reviewed based on professional and technical judgment and the following documents:

- US EPA Contract Laboratory Program National Functional Guidelines for Superfund Inorganic Superfund Data Review, November 2020 (EPA 540-R-20-006);
- Florida Department of Environmental Protection (DEP) Standard Operating Procedures (SOPs), January 2017 (DEP QA Rule, Chapter-62-160, F.A.C.); and
- The pertinent methods referenced by the laboratory reports.

The following samples were analyzed and validated at a Stage 2A level:

Laboratory ID	Client ID
21B0062-01	CCR-01
21B0063-01	CCR-01
21B0062-02	CCR-02
21B0063-02	CCR-02
21B0062-03	CCR-03
21B0063-03	CCR-03
21B0062-04	CCR-04
21B0063-04	CCR-04
21B0062-05	CCR-05
21B0063-05	CCR-05
21B0062-06	CCR-06
21B0063-06	CCR-06
21B0062-07	CCR-07
21B0063-07	CCR-07
21B0062-08	CCR-08
21B0063-08	CCR-08
21B0062-09	CCR-09
21B0063-09	CCR-09
21B0062-10	CCR-11
21B0063-10	CCR-11
21B0062-11	CCR-12
21B0063-11	CCR-12
21B0062-12	CCR-13

Laboratory ID	Client ID
21B0063-12	CCR-13
21B0062-13	CCR-15
21B0063-13	CCR-15
21B0062-14	CCR-16
21B0063-14	CCR-16
21B0062-15	CCR-17
21B0063-15	CCR-17
21B0062-16	CCR-18
21B0063-16	CCR-18
21B0062-17	CCR-19
21B0063-17	CCR-19
21B0062-18	CCR-20
21B0063-18	CCR-20
21B0062-19	CCR-21
21B0063-19	CCR-21
21B0062-20	CCR-22
21B0063-20	CCR-22
21B0062-21	CCR-23
21B0063-21	CCR-23
21B0062-22	CCR-24 (SW-106)
21B0063-22	CCR-24 (SW-106)
21B0062-23	CCR-25
21B0063-23	CCR-25

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According to information from Lakeland Electric, the samples were received at Lakeland Electric, Lakeland, Florida at temperatures between 2.7-14.6 degrees Celsius (°C), both within and outside the criteria of 0-6°C. Since the samples were received by Lakeland Electric on the same day as collection and based on professional and technical judgment, no qualifications were applied to the data.

Information sent from the laboratory confirmed that the samples were received at the Florida Spectrum Environmental Services service center in Lakeland, Florida, at 2.4°C. The samples were sent from there to the Florida Spectrum Environmental Services main lab in Fort Lauderdale, Florida, several days later and were received at 22.0°C. See section 3.1.2 for the data validation qualifications.

The following issues were noted on the chain of custody (COC) forms reported in the laboratory reports:

- 21B0062: The relinquishing time was not documented for the first sample transfer on the three pages of the COC. In addition, the samples were not relinquished on the three pages of the COC for the second sample transfer, for shipment to Florida Spectrum Environmental Services.
- 21B0063: The relinquishing time was not documented for the first sample transfer on the three pages of the COC. In addition, the samples were not relinquished on the three pages of the COC for the second sample transfer, for shipment to Florida Spectrum Environmental Services.

A document identified as "chain of custody form; quality control lab; McIntosh Power Plant" did not include any signature or date documentation for the receiving and relinquishing of the samples, and the equipment blank, identified as sample CCR-25 was not documented on this form.

The sample concentrations that were I-flagged by the laboratory were J qualified as estimated in the EDD with qualifiers file, CCR 012021 (Rev2 7-Jun-2021) with quals.xlsx.

Sample CCR-25 was identified as the equipment blank in the EDD. The equipment blank was reported with ID CCR-25 in both level II laboratory reports.

The sample CCR-24 was identified as "CCR-24 (SW-106)" in the EDD. The sample was reported with ID CCR-24 in both level II laboratory reports and the document identified as "chain of custody form; quality control lab; McIntosh Power Plant".

The EDD was revised twice. The first revision was provided on 3 June 2021 to include the QC data for chloride, sulfate and TDS. The second revision was provided on 7 June 2021 to include the relative percent difference (RPD) results and RPD limits for the TDS laboratory duplicates

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using sample CCR-09 and CCR-11. The second revised EDD was identified as CCR 012021 (Rev2 7-June-2021). The EDD worksheet "with QC" was used for chloride, sulfate and TDS data validation purposes. The EDD worksheet "without QC" was used for metals data validation purposes.

1.0 METALS

The samples were analyzed for metals by US EPA methods 3010A/200.7 (Mercury evaluated separately in Section 2.0, below).

The areas of data review are listed below. A leading check mark (\checkmark) indicates an area of review in which the data were acceptable. A preceding crossed circle (\otimes) signifies areas where issues were raised over the course of the validation review and should be considered to determine any impact on data quality and usability.

- ✓ Overall Assessment
- ✓ Holding Time
- ✓ Method Blank
- ✓ Matrix Spike/Matrix Spike Duplicate
- ✓ Laboratory Control Sample
- ✓ Equipment Blank
- ✓ Field Duplicate
- ✓ Sensitivity
- ⊗ Electronic Data Deliverable Review

1.1 Overall Assessment

The metals data reported in the laboratory report are considered usable for supporting project objectives. The results are considered valid; the analytical completeness, defined as the ratio of the number of valid analytical results (valid analytical results include values qualified as estimated) to the total number of analytical results requested on samples submitted for this analysis, for this sample set is 100%.

1.2 Holding Time

The holding time for the metals analysis of a preserved water sample is 180 days from sample collection to analysis. The holding times were met for the sample analyses.

It was noted that the dates of digestion and analysis did not include the year in the level II laboratory report; the dates were complete in the EDD.

1.3 Method Blank

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Four method blanks were reported (batches 21B0001, 21B0002, 21B0004 and 21B0008). Metals were not detected in the method blanks above the method detection limit (MDL).

1.4 <u>Matrix Spike/Matrix Spike Duplicate (MS/MSD)</u>

MS/MSD pairs were analyzed at the proper frequency for the number and types of samples analyzed (one pair per batch of 20 samples). Two sample set specific MS/MSD pairs were reported, using samples CCR-11 and CCR-25 (the equipment blank). The recovery and relative percent difference (RPD) results were within the laboratory specified acceptance criteria, with the following exceptions.

The recoveries of potassium in the MS/MSD pair using sample CCR-11 were low and the sodium recoveries were high, outside the laboratory specified acceptance criteria. In addition, the MS/MSD results for potassium and sodium were L-flagged by the laboratory to indicate the results exceeded the calibration ranges. Since the potassium and sodium concentrations in sample CCR-11 were greater than four times the spike amounts, no qualifications were applied to the data.

The recoveries of calcium in the MS/MSD pair using sample CCR-11 were NR-flagged by the laboratory to indicate the recoveries were not reported. In addition, the calcium data in this MS/MSD were L- flagged by the laboratory to indicate the results exceeded the calibration range. Since the calcium concentration in sample CCR-11 was greater than four times the spike amount, no qualifications were applied to the data.

Two batch MS/MSD pairs were also reported. Since these were batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.

1.5 <u>Laboratory Control Sample (LCS)</u>

LCSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Four LCSs were reported. The recovery results were within the laboratory specified acceptance criteria.

1.6 **Equipment Blank**

One equipment blank was collected with the sample set, CCR-25. Metals were not detected in the equipment blank above the MDL, with the following exceptions.

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Calcium and magnesium were detected in the equipment blank at estimated concentrations greater than the MDLs and less than the reporting limits (RLs). Since calcium and magnesium were detected in the associated samples at concentrations greater than the RL, no qualifications were applied to the data.

1.7 Field Duplicate

Field duplicate samples were not collected with the sample set.

1.8 **Sensitivity**

The samples were reported to the MDLs. Elevated non-detect results were not reported.

1.9 Electronic Data Deliverable Review

The results and sample IDs in the EDD were reviewed against the information provided by the associated level II report at a minimum of 20% as part of the data validation process. The following issues were noted in the EDD review:

- The L flags that were used in the level II report were not used in the EDD.
- The I flags that were used to flag the equipment blank calcium data in the level II report were not used in the EDD.
- The method blank data were reported to the RLs in the level II report. Upon review of the EDD, it was verified that the method blanks were assessed to the MDLs.

2.0 MERCURY

The samples were analyzed for mercury by US EPA Method 245.1.

The areas of data review are listed below. A leading check mark (\checkmark) indicates an area of review in which the data were acceptable. A preceding crossed circle (\otimes) signifies areas where issues were raised over the course of the validation review and should be considered to determine any impact on data quality and usability.

- ✓ Overall Assessment
- ✓ Holding Times
- ✓ Method Blank
- ✓ Matrix Spike/Matrix Spike Duplicate
- ✓ Laboratory Control Sample
- ✓ Equipment Blank
- ✓ Field Duplicate
- ✓ Sensitivity
- ⊗ Electronic Data Deliverable Review

2.1 Overall Assessment

The mercury data reported in the laboratory report are considered usable for supporting project objectives. The results are considered valid; the analytical completeness, defined as the ratio of the number of valid analytical results (valid analytical results include values qualified as estimated) to the total number of analytical results requested on samples submitted for this analysis, for this sample set is 100%.

2.2 Holding Times

The holding time for the mercury analysis of a preserved water sample is 28 days from sample collection to analysis. The holding times were met for the sample analyses.

2.3 Method Blank

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Two method blanks were reported (batches 21B0005 and 21B0006). Mercury was not detected in the method blanks above the MDL.

2.4 Matrix Spike/Matrix Spike Duplicate

MS/MSD pairs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Two sample set specific MS/MSD pairs were reported, using samples CCR-11 and CCR-21. The recovery and RPD results were within the laboratory specified acceptance criteria.

One batch MS/MSD pair was reported. Since these were batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.

2.5 Laboratory Control Sample

LCSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Two LCSs were reported. The recovery results were within the laboratory specified acceptance criteria.

Equipment Blank

One equipment blank was collected with the sample set, CCR-25. Mercury was not detected in the equipment blank above the MDL.

Final Review: ME Tyler 6/10/2021

2.7 Field Duplicate

A field duplicate sample was not collected with the sample set.

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2.8 Sensitivity

The samples were reported to the MDL. Elevated non-detect results were not reported.

2.9 <u>Electronic Data Deliverable Review</u>

The results and sample IDs in the EDD were reviewed against the information provided by the associated level II report at a minimum of 20% as part of the data validation process. The method blank data were reported to the RL in the level II report. Upon review of the EDD, it was verified that the method blanks were assessed to the MDL. No other discrepancies were identified between the level II report and the EDD.

3.0 WET CHEMISTRY

The samples were analyzed for anions (chloride, fluoride and sulfate as SO₄) by US EPA method 300.0, bicarbonate and total alkalinity by US EPA method 310.2, TDS by US EPA method 160.1 and SM 18 2540C.

The areas of data review are listed below. A leading check mark (\checkmark) indicates an area of review in which the data were acceptable. A preceding crossed circle (\otimes) signifies areas where issues were raised during the course of the validation review and should be considered to determine any impact on data quality and usability.

- ⊗ Overall Assessment
- ✓ Holding Time
- ✓ Method Blank
- ✓ Matrix Spike/Matrix Spike Duplicate
- ✓ Laboratory Control Sample
- ✓ Equipment Blank
- ✓ Laboratory Duplicate
- ✓ Field Duplicate
- ✓ Sensitivity
- ⊗ Electronic Data Deliverable Review

3.1 Overall Assessment

3.1.1 Completeness

The wet chemistry reported in the laboratory report are considered usable for supporting project objectives, with the following exceptions. The non-detect total alkalinity and bicarbonate results in samples CCR-15 and CCR-25 (the equipment blank) were R qualified as rejected due to the temperature at sample receipt. Therefore, the analytical completeness, defined as the ratio of the number of valid analytical results (valid analytical results include values qualified as estimated) to

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the total number of analytical results requested on samples submitted for this analysis, for this sample set is 96.9%.

3.1.2 Analysis Anomaly

The total and bicarbonate alkalinity results in the samples were Y-flagged by the laboratory to indicate the laboratory analyses were from unpreserved or improperly preserved samples. As noted above, the sample receipt temperature was 22°C. Therefore, based on professional and technical judgment, the total alkalinity and bicarbonate concentrations in these samples were J qualified as estimated, and the non-detect total alkalinity and bicarbonate results in CCR-15 and CCR-25 (the equipment blank) were R qualified as rejected.

The chloride concentration in sample CCR-05 was J-8 flagged by the laboratory to indicate the concentrations exceeded the calibration range. Therefore, based on professional and technical judgment, the chloride concentration in sample CCR-05 was J qualified as estimated.

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	Validation Result (mg/L)	Validation Qualifier*	Reason Code**
CCR-05	Chloride	5630	J-7, J-8	5630	J	10
CCR-05	Bicarbonate	31.8	Y	31.8	J	1
CCR-05	Total Alkalinity	31.8	Y	31.8	J	1
CCR-06	Bicarbonate	119	Y	119	J	1
CCR-06	Total Alkalinity	119	Y	119	J	1
CCR-07	Bicarbonate	19.8	Y	19.8	J	1
CCR-07	Total Alkalinity	19.8	Y	19.8	J	1
CCR-09	Bicarbonate	43.2	Y	43.2	J	1
CCR-09	Total Alkalinity	43.2	Y	43.2	J	1
CCR-11	Bicarbonate	18.2	Y	18.2	J	1
CCR-11	Total Alkalinity	18.2	Y	18.2	J	1
CCR-12	Bicarbonate	186	Y	186	J	1
CCR-12	Total Alkalinity	186	Y	186	J	1
CCR-15	Bicarbonate	2.49	Y, U	2.49	R	1
CCR-15	Total Alkalinity	2.49	Y, U	2.49	R	1
CCR-16	Bicarbonate	3.91	Y	3.91	J	1
CCR-16	Total Alkalinity	3.91	Y	3.91	J	1
CCR-17	Bicarbonate	205	Y	205	J	1
CCR-17	Total Alkalinity	205	Y	205	J	1
CCR-18	Bicarbonate	177	Y	177	J	1
CCR-18	Total Alkalinity	177	Y	177	J	1
CCR-19	Bicarbonate	15.8	Y	15.8	J	1

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	Validation Result (mg/L)	Validation Qualifier*	Reason Code**
CCR-19	Total Alkalinity	15.8	Y	15.8	J	1
CCR-20	Bicarbonate	28.6	Y	28.6	J	1
CCR-20	Total Alkalinity	28.6	Y	28.6	J	1
CCR-21	Bicarbonate	257	Y	257	J	1
CCR-21	Total Alkalinity	257	Y	257	J	1
CCR-22	Bicarbonate	12.8	Y	12.8	J	1
CCR-22	Total Alkalinity	12.8	Y	12.8	J	1
CCR-23	Bicarbonate	57.2	Y	57.2	J	1
CCR-23	Total Alkalinity	57.2	Y	57.2	J	1
CCR-24 (SW-106)	Bicarbonate	34.2	Y	34.2	J	1
CCR-24 (SW-106)	Total Alkalinity	34.8	Y	34.8	J	1
Equipment Blank (CCR-25)	Bicarbonate	2.49	Y, U	2.49	R	1
Equipment Blank (CCR-25)	Total Alkalinity	2.49	Y, U	2.49	R	1

mg/L-milligram per liter

3.2 Holding Time

The holding times for the wet chemistry parameters are listed in the table below. The holding times were met for the sample analyses.

Analysis	Holding Time
Anions (Chloride, Fluoride and Sulfate as SO ₄) by US EPA Method 300.0	28 days from collection to analysis
Total Dissolved Solids by US EPA Method 160.1 and SM 2540C	7 days from collection to analysis
Alkalinity by US EPA Method 310.2	14 days from collection to analysis

3.3 Method Blank

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Method blanks were reported for each analysis batch (chloride and sulfate batches 1012502, 1012703, 1012801 and 1020301; fluoride batches 21B0251 and 21B0270; sulfate batches 0071603, 0072006 and 0072205; total dissolved solids batches 1012604, 1012804 and 1020102; and total alkalinity batches 21B0174 and 21B0175). The wet chemistry parameters were not detected in the method blanks above the MDLs.

J-7 – laboratory flag indicating the concentration exceeds the regulatory maximum contaminant level (MCL)

J-8 – laboratory flag indicating the concentration exceeds the calibration range

Y-laboratory flag indicating the laboratory analysis was from an unpreserved or improperly preserved sample

^{*} Validation qualifiers are defined in Attachment 1 at the end of this report

^{**}Reason codes are defined in Attachment 2 at the end of this report

3.4 <u>Matrix Spike/Matrix Spike Duplicate</u>

Two sample set specific MSs were reported for fluoride, using samples CCR-01 and CCR-18. Two sample set specific MSs were reported for total alkalinity, using samples CCR-11 and CCR-24 (SW-106). Four sample set specific MS/MSD pairs were reported for chloride and sulfate, using samples CCR-01, CCR-07, CCR-18 and CCR-24 (SW-106). The recovery and RPD results were within the laboratory specified acceptance criteria.

Batch MSs were reported for fluoride and total alkalinity. Since these were batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.

3.5 Laboratory Control Sample

LCSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). An LCS or LCS/LCS duplicate (LCSD) pair were reported for each analytical batch per analysis. The recovery and RPD results were within the laboratory specified acceptance criteria.

3.6 **Equipment Blank**

One equipment blank was collected with the sample set, CCR-25. The wet chemistry parameters were not detected in the equipment blank above the MDLs, with the following exception.

TDS was detected at an estimated concentration greater than the MDL and less than the RL in the equipment blank. Since TDS was detected in the associated samples at concentrations greater than the RLs, no qualifications were applied to the data.

3.7 Laboratory Duplicate

One sample set specific laboratory duplicate was reported for total alkalinity, using sample CCR-11. One sample set specific laboratory duplicate was reported for fluoride, using sample CCR-01. Four sample set specific laboratory duplicates were reported for chloride and sulfate, using samples CCR-01, CCR-07, CCR-18 and CCR-24 (SW-106). Three sample set specific laboratory duplicates were reported for TDS, using samples CCR-09, CCR-11 and CCR-24 (SW-106). The RPD results were within the laboratory specified acceptance criteria.

Batch laboratory duplicates were reported for fluoride and total alkalinity. Since these were batch QC, the result does not affect the samples in this data set and qualifications were not applied to the data.

Final Review: ME Tyler 6/10/2021

3.8 Field Duplicate

A field duplicate sample was not collected with the sample set.

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3.9 **Sensitivity**

The samples were reported to the MDLs. An elevated non-detect fluoride result was reported in sample CCR-16 due to the dilution analyzed.

3.10 Electronic Data Deliverable Review

The results and sample IDs in the EDD were reviewed against the information provided by the associated level II report for fluoride and total alkalinity at a minimum of 20% as part of the data validation process. The method blank data were reported to the RLs in the level II report. Upon review of the EDD, it was verified that the method blanks were assessed to the MDLs. No other discrepancies were identified between the level II report and the EDD

* * * *

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ATTACHMENT 1 DATA VALIDATION QUALIFIER DEFINITIONS AND INTERPRETATION KEY Assigned by Geosyntec's Data Validation Team

DATA QUALIFIER DEFINITIONS

- U The analyte was analyzed for, but was not detected above the reported sample quantitation limit. Upon application of the U qualifier to a reported result, the definition changes to "not detected at or above the reported result".
- J The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
- J+ The analyte was positively identified; however, the associated numerical value is likely to be higher that the concentration of the analyte in the sample due to positive bias of associated QC or calibration data or attributable to matrix interference.
- J- The analyte was positively identified; however, the associated numerical value is likely to be lower that the concentration of the analyte in the sample due to negative bias of associated QC or calibration data or attributable to matrix interference.
- UJ The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
- R The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

ATTACHMENT 2 DATA VALIDATION REASON CODES Assigned by Geosyntec's Data Validation Team

Valid Value	Description
1	Preservation requirement not met
2	Analysis holding time exceeded
3	Blank contamination (i.e., method, trip, equipment, etc.)
4	Matrix spike/matrix spike duplicate recovery or RPD outside limits
5	LCS recovery outside limits
6	Surrogate recovery outside limits
7	Field Duplicate RPD exceeded
8	Serial dilution percent difference exceeded
9	Calibration criteria not met
10	Linear range exceeded
11	Internal standard criteria not met
12	Lab duplicates RPD exceeded
13	Other
14	Laboratory flag was removed or modified: no validation qualification required
NV	Data were not validated





Memorandum

Date: 22 September 2021

To: Todd Kafka

From: Matthew Richardson

CC: J. Caprio

Subject: Stage 2A Data Validation - Level II Data Deliverables - Florida

Spectrum Environmental Services Lab Work Orders 21G0877,

21G0804, 21G0981, 21G0982 and 21G1031

SITE: McIntosh Power Plant

INTRODUCTION

This report summarizes the findings of the Stage 2A data validation of forty-two water samples and two equipment blanks, collected 22 and 26-29 July 2021, as part of the McIntosh Power Plant project. The samples were analyzed at Florida Spectrum Environmental Services, Inc., Fort Lauderdale, Florida, for the following tests:

- Metals by United States (US) Environmental Protection Agency (EPA) Methods 3010A/200.7
- Mercury by US EPA Method 245.1
- Anions (Chloride, Fluoride and Sulfate as SO₄) by US EPA Method 300.0
- Bicarbonate and Total Alkalinity by US EPA Method 310.2
- Total Dissolved Solids (TDS) by Standard Methods (SM) 18 2540C

EXECUTIVE SUMMARY

Overall, based on this Stage 2A data validation covering the quality control (QC) parameters listed below and based on the information provided, the data as qualified are usable for supporting project objectives. The qualified data should be used within the limitations of the qualifications.

The data were reviewed based on professional and technical judgment and the following documents:

• US EPA Contract Laboratory Program National Functional Guidelines for Superfund Inorganic Superfund Data Review, November 2020 (EPA 540-R-20-006);

- Florida Department of Environmental Protection (DEP) Standard Operating Procedures (SOPs), January 2017 (DEP QA Rule, Chapter-62-160, F.A.C.); and
- The pertinent methods referenced by the laboratory reports.

The following samples were analyzed and validated at a Stage 2A level:

Laboratory ID	Client ID
21G1031-01	CCR-23A
21G1031-02	CCR-23B
21G1031-03	SW-106A
21G1031-04	SW-106B
21G1031-05	CCR-11A
21G1031-06	CCR-11B
21G1031-07	72921EqBlkA
21G1031-08	72921EqBlkB
21G0804-01	CCR-1A
21G0804-02	CCR-1B
21G0804-03	CCR-2A
21G0804-04	CCR-2B
21G0804-05	CCR-4A
21G0804-06	CCR-4B
21G0804-07	CCR-15A
21G0804-08	CCR-15B
21G0804-09	CCR-16A
21G0804-10	CCR-16B
21G0981-01	CCR-5A
21G0981-02	CCR-5B
21G0981-03	CCR-6A
21G0981-04	CCR-6B

Laboratory ID	Client ID
21G0981-05	CCR-7A
21G0981-06	CCR-7B
21G0982-01	CCR-8A
21G0982-02	CCR-8B
21G0982-03	CCR-9A
21G0982-04	CCR-9B
21G0982-05	CCR-12A
21G0982-06	CCR-12B
21G0982-07	CCR-13A
21G0982-08	CCR-13B
21G0877-01	CCR-17A
21G0877-02	CCR-17B
21G0877-03	CCR-18A
21G0877-04	CCR-18B
21G0877-05	CCR-19A
21G0877-06	CCR-19B
21G0877-07	CCR-20A
21G0877-08	CCR-20B
21G0877-09	CCR-21A
21G0877-10	CCR-21B
21G0877-11	CCR-22A
21G0877-12	CCR-22B

Final Review: K Henderson 09/29/2021

The samples were received at the laboratory at 0.9 degrees Celsius (°C), 5.8 °C, 2.6 °C, 2.5 °C and 4.5 °C, within the criteria of 0-6°C. No sample preservation issues were noted by the laboratory.

The following issues were noted on the chain of custody (COC) forms reported in the laboratory reports:

• The relinquishing time was not documented for the first sample transfer on both pages of the 21G0877 COC.

- Sample collection times were not documented for samples CCR-23A and CCR-23B on the 21G0877 COC. The samples were reported and analyzed in laboratory report 21G1031.
- The sample preservation was not documented for the equipment blanks 72921EqBlkA and 72921EqBlkB on the 21G1031 COC. According to the Groundwater Sampling Log provided by the client, the equipment blanks were properly preserved.
- Incorrect error corrections were observed on the 21G0804 and 21G0980 COCs, instead of the proper procedure of a single strike through, correction and initials and date of person making the corrections.

It was noted that the sample concentrations that were I flagged in the laboratory report were J qualified as estimated for the validation qualifiers in the electronic data deliverable (EDD).

1.0 METALS

The samples were analyzed for metals by US EPA methods 3010A/200.7 (Mercury evaluated separately in Section 2.0, below).

The areas of data review are listed below. A leading check mark (\checkmark) indicates an area of review in which the data were acceptable. A preceding crossed circle (\otimes) signifies areas where issues were raised over the course of the validation review and should be considered to determine any impact on data quality and usability.

- ✓ Overall Assessment
- ✓ Holding Time
- ✓ Method Blank
- ✓ Matrix Spike/Matrix Spike Duplicate
- ✓ Laboratory Control Sample
- ✓ Equipment Blank
- ✓ Sensitivity
- ⊗ Electronic Data Deliverable Review

1.1 Overall Assessment

The metals data reported in the laboratory report are considered usable for supporting project objectives. The results are considered valid; the analytical completeness, defined as the ratio of the number of valid analytical results (valid analytical results include values qualified as estimated) to the total number of analytical results requested on samples submitted for this analysis, for this data set is 100%.

1.2 **Holding Time**

The holding time for the metals analysis of a preserved water sample is 180 days from sample collection to analysis. The holding times were met for the sample analyses.

1.3 Method Blank

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Six method blanks were reported (batches 21G0112, 21G0119, 21G0089, 21G0102, 21G0105 and 21G0095). Metals were not detected in the method blanks above the method detection limits (MDLs).

1.4 Matrix Spike/Matrix Spike Duplicate (MS/MSD)

MS/MSD pairs were analyzed at the proper frequency for the number and types of samples analyzed (one pair per batch of 20 samples). Two sample set specific MS/MSD pairs were reported, two using sample 72921EqBlkA and one using sample CCR-21A. The recovery and relative percent difference (RPD) results were within the laboratory specified acceptance criteria.

Batch MS/MSD pairs were also reported. Since these were batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.

1.5 <u>Laboratory Control Sample (LCS)</u>

LCSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Six LCSs were reported. The recovery results were within the laboratory specified acceptance criteria.

1.6 **Equipment Blank**

Two equipment blanks, 72921EqBlkA and 72921EqBlkB, were collected with the sample set; 72921EqBlkA was analyzed for metals. Metals were not detected in 72921EqBlkA above the MDL.

1.7 Sensitivity

The samples were reported to the MDLs. Elevated non-detect results were not reported.

1.8 Electronic Data Deliverables Review

The results and sample IDs in the EDDs were reviewed against the information provided by the associated level II reports at a minimum of 20% as part of the data validation process. The method blank data were reported to the reporting limits (RLs) in the level II reports. Upon review of the

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EDDs, it was verified that the method blanks were assessed to the MDLs. The laboratory flags "I" in the level II report were not included in the EDD. No other discrepancies were identified between the level II reports and the EDDs.

2.0 MERCURY

The samples were analyzed for mercury by US EPA Method 245.1.

The areas of data review are listed below. A leading check mark (\checkmark) indicates an area of review in which the data were acceptable. A preceding crossed circle (\otimes) signifies areas where issues were raised over the course of the validation review and should be considered to determine any impact on data quality and usability.

- ✓ Overall Assessment
- ✓ Holding Times
- ✓ Method Blank
- ✓ Matrix Spike/Matrix Spike Duplicate
- ✓ Laboratory Control Sample
- ✓ Equipment Blank
- ✓ Sensitivity
- ⊗ Electronic Data Deliverable Review

2.1 Overall Assessment

The mercury data reported in the laboratory reports are considered usable for supporting project objectives. The results are considered valid; the analytical completeness, defined as the ratio of the number of valid analytical results (valid analytical results include values qualified as estimated) to the total number of analytical results requested on samples submitted for this analysis, for this data set is 100%.

2.2 Holding Times

The holding time for the mercury analysis of a preserved water sample is 28 days from sample collection to analysis. The holding times were met for the sample analyses.

2.3 Method Blank

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Three method blanks were reported (batches 21G0118, 21G0098 and 21G0117). Mercury was not detected in the method blanks above the MDL.

2.4 <u>Matrix Spike/Matrix Spike Duplicate</u>

MS/MSD pairs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Two sample set specific MS/MSD pairs were reported, using samples CCR-4A and 72921EqBlkA. The recovery and RPD results were within the laboratory specified acceptance criteria.

One batch MS/MSD pair was also reported. Since these were batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.

2.5 <u>Laboratory Control Sample</u>

LCSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). One LCS was reported. The recovery result was within the laboratory specified acceptance criteria.

Equipment Blank

Two equipment blanks, 72921EqBlkA and 72921EqBlkB, were collected with the sample set; 72921EqBlkA was analyzed for mercury. Mercury was not detected in 72921EqBlkA above the MDL.

2.7 Sensitivity

The samples were reported to the MDL. Elevated non-detect results were not reported.

2.8 Electronic Data Deliverables Review

The results and sample IDs in the EDDs were reviewed against the information provided by the associated level II reports at a minimum of 20% as part of the data validation process. The method blank data were reported to the RL in the level II reports. Upon review of the EDDs, it was verified that the method blanks were assessed to the MDL. No other discrepancies were identified between the level II reports and the EDDs.

3.0 WET CHEMISTRY

The samples were analyzed for anions (chloride, fluoride and sulfate as SO₄) by US EPA method 300.0, bicarbonate and total alkalinity by US EPA method 310.2 and TDS by SM 18 2540C.

The areas of data review are listed below. A leading check mark (\checkmark) indicates an area of review in which the data were acceptable. A preceding crossed circle (\otimes) signifies areas where issues were raised during the course of the validation review and should be considered to determine any impact on data quality and usability.

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- ✓ Overall Assessment
- ✓ Holding Time
- ✓ Method Blank
- ⊗ Matrix Spike/Matrix Spike Duplicate
- ✓ Laboratory Control Sample
- ✓ Equipment Blank
- ✓ Laboratory Duplicate
- ✓ Sensitivity
- ⊗ Electronic Data Deliverable Review

3.1 Overall Assessment

The wet chemistry data reported in the laboratory reports are considered usable for supporting project objectives. The results are considered valid; the analytical completeness, defined as the ratio of the number of valid analytical results (valid analytical results include values qualified as estimated) to the total number of analytical results requested on samples submitted for this analysis, for this data set is 100%.

3.2 **Holding Time**

The holding times for the wet chemistry parameters are listed in the table below. The holding times were met for the sample analyses.

Analysis	Holding Time
Anions (Chloride, Fluoride and Sulfate as SO ₄) by US EPA Method 300.0	28 days from collection to analysis
Total Dissolved Solids by SM 2540C	7 days from collection to analysis
Alkalinity by US EPA Method 310.2	14 days from collection to analysis

3.3 Method Blank

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Method blanks were reported for each analysis batch (anions batches 21G0884, 21G0709, 21G0825, 21G0794, 21G0802, 21H0204 and 21G0885; TDS batches 21H0180, 21G0772 and 21G0880; and total alkalinity batches 21H0299, 21G0683 and 21G0842). The wet chemistry parameters were not detected in the method blanks above the MDLs.

3.4 <u>Matrix Spike/Matrix Spike Duplicate</u>

One sample set specific MS was reported for anions, using sample SW-106B. Three sample set specific MSs were reported for total alkalinity, using samples CCR-16B, CCR-18B and CCR-8B. The recovery results were within the laboratory specified acceptance criteria, with the following exceptions.

The recoveries of total alkalinity in the MSs using samples CCR-18B and CCR-8B were low and outside the laboratory specified acceptance criteria. Therefore, the total alkalinity and bicarbonate concentrations in CCR-18B and CCR-8B were J- qualified as estimated with low biases.

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	Validation Result (mg/L)	Validation Qualifier*	Reason Code**
CCR-18B	Bicarbonate	141	NA	141	J-	4
CCR-18B	Total Alkalinity	141	J3	141	J-	4
CCR-8B	Bicarbonate	155	NA	155	J-	4
CCR-8B	Total Alkalinity	155	J3	155	J-	4

mg/L-milligrams per liter

NA-not applicable

Batch MSs were reported for anions and total alkalinity. Since these were batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.

3.5 Laboratory Control Sample

LCSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). An LCS were reported for each analytical batch per analysis. The recovery and RPD results were within the laboratory specified acceptance criteria.

3.6 **Equipment Blank**

Two equipment blanks, 72921EqBlkA and 72921EqBlkB, were collected with the sample set; 72921EqBlkB was analyzed for the wet chemistry parameters. The wet chemistry parameters were not detected in 72921EqBlkB above the MDLs.

3.7 <u>Laboratory Duplicate</u>

Four sample set specific laboratory duplicates were reported for TDS, using samples SW-106B, CCR-1B, CCR-2B and CCR-8B. One sample set specific laboratory duplicate was reported for total alkalinity, using sample CCR-18B. One sample set specific laboratory duplicate was reported for total alkalinity, using sample CCR-18B. The RPD results were within the laboratory specified acceptance criteria.

Batch laboratory duplicates were reported for anions, TDS and total alkalinity. Since these were batch QC, the result does not affect the samples in this data set and qualifications were not applied to the data.

J3-laboratory flag indicating the matrix spike recovery outside method acceptance limits indicating matrix interference

^{*} Validation qualifiers are defined in Attachment 1 at the end of this report

^{**}Reason codes are defined in Attachment 2 at the end of this report

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3.8 Sensitivity

The samples were reported to the MDLs. Elevated non-detect results were not reported.

3.9 Electronic Data Deliverables Review

The results and sample IDs in the EDDs were reviewed against the information provided by the associated level II reports at a minimum of 20% as part of the data validation process. The method blank data were reported to the RLs in the level II reports. Upon review of the EDDs, it was verified that the method blanks were assessed to the MDLs. The laboratory flags "I" in the level II report were not included in the EDD. No other discrepancies were identified between the level II reports and the EDDs. No other discrepancies were identified between the level II reports and the EDDs.

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ATTACHMENT 1 DATA VALIDATION QUALIFIER DEFINITIONS AND INTERPRETATION KEY Assigned by Geosyntec's Data Validation Team

DATA QUALIFIER DEFINITIONS

- U The analyte was analyzed for, but was not detected above the reported sample quantitation limit. Upon application of the U qualifier to a reported result, the definition changes to "not detected at or above the reported result".
- J The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
- J+ The analyte was positively identified; however, the associated numerical value is likely to be higher that the concentration of the analyte in the sample due to positive bias of associated QC or calibration data or attributable to matrix interference.
- J- The analyte was positively identified; however, the associated numerical value is likely to be lower that the concentration of the analyte in the sample due to negative bias of associated QC or calibration data or attributable to matrix interference.
- UJ The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
- R The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

ATTACHMENT 2 DATA VALIDATION REASON CODES Assigned by Geosyntec's Data Validation Team

Valid Value	Description
1	Preservation requirement not met
2	Analysis holding time exceeded
3	Blank contamination (i.e., method, trip, equipment, etc.)
4	Matrix spike/matrix spike duplicate recovery or RPD outside limits
5	LCS recovery outside limits
6	Surrogate recovery outside limits
7	Field Duplicate RPD exceeded
8	Serial dilution percent difference exceeded
9	Calibration criteria not met
10	Linear range exceeded
11	Internal standard criteria not met
12	Lab duplicates RPD exceeded
13	Other
14	Laboratory flag was removed or modified: no validation qualification required
NV	Data were not validated

APPENDIX B

Statistical Results – January 2021 Semi-Annual Monitoring

			Number			Minimum	Maximum	Minimum	Maximum					
Monitoring			of	Number	Percent	Detected	Detected	Detection	Detetion			Concentration		
Location	Analyte	Units	Samples	of NDs	NDs	Result	Result	Limit	Limit	Mean ¹	CV	Trend ³	LCL Distribution ²	95% LCL
CCR-3	Antimony	mg/L	18	18	100			0.001	0.0123	NA	NA	NA	DL	0.0010
CCR-3	Arsenic	mg/L	21	11	52	0.00051	0.0101	0.00046	0.00586	NA	NA	NA	DL	0.0005
CCR-3	Barium	mg/L	21	0	0	0.0234	0.055			0.0370	0.252	Decreasing	Trend (Regression)	0.015
CCR-3	Beryllium	mg/L	17	17	100			0.00034	0.00283	NA	NA	NA	DL	0.0003
CCR-3	Cadmium	mg/L	19	19	100			0.00032	0.0039	NA	NA	NA	DL	0.0003
CCR-3	Chromium	mg/L	19	11	58	0.0011	0.0015	0.000736	0.00513	NA	NA	NA	DL	0.0011
CCR-3	Cobalt	mg/L	19	19	100	-		0.000293	0.002	NA	NA	NA	DL	0.0004
CCR-3	Fluoride	mg/L	23	0	0	0.12	0.232			0.1682	0.189	Increasing	Normal	0.20
CCR-3	Lead	mg/L	19	17	89	0.00037	0.00047	0.00035	0.0139	NA	NA	NA	DL	0.0004
CCR-3	Lithium	mg/L	21	20	95	0.015	0.015	0.00272	0.011	NA	NA	NA	DL	0.0032
CCR-3	Mercury	mg/L	18	18	100			0.00003	0.000152	NA	NA	NA	DL	0.0001
CCR-3	Molybdenum	mg/L	21	18	86	0.00418	0.0134	0.00085	0.00631	NA	NA	NA	DL	0.0009
CCR-3	Selenium	mg/L	21	13	62	0.00028	0.0192	0.00024	0.027	NA	NA	NA	DL	0.0002
CCR-3	Thallium	mg/L	19	19	100			0.000085	0.0034	NA	NA	NA	DL	0.0001
CCR-4	Antimony	mg/L	18	15	83	0.001	0.0015	0.001	0.0123	NA	NA	NA	DL	0.0010
CCR-4	Arsenic	mg/L	21	7	33	0.001	0.0136	0.00221	0.013	0.0019	1.364	Decreasing	Frend (Theil-Sen Slope	0.0015
CCR-4	Barium	mg/L	21	0	0	0.149	0.36			0.2786	0.215	Probably Increasing	Trend (Regression)	0.24
CCR-4	Beryllium	mg/L	17	4	24	0.00036	0.00084	0.002	0.00283	0.0006	0.233	Increasing	Normal ⁴	0.0005
CCR-4	Cadmium	mg/L	19	6	32	0.00046	0.0233	0.00034	0.0039	0.0044	1.469	No Trend	Lognormal	0.0026
CCR-4	Chromium	mg/L	19	5	26	0.0015	0.0063	0.001	0.00513	0.0023	0.471	Decreasing	Nonparametric ⁴	0.0020
CCR-4	Cobalt	mg/L	19	4	21	0.0027	0.0052	0.000293	0.002	0.0031	0.500	Decreasing	Normal	0.0023
CCR-4	Fluoride	mg/L	23	6	26	0.04	1.92	0.032	0.05	0.24697	1.557	Increasing	Trend (Theil-Sen Slope	0.18
CCR-4	Lead	mg/L	19	14	74	0.00051	0.0032	0.00035	0.0139	NA	NA	NA	DL	0.0004
CCR-4	Lithium	mg/L	21	4	19	0.0079	0.34	0.00333	0.022	0.0642	1.313	No Trend	Lognormal	0.039
CCR-4	Mercury	mg/L	18	18	100	1		0.00003	0.000152	NA	NA	NA	DL	0.0001
CCR-4	Molybdenum	mg/L	21	19	90	0.0161	0.0184	0.00085	0.00631	NA	NA	NA	DL	0.0009
CCR-4	Selenium	mg/L	21	9	43	0.00029	0.0031	0.00024	0.028	0.0009	0.735	Decreasing	Frend (Theil-Sen Slope	0.0037
CCR-4	Thallium	mg/L	19	5	26	0.00026	0.0051	0.000925	0.0017	0.0006	1.751	No Trend	Nonparametric	0.0005
CCR-5	Antimony	mg/L	18	18	100			0.001	0.0123	NA	NA	NA	DL	0.0010
CCR-5	Arsenic	mg/L	21	6	29	0.00078	0.019	0.00046	0.013	0.0027	1.678	No Trend	Nonparametric	0.0018
CCR-5	Barium	mg/L	21	0	0	0.064	0.0847			0.0715	0.080	Probably Increasing	Trend (Regression)	0.073
CCR-5	Beryllium	mg/L	17	17	100			0.00034	0.00283	NA	NA	NA	DL	0.0003
CCR-5	Cadmium	mg/L	19	19	100			0.00032	0.0039	NA	NA	NA	DL	0.0003
CCR-5	Chromium	mg/L	19	6	32	0.0012	0.0018	0.000736	0.00513	0.0014	0.230	Decreasing	Normal ⁴	0.0012
CCR-5	Cobalt	mg/L	19	18	95	0.0032	0.0032	0.000293	0.002	NA	NA	NA	DL	0.0004
CCR-5	Fluoride	mg/L	22	5	23	0.04	0.145	0.032	0.084	0.0587	0.498	Increasing	Trend (Regression)	0.11
CCR-5	Lead	mg/L	19	14	74	0.00046	0.00071	0.00035	0.0139	NA	NA	NA	DL	0.0004
CCR-5	Lithium	mg/L	21	0	0	2.3	5.35			3.1843	0.323	Increasing	Trend (Theil-Sen Slope	3.5
CCR-5	Mercury	mg/L	18	17	94	0.000233	0.000233	0.00003	0.000152	NA	NA	NA	DL	0.0001
CCR-5	Molybdenum	mg/L	21	18	86	0.0026	0.025	0.00085	0.00631	NA	NA	NA	DL	0.0009

			Number			Minimum	Maximum	Minimum	Maximum					
Monitoring			of	Number	Percent	Detected	Detected	Detection	Detetion			Concentration		
Location	Analyte	Units	Samples	of NDs	NDs	Result	Result	Limit	Limit	Mean ¹	CV	Trend ³	LCL Distribution ²	95% LCL
CCR-5	Selenium	mg/L	21	10	48	0.00028	0.0312	0.00024	0.028	0.0021	3.167	Decreasing	Nonparametric ⁴	0.0014
CCR-5	Thallium	mg/L	19	17	89	0.0036	0.0056	0.000085	0.0017	NA	NA	NA	DL	0.000085
CCR-6	Antimony	mg/L	18	18	100			0.001	0.0123	NA	NA	NA	DL	0.0010
CCR-6	Arsenic	mg/L	21	7	33	0.00047	0.0073	0.00046	0.00586	0.0014	1.400	No Trend	Nonparametric	0.0010
CCR-6	Barium	mg/L	21	1	5	0.0145	0.051	0.017	0.017	0.0293	0.377	Decreasing	Normal	0.025
CCR-6	Beryllium	mg/L	17	17	100			0.00034	0.00283	NA	NA	NA	DL	0.0003
CCR-6	Cadmium	mg/L	19	19	100			0.00032	0.0039	NA	NA	NA	DL	0.0003
CCR-6	Chromium	mg/L	19	13	68	0.0012	0.021	0.000736	0.00513	NA	NA	NA	DL	0.0011
CCR-6	Cobalt	mg/L	19	19	100			0.000293	0.002	NA	NA	NA	DL	0.0004
CCR-6	Fluoride	mg/L	23	0	0	0.09	0.272			0.18035	0.282	Increasing	Trend (Regression)	0.23
CCR-6	Lead	mg/L	19	17	89	0.00037	0.00041	0.00035	0.0139	NA	NA	NA	DL	0.0004
CCR-6	Lithium	mg/L	21	0	0	0.045	1.11			0.2812	0.920	Probably Increasing	Trend (Regression)	0.41
CCR-6	Mercury	mg/L	18	18	100			0.00003	0.000152	NA	NA	NA	DL	0.0001
CCR-6	Molybdenum	mg/L	21	10	48	0.0011	0.0362	0.00085	0.00631	0.0050	1.744	Increasing	Frend (Theil-Sen Slope	0.0079
CCR-6	Selenium	mg/L	21	14	67	0.00033	0.00073	0.00024	0.027	NA	NA	NA	DL	0.0002
CCR-6	Thallium	mg/L	19	19	100			0.000085	0.0034	NA	NA	NA	DL	0.0001
CCR-7	Antimony	mg/L	18	17	94	0.0178	0.0178	0.001	0.0123	NA	NA	NA	DL	0.001
CCR-7	Arsenic	mg/L	21	12	57	0.00051	0.0169	0.00046	0.00586	NA	NA	NA	DL	0.0005
CCR-7	Barium	mg/L	21	1	5	0.0161	0.1	0.017	0.017	0.0437	0.500	Decreasing	Trend (Regression)	0.0006
CCR-7	Beryllium	mg/L	17	17	100			0.00034	0.00283	NA	NA	NA	DL	0.0003
CCR-7	Cadmium	mg/L	19	19	100			0.00032	0.0039	NA	NA	NA	DL	0.0003
CCR-7	Chromium	mg/L	19	10	53	0.0012	0.0028	0.000736	0.00513	NA	NA	NA	DL	0.0011
CCR-7	Cobalt	mg/L	19	14	74	0.00041	0.001	0.000293	0.002	NA	NA	NA	DL	0.0004
CCR-7	Fluoride	mg/L	22	0	0	0.08	0.404			0.23489	0.4512	Probably Increasing	Trend (Regression)	0.19
CCR-7	Lead	mg/L	19	15	79	0.00039	0.0013	0.00035	0.0139	NA	NA	NA	DL	0.0004
CCR-7	Lithium	mg/L	21	3	14	0.0032	0.34	0.0032	0.0032	0.0614	1.355	Increasing	Frend (Theil-Sen Slope	0.057
CCR-7	Mercury	mg/L	18	17	94	0.00007	0.00007	0.00003	0.000152	NA	NA	NA	DL	0.0001
CCR-7	Molybdenum	mg/L	21	19	90	0.00858	0.0115	0.00085	0.00631	NA	NA	NA	DL	0.0009
CCR-7	Selenium	mg/L	21	14	67	0.00024	0.00043	0.00024	0.027	NA	NA	NA	DL	0.0002
CCR-7	Thallium	mg/L	19	19	100			0.000085	0.0034	NA	NA	NA	DL	0.0001
CCR-8	Antimony	mg/L	18	16	89	0.0017	0.0058	0.001	0.0123	NA	NA	NA	DL	0.0010
CCR-8	Arsenic	mg/L	21	5	24	0.0015	0.0135	0.00289	0.00586	0.0032	0.851	Stable	Nonparametric	0.0026
CCR-8	Barium	mg/L	21	0	0	0.0244	0.064			0.0381	0.317	No Trend	Normal	0.034
CCR-8	Beryllium	mg/L	17	17	100			0.00034	0.00283	NA	NA	NA	DL	0.0003
CCR-8	Cadmium	mg/L	19	19	100			0.00032	0.0039	NA	NA	NA	DL	0.0003
CCR-8	Chromium	mg/L	19	19	100	-		0.000736	0.00513	NA	NA	NA	DL	0.0011
CCR-8	Cobalt	mg/L	19	18	95	0.0012	0.0012	0.000293	0.002	NA	NA	NA	DL	0.0004
CCR-8	Fluoride	mg/L	23	0	0	0.23	0.4			0.30122	0.1393	Increasing	Trend (Regression)	0.30
CCR-8	Lead	mg/L	19	18	95	0.00045	0.00045	0.00035	0.0139	NA	NA	NA	DL	0.0004
CCR-8	Lithium	mg/L	21	7	33	0.0043	0.0491	0.00333	0.011	0.0129	0.912	Decreasing	Normal	0.0034

			Number			Minimum	Maximum	Minimum	Maximum					
Monitoring			of	Number	Percent	Detected	Detected	Detection	Detetion			Concentration		
Location	Analyte	Units	Samples	of NDs	NDs	Result	Result	Limit	Limit	Mean ¹	CV	$Trend^3$	LCL Distribution ²	95% LCL
CCR-8	Mercury	mg/L	18	18	100			0.00003	0.000152	NA	NA	NA	DL	0.0001
CCR-8	Molybdenum	mg/L	21	0	0	0.012	0.0238			0.0172	0.169	Increasing	Frend (Theil-Sen Slope	0.018
CCR-8	Selenium	mg/L	21	16	76	0.0003	0.0246	0.00024	0.027	NA	NA	NA	DL	0.0002
CCR-8	Thallium	mg/L	19	18	95	0.00015	0.00015	0.000085	0.0034	NA	NA	NA	DL	0.0001
CCR-9	Antimony	mg/L	18	17	94	0.0017	0.0017	0.001	0.0123	NA	NA	NA	DL	0.0010
CCR-9	Arsenic	mg/L	21	1	5	0.003	0.0173	0.0075	0.0075	0.0061	0.562	Increasing	Frend (Theil-Sen Slope	0.0050
CCR-9	Barium	mg/L	21	0	0	0.062	0.13			0.0926	0.210	Decreasing	Trend (Regression)	0.046
CCR-9	Beryllium	mg/L	17	17	100			0.00034	0.00283	NA	NA	NA	DL	0.0003
CCR-9	Cadmium	mg/L	19	18	95	0.00058	0.00058	0.00032	0.0039	NA	NA	NA	DL	0.0003
CCR-9	Chromium	mg/L	19	15	79	0.0012	0.0023	0.000736	0.00513	NA	NA	NA	DL	0.0011
CCR-9	Cobalt	mg/L	19	19	100			0.000293	0.002	NA	NA	NA	DL	0.0004
CCR-9	Fluoride	mg/L	23	0	0	0.095	0.362			0.1947	0.2859	Increasing	Frend (Theil-Sen Slope	0.21
CCR-9	Lead	mg/L	19	16	84	0.00054	0.0028	0.00035	0.0139	NA	NA	NA	DL	0.0004
CCR-9	Lithium	mg/L	21	0	0	0.056	0.19		1	0.1142	0.341	No Trend	Normal	0.100
CCR-9	Mercury	mg/L	18	18	100			0.00003	0.000152	NA	NA	NA	DL	0.0001
CCR-9	Molybdenum	mg/L	21	17	81	0.0014	0.0166	0.00085	0.00631	NA	NA	NA	DL	0.0009
CCR-9	Selenium	mg/L	21	8	38	0.00047	0.0015	0.00309	0.027	0.0010	0.313	Increasing	Γrend (Theil-Sen Slope	0.0035
CCR-9	Thallium	mg/L	19	18	95	0.0048	0.0048	0.000085	0.0017	NA	NA	NA	DL	0.000085
CCR-10	Antimony	mg/L	17	17	100			0.001	0.0123	NA	NA	NA	DL	0.001
CCR-10	Arsenic	mg/L	19	5	26	0.0014	0.0026	0.00289	0.00586	0.0018	0.176	Stable	Normal	0.0017
CCR-10	Barium	mg/L	19	1	5	0.00739	0.034	0.017	0.017	0.0227	0.301	Decreasing	Trend (Regression)	0.0087
CCR-10	Beryllium	mg/L	15	15	100			0.00034	0.00259	NA	NA	NA	DL	0.00034
CCR-10	Cadmium	mg/L	17	17	100			0.00032	0.0039	NA	NA	NA	DL	0.00034
CCR-10	Chromium	mg/L	17	4	24	0.0018	0.0028	0.000736	0.00513	0.0021	0.281	Decreasing	Normal ⁴	0.0018
CCR-10	Cobalt	mg/L	17	17	100			0.000382	0.002	NA	NA	NA	DL	0.0004
CCR-10	Fluoride	mg/L	20	0	0					0.11755	0.3864	Increasing	Trend (Regression)	0.19
CCR-10	Lead	mg/L	17	16	94	0.00056	0.00056	0.00035	0.0139	NA	NA	NA	DL	0.00035
CCR-10	Lithium	mg/L	19	19	100			0.0032	0.018	NA	NA	NA	DL	0.0032
CCR-10	Mercury	mg/L	16	15	94	0.00007	0.00007	0.00003	0.000152	NA	NA	NA	DL	0.00007
CCR-10	Molybdenum	mg/L	19	18	95	0.0062	0.0062	0.00085	0.00631	NA	NA	NA	DL	0.00085
CCR-10	Selenium	mg/L	19	12	63	0.00025	0.0119	0.00024	0.027	NA	NA	NA	DL	0.00024
CCR-10	Thallium	mg/L	17	17	100			0.000085	0.0034	NA	NA	NA	DL	0.000085
CCR-11	Antimony	mg/L	18	17	94	0.0015	0.0015	0.001	0.0123	NA	NA	NA	DL	0.001
CCR-11	Arsenic	mg/L	21	0	0	0.0544	0.14			0.0972	0.304	Stable	Normal	0.086
CCR-11	Barium	mg/L	21	0	0	0.025	0.071			0.0534	0.201	Decreasing	Trend (Regression)	0.036
CCR-11	Beryllium	mg/L	17	17	100			0.00034	0.00283	NA	NA	NA	DL	0.0003
CCR-11	Cadmium	mg/L	19	19	100			0.00032	0.0039	NA	NA	NA	DL	0.0003
CCR-11	Chromium	mg/L	19	6	32	0.0012	0.0023	0.000736	0.00513	0.0015	0.278	Decreasing	Normal ⁴	0.0013
CCR-11	Cobalt	mg/L	19	19	100	-		0.000293	0.002	NA	NA	NA	DL	0.0004
CCR-11	Fluoride	mg/L	24	0	0	0.35	1.04			0.52267	0.3481	Increasing	Frend (Theil-Sen Slope	0.75

			Number			Minimum	Maximum	Minimum	Maximum					
Monitoring			of	Number	Percent	Detected	Detected	Detection	Detetion			Concentration		
Location	Analyte	Units	Samples	of NDs	NDs	Result	Result	Limit	Limit	Mean ¹	CV	Trend ³	LCL Distribution ²	95% LCL
CCR-11	Lead	mg/L	19	12	63	0.00039	0.0014	0.00035	0.0139	NA	NA	NA	DL	0.0004
CCR-11	Lithium	mg/L	21	11	52	0.004	0.0338	0.00272	0.011	NA	NA	NA	DL	0.0032
CCR-11	Mercury	mg/L	18	18	100			0.00003	0.000152	NA	NA	NA	DL	0.0001
CCR-11	Molybdenum	mg/L	21	14	67	0.00089	0.0149	0.00085	0.00631	NA	NA	NA	DL	0.0009
CCR-11	Selenium	mg/L	21	5	24	0.0013	0.0085	0.00309	0.027	0.0026	0.902	Probably Increasing	Trend (Theil-Sen Slope	0.0035
CCR-11	Thallium	mg/L	19	19	100			0.000085	0.0034	NA	NA	NA	DL	0.0001
CCR-12	Antimony	mg/L	18	18	100			0.001	0.0123	NA	NA	NA	DL	0.0010
CCR-12	Arsenic	mg/L	21	0	0	0.00089	0.199			0.0496	0.788	Increasing	Trend (Theil-Sen Slope	0.053
CCR-12	Barium	mg/L	21	0	0	0.0117	0.048			0.0169	0.462	Increasing	Frend (Theil-Sen Slope	0.014
CCR-12	Beryllium	mg/L	17	17	100			0.00034	0.00283	NA	NA	NA	DL	0.0003
CCR-12	Cadmium	mg/L	19	19	100			0.00032	0.0039	NA	NA	NA	DL	0.0003
CCR-12	Chromium	mg/L	19	18	95	0.0024	0.0024	0.000736	0.00513	NA	NA	NA	DL	0.0011
CCR-12	Cobalt	mg/L	19	17	89	0.0013	0.0015	0.000293	0.002	NA	NA	NA	DL	0.0004
CCR-12	Fluoride	mg/L	23	0	0	0.45	0.72			0.57409	0.1422	Increasing	Trend (Regression)	0.63
CCR-12	Lead	mg/L	19	18	95	0.001	0.001	0.00035	0.0139	NA	NA	NA	DL	0.0004
CCR-12	Lithium	mg/L	21	17	81	0.0139	0.26	0.00272	0.011	NA	NA	NA	DL	0.0032
CCR-12	Mercury	mg/L	18	18	100			0.00003	0.000152	NA	NA	NA	DL	0.0001
CCR-12	Molybdenum	mg/L	21	2	10	0.0056	0.0368	0.00085	0.00392	0.0105	0.791	Increasing	Trend (Regression)	0.022
CCR-12	Selenium	mg/L	21	10	48	0.00032	0.0151	0.00024	0.028	0.0014	2.360	Probably Decreasing	Nonparametric ⁴	0.0010
CCR-12	Thallium	mg/L	19	17	89	0.00035	0.0041	0.000085	0.0017	NA	NA	NA	DL	0.000085
CCR-13	Antimony	mg/L	18	17	94	0.0014	0.0014	0.001	0.0123	NA	NA	NA	DL	0.0010
CCR-13	Arsenic	mg/L	21	9	43	0.00052	0.043	0.00046	0.00314	0.0044	2.202	No Trend	Nonparametric	0.0018
CCR-13	Barium	mg/L	21	0	0	0.01	0.053			0.0381	0.338	No Trend	Nonparametric	0.039
CCR-13	Beryllium	mg/L	17	17	100			0.00034	0.00283	NA	NA	NA	DL	0.0003
CCR-13	Cadmium	mg/L	19	19	100		-	0.00032	0.0039	NA	NA	NA	DL	0.0003
CCR-13	Chromium	mg/L	19	7	37	0.001	0.0023	0.0011	0.00513	0.0017	0.300	Decreasing	Normal ⁴	0.0013
CCR-13	Cobalt	mg/L	19	6	32	0.00094	0.0046	0.000382	0.002	0.0015	0.731	No Trend	Lognormal	0.0011
CCR-13	Fluoride	mg/L	23	0	0	0.103	1.59			0.71839	0.6114	Increasing	Trend (Regression)	1.3
CCR-13	Lead	mg/L	19	19	100		-	0.00035	0.0139	NA	NA	NA	DL	0.0004
CCR-13	Lithium	mg/L	21	1	5	0.011	0.32	0.0032	0.0032	0.2106	0.476	Stable	Normal	0.17
CCR-13	Mercury	mg/L	18	17	94	0.000195	0.000195	0.00003	0.000152	NA	NA	NA	DL	0.0001
CCR-13	Molybdenum	mg/L	21	14	67	0.001	0.0121	0.00085	0.00631	NA	NA	NA	DL	0.0009
CCR-13	Selenium	mg/L	21	13	62	0.00032	0.0135	0.00024	0.027	NA	NA	NA	DL	0.0002
CCR-13	Thallium	mg/L	19	14	74	0.00009	0.00011	0.000085	0.0034	NA	NA	NA	DL	0.0001

Monitoring			Number of	Number	Percent	Minimum Detected	Maximum Detected	Minimum Detection	Maximum Detetion			Concentration		
Location	Analyte	Units	Samples	of NDs	NDs	Result	Result	Limit	Limit	Mean ¹	CV	Trend ³	LCL Distribution ²	95% LCL
CCR-14	Antimony	mg/L	17	17	100			0.001	0.0123	NA	NA	NA	DL	0.0010
CCR-14	Arsenic	mg/L	19	6	32	0.0019	0.0049	0.00289	0.013	0.0027	0.257	Decreasing	Frend (Theil-Sen Slope	0.0029
CCR-14	Barium	mg/L	19	0	0	0.012	0.0283			0.0183	0.264	No Trend	Normal	0.016
CCR-14	Beryllium	mg/L	15	15	100			0.00034	0.00259	NA	NA	NA	DL	0.0003
CCR-14	Cadmium	mg/L	17	15	88	0.00044	0.00055	0.00032	0.0039	NA	NA	NA	DL	0.0003
CCR-14	Chromium	mg/L	17	2	12	0.0012	0.003	0.0037	0.00513	0.0017	0.281	Stable	Lognormal	0.0015
CCR-14	Cobalt	mg/L	17	17	100			0.000382	0.002	NA	NA	NA	DL	0.0004
CCR-14	Fluoride	mg/L	22	1	5	0.27	0.662	0.05	0.05	0.41768	0.2785	Increasing	Frend (Theil-Sen Slope	0.46
CCR-14	Lead	mg/L	17	17	100			0.00035	0.0139	NA	NA	NA	DL	0.0004
CCR-14	Lithium	mg/L	19	14	74	0.0033	0.0215	0.0032	0.011	NA	NA	NA	DL	0.0032
CCR-14	Mercury	mg/L	16	15	94	0.000083	0.000083	0.00003	0.000152	NA	NA	NA	DL	0.0001
CCR-14	Molybdenum	mg/L	19	10	53	0.00086	0.0051	0.00085	0.00631	NA	NA	NA	DL	0.0009
CCR-14	Selenium	mg/L	19	17	89	0.00045	0.00068	0.00024	0.027	NA	NA	NA	DL	0.0002
CCR-14	Thallium	mg/L	17	17	100			0.000085	0.0034	NA	NA	NA	DL	0.0001

Notes:

- 1. For data sets with any ND data and less than 50% nondetects, the Kaplan-Meier mean and CV are provided
- 2. For distribution = "Normal" and "Lognormal", the 95% LCL was calculated on the mean concentration.

For distribution = "Trend (Regression)" or "Trend (Theil-Sen Slope)", the 95% LCL was calculated from the regression/Sen's slope line due to an increasing/decreasing trend.

For distribution = "Nonparametric", the 95% LCL was calculated on the median concentration.

For distribution = "DL", the 95% LCL was equivalent to the MDL.

- 3. The Mann-Kendall test was used to identify increasing or decreasing trends in the data with trends identified with a confidence level of 95% or more marked increasing or decreasing and those with a confidence level between 90% and 95% marked probably increasing or probably decreasing.
- 4. Decreasing trend is an artifact of varyng detection limits, therefore, the LCL was derived using a nonparametric method.
- -- not provided because all data had detected concentrations.

CV - coefficient of variation calculated as the ratio of the standard deviation to the mean

LCL - lower confidence limit

mg/L - milligrams per liter

NA - not applicable, statistic could not be calculated due to high percent of non-detects (>85% NDs)

ND - non-detect

APPENDIX C Statistical Results – July 2021 Semi-Annual Monitoring

			Number			Minimum	Maximum	Minimum	Maximum					
Monitoring			of	Number	Percent	Detected	Detected	Detection	Detetion			Concentration		
Location	Analyte	Units	Samples	of NDs	NDs	Result	Result	Limit	Limit	Mean ¹	CV	Trend ³	LCL Distribution ²	95% LCL
CCR-3	Antimony	mg/L	18	18	100			0.001	0.0123	NA	NA	NA	DL	0.0010
CCR-3	Arsenic	mg/L	21	11	52	0.00051	0.0101	0.0001	0.00586	NA	NA	NA NA	DL	0.00046
CCR-3	Barium	mg/L	21	0	0	0.0234	0.055			0.037	0.25	Decreasing	Trend (Regression)	0.015
CCR-3	Beryllium	mg/L	17	17	100			0.00034	0.00283	NA	NA	NA	DL	0.00034
CCR-3	Cadmium	mg/L	19	19	100			0.00034	0.0039	NA	NA	NA	DL	0.00034
CCR-3	Chromium	mg/L	19	11	58	0.0011	0.0015	0.000736	0.00513	NA	NA	NA	DL	0.0011
CCR-3	Cobalt	mg/L	19	19	100			0.000293	0.002	NA	NA	NA	DL	0.00040
CCR-3	Fluoride	mg/L	23	0	0	0.12	0.232			0.17	0.19	Increasing	Normal	0.20
CCR-3	Lead	mg/L	19	17	89	0.00037	0.00047	0.00035	0.0139	NA	NA	NA	DL	0.00035
CCR-3	Lithium	mg/L	21	20	95	0.015	0.015	0.00272	0.011	NA	NA	NA	DL	0.0032
CCR-3	Mercury	mg/L	18	18	100			0.00003	0.000152	NA	NA	NA	DL	0.00007
CCR-3	Molvbdenum	mg/L	21	18	86	0.00418	0.0134	0.00085	0.00631	NA	NA	NA	DL	0.00085
CCR-3	Selenium	mg/L	21	13	62	0.00028	0.0192	0.00024	0.027	NA	NA	NA	DL	0.00024
CCR-3	Thallium	mg/L	19	19	100			0.000085	0.0034	NA	NA	NA	DL	0.00009
CCR-4	Antimony	mg/L	19	16	84	0.001	0.0015	0.001	0.0123	NA	NA	NA	DL	0.0010
CCR-4	Arsenic	mg/L	22	8	36	0.001	0.0136	0.00221	0.013	0.0019	1.35	Decreasing	Nonparametric	0.0016
CCR-4	Barium	mg/L	22	0	0	0.149	0.36			0.28	0.21	No Trend	Normal	0.26
CCR-4	Beryllium	mg/L	18	5	28	0.00036	0.00084	0.000101	0.00283	0.0006	0.33	Stable	Normal	0.00045
CCR-4	Cadmium	mg/L	20	7	35	0.00046	0.0233	0.000181	0.0039	0.0041	1.54	No Trend	Gamma	0.0023
CCR-4	Chromium	mg/L	20	5	25	0.0015	0.0063	0.001	0.00513	0.0023	0.47	Decreasing	Nonparametric	0.0020
CCR-4	Cobalt	mg/L	20	5	25	0.0027	0.0052	0.000293	0.002	0.0029	0.55	Decreasing	Normal	0.0020
CCR-4	Fluoride	mg/L	24	6	25	0.04	1.92	0.032	0.05	0.27	1.45	Increasing	Trend (Theil-Sen Slope)	0.28
CCR-4	Lead	mg/L	20	15	75	0.00051	0.0032	0.00035	0.0139	NA	NA	NA	DL	0.00035
CCR-4	Lithium	mg/L	22	4	18	0.0079	0.34	0.00333	0.022	0.072	1.25	Probably Increasing	Trend (Theil-Sen Slope)	0.015
CCR-4	Mercury	mg/L	19	19	100			0.00003	0.000152	NA	NA	NA	DL	0.00007
CCR-4	Molybdenum	mg/L	22	20	91	0.0161	0.0184	0.00085	0.00631	NA	NA	NA	DL	0.00085
CCR-4	Selenium	mg/L	22	10	45	0.00029	0.0031	0.00024	0.028	0.0009	0.74	Decreasing	Lognormal	0.00068
CCR-4	Thallium	mg/L	20	6	30	0.00026	0.0051	0.000925	0.0017	0.0006	1.75	No Trend	Nonparametric	0.00046
CCR-5	Antimony	mg/L	19	19	100			0.001	0.0123	NA	NA	NA	DL	0.0010
CCR-5	Arsenic	mg/L	22	7	32	0.00078	0.019	0.00046	0.013	0.0026	1.70	No Trend	Nonparametric	0.0018
CCR-5	Barium	mg/L	22	0	0	0.064	0.0847			0.071	0.08	No Trend	Normal	0.069
CCR-5	Beryllium	mg/L	18	18	100			0.000101	0.00283	NA	NA	NA	DL	0.00034
CCR-5	Cadmium	mg/L	20	20	100			0.000181	0.0039	NA	NA	NA	DL	0.00034
CCR-5	Chromium	mg/L	20	6	30	0.0008	0.0018	0.000736	0.00513	0.0013	0.25		Trend (Theil-Sen Slope)	0.00042
CCR-5	Cobalt	mg/L	20	19	95	0.0032	0.0032	0.000293	0.002	NA	NA	NA	DL	0.00040
CCR-5	Fluoride	mg/L	23	5	22	0.04	0.835	0.032	0.084	0.092	1.74	Increasing	Trend (Theil-Sen Slope)	0.069
CCR-5	Lead	mg/L	20	15	75	0.00046	0.00071	0.00035	0.0139	NA	NA	NA	DL	0.00035
CCR-5	Lithium	mg/L	22	0	0	2.3	5.35			3.2	0.31	Increasing	Trend (Theil-Sen Slope)	3.60
CCR-5	Mercury	mg/L	19	18	95	0.000233	0.000233	0.00003	0.000152	NA	NA	NA	DL	0.00007
CCR-5	Molybdenum	mg/L	22	19	86	0.0026	0.025	0.00085	0.00631	NA	NA	NA	DL	0.00085

			Number			Minimum	Maximum	Minimum	Maximum					
Monitoring			of	Number	Percent	Detected	Detected	Detection	Detetion			Concentration		1
Location	Analyte	Units	Samples	of NDs	NDs	Result	Result	Limit	Limit	Mean ¹	CV	Trend ³	LCL Distribution ²	95% LCL
CCR-5	Selenium	mg/L	22	11	50	0.00028	0.0312	0.00024	0.028	0.0020	3.20	Decreasing	Nonparametric ⁴	0.0014
CCR-5	Thallium	mg/L	20	18	90	0.0036	0.0056	0.000085	0.0017	NA	NA	NA	DL	0.00009
CCR-6	Antimony	mg/L	19	19	100			0.001	0.0123	NA	NA	NA	DL	0.0010
CCR-6	Arsenic	mg/L	22	8	36	0.00047	0.0073	0.00046	0.00586	0.0013	1.41	No Trend	Nonparametric	0.00099
CCR-6	Barium	mg/L	22	1	5	0.0145	0.051	0.017	0.017	0.030	0.37	Probably Decreasing	Normal	0.025
CCR-6	Beryllium	mg/L	18	18	100			0.000101	0.00283	NA	NA	NA	DL	0.00034
CCR-6	Cadmium	mg/L	20	20	100			0.000181	0.0039	NA	NA	NA	DL	0.00034
CCR-6	Chromium	mg/L	20	13	65	0.001	0.021	0.000736	0.00513	NA	NA	NA	DL	0.0011
CCR-6	Cobalt	mg/L	20	20	100			0.000293	0.002	NA	NA	NA	DL	0.00040
CCR-6	Fluoride	mg/L	24	0	0	0.09	0.535			0.20	0.45	Increasing	Trend (Theil-Sen Slope)	
CCR-6	Lead	mg/L	20	18	90	0.00037	0.00041	0.00035	0.0139	NA	NA	NA	DL	0.00035
CCR-6	Lithium	mg/L	22	0	0	0.045	1.12			0.32	0.97	Increasing	Trend (Regression)	0.59
CCR-6	Mercury	mg/L	19	19	100			0.00003	0.000152	NA	NA	NA	DL	0.00007
CCR-6	Molybdenum	mg/L	22	10	45	0.0011	0.0362	0.00085	0.00631	0.0054	1.62		Trend (Theil-Sen Slope)	0.0094
CCR-6	Selenium	mg/L	22	15	68	0.00033	0.00073	0.00024	0.027	NA	NA	NA	DL	0.00024
CCR-6	Thallium	mg/L	20	20	100			0.000085	0.0034	NA	NA	NA	DL	0.00009
CCR-7	Antimony	mg/L	19	18	95	0.0178	0.0178	0.001	0.0123	NA	NA	NA	DL	0.0010
CCR-7	Arsenic	mg/L	22	13	59	0.00051	0.0169	0.00046	0.00586	NA	NA	NA	DL	0.00046
CCR-7	Barium	mg/L	22	1	5	0.016	0.1	0.017	0.017	0.042	0.52	Decreasing	Normal	0.034
CCR-7	Beryllium	mg/L	18	18	100			0.000101	0.00283	NA	NA	NA	DL	0.00034
CCR-7	Cadmium	mg/L	20	20	100			0.000181	0.0039	NA	NA	NA	DL	0.00034
CCR-7	Chromium	mg/L	20	10	50	0.0012	0.0028	0.000736	0.00513	0.0015	0.49	Decreasing	Normal ⁴	0.00084
CCR-7	Cobalt	mg/L	20	15	75	0.00041	0.001	0.000293	0.002	NA	NA	NA	DL	0.00040
CCR-7	Fluoride	mg/L	23	0	0	0.08	0.54			0.25	0.49	Increasing	Trend (Regression)	0.27
CCR-7	Lead	mg/L	20	16	80	0.00039	0.0013	0.00035	0.0139	NA	NA	NA	DL	0.00035
CCR-7	Lithium	mg/L	22	3	14	0.0032	0.34	0.0032	0.0032	0.061	1.34	Increasing	Gamma ⁶	0.039
CCR-7	Mercury	mg/L	19	18	95	0.00007	0.00007	0.00003	0.000152	NA	NA	NA	DL	0.00007
CCR-7	Molybdenum	mg/L	22	20	91	0.00858	0.0115	0.00085	0.00631	NA	NA	NA	DL	0.00085
CCR-7	Selenium	mg/L	22	15	68	0.00024	0.00043	0.00024	0.027	NA	NA	NA	DL	0.00024
CCR-7	Thallium	mg/L	20	20	100	-		0.000085	0.0034	NA	NA	NA	DL	0.00009
CCR-8	Antimony	mg/L	19	17	89	0.0017	0.0058	0.001	0.0123	NA	NA	NA	DL	0.0010
CCR-8	Arsenic	mg/L	22	6	27	0.0015	0.0135	0.00221	0.00586	0.0032	0.85	No Trend	Nonparametric	0.0025
CCR-8	Barium	mg/L	22	0	0	0.0244	0.064			0.038	0.31	No Trend	Lognormal	0.034
CCR-8	Beryllium	mg/L	18	18	100	-		0.000101	0.00283	NA	NA	NA	DL	0.00034
CCR-8	Cadmium	mg/L	20	20	100			0.000181	0.0039	NA	NA	NA	DL	0.00034
CCR-8	Chromium	mg/L	20	19	95	0.0008	0.0008	0.000736	0.00513	NA	NA	NA	DL	0.0011
CCR-8	Cobalt	mg/L	20	19	95	0.0012	0.0012	0.000293	0.002	NA	NA	NA	DL	0.00040
CCR-8	Fluoride	mg/L	24	0	0	0.23	0.4			0.30	0.14	Increasing	Trend (Regression)	0.31
CCR-8	Lead	mg/L	20	19	95	0.00045	0.00045	0.00035	0.0139	NA	NA	NA	DL	0.00035
CCR-8	Lithium	mg/L	22	8	36	0.0043	0.0491	0.00272	0.011	0.012	0.96	Decreasing	Normal	0.0021

			Number			Minimum	Maximum	Minimum	Maximum					
Monitoring			of	Number	Percent	Detected	Detected	Detection	Detetion			Concentration		
Location	Analyte	Units	Samples	of NDs	NDs	Result	Result	Limit	Limit	Mean ¹	CV	Trend ³	LCL Distribution ²	95% LCL
CCR-8	Mercury	mg/L	19	19	100			0.00003	0.000152	NA	NA	NA	DL	0.00007
CCR-8	Molybdenum	mg/L	22	0	0	0.012	0.0238			0.017	0.17	Probably Increasing	Trend (Regression)	0.017
CCR-8	Selenium	mg/L	22	17	77	0.0003	0.0246	0.00024	0.027	NA	NA	NA	DL	0.00024
CCR-8	Thallium	mg/L	20	19	95	0.00015	0.00015	0.000085	0.0034	NA	NA	NA	DL	0.00009
CCR-9	Antimony	mg/L	19	18	95	0.0017	0.0017	0.001	0.0123	NA	NA	NA	DL	0.0010
CCR-9	Arsenic	mg/L	22	1	5	0.003	0.0173	0.0075	0.0075	0.0060	0.57		Trend (Theil-Sen Slope)	0.0041
CCR-9	Barium	mg/L	22	0	0	0.0542	0.13			0.091	0.23	Decreasing	Trend (Regression)	0.041
CCR-9	Beryllium	mg/L	18	18	100			0.000101	0.00283	NA	NA	NA	DL	0.00034
CCR-9	Cadmium	mg/L	20	19	95	0.00058	0.00058	0.000181	0.0039	NA	NA	NA	DL	0.00034
CCR-9	Chromium	mg/L	20	15	75	0.0011	0.0023	0.000736	0.00513	NA	NA	NA	DL	0.0011
CCR-9	Cobalt	mg/L	20	20	100			0.000293	0.002	NA	NA	NA	DL	0.00040
CCR-9	Fluoride	mg/L	24	0	0	0.095	0.58			0.21	0.45	Increasing	Trend (Theil-Sen Slope)	
CCR-9	Lead	mg/L	20	17	85	0.00054	0.0028	0.00035	0.0139	NA	NA	NA	DL	0.00035
CCR-9	Lithium	mg/L	22	1	5	0.056	0.19	0.00272	0.00272	0.11	0.40	Stable	Normal	0.092
CCR-9	Mercury	mg/L	19	19	100			0.00003	0.000152	NA	NA	NA	DL	0.00007
CCR-9	Molybdenum	mg/L	22	18	82	0.0014	0.0166	0.00085	0.00631	NA	NA	NA	DL	0.00085
CCR-9	Selenium	mg/L	22	9	41	0.00047	0.0015	0.00309	0.027	0.0010	0.31	Increasing	Normal ⁴	0.00081
CCR-9	Thallium	mg/L	20	19	95	0.0048	0.0048	0.000085	0.0017	NA	NA	NA	DL	0.00009
CCR-10	Antimony	mg/L	17	17	100			0.001	0.0123	NA	NA	NA	DL	0.0010
CCR-10	Arsenic	mg/L	19	5	26	0.0014	0.0026	0.00289	0.00586	0.0018	0.18	Stable	Normal	0.0017
CCR-10	Barium	mg/L	19	1	5	0.00739	0.034	0.017	0.017	0.023	0.30	Decreasing	Trend (Regression)	0.0088
CCR-10	Beryllium	mg/L	15	15	100			0.00034	0.00259	NA	NA	NA	DL	0.00034
CCR-10	Cadmium	mg/L	17	17	100			0.00032	0.0039	NA	NA	NA	DL	0.00034
CCR-10	Chromium	mg/L	17	4	24	0.0018	0.0028	0.000736	0.00513	0.0021	0.28	Decreasing	Normal ⁴	0.0018
CCR-10	Cobalt	mg/L	17	17	100			0.000382	0.002	NA	NA	NA	DL	0.00040
CCR-10	Fluoride	mg/L	20	0	0	0.07	0.207			0.12	0.39	Increasing	Trend (Regression)	0.19
CCR-10	Lead	mg/L	17	16	94	0.00056	0.00056	0.00035	0.0139	NA	NA	NA	DL	0.00035
CCR-10	Lithium	mg/L	19	19	100			0.0032	0.018	NA	NA	NA	DL	0.0032
CCR-10	Mercury	mg/L	16	15	94	0.00007	0.00007	0.00003	0.000152	NA	NA	NA	DL	0.00007
CCR-10	Molybdenum	mg/L	19	18	95	0.0062	0.0062	0.00085	0.00631	NA	NA	NA	DL	0.00085
CCR-10	Selenium	mg/L	19	12	63	0.00025	0.0119	0.00024	0.027	NA	NA	NA	DL	0.00024
CCR-10	Thallium	mg/L	17	17	100			0.000085	0.0034	NA	NA	NA	DL	0.00009
CCR-11	Antimony	mg/L	19	18	95	0.0015	0.0015	0.001	0.0123	NA	NA	NA	DL	0.0010
CCR-11	Arsenic	mg/L	22	0	0	0.0544	0.14			0.096	0.31	Stable	Normal	0.085
CCR-11	Barium	mg/L	22	0	0	0.025	0.071			0.053	0.20	Decreasing	Trend (Regression)	0.036
CCR-11	Beryllium	mg/L	18	18	100			0.000101	0.00283	NA	NA	NA	DL	0.00034
CCR-11	Cadmium	mg/L	20	20	100			0.000181	0.0039	NA	NA	NA	DL	0.00034
CCR-11	Chromium	mg/L	20	6	30	0.0012	0.0023	0.000736	0.00513	0.0015	0.27	Decreasing	Normal ⁴	0.0013
CCR-11	Cobalt	mg/L	20	20	100			0.000293	0.002	NA	NA	NA	DL	0.00040
CCR-11	Fluoride	mg/L	25	0	0	0.35	1.46			0.56	0.46	Increasing	Trend (Theil-Sen Slope)	0.83

			Number			Minimum	Maximum	Minimum	Maximum					
Monitoring			of	Number	Percent	Detected	Detected	Detection	Detetion			Concentration		
Location	Analyte	Units	Samples	of NDs	NDs	Result	Result	Limit	Limit	Mean ¹	\mathbf{CV}	Trend ³	LCL Distribution ²	95% LCL
CCR-11	Lead	mg/L	20	13	65	0.00039	0.0014	0.00035	0.0139	NA	NA	NA	DL	0.00035
CCR-11	Lithium	mg/L	22	12	55	0.004	0.0338	0.00272	0.011	NA	NA	NA	DL	0.0032
CCR-11	Mercury	mg/L	19	19	100			0.00003	0.000152	NA	NA	NA	DL	0.00007
CCR-11	Molybdenum	mg/L	22	15	68	0.00089	0.0149	0.00085	0.00631	NA	NA	NA	DL	0.00085
CCR-11	Selenium	mg/L	22	6	27	0.0013	0.0085	0.00309	0.027	0.0026	0.90	Probably Increasing	Trend (Theil-Sen Slope)	0.0036
CCR-11	Thallium	mg/L	20	20	100			0.000085	0.0034	NA	NA	NA	DL	0.00009
CCR-12	Antimony	mg/L	19	19	100			0.001	0.0123	NA	NA	NA	DL	0.0010
CCR-12	Arsenic	mg/L	22	0	0	0.00089	0.199			0.056	0.88	Increasing	Trend (Regression)	0.10
CCR-12	Barium	mg/L	22	0	0	0.0117	0.048			0.017	0.45		Trend (Theil-Sen Slope)	0.014
CCR-12	Beryllium	mg/L	18	18	100			0.000101	0.00283	NA	NA	NA	DL	0.00034
CCR-12	Cadmium	mg/L	20	20	100			0.000181	0.0039	NA	NA	NA	DL	0.00034
CCR-12	Chromium	mg/L	20	18	90	0.0008	0.0024	0.000736	0.00513	NA	NA	NA	DL	0.0011
CCR-12	Cobalt	mg/L	20	18	90	0.0013	0.0015	0.000293	0.002	NA	NA	NA	DL	0.00040
CCR-12	Fluoride	mg/L	24	0	0	0.45	1.44			0.61	0.32		Trend (Theil-Sen Slope)	0.67
CCR-12	Lead	mg/L	20	19	95	0.001	0.001	0.00035	0.0139	NA	NA	NA	DL	0.00035
CCR-12	Lithium	mg/L	22	18	82	0.0139	0.26	0.00272	0.011	NA	NA	NA	DL	0.0032
CCR-12	Mercury	mg/L	19	19	100			0.00003	0.000152	NA	NA	NA	DL	0.00007
CCR-12	Molybdenum	mg/L	22	2	9	0.0056	0.0368	0.00085	0.00392	0.011	0.77	Increasing	Trend (Regression)	0.023
CCR-12	Selenium	mg/L	22	11	50	0.00032	0.0151	0.00024	0.028	0.0013		Probably Decreasing	Nonparametric ⁴	0.0010
CCR-12	Thallium	mg/L	20	18	90	0.00035	0.0041	0.000085	0.0017	NA	NA	NA	DL	0.00009
CCR-13	Antimony	mg/L	19	18	95	0.0014	0.0014	0.001	0.0123	NA	NA	NA	DL	0.0010
CCR-13	Arsenic	mg/L	22	10	45	0.00052	0.043	0.00046	0.00314	0.0043	2.24	No Trend	Nonparametric	0.0018
CCR-13	Barium	mg/L	22	0	0	0.01	0.053			0.038	0.33	Stable	Nonparametric	0.037
CCR-13	Beryllium	mg/L	18	18	100			0.000101	0.00283	NA	NA	NA	DL	0.00034
CCR-13	Cadmium	mg/L	20	20	100			0.000181	0.0039	NA	NA	NA	DL	0.00034
CCR-13	Chromium	mg/L	20	7	35	0.001	0.0023	0.0011	0.00513	0.0017	0.29	Decreasing	Normal ⁴	0.0014
CCR-13	Cobalt	mg/L	20	6	30	0.00094	0.0046	0.000382	0.002	0.0016	0.70	No Trend	Normal	0.00071
CCR-13	Fluoride	mg/L	24	0	0	0.103	1.59			0.74	0.60	Increasing	Trend (Regression)	1.30
CCR-13	Lead	mg/L	20	20	100			0.00035	0.0139	NA	NA	NA	DL	0.00035
CCR-13	Lithium	mg/L	22	1	5	0.011	0.32	0.0032	0.0032	0.21	0.47	Stable	Normal	0.17
CCR-13	Mercury	mg/L	19	18	95	0.000195	0.000195	0.00003	0.000152	NA	NA	NA	DL	0.00007
CCR-13	Molybdenum	mg/L	22	15	68	0.001	0.0121	0.00085	0.00631	NA	NA	NA	DL	0.00085
CCR-13	Selenium	mg/L	22	14	64	0.00032	0.0135	0.00024	0.027	NA	NA	NA	DL	0.00024
CCR-13	Thallium	mg/L	20	15	75	0.00009	0.00011	0.000085	0.0034	NA	NA	NA	DL	0.00009

Monitoring			Number of	Number	Percent		Maximum Detected	Minimum Detection	Maximum Detetion			Concentration		
Location	Analyte	Units	Samples	of NDs	NDs	Result	Result	Limit	Limit	Mean ¹	CV	Trend ³	LCL Distribution ²	95% LCL
CCR-14	Antimony	mg/L	17	17	100			0.001	0.0123	NA	NA	NA	DL	0.0010
CCR-14	Arsenic	mg/L	19	6	32	0.0019	0.0049	0.00289	0.013	0.0027	0.26	Decreasing	Nonparametric ⁴	0.0025
CCR-14	Barium	mg/L	19	0	0	0.012	0.0283			0.018	0.26	No Trend	Normal	0.016
CCR-14	Beryllium	mg/L	15	15	100			0.00034	0.00259	NA	NA	NA	DL	0.00034
CCR-14	Cadmium	mg/L	17	15	88	0.00044	0.00055	0.00032	0.0039	NA	NA	NA	DL	0.00034
CCR-14	Chromium	mg/L	17	2	12	0.0012	0.003	0.0037	0.00513	0.0017	0.28	Stable	Lognormal	0.0015
CCR-14	Cobalt	mg/L	17	17	100			0.000382	0.002	NA	NA	NA	DL	0.00040
CCR-14	Fluoride	mg/L	22	1	5	0.27	0.662	0.05	0.05	0.42	0.28	Increasing	Trend (Theil-Sen Slope)	0.46
CCR-14	Lead	mg/L	17	17	100			0.00035	0.0139	NA	NA	NA	DL	0.00035
CCR-14	Lithium	mg/L	19	14	74	0.0033	0.0215	0.0032	0.011	NA	NA	NA	DL	0.0032
CCR-14	Mercury	mg/L	16	15	94	0.000083	0.000083	0.00003	0.000152	NA	NA	NA	DL	0.00007
CCR-14	Molybdenum	mg/L	19	10	53	0.00086	0.0051	0.00085	0.00631	NA	NA	NA	DL	0.00085
CCR-14	Selenium	mg/L	19	17	89	0.00045	0.00068	0.00024	0.027	NA	NA	NA	DL	0.00024
CCR-14	Thallium	mg/L	17	17	100			0.000085	0.0034	NA	NA	NA	DL	0.00009

Notes:

- 1. For data sets with any ND data and less than 50% nondetects, the Kaplan-Meier mean and CV are provided.
- 2. For distribution = "Normal" and "Lognormal", the 95% LCL was calculated on the mean concentration.

For distribution = "Trend (Regression)" or "Trend (Theil-Sen Slope)", the 95% LCL was calculated from the regression/Sen's slope line due to an increasing/decreasing trend.

For distribution = "Nonparametric", the 95% LCL was calculated on the median concentration.

For distribution = "DL", the 95% LCL was equivalent to the MDL.

- 3. The Mann-Kendall test was used to identify increasing or decreasing trends in the data with trends identified with a confidence level of 95% or more marked increasing or decreasing and those with a confidence level between 90% and 95% marked probably increasing or probably decreasing.
- 4. Decreasing trend is an artifact of varyng detection limits, therefore, the LCL was derived using a nonparametric method.
- 5. Data used in the statistical analysis are provided in Table 2.
- 6. There were two anomalously high concentrations in April 2018 and April 2019, but concentrations have been decreasing since April 2019. As such, a Gamma LCL was calculated instead of an LCL from the trend line.
- -- not provided because all data had either detected concentrations or was nondetect.
- CV coefficient of variation calculated as the ratio of the standard deviation to the mean.
- LCL lower confidence limit
- mg/L milligrams per liter
- NA not applicable, statistic could not be calculated due to high percent of non-detects (>85% NDs).
- ND non-detect

APPENDIX D

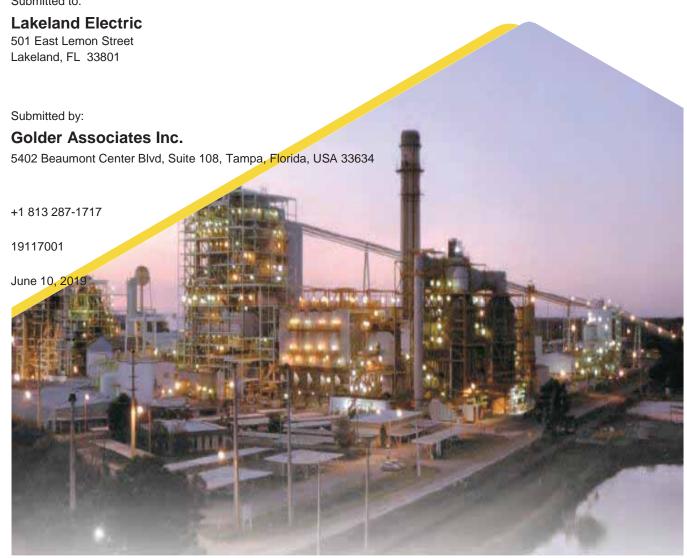
Alternate Source Demonstration for Radium 226 & 228 in Groundwater



ALTERNATE SOURCE DEMONSTRATION FOR RADIUM 226 & 228 IN GROUNDWATER BYPRODUCT STORAGE AREA C.D. MCINTOSH POWER PLANT

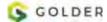
LAKELAND, POLK COUNTY, FLORIDA

Submitted to:



Distribution List

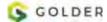
Sean P. McGinnis, CHMM, Lakeland Electric



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Figure 5	Groundwater Contour Map of the Surficial Aquifer (July 16, 2018)
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APPENDICES

Appendix A	Soil Boring Logs and Location Map
Appendix B	Historical Aerial Photographs and Maps
Appendix C	Record of Borehole Logs for CCR-2A, CCR-4A, CCR-5A, CCR-7A, CCR-13A, and CCR-14A
Appendix D	Geochemical Evaluation of Radium-226+228 in Soils
Appendix E	Mineralogical Assessment prepared by Petrologic Solutions, Inc.



1.0 INTRODUCTION

Golder Associates Inc. (Golder), on behalf of Lakeland Electric, prepared this alternative source demonstration (ASD) report for combined radium-226 and radium-228 (referred to as radium-226+228) detected in groundwater samples collected from the monitoring well network installed pursuant to the Coal Combustion Residual (CCR) Rule¹ for the Byproduct Storage Area (BSA) at the C.D. McIntosh Power Plant (MPP or site). Figure 1 presents a site location map and Figure 2 presents a map of the BSA and associated CCR monitoring well network. A statistical analysis of assessment monitoring results identified certain Appendix IV constituents in the uppermost aquifer at statistically significant levels (SSLs) above the groundwater protection standards (GWPS) established for the constituents for the site. The rule allows the owner or operator of a CCR unit to demonstrate that the SSL(s) are due to a source other than the CCR unit—an alternate source.² The statistical analysis of assessment monitoring of the CCR monitoring well network identified radium-226+228, arsenic, and lithium to be present at SSLs above the respective GWPS in groundwater samples from CCR monitoring wells listed below (Golder 2018b):

Appendix IV Parameter	GWPS	CCR Monitoring Well at SSL
Arsenic	0.010 mg/L	CCR-11 and CCR-12
Lithium	0.040 mg/L	CCR-5, CCR-6, CCR-9, and CCR-13
Radium-226+228	7.94 pCi/L	CCR-4, CCR-5, CCR-7, CCR-13 and CCR-14

pCi/L - Picocuries per liter

mg/L - milligrams per liter

The BSA is a unit that historically has received CCR generated by Unit 3 at the MPP, including fly ash, bottom ash, synthetic gypsum and stabilized flue gas desulfurization (FGD) material. The BSA encompasses approximately 44 acres and is located east of Unit 3 and adjacent to Fish Lake, Lakes B, C, and D, the south sedimentation pond, and the Stackout pad (Figures 2 and 3). The BSA, constructed in the 1980s, is an abovegrade earthen containment unit surrounded by a perimeter ditch system.

² Chapter 40 CFR Section 257.95(g)(3)(ii).



¹ Chapter 40 Code of Federal Regulations (CFR), Part 257, Subpart D.

2.0 PURPOSE AND BACKGROUND

2.1 Purpose

The purpose of this report is to provide information about a potential alternate source(s) for radium-226+228 that has been detected in groundwater from CCR monitoring wells at SSLs. The report presents a literature review of naturally occurring radioactive soils at the site and surrounding area (study area) and results of groundwater and soil assessments conducted at the site in February and March 2019.

This ASD report presents a description of the BSA and associated CCR monitoring well network, regional geologic and hydrogeologic conditions, site-specific hydrogeologic settings, a discussion on naturally-occurring radionuclides present in soil, sediment, and groundwater in central Florida; historical mining operations in the study area and at the BSA; and a review of historic aerial photographs and topographic maps of the BSA. Site characterization involved the installation of several soil borings / soil sampling adjacent to the monitoring wells where radium-226+228 was at SSLs in groundwater, as well as, the installation of additional soil borings, soil and sediment sampling, installation of "nature and extent" monitoring wells located hydraulically downgradient of the BSA, and groundwater and surface water sampling to evaluate the nature and extent of radium-226+228, arsenic and lithium for the SSLs in groundwater. Figure 4 presents the CCR monitoring well network (CCR-1 through CCR-14) and recently installed monitoring wells (CCR-15 through CCR-23) and existing MMP compliance monitoring wells³ MW-24S, MW-25S, and MW-26S, which were used to evaluate the nature and extent of groundwater impacts at the BSA. Figure 4 also shows the location of soil borings drilled as part of site characterization. Site characterization included a geochemical assessment of select soil, sediment, and groundwater samples. This ASD also includes a mineralogical assessment for natural occurring radioactive minerals on select soil samples collected from the boreholes drilled adjacent to the CCR monitoring wells with radium-226+228 at SSLs above the GWPS (CCR-4, CCR-5, CCR-7, CCR-13, and CCR-14) and background well CCR-2.

2.2 Background

Radioactive decay products from naturally occurring radionuclides (e.g. uranium and thorium) are potential sources of radium-226+228 present in groundwater of the uppermost aquifer around and beneath the BSA. Past regional mineral resource evaluations reveal significant uranium-238 and other accessory constituents are associated with the phosphate ore that was mined at and near the BSA. Radium-226 and radium-228 are formed from the radioactive decay of uranium-238 and thorium-232, respectively. Radium-226 has a half-life of 1600 years and decays to form radon-222; radium-228 has a half-life of 5.8 years and decays to form actinium-228 (IAEA 2014).

Mining techniques used at the site prior to the construction of the BSA, typically resulted in fine-grained phosphatic materials (unrecoverable product) being left behind as mine tailings. Based on historic aerial photographs and topographic maps, a significant portion of the BSA footprint was constructed on previously mined land that was reclaimed (backfilled) with these fine-grained phosphatic mine tailings. Naturally occurring radionuclides are associated with phosphatic minerals, therefore, the mine tailings and unmined earth likely contain naturally occurring radionuclides. Also, a smaller portion of the land below ground surface (bgs) at the

³ MPP compliance monitoring is performed in accordance with the Conditions of Certification for the site.



BSA was likely unmined, due to mining limitations such as pit side-slope stability and setback considerations in proximity of surface water, roads, etc. Therefore, unmined phosphate minerals may exist in these areas.

Several soil borings drilled within the footprint of the BSA before its construction indicate the presence of phosphate materials, including the following:

- TH-10 (phosphate matrix material)
- TH-11 (clayey sand with phosphate)
- BH-11, TH-12 (sandy clay with phosphate)
- BH-13 (cemented silt with phosphate)

The locations of these, and other soil borings, and the associated cross-sections are shown in Appendix A.



3.0 REGIONAL AND SITE SETTING

3.1 Regional Geology

The MPP is located within the Central Florida Phosphate District, an area of economically important, high-grade phosphate deposits in the Lakeland Ridge and Polk Upland geomorphic provinces (Hurst and others 2016). Stratigraphic nomenclature in this District has evolved over the past 100 years, resulting in confusion when comparing literature discussing geology of the mining district. Lithologic/stratigraphic descriptions for older mines use stratigraphic nomenclature developed by Cathcart (1964). The updated stratigraphic nomenclature presented by Scott (1986 and 2016) is commonly used in more recent publications and is referenced in this summary report.

Stratigraphic units present in the region consist of (in descending order; youngest to oldest):

- Up to 25 feet (ft) of Holocene to Pliocene-age sands and clays occur in the Lakeland area (FGS 1991). The Holocene-age sands consist of laterally restricted deposits such as stream flood plains, beaches, swamps, marshes, and lakes. The Pleistocene to upper Pliocene-age sands and clays are locally phosphatic and generally occur as laterally consistent terrace deposits.
- The Miocene to Oligocene-age Hawthorn Group has an approximate thickness between 50 and 100 ft in the Lakeland area and is comprised of the Peace River and Arcadia Formations. In Polk County, the upper portion of the Peace River Formation includes the Bone Valley Member, which is characterized by phosphate-rich, pebbly- and clayey-sand soils overlain by weathered residuum (Scott 1988). Economic quantities of minable, phosphate-bearing minerals occur within the Bone Valley Member. The remainder of the Peace River Formation is undifferentiated, largely being comprised of sandy, phosphatic dolostone interbedded with laterally discontinuous layers of sand, clay, and limestone. The Arcadia Formation underlies the Peace River Formation and is comprised of clayey dolostone and limestone of the Tampa and Nocatee Members (Scott 1988). The top of the Hawthorn Group experienced significant karstic solutioning when sea levels declined, resulting in an irregular erosional surface with abundant depressions and hills. A layer of phosphatic conglomerate is located on this surface, providing further support that the contact between the surficial sands and clays and underlying Hawthorn Group is unconformable (Cathcart 1964). The estimated thickness of the Hawthorn Group in the vicinity of the MPP is approximately 40 to 60 ft (Cathcart 1964).
- Older units underlying the Hawthorn group in the region include the Suwannee Limestone, Ocala Limestone, Avon Park Formation and Oldsmar Formation. These units are Oligocene to Eocene age and are primarily comprised of limestone and/or dolostone, and generally do not contain economic quantities of phosphatebearing minerals.

3.2 Regional Hydrogeology

The regional hydrogeology is comprised of three major hydrostratigraphic units: the unconfined surficial aquifer, the intermediate aquifer/confining unit, and the Floridan aquifer. The following discusses each system in its regional context:

The unconfined surficial aquifer underlies all of Polk County and varies from less than 25 to 50 ft thick in northern Polk County (FGS, 1991). This water-table aquifer consists primarily of Holocene- to Pliocene-age sand, clay, shell, and phosphate deposits that are contiguous with the ground surface.



The base of the surficial aquifer system is formed by the clayey, less permeable beds of the Peace River Formation – Bone Valley Member (Scott 1988). The surficial aquifer system is used primarily for residential low-volume irrigation applications (e.g. lawn watering) where high discharge rates are not required (Scott 1988). Transmissivity within the surficial aquifer ranges from 2 to about 20 square ft per day (ft²/day), where fine clayey sand predominates, to greater than 5,000 ft²/day in shell beds (Golder 2005). Regional groundwater flow in the surficial aquifer typically mimics ground surface topography. The surficial aquifer is discharged by natural gravity flow, evapotranspiration, discharge to lakes, downward loss into underlying aquifers, and pumping from wells. The surficial aquifer is recharged by rainfall, infiltration and discharge from lakes, and stormwater.

- The hydrostratigraphic unit that underlies the surficial aquifer is referred to as the intermediate aquifer/intermediate confining unit. The intermediate confining unit is largely comprised of clayey sand, sandy clay and clays and underlying clayey dolomite and limestone of the Hawthorn Group.
- The confined, artesian Floridan aquifer is the principal aquifer in Polk County and is the source of major municipal, industrial, and irrigation water supplies. This aquifer occurs primarily within the Ocala Limestone and is locally hydraulically connected with the overlying intermediate aquifer/confining unit, where present, in areas where the confining unit is absent or breached. There is limited recharge to the Floridan aquifer near the MPP due to the presence of the confining unit. Transmissivity of the upper Floridan aquifer is highly variable, and ranges from less than 50,000 ft²/day to greater than 9,000,000 ft²/day. The potentiometric surface of the aquifer occurs at an elevation of approximately 75 ft above National Geodetic Vertical Datum or approximately 70 ft bgs in the area of the MPP with regional groundwater flow generally to the south-southwest (FGS 1991). Due to the relatively thick and continuous intermediate confining unit separating the Floridan aquifer from the surficial aquifer, exchange of groundwater between the two aquifers is limited beneath the MPP (Golder 2005).

3.3 Site Hydrogeology and BSA Monitoring Well Network

The BSA is underlain by two regional aquifers, the surficial aquifer and Floridan aquifer which are separated by an intermediate confining unit. The surficial aquifer represents the uppermost aquifer and is approximately 25 ft to 30 ft thick beneath the BSA (Golder 2005). The surficial aquifer consists primarily of Holocene- to Pliocene-age sand, clay, shell, and phosphate deposits. Groundwater in the surficial aquifer generally flows from topographic highs to topographic lows. Underlying the surficial aquifer below the BSA is the intermediate confining unit, which ranges in thickness from approximately 40 to 50 ft and consists of interbedded clay with silty to sandy clay, silt to clayey sand, sand to clayey silt, and limestone (Golder 2005). There is a small component of groundwater flow in the surficial aquifer that is vertically downward toward the intermediate confining unit, and Floridan aquifer. However, this vertical flow component is retarded by the clayey materials of the underlying intermediate confining unit (Golder 2005).

The CCR monitoring network at the BSA includes two background monitoring wells, CCR-1 and CCR-2, and twelve downgradient monitoring wells, CCR-3 through CCR-14⁴, installed at waste boundary and screened in the uppermost aquifer. Screened intervals in each of the monitoring wells, range from 15 to 25 ft bgs.

⁴ Monitoring well CCR-10 was abandoned and replaced with CCR-10R on March 13, 2018 (Golder 2018a)



Groundwater in the surficial aquifer beneath the BSA has been documented to flow radially away from the BSA, with flow to the north toward Lake B, to the west toward Fish Lake, and to the east toward Lakes C and D (Figures 5 and 6). An area to the southwest of the BSA is hydraulically upgradient or side-gradient to the BSA, depending on site conditions that affect groundwater flow (e.g., surface water elevations, amount of precipitation, etc.), while the areas to the west, north and east are hydraulically downgradient of the BSA.



4.0 REGIONAL PHOSPHATE MINING

Land-pebble phosphate, hard-rock phosphate, and river-pebble phosphate are the three types of phosphatic ore found in Florida. The BSA is in one of the most productive areas of the land-pebble phosphate mining district. The land-pebble phosphate district was of economic interest not only to the minerals and fertilizer industry, but also to the United States Atomic Energy Commission (USAEC) during the twentieth century because land-pebble deposits contain a type of phosphate with elevated concentrations of uranium (Cathcart 1949). This section summarizes historic stratigraphy of mined land⁵ near the BSA, uranium associated in the economic mining of calcium phosphate and aluminum phosphate zones, and the history of mining in the study area.

4.1 Historic Mining Related Stratigraphy

The stratigraphy near the BSA that was likely disturbed by historic mine activities, is presented below:

- Surface deposits consisted of windblown sand and swamp muck that range in thickness of up to 5 ft (Cathcart 1964).
- The Bone Valley Member⁶ is divided into two distinct stratigraphic units, an upper unit of clayey sand and a lower phosphatic unit. The upper unit ranged in thickness from 0 to 25 ft and averaged about 8 ft (Cathcart 1964). It included light-colored clayey sand containing traces of phosphate nodules at the unit's base characterized by kaolinite and aluminum phosphate minerals.
- The contact between the upper and lower units of the Bone Valley Member is gradational over a few inches throughout most of the United States Geological Survey (USGS) Lakeland, Florida 7.5-minute quadrangle (Cathcart 1964). The lower unit ranges in thickness from minimal thickness to 35 ft, averages about 10 ft and contains most of the economic phosphate (Cathcart 1964). This unit is predominantly a clayey sand or a sandy clay, but beds of loose phosphate sand or fine-grained conglomerate are common. Beds of the lower unit locally contain phosphate nodules that range in size from fine sand to gravel (coarse pebble). The phosphate nodules are predominantly light colored—white, light brown and tan, gray; however, a few are amber or black.
- Due to mining, most of the Bone Valley sediments have been removed and reworked to recover phosphate. Mining in the vicinity of the BSA likely extended and stopped before, at, or slightly into the upper part of the Arcadia Formation, which underlies the Peace River Formation (Bone Valley Member). The upper portions of the Arcadia Formation consist of clayey sand and the lower portion of the formation is calcareous, and correlates to the upper portion of the intermediate confining unit at the site.

4.2 Uranium Associated with the Calcium Phosphate and Aluminum Phosphate Zones

The aluminum phosphate zone is formed by downward-percolating acidic water. The aluminum phosphate zone is not a stratigraphic unit but may include the various named and/or renamed beds/members of the Bone Valley strata. The physical and chemical characteristics of the zone vary.

⁶ Later in the twentieth century the stratigraphic nomenclature was refined such that Bone Valley Formation isn't currently used, rather, the recent nomenclature includes Peace River Formation and its upper unit is the Bone Valley Member, both of which belong to the Hawthorn Group.



⁵ Historic stratigraphic nomenclature differs from the regional/site geology included in Section 3 of this report.

Typically, it is a white, light gray, tan, or gray-green clayey sand containing no visible phosphate except near the base, and in some areas the base of the zone is characterized by lumps, fragments, or beds of sandrock. According to Altschuler, Clarke, and Young (1958), the most completely leached part of the zone is characterized by the aluminum phosphate mineral wavellite, the less weathered parts by calcium aluminum phosphate minerals, and the unweathered part by the calcium phosphate mineral carbonate-rich fluorapatite. The principal clay mineral in the weathered (leached) parts is kaolinite, whereas montmorillonite is characteristic of the unweathered parts. The aluminum phosphate zone is high in uranium, which typically is concentrated in the finest (slime) fraction (Cathcart 1964).

The calcium phosphate zone within the Bone Valley Member underlies the aluminum phosphate zone. Both the aluminum phosphate and calcium phosphate zones are present at the borehole drilled in 1953 by the USAEC, at the 40-acre tract where the southern region of the BSA and the other 26 holes drilled in 1953 at the Lake Parker Tract (Cathcart 1964) (see Section 4.3 of this report). The calcium phosphate zone consists of unconsolidated sand, clayey sand, and sandy clay containing abundant nodules of calcium phosphate. The ore zone, referred to by miners as the matrix section, is contained with the calcium phosphate zone (Cathcart 1964). In general, the coarse phosphate fraction (+20 or +24 mesh) of the calcium phosphate zone contains less phosphorus pentoxide (P_2O_5) and generally more uranium than the fine phosphate fraction (-20 to +150 mesh), which is characteristic of the land-pebble phosphate district (Cathcart 1964). At the Lake Parker Tract (nearest the BSA), however, the coarse phosphate fraction contains more P_2O_5 than the fine fraction (Cathcart 1964). The following is based on the analyses the borehole drilled in 1953 by the USACE at the 40-acre tract where the southern portion of the BSA exists, in accordance with Cathcart (1964):

- Uranium is removed (leached) from the coarser (pebble and sand) fractions of the sample collected from approximately 17 to 26 ft below the 1953 ground surface,
- Uranium is concentrated to some degree in the fine slime fraction of the same 17 to 26 ft bgs sample, and
- Uranium is highly concentrated in the pebble and slime fractions of the 26 to 30 ft bgs sample.

4.3 History of Mining in the Vicinity of the BSA

Mining for phosphate was active at several locations in the Lakeland Quadrangle from about 1914 through the 1980s. Some areas that were completely mined in the early twentieth century exist today as lakes, indicating that mining was likely hydraulic⁸ instead of dragline (Cathcart 1964). Early mining, approximately three miles south of Lake Parker in the Pauway area, was by hydraulic methods for the pebble fraction only; later mining was by dragline for the overburden, but hydraulic monitors (water cannons) were used to move ore (Cathcart 1964). Some washer debris from early mine operations was in part re-mined (Cathcart 1964), but the technology at that time was insufficient at recovering the finer grain-size phosphate, thus finer materials were not recovered or were returned to the mine cut (Moudgil, 1992).

⁸ Hydraulic mining is performed using high-pressure jets of water to dislodge rock material.



⁷ Slimes refers to fines, like silts/clays, passing a 150 mesh screen – less than approximately 0.1 millimeter in diameter. The fraction likely left behind and/or unmined at the BSA.

The American Cyanamid Co. operated its Saddle Creek Mine (T28S/R24E) from 1942 to 1957, and subsequently moved to the Orange Park Mine (Cathcart 1964). The Saddle Creek area was mined with draglines; both pebble and flotation concentrates⁹ were recovered. The Orange Park Mine (T27S/R24E) started operating in April 1957 and was active in the 1960s (Cathcart 1964). Mining was by large draglines, flotation cells were used, and hydrocyclones¹⁰ were used for primary desliming. Coronet Phosphate Co. began operation of its Tenoroc Mine (T27S/R24E) in 1951, and the mine continued to operate into the 1970s while the MPP was being developed. Mining at Tenoroc was for flotation concentrate and pebble; draglines were used to mine the overburden and phosphate (Cathcart 1964).

4.3.1 Lake Parker Tract

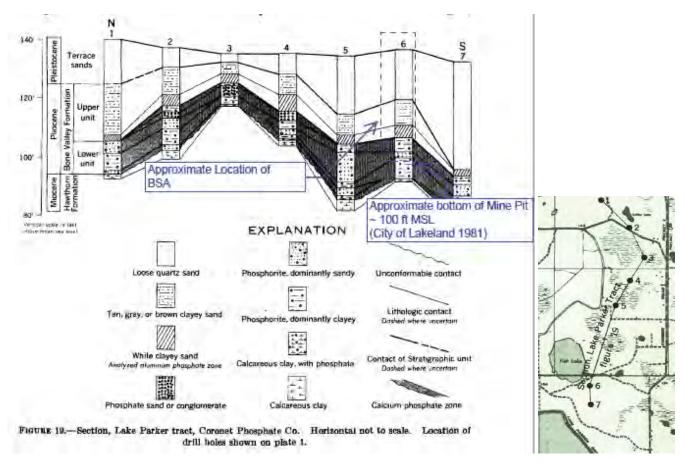
The Lake Parker tract included nearly 1,300 acres in portions of Sections 28 and 33: T27S/R24E, and Sections 3 and 4: T28S/R24E. The BSA, Fish Lake, and Lakes B, C, and D exist in portions of the same Sections. In 1953, the mining company, Coronet Phosphate Company, drilled 27 holes, under contract to the USAEC, at a spacing of 1 hole per 40-acre block (Cathcart 1964)¹¹. The calcium phosphate zone, which includes the economic phosphate deposit, and the aluminum phosphate zone, which includes some possibly economic phosphate and concentrated uranium, are both present in all 27 holes in the Lake Parker tract. Relations of the two zones are graphically shown below.

¹¹ The Lake Parker tract had not been mined as of the 1964 reference publication date. The area that has recently become the Florida Fish and Wildlife Conservation Commission Teneroc Public Use Area (PUA) was extensively surface mined for phosphate through 1978. The western portion of the PUA was part of a wetland system associated with Lake Parker. The area that became Tenoroc was extensively surface-mined between 1950 and 1978 by the Coronet Phosphate Company, the Smith-Douglass Company, and Borden, Inc.



⁹ Concentrate refers to the fine phosphate product, 1.17 mm to 0.104 mm in grain size. Material of this grain size is treated in flotation cells to separate the phosphate from the quartz sand. The phosphate product is the concentrate (Cathcart 1963, page 11).

¹⁰ Hydrocyclones are typically funnel-shaped equipment used to separate materials by particle size.



Source for above base imagery: Cathcart 1964 – Image to the right of the section depicts approximate section/drill hole locations from Plate 1. Drill hole locations #6 and #7 are nearest the BSA location. Appendix B to this report includes a copy of the City of Lakeland 1981 Landfill Design Survey Drawing No. 229101.

Results of the analyses performed for the USAEC on samples collected in 1953 from the same 40-acre tract where the south region of the BSA exists are summarized below:

Table 18.—Analytical data, aluminum phosphate zone, NE%NW% sec. 4
T. 28 S., R. 24 E.

[Leaders (....) = below limit of detection, taken as 0.0 percent. Analyses by Coronet Phosphate Co. chemists, under contract to the U.S. Atomic Energy Comm. Pebble = +20 mesh; sand = -20+150 mesh; slime = -150 mesh; head = computed from pebble, sand, and slime fractions. From 0 to 17 ft below surface is loose quartz sand, not sampled; from 30 to 44 ft is calcium phosphate zone]

Fraction	Weight	Chemical analyses, in percent									
	percent	P2O5	P ₂ O ₅ CaO Insoluble		Al ₂ O ₃	Fe ₂ O ₃	U				
	Top s	ample; 17-	26 ft belov	v surface							
Pebble Sand Slime Head	0. 3 70. 4 29. 3 100. 0	2, 55 , 33 6, 79 2, 23	1. 01 3. 36 . 90	92, 42 98, 13 64, 74 88, 24	2. 18 . 28 14. 62 4. 48	0. 42 . 18 . 40 . 25	0.0001 .010 .002				
	Bottom	sample; 2	6-30 ft belo	ow surface	'						
PebbleSandSlimeHead	0. 5 62. 4 37. 1 100. 0	14. 18 . 80 5. 08 2. 45	8. 52 2. 77 1. 50 2. 33	56, 57 96, 63 72, 81 87, 61	11. 96 . 85 12. 50 5. 22	0. 68 . 17 . 28 . 21	0. 047 . 001 . 022 . 010				

Source for above: Cathcart 1964.

The Top sample (17 to 26 ft bgs) tabulated above is described as more thoroughly leached, has less calcium oxide (CaO) and uranium, and slightly less P_2O_5 than the Bottom sample (26 to 30 ft bgs); both have similar aluminum oxide (Al_2O_3) concentrations. The P_2O_5 content, originally as apatite (calcium phosphate), is dissolved and combines with alumina to form the relatively insoluble aluminum or calcium aluminum phosphate minerals. Uranium is not taken up by the aluminum phosphate minerals but combines with the calcium phosphate minerals. Uranium is removed from the coarser fractions of the top sample, is concentrated to some degree in the slime fraction¹² of the top sample and is highly concentrated in the pebble and slime fractions of the lower sample (Cathcart 1964).

4.3.2 Orange Park Mine

The Orange Park Mine consisted of two tracts of land: The Orange tract and the Park tract.

- The Orange tract included land in Section 28: T27S/R24E which includes the north portion of Lake B, which is adjacent to the BSA. Lake B extends into Section 28.
- The Park tract included land in Section 33: T27S/R24E, which includes portions of the BSA, Fish Lake, Lake B, and Lake C; and in Section 5: T28S/R24E, which includes portions of the MPP, Lake Parker, and Horseshoe Lake.

¹² Slimes refers to fines, like silts/clays, passing 150 mesh screen – less than approximately 0.1 millimeter in diameter, which represent the fraction likely left behind and/or unmined at the BSA.

The American Cyanamid Company started mining in the Orange tract in 1957. In 1954, the company drilled 57 holes at the Orange tract and 33 holes at the Park tract, under contract to the USAEC, spaced one in each 40-acre tract in effort to cover most of the property.

In the southern part of the area (in the Park tract), the calcium phosphate zone averaged 9 ft in thickness and included rocks¹³ of the Hawthorn Group, Bone Valley Member and/or Peace River Formation at almost every drill hole. The relations are depicted below: the calcium phosphate zone is entirely within the Hawthorn Group Peace River Formation at hole A (shown as Hawthorn Formation on log); at hole B, the calcium phosphate zone is divided about equally between the Hawthorn Group, Peace River Formation and Bone Valley Group (shown as Bone Valley Formation on log); and, at hole C, the calcium phosphate zone is entirely within the Bone Valley Group (Cathcart 1964).

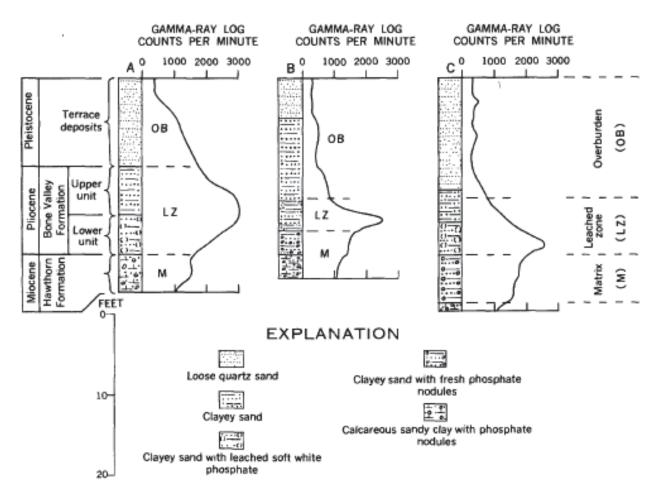


Figure 17.—Typical drill hole and gamma logs, Orange Park tract. Location of drill holes shown on plate 1.

Source for above: Page G86 Cathcart US Geologic Survey (USGS) 1964.

¹³ In more recent stratigraphic nomenclature, this rock mentioned by Cathcart (1964) likely limestone or dolomite, is likely phosphatic, would today likely be assigned to the Arcadia Formation of the Hawthorn Group.



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Teneroc Mine 4.3.3

The Tenoroc Mine is located just east of the BSA with the nearest operations approximately one mile from the BSA in Section 34: T27S/R24E and Section 2 and/or 3: T28S/R24E. Mining by Coronet Phosphate Company started in 1951. In 1953, the company drilled 39 holes under contract to the USAEC. In an area of about 2,000 acres, the holes were drilled at a spacing of one in each 40 acres. One sample each of the aluminum phosphate zone and the calcium phosphate zone were collected at each drill hole and were analyzed. Select laboratory and drilling results for samples, including samples from the Teneroc Mine are listed in Tables 8 and 13 and Figure 18 from Cathcart 1964. The analytical data, screen data, and stratigraphic and economic geologic cross-section shown below further demonstrate the abundance of phosphate present in the study area.

Table 8.—Analytical data, calcium phosphate zone, Lakeland quadrangle [NA, no analysis reported. Analytical data by American Cyanamid Co. and Coronet Phosphate Co., under contract to the U.S. Atomic Energy Comm.]

Number of drill holes	Location	Fraction	Chemical analyses, average, (in percent)				Ratio
		(mesh size)	P3O6	I and A1	Acid insol- uble	σ	U:P ₂ O ₅ (average)
90	Park and Orange tracts, T. 27 S., R. 24 E.	+20 -20+150 ²	33. 9 35. 0 19. 8	2,39 2,28 12,85	7.20 4.24 32.57	0.012 .010 .011	1;2820 1:3500 1;1800
39	Tenoroc mine, T. 27 S., Rs. 24 and 25 E.	Head ³	23. 1 31. 8 35. 2 14. 7 12. 1	2.33 1.83 NA	8. 14 1. 88 42. 69	.008 .015 .010 .011	1;2120 1;3520 1;1340
27	Lake Parker tract, T. 28 S., R. 24 E.	+24 -24+150 ² -150 Head ³	32.2 31.4 16.8 12.6	3.31 2.01 NA	9, 67 2, 30 39, 55	.015 .012 .010 .006	1:2150 1:2620 1:1680

Percent Fe₂O₃+Al₂O₃.

Concentrate fraction—quartz sand removed by flotation.
 Calculated, assuming that the sand tailing contained 2 percent P₂O₃ and 0.002 percent U.

Table 13.—Summary of screen data and chemical analyses, aluminum phosphate zone, Lakeland quadrangle

[Analyses by American Cyanamid Co. and Coronet Phosphate Co., published with permission]

Number of samples	Screen data		Chemical analyses, in percent				Ratios		
	Size	Weight percent	P ₂ O ₅	CaO	υ	Al ₂ O ₃	Fe ₂ O ₃	CaO:P2Os	U:P2O4
		Lake P	arker trac	t, T. 27 S	3., R. 24 E.	; T. 28 S.,	R. 24 E.		
27	+24 +150 -150 Head	1. 1 68. 4 30. 5 100. 0	13. 09 . 72 6. 10 2. 52	3. 97 . 08 3. 64 1. 24	0.009 .0001 .012 .004	11. 50 . 56 8. 28 3. 05	0.56 .26 .71 .40	0.303 .111 .597 .492	1:1450 1:510 1:630
	Te	noroc mine	, T. 27 S.,	R. 24 E.;	T. 27 S., I	R. 25 E.; T.	28 S., R.	24 E,	
39	+24 +150 -150 Head	0. 7 72. 1 27. 2 100. 0	11. 99 . 52 5. 42 1. 93	5. 88 . 37 3. 65 1. 30	0.005 .0001 .009 .0025	8. 42 . 41 6. 94 2. 28	0.80 .31 .86 .46	0.490 .712 .673 .674	1:2390 1:600 1:770
			Oran	ge tract,	T. 27 S., R	. 24 E.			
57	+20 +150 -150 Head	1, 5 56, 7 41, 8 100, 0	26. 02 2. 25 8. 66 5. 29	28. 03 2. 08 6. 26 4. 23	0.015 .002 .017 .008	8. 29 . 78 11. 10 5. 17	0. 69 . 36 1. 22 . 72	1.077 .924 .723 .800	1:1630 1:1130 1:510 1:660
			Par	k tract, 7	r. 27 S., R.	24 E.			
33	+20 +150 -150 Head	3. 2 52. 0 44. 8 100. 0	31. 84 3. 85 14. 63 9. 58	34. 09 3. 94 14. 05 9. 44	0.016 .003 .018 .010	8. 11 . 94 11. 64 5. 97	0.91 .41 1.89 1.09	1. 071 1. 023 . 960 . 985	1:1990 1:1280 1:810 1:960



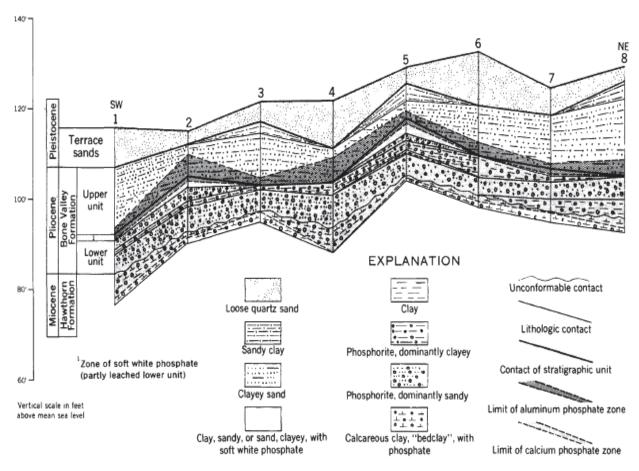
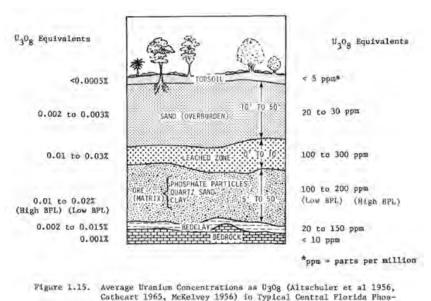


Figure 18.—Section, Tenoroc mine, showing relations of stratigraphy and economic geology. Horizontal not to scale. Location of drill holes shown on plate 1.

5.0 NATURALLY-OCCURING RADIONUCLIDE DISCUSSION

The following discussion provides information on the naturally-occurring radionuclides in the regional vicinity of the BSA:

- The Bone Valley Member contains high-grade phosphate rock in land-pebble form and is present and/or was mined just before construction of the BSA. In a report prepared for the USAEC, the USGS indicates the uranium occurrences in the Bone Valley Member were up to 0.1 percent (100 milligrams per kilogram or parts per million (ppm)) and are associated with the land pebble phosphate (Cathcart 1949).
- The BSA is located on former phosphate mined land which also included a mining pit/lake. The BSA and surrounding properties were mined in the early 1970s, at which time only coarser-grained pebble phosphate was recovered and the finer-grained (sand, silt, and clay) phosphate and associated minerals were left behind. An estimate of 20 to 30 percent of the phosphate (contained in the ore) is left behind with these finer-grained materials and/or returned to the mine cut or clay settling pond (Moudgil 1992). The mined land and lake were likely left behind with and/or infilled with these finer-grained material leftovers from mining and surrounding overburden.
- The southeastern coastal marine sediments of the Bone Valley Member contain naturally occurring phosphate minerals. Uranium and its decay products occur in significant quantities within these phosphate minerals and during the mid-1990s, 20 percent of the uranium produced in the United States was extracted from phosphate deposits in central Florida as a byproduct of fertilizer production (World Nuclear Association 2015).
- A typical Central Florida Phosphate district profile with average uranium concentrations listed per stratum is depicted below:



Source for above: Environmental Impact Statement: Central Florida Phosphate Industry: Volume II Background and Alternatives
Assessment. EPA Nov 1978.

phate District Profile (Fountain and Zellars 1972)



■ Uranium in leached- and matrix-zones exhibits typical concentrations between 100 and 300 parts per million (ppm), which is approximately 1 to 2 orders of magnitude higher than U.S. coals and fly ash, respectively, as depicted below (USGS 1997, Figure 2):

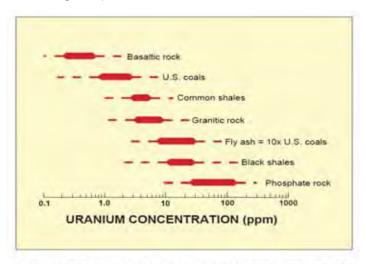
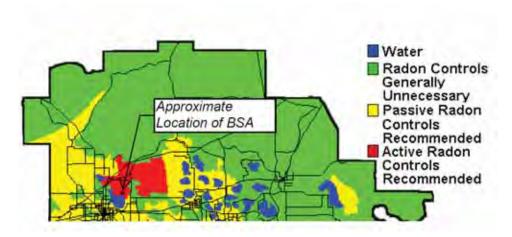


Figure 2. Typical range of uranium concentration in coal, fly ash, and a variety of common rocks.

Source of Figure 2 above: USGS 1997 Fact Sheet FS-163-97

According to the Florida Department of Health (FDOH), the MPP is located in an area that is known to contain so much naturally-occurring radon, which is a daughter product of radium-226 decay, that the FDOH suggests buildings designed for construction on reclaimed mined land include active engineering controls in the effort to mitigate potential adverse health effects associated with human exposure to the natural radon gas. The following image is an excerpt from the Radon Protection Map for Polk County and depicts the approximate location of the BSA.



Source of above image of northern Polk County: http://www.floridahealth.gov/environmental-health/radon/maps/_images/POLK_LB.GIF (accessed November 16, 2018).

■ Elevated levels of radon in structures built on reclaimed land suggest uranium and radium concentrations at shallow depths may be elevated relative to pre-mining levels. This is considered to occur when discarded fine-grained ore and leach zone materials are mixed with overburden materials as part of overall reclamation (Kaufman and Bliss 1977).

- Radon is a noble gas that sorbs little and does not participate in ion exchange; thus, its concentration can increase to high levels. Due to the short half-life (3.8 days) of radon-222, an abundance of radium-226 in subsurface materials is required to sustain high radon-222 levels (Miller 1985).
- Analysis by Miller (1985) suggests that a major fraction of radium-226 is released by alpha-particle recoil of thorium-230 or its precursors (uranium-234, protactinium-234, thorium-234, and uranium-238) to groundwater. Mineralized water competes with radium-226 for ion exchange and sorption sites and consequently results in elevated concentrations of dissolved radium-226. Miller contends that this process may explain the radium-226 concentrations present in groundwater in phosphate mining areas of Polk County.



6.0 AERIAL PHOTOGRAPHS AND TOPOGRAPHIC MAP SUMMARY

Based on Golder's review of documents including historic aerial photographs and topographic maps:

The ground beneath BSA includes an area in the northeast region of the BSA identified as an abandoned phosphate pit (apparently the former southern finger of what is now identified as Lake B).

- Mining of the BSA and vicinity was active from 1971 through 1975.
- The western portion of the BSA likely was not mined as deep as other portions or at all due to mining limitations like pit side-slope stability setback considerations in proximity of surface water, roads, structures, etc., and therefore, phosphate matrix likely exists in these areas.

A summary of select historic aerial photographs and topographic maps reviewed is provided below. Appendix B provides copies of the photographs and maps:

Before the BSA:

- 1964 Plate 1 USGS Bulletin 1162-G (Cathcart 1964): includes approximate drill hole locations #6 and #7 along the Lake Parker Tract section line depicted in Section 4.3. of this report, drill hole locations #6 and #7 are nearest the BSA.
- 1968 Aerial Photograph: the east bank Horseshoe Lake is visible on the left side of the photograph. BSA vicinity prior to mining or site development activities.
- 1971 FDOT Aerial Photograph: An apparent dragline and perhaps pipelines are visible near the active mining just off the northeast corner of the BSA area.
- November 30, 1971 Aerial Photograph: Mining appears to be starting in the BSA area based on the ground surface appears to be stripped, and some tanks, pipelines, and/or a dragline is visible in the upper west area of the BSA near fish Lake.
- December 2, 1972 aerial photograph (on 1975 USGS Topographic Map): There is a region that appears to have been unmined and seems to have cast overburden at the western portion of the BSA south of Fish Lake between the visibly mined area and where the MPP generating area is now located and shore of Lake Parker, but some mining overburden may have been placed in this area. The mine pits appear to be holding water in the area where Lakes B, C, and D are currently located.
- 1973 Aerial Photograph (provided by Lakeland Electric with labels): Lake D appears to be undergoing mining. Some mine processing equipment appears to exist due south and near the bank of Fish Lake (near the approximate locations of monitoring wells CCR-13 and CCR-14).
- 1975 Aerial Photograph taken February 1, 1975 included on Map 2.1.1 Aerial Topographical Map dated 3/27/1978 for City of Lakeland MPP: mining appears to be recently active in the east and north areas of the BSA. South of the BSA and in the western/southernmost vicinity of the BSA the area is identified as, "Proposed Plant Boundary", and there is a region that appears to have been unmined and seems to have cast overburden at the western region of the BSA south of Fish Lake at the western region of the area between the visibly mined area and the MPP generating area and shore of Lake Parker.



November 26, 1977 Aerial Photograph: Lakes B, C, and D created and left behind by the phosphate mining are visible. Mining does not appear to be actively ongoing in the photograph.

Post-Commencement of development of the Unit 3 at MPP:

- 1980 Aerial Photograph: Plant construction laydown roads (also drawn on the June 12, 1981 Existing Site Plan map) in the west area of the BSA are visible and some equipment/materials can be seen staged in this area. Lakes, including Lake B in the north BSA, created and left behind by the phosphate mining are visible.
- June 12, 1981 Existing Site Plan and April 7, 1981 Phase I Site Preparation Grading Plan for the City of Lakeland MPP landfill design: Topographic contours surveyed and depicted in the Lake B finger are labeled as abandoned phosphate mining pit in the BSA area. The pit appears to be approximately 20 ft deep with a base elevation of approximately 100 ft (USC&G Survey Datum).
- March 2, 1984 Aerial Photograph: A finger of Lake B, which is a manmade lake formed by mining, is visible in the BSA area. Lakes C and D, which were manmade by mining appear possibly interconnected.



7.0 SITE CHARACTERIZATION FOR RADIUM-226+228

The literature review for an ASD for radium-226+228 in groundwater is supported by data obtained from the February / March 2019 site characterization of and around the BSA, which was completed as part of the nature and extent investigation for radium-226+228, arsenic, and lithium SSLs in groundwater under the auspices of the assessment of corrective measures for the site. An assessment of corrective measures report will be included in the facility's operating records in accordance with §257.105(h)(10).

7.1 Field Investigation

Site characterization field investigation activities included an underground utility survey, collection of soil samples for a mineralogical assessment and chemical analysis, monitoring well installation and development, staff gauge installations, water-level data collection, and surface and groundwater sampling and analysis. Figure 4 presents locations of soil borings and monitoring wells installed and sampled as part of the site characterization.

Six boreholes were drilled using direct push technology (DPT) at locations adjacent to the CCR monitoring wells with radium-226+228 SSLs (CCR monitoring wells CCR-4, CCR-5, CCR-7, CCR-13, and CCR-14) and background CCR monitoring well CCR-2. These soil borings, designated CCR-2A, CCR-4A, CCR-5A, CCR-7A, CCR-13A, and CCR14A, were drilled to 30 ft bgs, and the soil boring logs are presented in Appendix C. Sixteen soil samples were collected from these six soil borings, ranging from 7 ft bgs to up to 29 ft bgs, for analysis. The soil samples are representative of the saturated uppermost aquifer downgradient of the BSA. A detailed mineralogical assessment of these 16 soil samples was conducted by Petrologic Solutions, Inc. under subcontract to Golder (see Section 7.2).

Nine soil borings were also advanced using DPT at proposed nature and extent monitoring well locations CCR-15 through CCR-23 to a depth of approximately 25 ft bgs. Soil samples were collected from these borings, as well as from soil boring CCR-4A, from approximately 24 ft bgs to 25 ft bgs and submitted, under chain-of-custody, for laboratory analysis of total uranium, iron, aluminum, arsenic, lithium, and phosphorus via EPA¹⁴ Method 6020B, and for radium-226 and radium-228 via EPA Method 9315 and 9320, respectively, for samples from soil borings CCR-4A, CCR-15, CCR-16, CCR-18, CCR-22, and CCR-23. Soil samples were also collected from soil boring CCR-4A and from the soil borings advanced for the installation of nature and extent monitoring wells CCR-16 and CCR-20, from approximately 24 ft bgs to 25 ft bgs, and submitted, under chain-of-custody, for laboratory analysis of aluminum, arsenic, iron, and lithium via sequential extraction (EPA Method SW846 6010B SEP).

One shallow soil sample and one shallow sediment sample were also obtained from ground surface to 0.5 ft bgs. The soil sample, designated GSB-1, was collected east of the BSA and the sediment sample, designed Fish Lake-Sed, was collected from the bank of Fish Lake. Both samples were submitted under chain-of-custody for laboratory analysis. Soil sample GSB-1 was analyzed for total uranium, iron, aluminum, arsenic, lithium, and phosphorus via EPA Method 6020B and sediment sample Fish Lake-Sed was analyzed for total organic carbon via EPA Method Walkley-Black (USEA 2004a).

¹⁴ EPA: United States Environmental Protection Agency.



A larger-diameter borehole was drilled, using hollow-stem auger drilling techniques, at locations where soil borings where previously drilled using DPT, to facilitate the installation of nature and extent monitoring wells CCR-15 through CCR-23. The monitoring wells were constructed of 2-inch diameter, flush threaded schedule 40 polyvinyl chloride (PVC), bottom cap, 0.006-inch slotted, 10-foot screen, and riser section.

The borehole annulus was filled with 30-45 graded silica sand to approximately 2 feet above the top of the screen interval, with approximately 2 feet of 3/8-inch bentonite chips placed atop. The remaining annulus was filled from bottom to top via tremie method with a neat Portland cement grout to just below ground surface. Monitoring wells CCR-15 through CCR-22 were completed above-grade with locking well caps and aluminum protective casings set into 2-foot by 2-foot by 4-inch concrete pads. Bollards were installed around each monitoring well for visibility and damage protection. Monitoring well CCR-23 was installed below grade, in a flush-mounted well casing set into a rebar reinforced 2-foot by 2-foot by 4-inch concrete pad without bollards (the well is installed in an access road). The newly-installed nature and extent monitoring wells were surveyed for elevation (top of well casing) and location and staff gauges were installed in Fish Lake and Lakes B, C, and D for surface water level elevation. Table 1 presents a summary of monitoring well construction details.

After development of the newly-installed wells, groundwater was collected from nature and extent monitoring wells CCR-15 through CCR-23, MW-24S, MW-25S, and MW-26S. Surface water samples were also obtained from Fish Lake, and Lakes B, C, and D. Chemical/geochemical analysis of groundwater and surface water samples included field parameters and radionuclides, nutrients, and major cations and anions. The rationale and methods used are as follows:

Field Parameters: Parameters measured in the field included pH, dissolved oxygen, oxidation reduction potential (ORP), conductivity, and temperature. These parameters were used to evaluate general geochemical conditions in the groundwater and support geochemical modeling.

Metals: Analysis of Appendix III and IV metals and uranium to better understand the geochemical composition of groundwater and surface water. Metals analysis allows for the delineation of a potential plume, evaluation of mineral saturation indices, and evaluation of background contributions from natural sources or anthropogenic sources (USEPA 1998).

Radionuclides: Analysis of radium-226 and radium-228 to better understand the nature and extent of radium in groundwater and surface water and evaluation of background contributions from natural or anthropogenic sources (USEPA 2014).

Major Cations, Anions, and Nutrients: Geochemical modeling of mineral solubility, metals attenuation and background contributions requires analysis of major cations and anions because they affect and participate in sorption and mineral dissolution or precipitation reactions.

The groundwater samples were analyzed using the following methods:

- pH following SW846 9040C "pH Electrometric Measurement" (USEPA 2004b)
- Total dissolved solids standard method (SM) 2540C "Total Dissolved Solids Dried at 180°C" (USEPA 1993a)
- Total hardness following SM 2340B (USEPA 1997)
- Chloride, fluoride, and sulfide following USEPA SW846 9056A "Determination of Inorganic Anions by Ion Chromatography", Revision 1 (USEPA 2007c)



 Nitrate and nitrite following EPA 353.2 "Determination of Nitrate-Nitrite Nitrogen by Automated Colorimetry, Revision 2.0" (USEPA 1993b)

- Alkalinity following SM 2320B "Alkalinity by Titration" (USEPA 2005a)
- Phosphorus following SM 4500-P E "Phosphorus by Ascorbic Acid Method" (USEPA 2005b)

7.2 Summary of Results for Radium-226+228

Table 2 presents a summary of soil and analytical results. Radium-226+228 detected in soil samples from soil borings advanced in the surficial aquifer around the BSA was measured in six samples (soil sample CCR-4A, CCR-15, CCR-16, CCR-18, CCR-22, and CCR-23) as were total uranium and total phosphorus. Radium-226+228 ranged from approximately 0.6 pCi/g (CCR-18) to 76.6 pCi/g (CCR-4A). The presence of radium-226+228 correlates to the presence of uranium in soil samples of the surficial aquifer with a coefficient of determination (R²) of 0.99, while total uranium also correlates to total phosphorus in soil samples of the surficial aquifer with a coefficient of determination of 0.80 (Appendix D). Based on these correlations and the known consistency of typical CCR (USGS 1997), it is considered highly likely that the presence of radium is due to the decay of naturally-occurring uranium in soils.

Results from a March 2019 groundwater sampling event for radium-226+228 in groundwater collected from nature and extent monitoring wells CCR-15, CCR-16, CCR-18, CCR-22, CCR-23, MW-25S, and MW-26S and for radium-226+228 in surface water samples collected from Fish Lake and Lakes B, C, and D are presented on Figure 7 and the results are summarized in Table 3. Historical groundwater sampling results for radium-226+228, from CCR monitoring wells, from August 2016 through January 2019, are also included on Figure 7 and in Table 4.

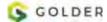
Radium-226+228 concentrations in groundwater sampled in March 2019 ranged from 1.1 pCi/L to 42.7 pCi/L. The concentration of radium-226+228 was above the site-specific GWPS of 7.94 pCi/L (Golder 2018b) in groundwater samples collected from nature and extent monitoring wells CCR-15, CCR-16, and CCR-22. The concentration of radium-226+228 detected in the groundwater sample collected from nature and extent well CCR-16 was higher compared to the corresponding hydraulically upgradient CCR monitoring well CCR-5 (Figure 7). Radium-226+228 concentration in groundwater varies in the vicinity of the BSA, likely due to natural variability of radium-226+228 in soils as well as in the phosphatic mine tailings used to backfill the mined area where the BSA was constructed. Radium-226+228 in lake samples (Fish Lake and Lakes B, C, and D) ranged from 1.4 pCi/L in Fish Lake to 5.3 pCi/L¹5 in Lake D. Given the radial pattern of groundwater flow away from the BSA (Figure 5 and 6), Fish Lake, and Lakes B, C, and D are downgradient receptors of groundwater flowing from the BSA, and the concentration of radium-226+228 detected in these water bodies is below the Florida surface water quality criteria of 5 pCi/L (Chapter 62-302.530, F.A.C.). Furthermore, based on historical groundwater data (August 2016 to January 2019) of samples collected from the CCR monitoring well network, radium-226+228 shows a stable or decreasing trend at each CCR monitoring well (Table 4).

¹⁵ Reported value meets State of Florida surface water quality criteria (Chapter 62-302.530, F.A.C.) for radium-226+228, in accordance with the rounding procedures described in the FDEP memorandum "Rounding Analytical Data for Site Rehabilitation Completion", dated November 17, 2011.



These soil and groundwater findings support the literature review indicating that the BSA and surrounding area are underlain by fine-grained phosphatic mine tailings and/or unmined phosphate deposits. Based on those findings, there is the high likelihood that radium-226+228 detected in groundwater is present as a product of the decay of a naturally-occurring uranium and thorium in soil and/or the mine tailings/phosphate deposits.

Further evidence for a naturally-occurring source for radium-226+228 in groundwater below and near the BSA is presented in a detailed mineralogical assessment of the underlying soils conducted by Petrologic Solutions, Inc. (Appendix E). The mineralogical assessment of soil samples included petrographic analysis, quantitative X-Ray Diffraction (XRD), Scanning Electron Microscopy (SEM), and additional bulk geochemistry. Results of the chemical and mineralogical assessment, coupled with Site and regional mineral resource evaluations, reveal the presence of naturally-occurring radioactive minerals associated with the phosphate ore mined at and near the BSA. These minerals include: eylettersite (thorium-bearing aluminum phosphate); wavellite (uranium-bearing aluminum phosphate); collophane, apatite, hydroxyapatite, and fluorapatite (uranium-bearing calcium phosphates) and zircon, rutile, and ilmenite (uranium-bearing oxides). As such, radium-226+228 present in groundwater below and in the vicinity of the BSA is considered to be naturally occurring and not due to a release from the BSA.



8.0 SUMMARY AND CONCLUSIONS

Radionuclides including radium-226 and radium-228 are naturally occurring in the study area and are associated with minerals in the phosphate matrix that was mined by the phosphate mining industry during the 1970s at the BSA prior to its construction. Radionuclides, including uranium, were detected in samples collected from approximately 26 to 30 ft bgs at the BSA during the 1950s. The upper portion of the phosphate matrix was mined in the north and west region of the BSA and phosphate matrix, tailings, and/or remnants, including the associated radionuclides, were left behind as backfill beneath the current BSA. Furthermore, a portion of the land beneath the BSA was likely not mined or partially mined, due to the proximity of the existing lakes, roads, and the MPP and therefore, phosphate ore likely exists in these areas. Based on the analysis presented in this report, uranium is most concentrated in the deeper phosphate bearing portions at the BSA site (e.g., approximately 26 to 30 ft bgs).

As previously presented, uranium concentrations in phosphate-bearing rocks exhibit typical uranium concentrations of up to 300 ppm, which is approximately 1 to 2 orders of magnitude higher than U.S. coals and fly ash, respectively (USGS 1997). The naturally occurring radionuclides in phosphate ore and mine tailings left behind underneath the BSA are conceivably at higher concentrations than CCR.

Findings of the geochemical assessments conducted for soil and groundwater at the site indicate that the BSA and surrounding area are underlain by fine-grained phosphatic mine tailings and/or unmined phosphate deposits. The concentration of radium-226+228 in groundwater in the vicinity of the BSA is shown to be variable, likely due to natural variations in soils as well as due to variations of radium-226+228 present in the phosphatic mine tailings used to backfill the mined area where the BSA was constructed. Furthermore, the detailed mineralogical assessment of the underlying soils conducted by Petrologic Solutions, Inc. reveal significant uranium and other accessory constituents associated with the phosphate ore mined at and near the BSA.

Therefore, based on the evidence presented herein, it is the opinion of Golder that radium-226+228 present in groundwater below and in the vicinity of the BSA is naturally occurring and not due to a release from the BSA.



9.0 PROFESSIONAL CERTIFICATION

This Alternative Source Demonstration for radium-226 and radium-228 in groundwater has been prepared for the Byproducts Storage Area at the C.D. McIntosh Power Plant, Lakeland, Florida. I hereby certify that the information contained in this report is accurate to the best of my knowledge as required by 40 CFR §257.95(g)(3)(ii).

Golder Associates Inc.

Samuel F. Stafford, P.E.

Florida Professional Engineer No. 78648

Certificate of Authorization No. 1670

Date to some 2019



10.0 SIGNATURE PAGE

Golder Associates Inc.

Samuel F. Stafford, PE Senior Project Engineer Gregory A. O'Neal II, PG Senior Geologist

Dy a chet II

Anthony L. Grasso, PG Principal and Practice Leader

GAO/SFS/ALG/sjh

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TABLES

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Reviewed by ALG 6/10/19

Checked by: MSI 5/8/19

Table 1: Summary of CCR Monitoring Well and Nature and Extent Monitoring Well Construction Details

Byproduct Storage Area

Lakeland Electric - C.D. McIntosh Jr. Power Plant

7.42 - 1.81	725.4	3.0-	135.78	136.2	7.447189	1.2182812.1	2/12/2019	CCK-23
14.8 - 24.4	1.3S	3.5	137.51	134.0	7.870289	4.7108881	2/13/2019	CCR-22
15.6 - 25.2	26.9	2.6	137.12	134.5	4.188288	1363454.0	2/13/2019	CCR-21
74.9 - 24.5	2.52	2.9	136.05	1.551	6.474289	1363855.5	2/14/2019	CCR-20
15.5 - 25.1	8.82	7.2	74.3E1	8.681	683064.5	1364205.4	2/16/2019	CCR-19
15.6 - 25.2	26.9	2.6	140.81	138.2	7.698889	1.1636361	2/18/2019	CCR-18
15.4 - 25.0	7.32	2.9	145.80	142.9	7.217589	9.6108381	2/19/2019	CCR-17
15.3 - 24.9	25.6	2.9	144.10	2.141	9.288889	1362533.2	2/18/2019	CCR-16
15.4 - 25.0	7.32	2.9	99'77l	8.141	683123.5	1362341.3	2/18/2019	CCR-15
15.4 - 24.9	25.5	2.9	138.70	135.8	2.197188	1.1772381	9102/12/9	CCR-14
15.6 - 25.1	7.32	3.0	36.751	135.0	1.481288	1362936.6	9102/12/9	CCR-13
15.7 - 25.2	25.8	2.9	136.99	134.1	682430.5	1363353.1	9102/02/9	CCR-12
15.6 - 25.1	25.6	8.2	137.12	134.3	2.773289	1363835.4	9102/02/9	CCR-11
1.42 - 24.1	7.42	2.0-	133.56	133.8	6.307283	1.264262.1	3/13/2018	CCR-10R
14.4 - 23.9	24.5	2.6	138.54	135.9	2.227289	4.6054361	9102/02/9	CCK-10 *
15.5 - 25.0	25.6	1.6	79.141	138.6	6.345.3	1364085.2	9102/12/9	CCK-9
15.9 - 25.4	26.0	7.2	142.12	139.4	9.114889	9.7198381	6/22/2016	CCR-8
16.7 - 25.2	8.32	3.0	142.10	1.95.1	2.277289	9.1888881	6/22/2016	CCR-7
16.7 - 25.2	7.32	2.9	141.34	138.5	9.873583	1363168.4	6/22/2016	CCK-6
7.32 - 2.91	2.92	2.5	70.141	138.6	6.978888	1362716.0	6/22/2016	CCK-5
15.6 - 25.1	7.32	2.9	143.13	140.3	7.240889	1362450.0	9/24/2016	CCK-4
15.9 - 25.3	8.32	G.O-	137.04	3.751	6.13451.3	1362334.6	9102/22/9	CCR-3
15.7 - 25.2	8.32	3.0	73.041	9.781	9.78718a	1362203.9	9102/22/9	CCK-2
15.7 - 25.2	7.32	3.0	141.30	138.3	1.782188	1362405.2	9/24/2016	CCR-1
Screen Interval Depth (ft bgs)	Well Depth (sgd 11)	Stick-up Height (ft ags)	TOC Elevation (ft NAVD88)	Ground Surface Elevation (ft NAVD88)	Easting (ft NAD83)	Dorthing (ft NAD83)	Date bellstanl	M ^e ll ID

Notes:

CCR Monitroing Wells are CCR-1 through CCR-14 and CCR-10R. Nature and Extent Monitoring Wells are CCR-15 through CCR-23.

1991 = 11

NAD83 = North American 1983 Datum

NAVD88 = North American Vertical Datum of 1988

ft bgs = feet below ground surface

ft ags = feet above ground surface

* Monitoring well CCR-10 was abandonend and replaced with CCR-10R on 3/13/2018.



June 2019

Summary of Soil / Sediment Analytical Results Byproduct Storage Area Lakeland Electric - C.D. McIntosh Jr. Power Plant Table 2:

Uranium Phosphorus Radium-226 (mg/Kg) (mg/Kg) (pCi/g) 280 F1 130,000 75.9	1) Uranium Phosphorus (mg/Kg) (mg/Kg) 280 F1 130,000	/Kg) Lithium (mg/Kg) Uranium (mg/Kg) Phosphorus (mg/Kg) ND 280 F1 130,000	Iron (mg/Kg) 130,000	Iron (mg/Kg) Lithium (mg/Kg) Uranium (mg/Kg) Phosphorus (mg/Kg) 2,800 ND 280 F1 130,000	Aluminum
130,000	280 F1 130,000	ND 280 F1 130,000	2,800 ND 280 F1 130,000	B ND 2,800 ND 280 F1 130,000	28,000 B ND 2,800 ND 280 F1 130,000
			08 0 70 1 76 2 800		
4.5 2,800 0.702	7,800	0.79 J 4.5 2,800	36 0.73 3 4.3		B ND 98 0.79 J 4.5 2,800
4.3 3,000 1.14	3,000	4.3 3,000	2.9 4.3 3,000	450 2.9 4.3 3,000	B ND 450 2.9 4.3 3,000
0.92 1,000 NA	1,000	0.92 1,000	ND 0.92 1,000	97 ND 0.92 1,000	B ND 97 ND 0.92 1,000
1.2 800 0.443	800	J 1.2 800	0.45 J 1.2 800	79 0.45 J 1.2 800	B ND 79 0.45 J 1.2 800
0.50 310 NA	310	0.50 310	ND 0.50 310	62 ND 0.50 310	B ND 62 ND 0.50 310
40 11,000 NA NA	11,000 NA	40 11,000 NA	ND 40 11,000 NA	J 460 ND 40 11,000 NA	B 1.4 J 460 ND 40 11,000 NA
0.51 210 NA NA	210 NA	0.51 210 NA	ND 0.51 210 NA	110 ND 051 110 NA	
5.12	0.11	0.1			
			0.1	211	B ND 110 ND 0.51 210
					1,800 B ND 110 ND 0.51 210
11	1.2 0.50 40 11 0.51	ND 0.50 ND 40 11 ND 0.51 ND 0.51	79 0.45 J 1.2 62 ND 0.50 J 460 ND 40 11 110 ND 0.51	B ND 62 ND 0.50 11.2 B 1.4 460 ND 0.51	2,600 B ND 79 0.45 J 1.2 2,000 B ND 62 ND 0.50 21,000 B 14 J 460 ND 40 11
4.3 0.92 1.2 0.50 40 0.51	¬	2.9 N ND N ND ND ND	450 2.9 ND 97 ND 79 0.45 J 62 ND 110 ND ND	B ND 450 2.9 ND B ND 79 0.45 J B ND 62 ND B ND 62 ND B ND 62 ND B ND 62 ND B ND 110 ND	19,000 B ND 450 2.9 5,900 B ND 97 ND 2,600 B ND 79 0.45 J 2,000 B ND 62 ND 2,100 B 14 J 460 ND
	0.79 J 2.9 J ND ND N		450 97 97 79 62 62 1 460	B ND 450 B ND 97 B ND 779 B ND 62 B 1.4 J 460	8,000 B ND 98 19,000 B ND 450 5,900 B ND 79 2,600 B ND 62 21,000 B 1,4 J 460
19,000 B ND 5,900 B ND 2,600 B ND 2,000 B ND 2,000 B ND 1.4 J	2/18/19 19,000 B 2/19/19 5,900 B 2/15/19 2,600 B 2/15/19 2,000 B 2/14/19 21,000 B	2/18/19 19,000 2/19/19 5,900 2/15/19 2,600 2/15/19 2,000 2/14/19 21,000		24-25 24-25 24-25 24-25 24-25	

ft bgs = feet below ground surface

mg/Kg = milligrams per kilogram

pCi/g = picocuries per gram g/g = gram per gram B - Compound was found in the blank and sample.

F1 - Matrix Spike-Matrix Spike duplicate (MS/MSD) Recovery is outside acceptance limits, and the concentration is an approximate value. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample recovery was within acceptable limits.

J - Result is less than the reporting limit (RL) but greater than or equal to the method detection limit (MDL) and the concentration is an approximate value.

U - Result is less than the sample detection limit.

ND - Not detected NA - Not analyzed SJH 5/23/19 ALG 6/10/19 Checked by: Reviewed by:



June 2019 19117001

Table 3: Summary of Radium 226 & 228 in Nature and Extent Groundwater and Suface Water Byproduct Storage Area
Lakeland Electric - C.D. McIntosh Jr. Power Plant

Monitoring Well / Surface Water	Date Sampled	Radium 226 (pCi/L)	Radium 228 (pCi/L)
CCR-15	3/7/19	19.2	5.9
CCR-16	3/6/19	23.3	19.4
CCR-17	3/6/19	NA	NA
CCR-18	3/6/19	0.5	0.7 U
CCR-19	3/6/19	NA	NA
CCR-20	3/7/19	NA	NA
CCR-21	3/7/19	NA	NA
CCR-22	3/7/19	26.3	1.4
CCR-23	3/7/19	6.5	0.8
MW-24S	3/5/19	NA	NA
MW-25S	3/6/19	0.5	0.7 U
MW-26S	3/5/19	0.5	0.6 U
Fish Lake	3/11/19	0.7	0.7 U
Lake B	3/11/19	1.6	0.8 U
Lake C	3/13/19	1.5	0.7 U
Lake D	3/13/19	4.0	1.3

Notes:

Radium concentrations reported in picocuries per liter (pCi/L)

U - Result is less than the sample detection limit

NA - Not Analyzed

Checked by: SJH 5/10/19 Reviewed by: ALG 6/10/19



19117001 June 2019

Table 4: Summary of Radium 228 & 228 Concentrations in Groundwater (CCR Monitoring Wells)

Byproduct Storage Area

Lakeland Electric - C.D. McIntosh Jr. Power Plant

	ote C						CCR	CCR Monitoring Well Designation	Vell Designa	ition					
Event	Sampled	CCR-1	CCR-2	CCR-3	CCR-4	CCR-5	CCR-6	CCR-7	CCR-8	CCR-9	CCR-10/ CCR-10R*	CCR-11	CCR-12	CCR-13	CCR-14
Background	8/4/2016	3.23	8.84	24.7	39.7	18.7	9.71	7.24	22	3.77	2.79	9.21	က	29.7	25.7
Background	9/14/2016	3.97	4.96	6.91	41	18	7.63	12.8	3.99	20.6	3.02	10.4	2.75	0.629	30.7
Background	10/12/2016	4.07	6.55	6.11	47.8	18.6	4.9	6.83	4.32	20.1	1.93	11.4	2.84	70.2	28.4
Background	11/2/2016	4.71	6.52	6.7	48.2	17	3.7	5.9	3.71	21.4	1.28	8.05	3.06	74.6	27
Background	12/14/2016	5.42	4.56	7.05	77.3	19.3	5.77	14.1	5.84	22.2	1.64	10.6	2.87	85.7	42.1
Background	1/11/2017	5.02	5.83	6.19	82.2	19.5	5.81	17.9	5.56	21.7	2.01	10.6	2.37	81.4	36.4
Background	2/1/2017	4.31	5.73	5.61	71.7	16.2	6.07	16.3	7.37	18.4	1.18	9.13	2.48	6.07	35.8
Background	3/15/2017	4.39	20'9	4.43	69	16.2	6.53	15.1	8.77	14.4	1.58	68'9	2.68	6.09	29.4
Background	4/12/2017	4.62	5.54	4.62	8.99	16	7.3	19.4	9.28	15.3	1.5	7.78	2.11	52.6	32.4
Background	5/17/2017	3.58	20'9	3.81	71.1	13.8	8.53	20.6	7.32	13.5	1.38	8.93	2.01	30.3	24.8
Background	6/13/2017	4.87	5.24	3.87	56.4	16.4	6.58	17.3	4.27	18.2	1.15	10.2	3.19	8.98	42.2
Background	7/11/2017	4.59	4.54	5.02	71.9	15.9	98.9	12.3	4.41	14.4	1.02	7.11	2.46	5.06	35.1
Background	8/15/2017	5.65	2.41	4.17	61.7	17.2	4.05	4.93	5.27	15.5	0.864	66'2	2.55	36.2	28.2
Detection	10/13/2017	ΑN	ΑN	ΑN	NA	NA	NA	NA	ΑN	NA	AN	ΝA	NA	NA	NA
Detection	11/30/2017	ΑN	ΑN	ΑN	NA	NA	NA	NA	ΑN	NA	ΑN	ΝA	NA	NA	NA
Detection	12/7/2017	ΑN	ΑN	ΑN	NA	NA	NA	NA	ΑN	NA	AN	ΝA	NA	NA	NA
Assessment	4/12/2018	9.9	5.8	3.9	45.8	18.8	4.8	11.7	6.4	0.86	3.6	1.3	3	57.4	23.3
Assessment	7/18/2018	8.9	3.2	4.1	51	21.1	2.9	2.9	5.5	9.1	2.7	6.1	3.6	40.6	17.5
Assessment	1/8/2019	8.9	2.8	4.6	38.2	13.3	2.3	7.2	4.8	11.1	3.4	4.8	4.8	69.3	23.0

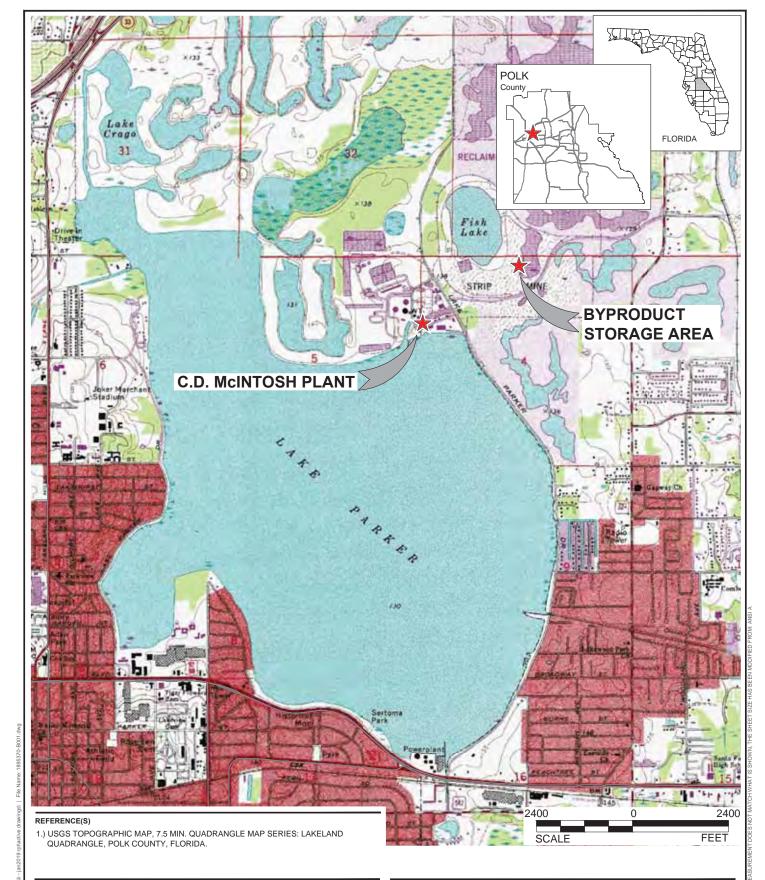
Notes:
Dates shown are representative of sampling events that took place over multiple days
Radium values represent sum of Radium 226 and Radium 228
All concentrations reported in picocuries per liter (pCi/L)
NA - Not analyzed
* Monitoring well CCR-10 was abandonend and replaced with CCR-10R on 3/13/2018

Checked by: SJH 5/10/19 Reviewed by: ALG 5/24/2019

Checked by:



FIGURES



CLIENT

LAKELAND ELECTRIC

CONSULTANT



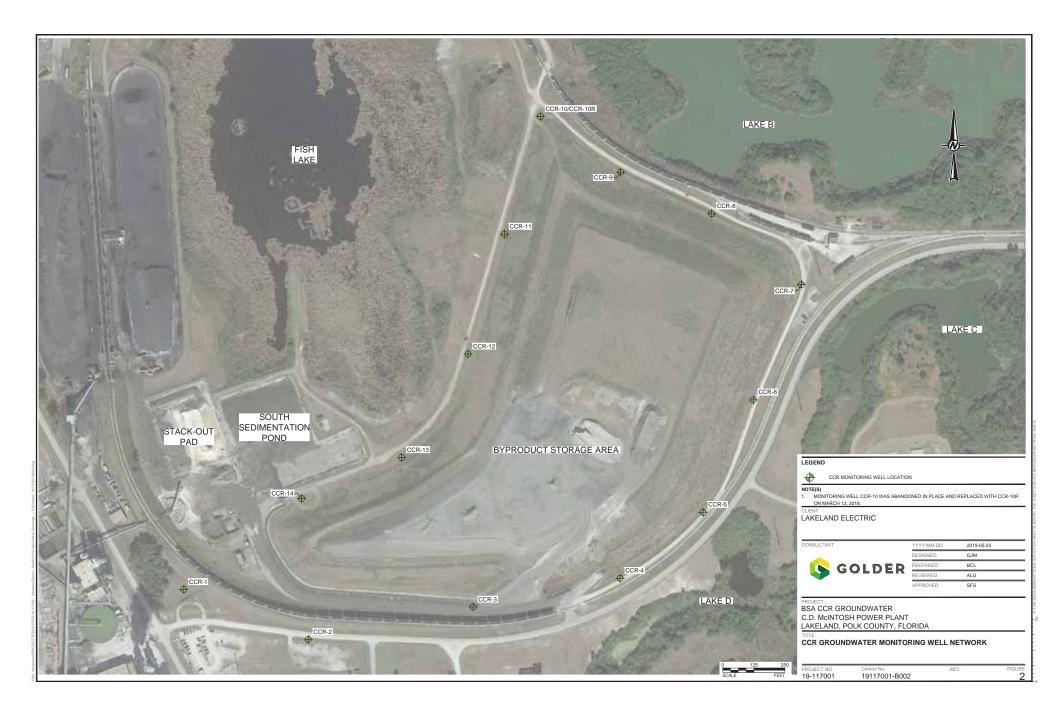
YYYY-MM-DD	2019-01-08
DESIGNED	SFS
PREPARED	BCL
REVIEWED	ALG
APPROVED	SFS

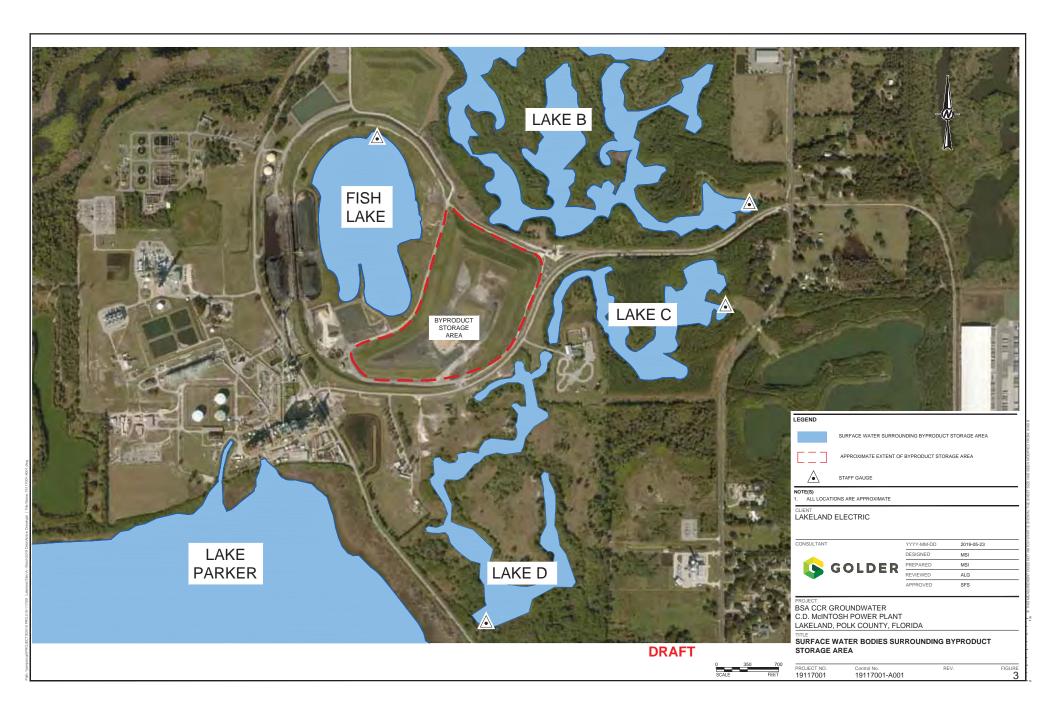
PROJECT
BSA CCR GROUNDWATER
C.D. McINTOSH POWER PLANT

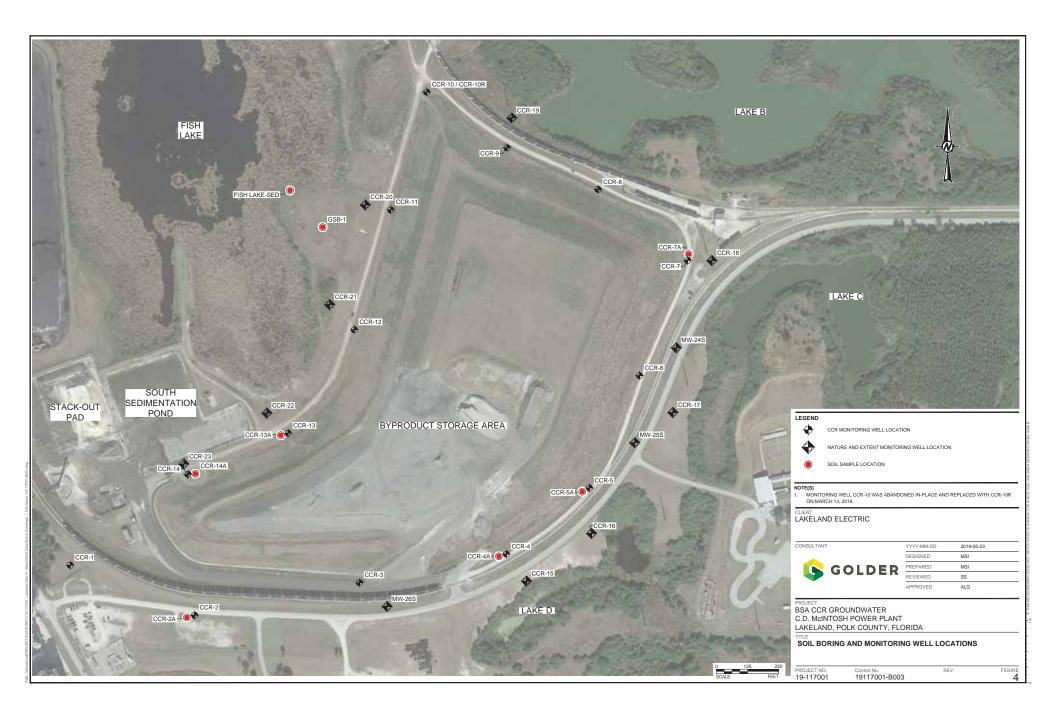
C.D. MCINTOSH POWER PLANT LAKELAND, POLK COUNTY, FLORIDA

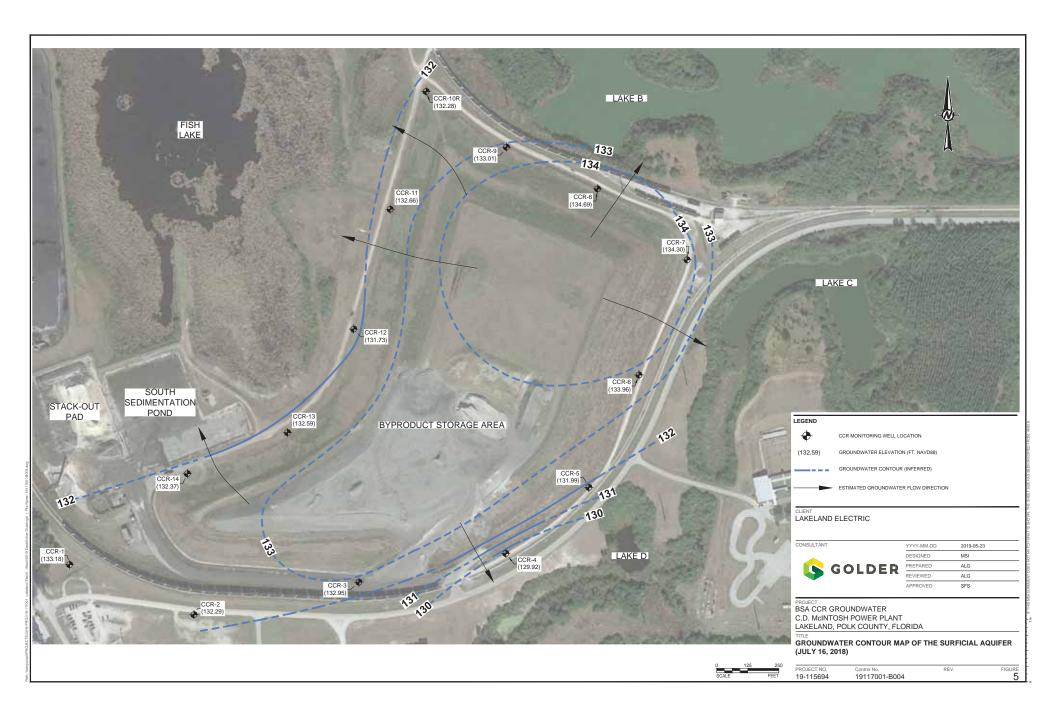
SITE LOCATION MAP

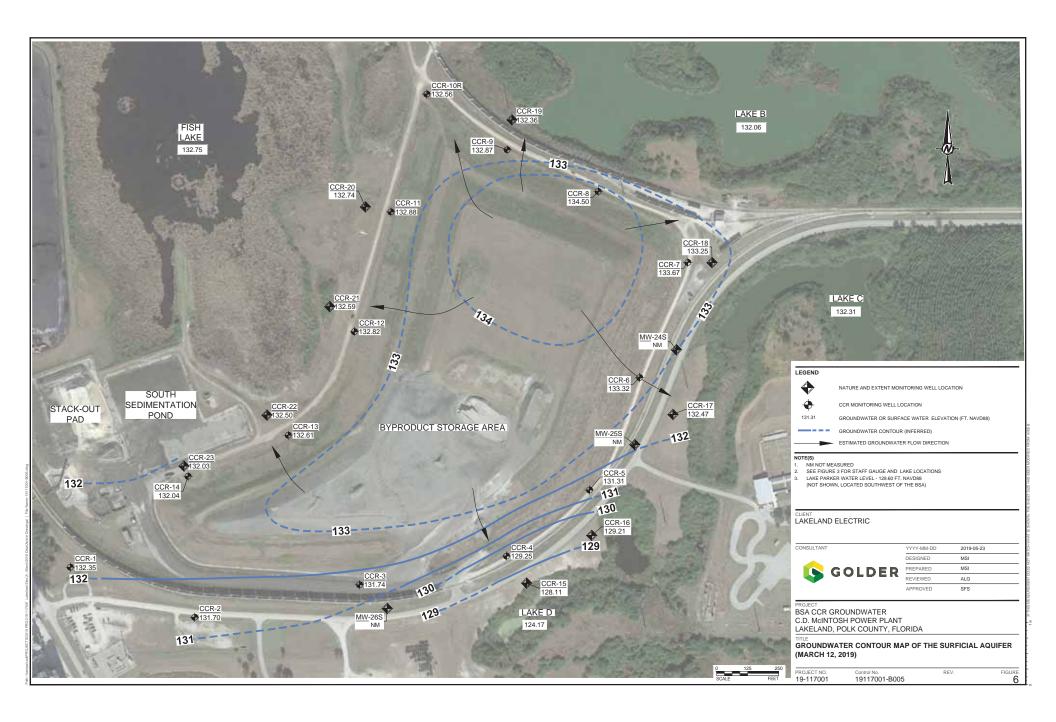
PROJECT NO.	Control No.	REV.	FIGURE
19-117001	1895370-B001		1

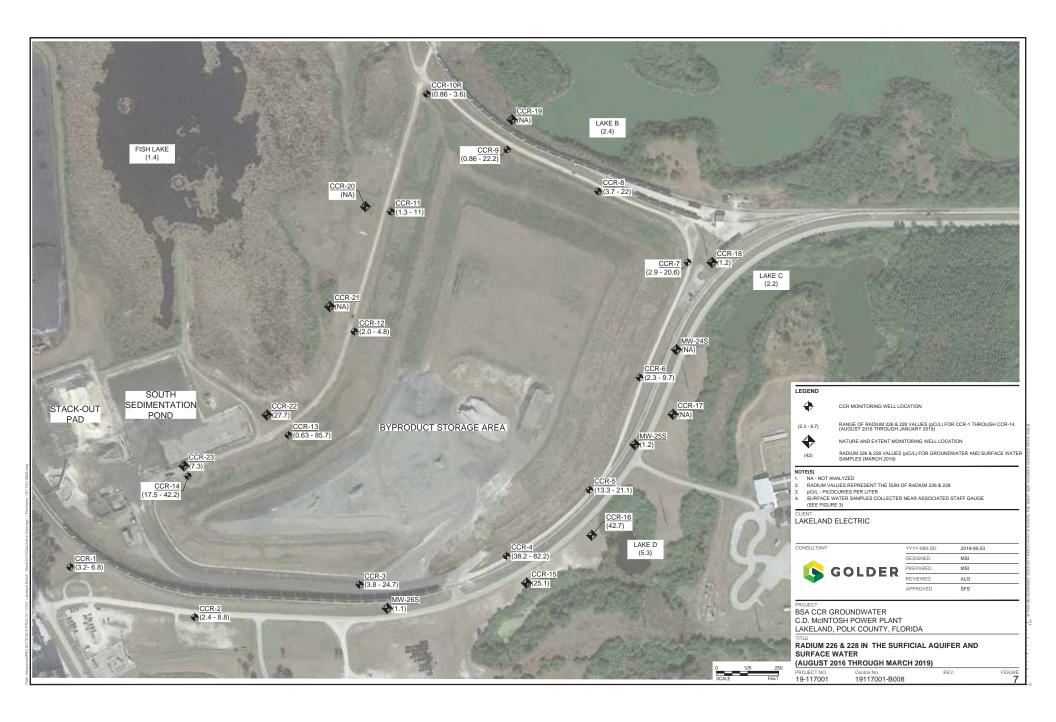






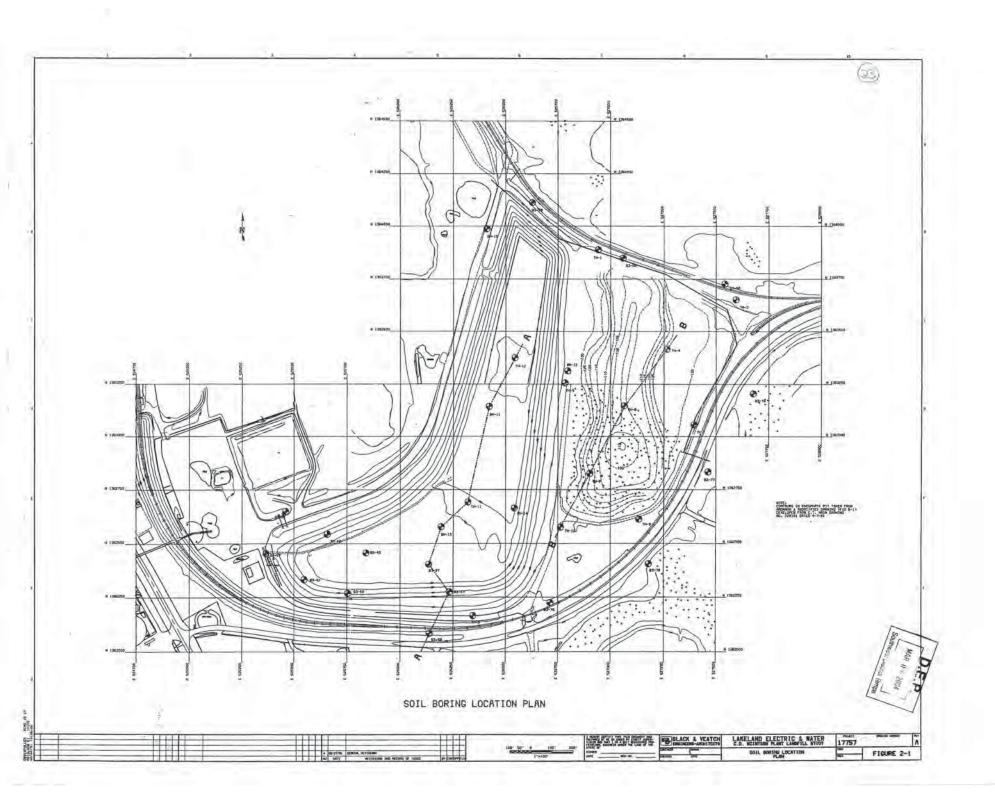


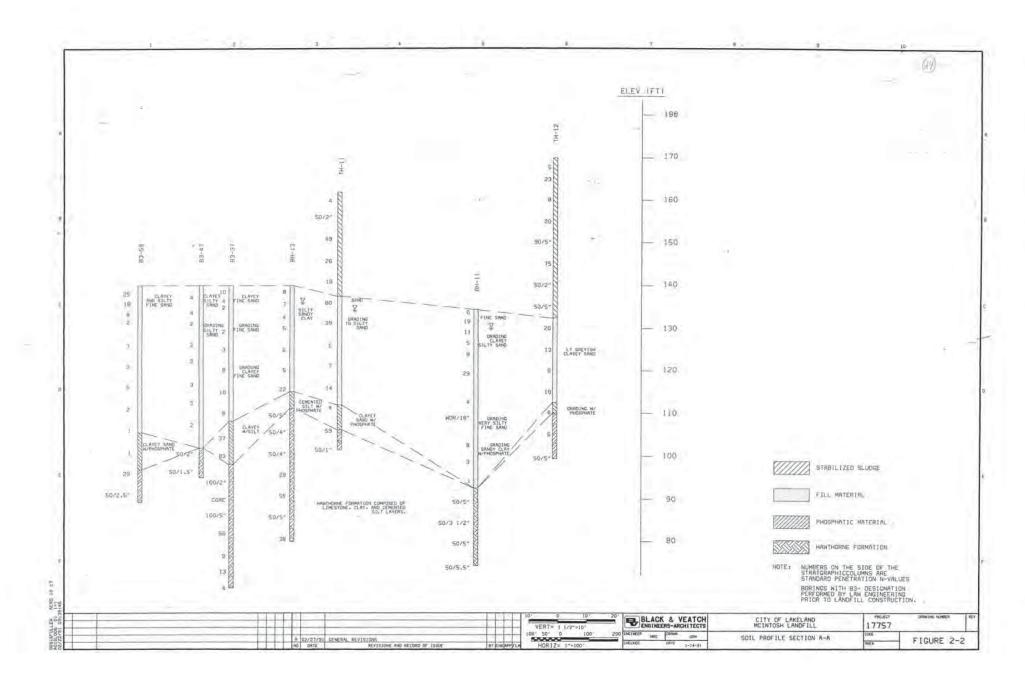


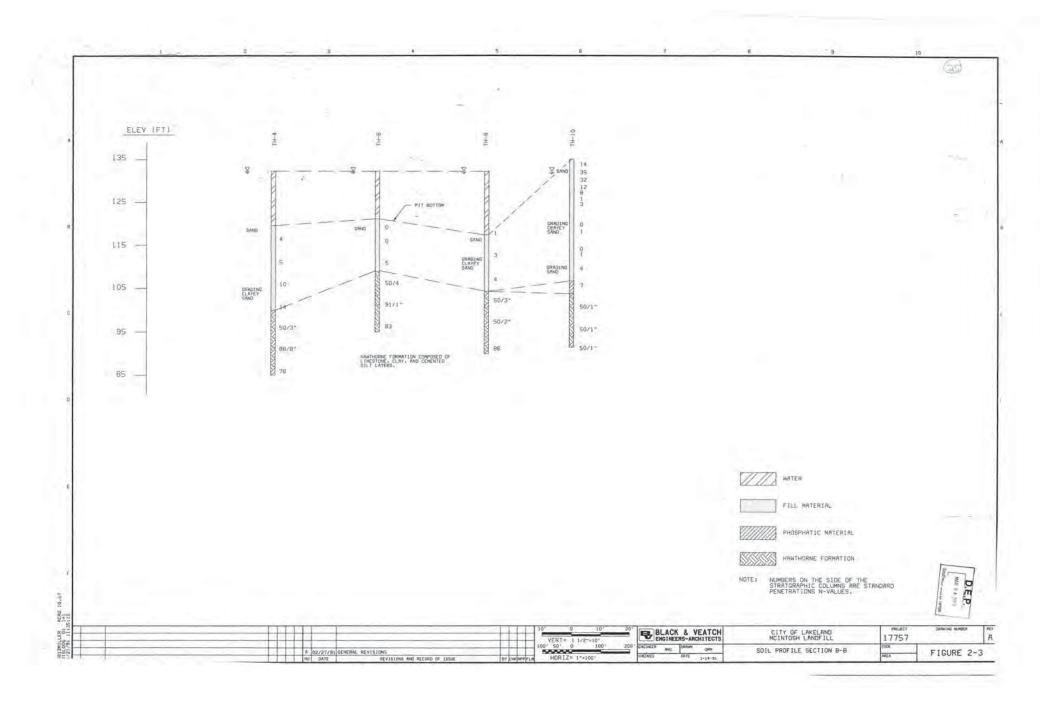


APPENDIX A

Soil Boring Logs and Location Map



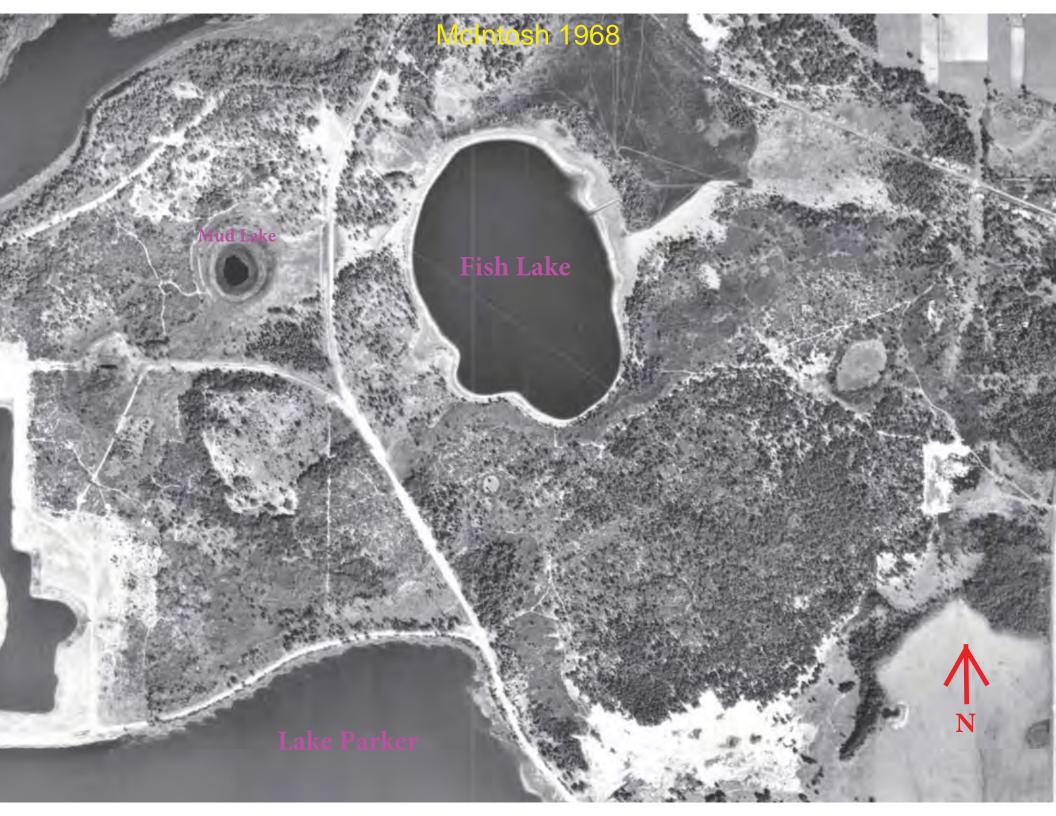


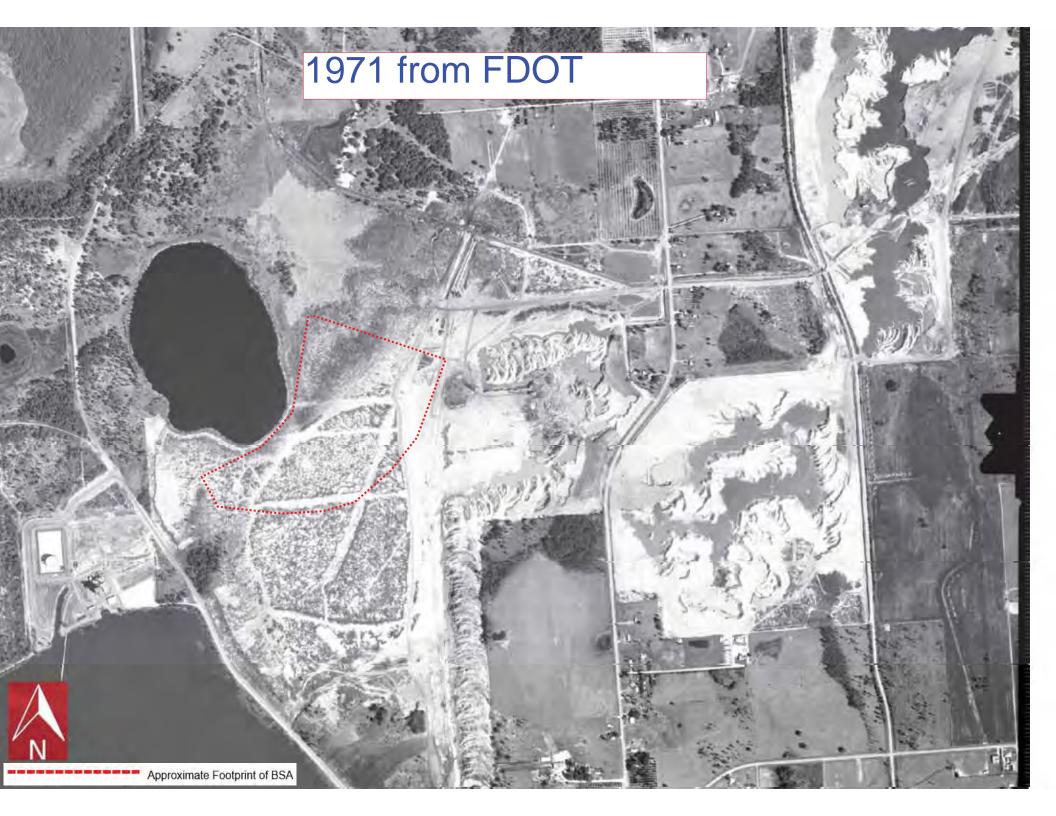


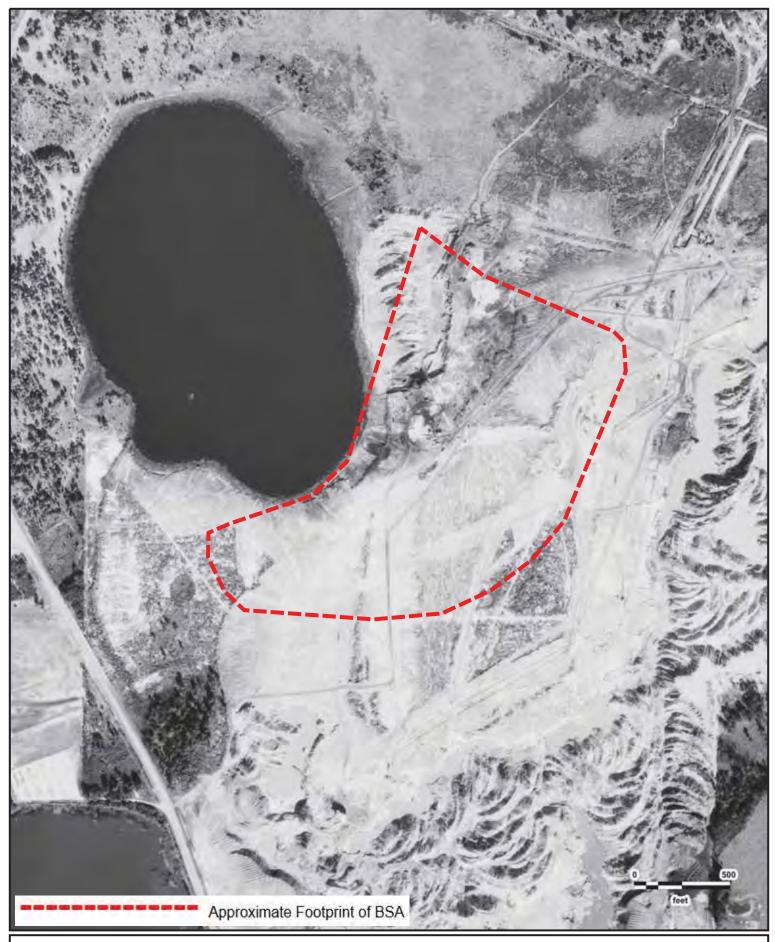
APPENDIX B

Historical Aerial Photographs and Maps







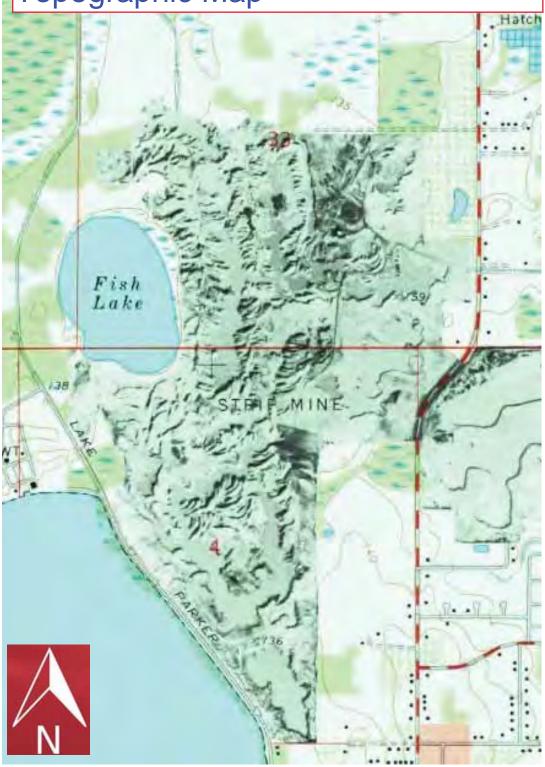


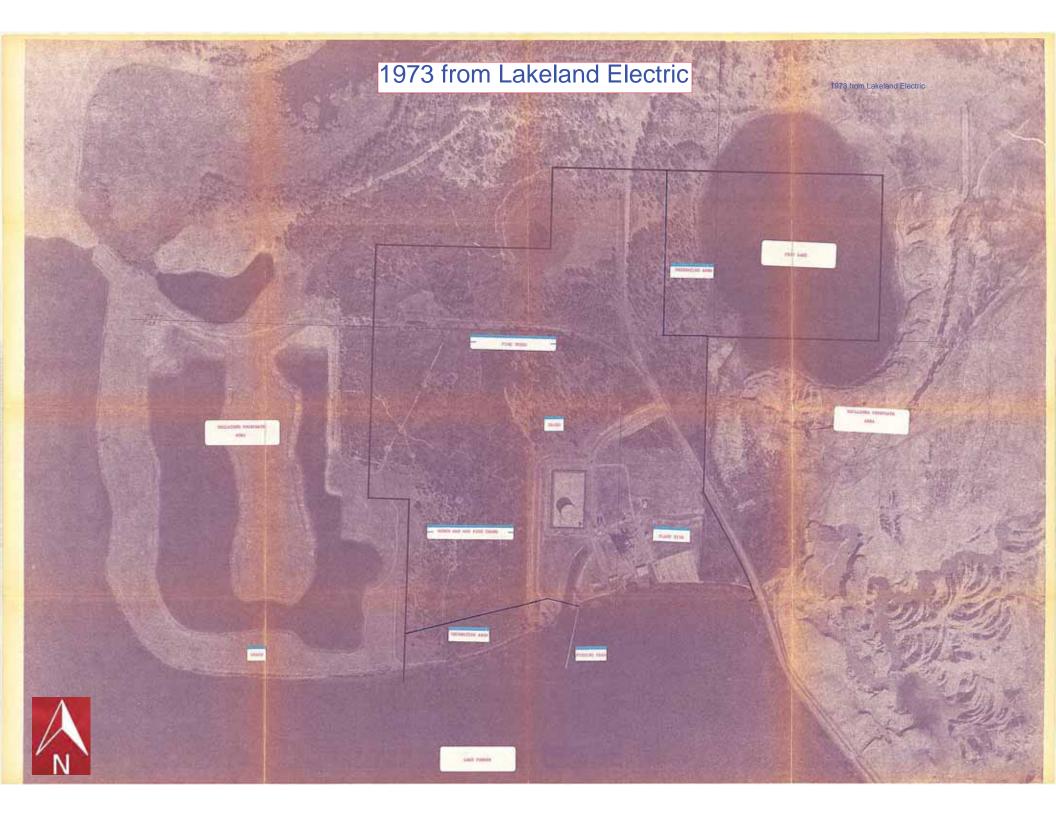


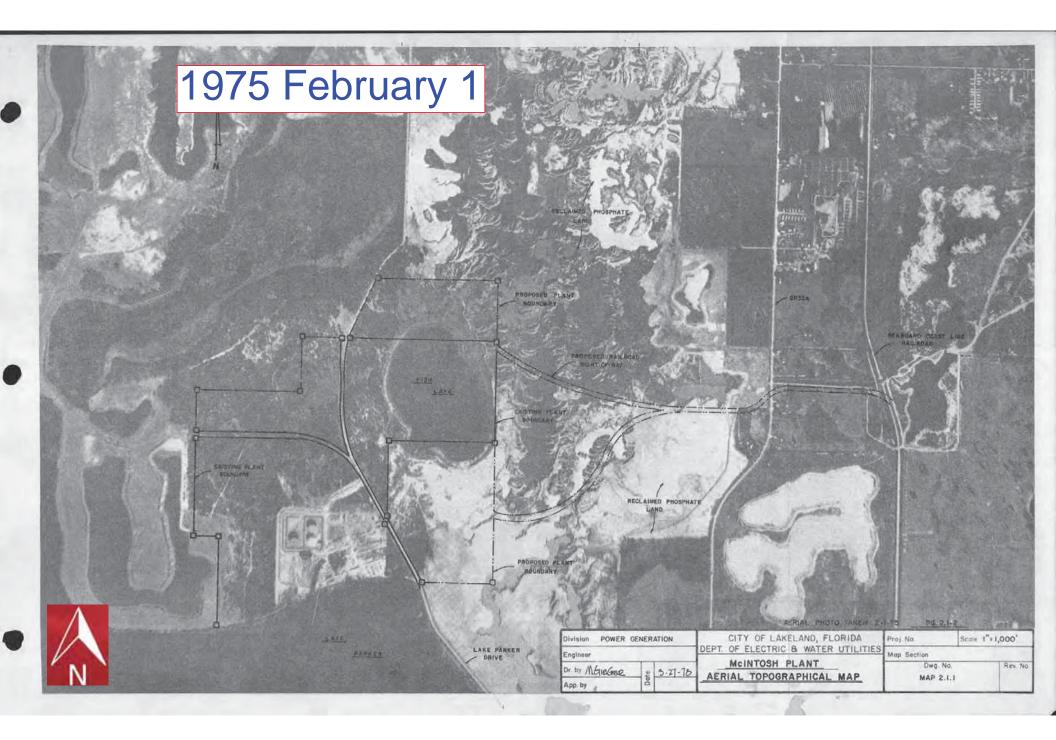
BSA at Lakeland Electric USGS 11/30/1971 (Current boundary shown by dashed red line)



1972 Photo on 1975 USGS Topographic Map







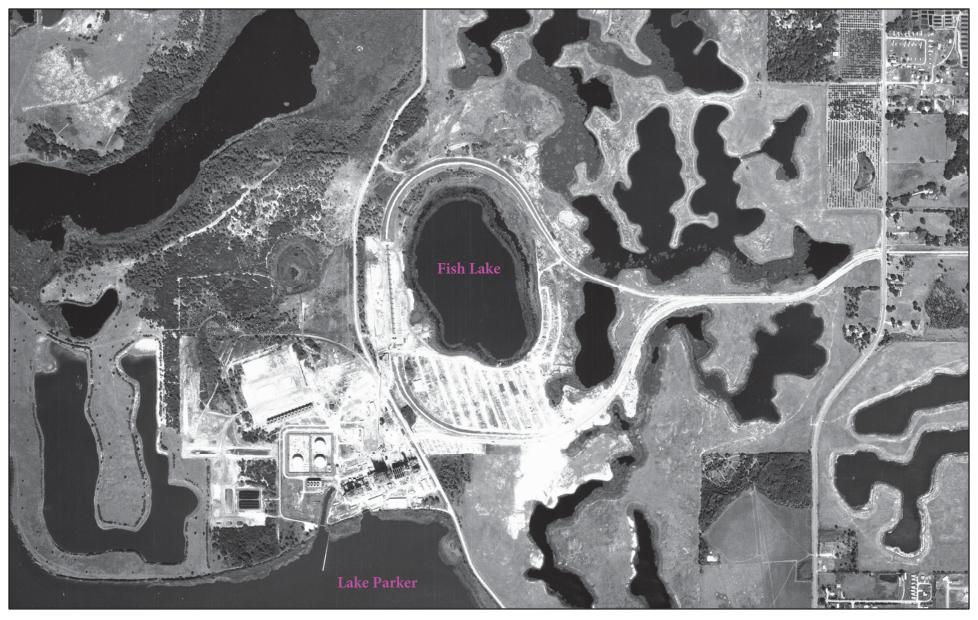




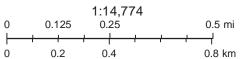
BSA at Lakeland Electric USGS 11/26/1977 (Current boundary shown by dashed red line)

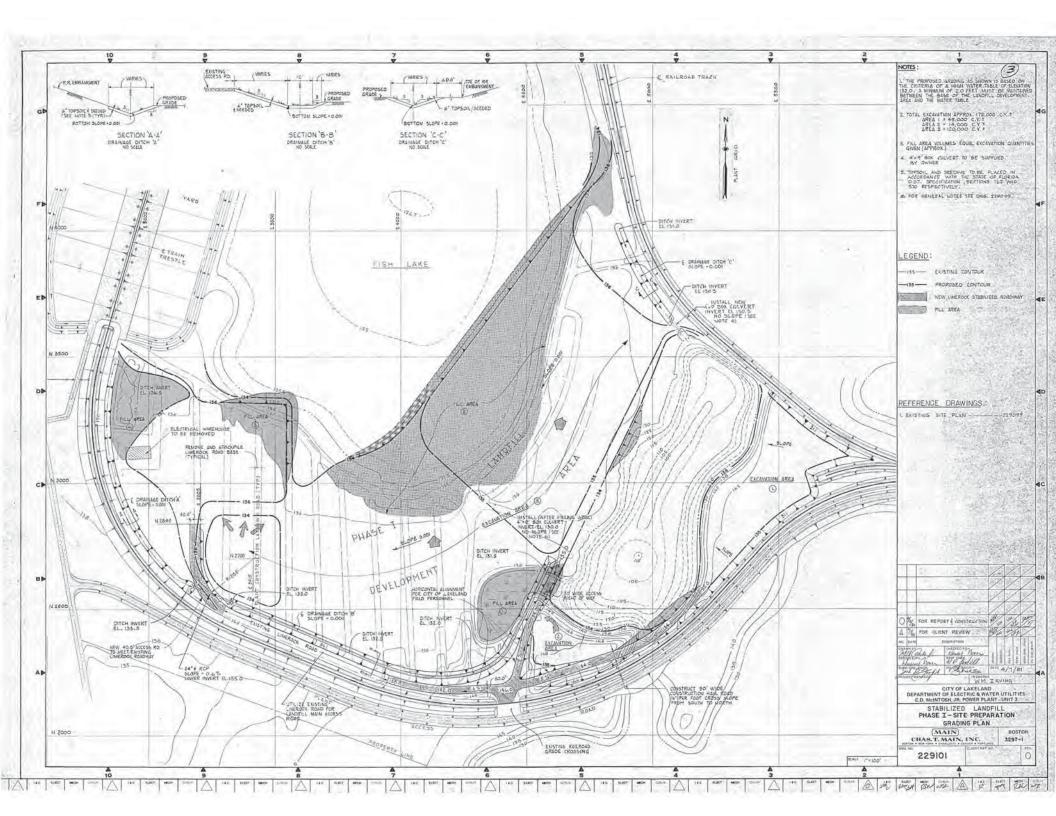


McIntosh 1980













BSA at Lakeland Electric USGS 03/02/1984 (Current boundary shown by dashed red line)

GeoSearch

APPENDIX C

Record of Borehole Logs for CCR-2A, CCR-4A, CCR-5A, CCR-7A, CCR-13A, and CCR-14A

RECORD OF BOREHOLE CCR-2A

PROJECT: Lakeland Electric CCR PROJECT NUMBER: 19117001 DRILLED DEPTH: 30.0 ft AZIMUTH: N/A LOCATION: Lakeland, FL DRILL METHOD: Direct Push DRILL RIG: Geoprobe 3230 DT DATE STARTED: 2/11/2019 DATE COMPLETED: 2/11/2019 DATUM: NAD83 / NAVD88 COORDS: N: 1,362,203.9 E: 681,787.6 GS ELEVATION: 137.6 ft TRC ELEVATION: N/A ft TEMPERATURE: 74° F

INCLINATION: -90 5 DEPTH W.L.: 5.9 ft ELEVATION W.L.: 131.70 ft DATE W.L.: 3/12/2019 TIME W.L.: 10:45

SHEET 1 of 1

DATE STARTED: 2/11/2019 GS ELEVATION: 137.6 ft
DATE COMPLETED: 2/11/2019 TRC ELEVATION: N/A ft
WEATHER: Partly cloudy TEMPERATURE: 74° F

		SOIL PROFILE				
 E	NO.	SUIL FROFILE			F1 = 1	
DEPTH (ff)	ELEVATION (ft)	DESCRIPTION	nscs	GRAPHIC LOG	DEPTH	COMMENTS
0 -		0.0 - 1.0 SAND, fine; brown, dry	SP		(ft)	Borehole location is adjacent to monitoring
-	-	1.0 - 2.0			136.6 1.0	well CCR-2; survey coordinates shown are from CCR-2.
_	-	SAND, fine; grayish brown, dry 2.0 - 4.0	SP		135.6	Solution 2.) Ground surface elevation is estimated based on ground surface elevation of
-	— 135 —	SAND, fine; light gray, dry	SP			monitoring well CCR-2. 3.) Boreholes were backfilled with 20/30 graded silica sand to 5 ft bgs and the remaining borehole was filled with bentonite
5 -	- -	4.0 - 7.5 SAND, trace organics, fine to medium, subrounded to subangular, poorly graded; dark brown to black	SP		133.6 4.0	chips to land surface. 4.) Water-level elevations are estimated based on depth-to-water measurements from adjacent monitoring well CCR-2. 5.) Density descriptions are based on field
-	_ 				130.1	observations and not form SPT blow counts. 6.) Soil cores were collected and transported to Golder's Tampa office. The soil cores were later logged by M. Boatman for mineralogic
10 —		7.5 - 10.8 SAND, fine to medium, subround to subangular, uniform grading; light tan to white, moist	SP		7.5	description of lithology. 7.) Based on lithologic descriptions, mine tailings and/or fill was encountered from approximately ground surface to 20 ft bgs and in-situ residual soil and/or weathered rock from 20 ft bgs to terminal depth.
-	_ _ - - 125	10.8 - 13.5 SAND, fine, subrounded, uniform; dark brown to black, compact, wet	SP		126.9	
-	- -	13.5 - 15.8 No Recovery			124.1 13.5	
15 –	1				121.9	
-	- - - 120	15.8 - 18.4 SAND, fine, subrounded; light brown to light grey (white with small round black heavy mineral), wet	SP		15.8	
_	-	18.4 - 19.5 SAND, fine; dark brown to black (grains are brown), compact to dense,	SP		119.2	
20 -	-	wet 19.5 - 20.0			118.1 117.6	
-	-	\ No Recovery 20.0 - 23.0 SAND, very fine, subrounded; light brown to tan with a dark brown to black coating with small black opaque grains, compact to very dense, wet	SP		20.0	
-	— 115 -	23.0 - 23.5	SC	////	114.6	-
-		CLAYEY SAND; tan to light brown, wet 23.5 - 25.0 SAND, very fine, subrounded; light brown to tan with a dark brown to	SP		23.5	
25 -	- -	black coating with small black heavy mineral, compact to very dense, wet 25.0 - 27.5 SAND, fine subrounded, uniform grading; brown, loose to compact, wet	SP		112.6 25.0	
	- 110	27.5 - 30.0 SAND, fine, subrounded; tan to white with small black heavy minerals, compact to dense, wet	SP		110.1 27.5	
30 -	·	Boring completed at 30.0 ft		<u>le kab</u>	107.6	
	- - -					

LOG SCALE: 1 in = 4 ft

GEOTECH NO SPT 1545454.2_REV1 (1).GPJ 5/30/19

GLDR

DRILLING COMPANY: Action Environmental

DRILLER: Omar Velazquez

INSPECTOR: M. Boatman CHECKED BY: G. Morelli

DATE: 5/30/19



RECORD OF BOREHOLE CCR-4A

PROJECT: Lakeland Electric CCR PROJECT NUMBER: 19117001 DRILLED DEPTH: 30.0 ft AZIMUTH: N/A LOCATION: Lakeland, FL

DRILL METHOD: Direct Push DRILL RIG: Geoprobe 3230 DT DATE STARTED: 2/11/2019 DATE COMPLETED: 2/11/2019 WEATHER: Partly cloudy

DATUM: NAD83 / NAVD88 COORDS: N: 1,362,450.0 E: 683,042.7 GS ELEVATION: 140.3 ft

TRC ELEVATION: N/A ft TEMPERATURE: 86° F

INCLINATION: -90 DEPTH W.L.: 11.05 ft ELEVATION W.L.: 129.25 ft DATE W.L.: 3/12/2019 TIME W.L.: 10:57

SHEET 1 of 1

SOIL PROFILE ELEVATION (ft) DEPTH (ft) ELEV. GRAPHIC LOG **NSCS** DESCRIPTION COMMENTS DEPTH (ft) 0 140 0.0 - 1.01.) Borehole location is adjacent to monitoring SAND, fine; brown, dry SP well CCR-4; survey coordinates shown are 139.3 from CCR-4. 1.0 - 2.0 1.0 SP SAND, fine, some gravel and silt; brown, dry 2.) Ground surface elevation is estimated 138.3 based on ground surface elevation of monitoring well CCR-4. 2.0 - 5.0 2.0 SAND, fine, some silt; brown, dry 3.) Boreholes were backfilled with 20/30 graded silica sand to 5 ft bgs and the remaining borehole was filled with bentonite SP-SM chips to land surface 4.) Water-level elevations are estimated based 135.3 5 on depth-to-water measurements from 135 5.0 - 10.4 5.0 adjacent monitoring well CCR-4. SILTY SAND, fine, subrounded to subangular, uniform grading; dark brown to black, dry to moist 5.) Density descriptions are based on field observations and not form SPT blow counts. 6.) Soil cores were collected and transported to Golder's Tampa office. The soil cores were later logged by M. Boatman for mineralogic description of lithology. SM 7.) Based on lithologic descriptions, mine tailings and/or fill was encountered from approximately ground surface to 19.5 ft bgs and in-situ residual soil and/or weathered rock 10 from 19.5 ft bgs to terminal depth. 129.9 130 10.4 - 13.6 10.4 SAND, fine to medium, subrounded, uniform grading; dark brown with small black heavy minerals, loose to very loose, wet SP 12.0 - 13.6 contact water is black 126.7 13.6 - 15.0 13.6 SAND, very fine, subrounded, uniform grading; dark brown with small SP black heavy minerals, compact, wet 125.3 15 15.0 - 15.8 SAND, fine to medium, subrounded, uniform grading; dark brown with 15.0 125 SP 124.5 small black heavy minerals, loose to very loose, wet, water is black 15.8 15.8 - 19.5 SAND, fine, subrounded, uniform grading; light to dark brown, compact to dense, wet SP 120.8 195-211 19.5 20 SAND little to some clay; fine, angular to subrounded, uniform grading; SP-SC 120 white to tan with small black heavy minerals, wet 119.2 21.1 - 22.8 21.1 SAND some clay, fine, subrounded; white to pale green, moist SP-SC 117.5 CL 116.9 CLAY some sand and trace gravel; soft; fine, limestone gravel, brownish 23.4 gray; pale green to greenish gray, moist Sandy CLAY, trace to some silt; pale green to white, loose to compact, wet, fossiliferous (weathered limestone) 25 - 115 1545454.2_REV1 (1).GPJ 5/30/19 CL 112.1 28.2 CLAY trace sand and gravel; soft; fine angular sand, fine rounded gravel; green, moist (weathered limestone) CL 110.3 30 Boring completed at 30.0 ft - 110 GEOTECH NO SPT

LOG SCALE: 1 in = 4 ft

H

G

DRILLING COMPANY: Action Environmental

DRILLER: Omar Velazquez

INSPECTOR: M. Boatman CHECKED BY: G. Morelli



RECORD OF BOREHOLE CCR-5A

PROJECT: Lakeland Electric CCR PROJECT NUMBER: 19117001 DRILLED DEPTH: 30.0 ft AZIMUTH: N/A

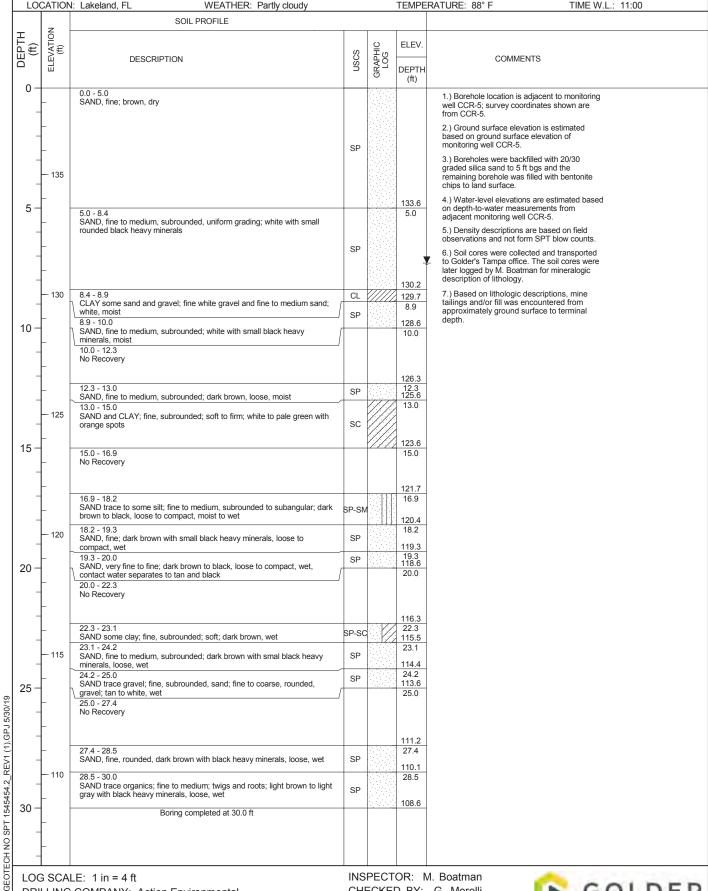
DRILL METHOD: Direct Push DRILL RIG: Geoprobe 3230 DT DATE STARTED: 2/11/2019 DATE COMPLETED: 2/11/2019 WEATHER: Partly cloudy

DATUM: NAD83 / NAVD88 COORDS: N: 1,362,716.0 E: 683,376.9 GS ELEVATION: 138.6 ft

TRC ELEVATION: N/A ft TEMPERATURE: 88° F

SHEET 1 of 1

INCLINATION: -90 DEPTH W.L.: 7.29 ft ELEVATION W.L.: 131.31 ft DATE W.L.: 3/12/2019 TIME W.L.: 11:00



LOG SCALE: 1 in = 4 ft

H

G

DRILLING COMPANY: Action Environmental

DRILLER: Omar Velazquez

INSPECTOR: M. Boatman CHECKED BY: G. Morelli



RECORD OF BOREHOLE CCR-7A

PROJECT: Lakeland Electric CCR PROJECT NUMBER: 19117001 DRILLED DEPTH: 30.0 ft AZIMUTH: N/A LOCATION: Lakeland, FL

DRILL METHOD: Direct Push DRILL RIG: Geoprobe 3230 DT DATE STARTED: 2/11/2019 DATE COMPLETED: 2/11/2019

DATUM: NAD83 / NAVD88
COORDS: N: 1,363,631.9 E: 683,772.2
GS ELEVATION: 139.1 ft
TRC ELEVATION: N/A ft

INCLINATION: -90 DEPTH W.L.: 5.43 ft ELEVATION W.L.: 133.67 ft DATE W.L.: 3/12/2019 TIME W.L.: 11:05

SHEET 1 of 1

WEATHER: Partly cloudy TEMPERATURE: 86° F

SP ELEV. COMMENTS COMMENTS 1.) Borehole location is adjacent to monitoring well CCR-7; survey coordinates shown are from CCR-7. 2.) Ground surface elevation is estimated based on ground surface elevation of monitoring well CCR-7. 3.) Boreholes were backfilled with 20/30 graded silica sand to 5 ft bgs and the
1.) Borehole location is adjacent to monitoring well CCR-7; survey coordinates shown are from CCR-7. 2.) Ground surface elevation is estimated based on ground surface elevation of monitoring well CCR-7. 3.) Boreholes were backfilled with 20/30
1.) Borehole location is adjacent to monitoring well CCR-7; survey coordinates shown are from CCR-7. 2.) Ground surface elevation is estimated based on ground surface elevation of monitoring well CCR-7. 3.) Boreholes were backfilled with 20/30
2.) Ground surface elevation is estimated based on ground surface elevation of monitoring well CCR-7. 3.) Boreholes were backfilled with 20/30
remaining borehole was filled with bentonite chips to land surface.
4.) Water-level elevations are estimated based on depth-to-water measurements from adjacent monitoring well CCR-7.
133.1 5.) Density descriptions are based on field observations and not form SPT blow counts. SP 132.1 6.) Soil cores were collected and transported
se to compact, wet SP 131.7 to Golder's Tampa office. The soil cores were later logged by M. Boatman for mineralogic description of lithology.
niform grading; fine mpact, wet 7.) Based on lithologic descriptions, mine tailings and/or fill was encountered from approximately ground surface to 17 ft bgs and in-situ residual soil and/or weathered rock
129.1 10.0 128.1
k brown with black
SM 124.1
15.0
122.1 prown to black, wet SP-SM 17.0 121.3
CL 17.8 120.6 120.6 18.5
grading; dark brown, SP-SM 119.1
ng; white clay; brown
SP/CL
114.1
25.0
113.0 SP 112.5 SC/CL 111.9
green, wet 27.2
SP SP
n, loo

GLDR

DRILLER: Omar Velazquez



RECORD OF BOREHOLE CCR-13A

PROJECT: Lakeland Electric CCR PROJECT NUMBER: 19117001 DRILLED DEPTH: 30.0 ft AZIMUTH: N/A

DRILL METHOD: Direct Push DRILL RIG: Geoprobe 3230 DT DATE STARTED: 2/12/2019 DATE COMPLETED: 2/12/2019

DATUM: NAD83 / NAVD88 COORDS: N: 1,362,936.6 E: 682,164.1 GS ELEVATION: 135.0 ft TRC ELEVATION: N/A ft

INCLINATION: -90 DEPTH W.L.: 2.39 ft ELEVATION W.L.: 132.61 ft DATE W.L.: 3/12/2019 TIME W.L.: 11.58

SHEET 1 of 1

LOCATION: Lakeland, FL WEATHER: Partly cloudy TEMPERATURE: 72° F SOIL PROFILE ELEVATION (ft) DEPTH (ft) ELEV. GRAPHIC LOG **NSCS** DESCRIPTION COMMENTS DEPTH (ft) 0 135 0.0 - 2.01.) Borehole location is adjacent to monitoring SAND, fine; light brown, dry well CCR-13; survey coordinates shown are SP from CCR-13. 2.) Ground surface elevation is estimated 133.0 based on ground surface elevation of monitoring well CCR-13. 2.0 - 4.0 2.0 SAND, fine; dark grayish brown, dry 3.) Boreholes were backfilled with 20/30 SP graded silica sand to 5 ft bgs and the remaining borehole was filled with bentonite 131.0 chips to land surface 4.0 - 5.0 SAND, fine; brown, dry 4.0 SP 4.) Water-level elevations are estimated based 130.0 130 5 on depth-to-water measurements from 50-71 5.0 adjacent monitoring well CCR-13. SAND, fine, subrounded, uniform grading; black to dark gray, loose, moist to wet 5.) Density descriptions are based on field SP observations and not form SPT blow counts. 6.) Soil cores were collected and transported to Golder's Tampa office. The soil cores were 127.9 7.1 later logged by M. Boatman for mineralogic description of lithology. SILTY SAND, fine, uniform grading; tan to white, compact to dense, wet SM 7.) Based on lithologic descriptions, mine tailings and/or fill was encountered from approximately ground surface to 25 ft bgs and in-situ residual soil and/or weathered rock 125.6 94 - 100 SP 125.0 SAND, fine, uniform grading; black with heavy minerals, loose, wet 10 125 from 25 ft bgs to terminal depth. 10.0 10.0 - 12.0 No Recovery 123.0 12.0 - 15.0 12.0 SAND, fine to medium, subrounded; dark brown, loose to compact, wet SP 14.2: root encountered 120.0 15 120 15.0 - 17.0 15.0 No Recovery 118.0 17 0 - 19 0 17.0 SAND trace to some clay, fine, uniform grading; grayish brown/tan with black heavy minerals, loose, wet. SP-SC - two black bands at 17.3 and 17.6 ft bgs 116.0 19.0 - 20.0 19.0 SP SAND, fine, uniform grading; grayish brown with black heavy minerals, compact, moist 115.0 20 115 20.0 SAND, fine to medium, uniform grading; tan to white wih heavy minerals SP 110.0 25 110 CLAY trace sand; fine, sand; white to pale green, firm to stiff, slight mottling, moist 1545454.2_REV1 (1).GPJ CL

LOG SCALE: 1 in = 4 ft

30 -- 105

GEOTECH NO SPT

H

G

DRILLING COMPANY: Action Environmental

Boring completed at 30.0 ft

DRILLER: Omar Velazquez

INSPECTOR: M. Boatman CHECKED BY: G. Morelli

105.0



RECORD OF BOREHOLE CCR-14A

PROJECT: Lakeland Electric CCR PROJECT NUMBER: 19117001 DRILLED DEPTH: 30.0 ft AZIMUTH: N/A

DRILL METHOD: Direct Push DRILL RIG: Geoprobe 3230 DT DATE STARTED: 2/12/2019 DATE COMPLETED: 2/12/2019

DATUM: NAD83 / NAVD88 INCLINATION: -90
COORDS: N: 1,362,771.1 E: 681,761.2 DEPTH W.L.: 3.76 ft
GS ELEVATION: 135.8 ft
TRC ELEVATION: N/A ft
DATE W.L.: 3/12/2019

SHEET 1 of 1

	NOIT)			O	ELEV.	
# (#)	ELEVATION (ft)	DESCRIPTION	nscs	GRAPHIC LOG	DEPTH	COMMENTS
0 —		00.50		Ö	(ft)	
_	— 135	0.0 - 5.0 SAND, fine; brown, dry to moist				1.) Borehole location is adjacent to monitoring well CCR-14; survey coordinates shown are from CCR-14.
_	-					Ground surface elevation is estimated based on ground surface elevation of
_	_		SP			monitoring well CCR-14. 3.) Boreholes were backfilled with 20/30
_	_				<u> </u>	graded silica sand to 5 ft bgs and the remaining borehole was filled with bentonite chips to land surface.
5 –	_				130.8	Water-level elevations are estimated based on depth-to-water measurements from
_	— 130	5.0 - 7.4 SAND some silt; fine, subrounded, uniform grading; grayish brown, wet, loose			5.0	adjacent monitoring well CCR-14. 5.) Density descriptions are based on field
	_	6.3: 6.3-6.7 ft bgs, CLAY pocket; soft; white, moist	SP-SM	1		observations and not form SPT blow counts. 6.) Soil cores were collected and transported
		7.4 - 10.0 SAND, fine, subrounded, uniform grading; light to medium grayish brown,			7.4	to Golder's Tampa office. The soil cores were later logged by M. Boatman for mineralogic description of lithology.
_	_	moist 8.6: 8.6-8.8 ft bgs, (CL) CLAY; soft; white, moist	SP			7.) Based on lithologic descriptions, in-situ residual soil and/or weathered rock was
					125.8	encountered from approximately ground surface to terminal depth.
10 –	— 125	10.0 - 11.2 No Recovery			10.0	
_	_	11.2 - 12.3 SILTY SAND, fine, subrounded, uniform graded; white to light gray, wet,	SM		124.6 11.2	
-	-	loose 12.3 - 15.0			123.5 12.3	
-		CLAYEY SAND to Sandy CLAY, fine, subrounded; white to tan, moist, compact	SC/CL			
-	_					
15 –	_	15.0 - 16.4 No Recovery		<i>77.7.7</i>	120.8 15.0	
-	— 120 -	16.4 - 18.3		77.77	119.4 16.4	
-	_	CLAYEY SAND to Sandy CLAY, fine to coarse, subangular, fossil fragments; white to pale green, wet, loose to compact	SC/CL		10.7	
-	-	18.3 - 20.0			117.5 18.3	
-	-	SAND, fine to medium, subrounded to subangular, uniform grading; moist, compact to dense	SP			
20 –	-	20.0 - 22.8 Sandy CLAY; fine to coarse, subangular coarse (fossil fragments); pale			115.8 20.0	
-	— 115 	green to green, compact to dense (weathered limestone)	CL			
-					140.0	
-	-	22.8 - 25.0 Sandy CLAY, fine to medium; white to pale green, moist, loose to			113.0 22.8	
-	-	compact	CL			
25 –	- 	25.0 - 27.0 Sandy CLAY: fine to coarse, subangular coarse (fassil fragments); pale			110.8 25.0	-
-	— 110	Sandy CLAY; fine to coarse, subangular coarse (fossil fragments); pale green to green, compact to dense (weathered limestone)	CL			
-	- 	27.0 - 30.0			108.8 27.0	-
-	-	CLAY trace sand; coarse sand; green and olive brown mottled, phosphatic grains, moist, stiff to hard (weathered limestone)	CL			
-	 					
30 –		Boring completed at 30.0 ft		<i>\////</i>	105.8	+
-	— 105					
-						

GLDR

DRILLER: Omar Velazquez



APPENDIX D

Geochemical Evaluation of Radium-226+228 in Soils

140000 120000 100000 $R^2 = 0.7949$ Phosphorus (mg/kg) 80000 00009 40000 20000 Uranium (mg/kg) 300 250 200 100 20 **a**

CLIENT
LAKELAND ELECTRIC

4

PROJECT SECTOR GROUNDWATER C.D. MGNITOSH POWER PLANT LAKELAND, POLK COUNTY, FLORIDA TITLE GEOCHEMICAL EVALUATION OF RADIUM-228+228 IN SOILS

PHASE 01

GOLDER

(a)

•	300
8166	250
R= 0.9918	200
	150 Uranium (mg/kg)
	100
	50
Radium[226+228] (pCi/g) 8 8 8 8 8 8 8	0

Results of chemical analysis of soils from boreholes for radionuclides and phosphorus

Soil Boring ID	Depth of samples (ft. bgs.)	Total Uranium (mg/kg)	Phosphorus (mg/kg)	Radium 226 Radium 228 (PCi/g)	Radium 228 (pCi/g)	Total Radiun (pCi/g)
 CCR-4A	24 - 25	280	130,000	75.9	0.726	9.92
 CCR-15	24 - 25	4.5	2,800	0.702	0.328	1.03
CCR-16	24 - 25	4.3	3,000	1.14	1.07	2.21
CCR-18	24 - 25	1.2	800	0.443	ND	0.443
CCR-22	24 - 25	280	90,000	65.2	1.49	2.99
 CCR-23	24 - 25	58	78,000	14.7	0.359	15.1

Notes:
mg/kg- milligrams per kilogram
pCl/g- picocuries per gram
ft. bgs.- feet below ground surface

APPENDIX E

Mineralogical Assessment prepared by Petrologic Solutions, Inc.

Petrologic Solutions, Inc.

3997 Oak Hill Road Douglasville, GA 30135 Tel: (678) 313-4146 rlkath@comcast.net



June 4, 2019 P18-2058

Anthony Grasso, P.G. Golder Associates Inc. 5402 Beaumont Center Boulevard, Suite 108 Tampa, Florida, USA 33634

RE: TRANSMITTAL OF ANALYTICAL RESULTS IN SUPPORT OF THE EVALUATION OF RADIONUCLIDE SOURCES AT THE C.D. McINTOSH POWER PLANT, POLK COUNTY, LAKELAND, FLORIDA

Dear Mr. Grasso:

Petrologic Solutions, Inc. (Petrologic) was retained by Golder Associates Inc. (Golder) to evaluate soil samples for the presence of naturally-occurring radiogenic minerals and elements in support of Lakeland Electric's evaluation of radionuclide sources beneath the Byproduct Storage Area (BSA) at the C.D. McIntosh Power Plant (MPP) in Lakeland, Florida. For this work effort, Petrologic conducted petrographic analysis, qualitative X-ray diffraction (XRD), Scanning Electron Microscopy (SEM), and bulk geochemical analysis of unconsolidated soil samples collected from borings recently advanced at the site. Analytical procedures and results of these analyses are presented herein.

1.0 SAMPLE COLLECTION, PREPARATION, AND DESCRIPTION

Six soil borings were advanced around the perimeter of the BSA adjacent to monitoring wells CCR2, CCR4, CCR5, CCR7, CCR13, and CCR14 in February 2019, using Direct Push Technology (DPT). These additional borings, designated CCR2A, CCR4A, CCR5A, CCR7A, CCR13A, and CCR14A, were each extended to 30 feet below ground surface (ft. bgs). The locations of the borings were selected to evaluate geologic conditions of downgradient monitoring wells that encountered statistically significant levels of Radium-226 (Ra²²⁶) and Radium-228 (Ra²²⁸) during recent groundwater sampling events. An additional boring was located adjacent to CCR2, which occurs in an upgradient or side gradient position relative to the BSA. Golder logged the soil samples collected from the borings on March 1, 2019 and shipped 40 representative samples to Petrologic for analysis. Upon receipt, the soil samples were saturated; consequently, the samples were dried at 100 °C for 12-hours and then relogged by Petrologic.

Based on visual observation of the dried samples, generally two different material types were represented in the 40 samples collected. The upper-most unit consists of subangular to subrounded, fine- to medium-grained sand that varies in color, silt content, and abundance of heavy minerals. The sand-sized material is largely comprised of quartz, feldspar and a variety of dark heavy minerals; mineralogy of the very fine-grained matrix of the sand could not be determined through visual observation. This unit, as represented on the soil logs provided by Golder, ranges from approximately 20 feet to greater than 30 feet thick and was encountered in the upper parts of each of the additional DPT borings advanced. Although the samples show lithologic variability, no lateral continuity was apparent, giving the material a disturbed or disrupted appearance.

A second unit, observed to locally underlie the sand unit, consists of white to buff-tan, very fine-to fine-grained clayey sand to sandy clay with variable concentrations of silt and local occurrence of marine fossils (bryozoans and bivalves) and bone fragments. This lower unit is largely comprised of clay and quartz, with accessory minerals including rounded brown collophane (fine-grained apatite) "balls" and dolomite. Where present, this clayey sand to sandy clay unit, as represented on the soil logs provided by Golder, ranges from at least 5 feet to 10 feet thick and was encountered in the lower part of each of the DPT borings advanced except for CCR2A and CCR5A. The lateral continuity of this material along with the occurrence of dolomite, marine fossils, and bone, indicates that this unit may represent in-situ material.

From the 40 samples provided, Petrologic selected a subset of 16 samples for supplemental evaluation using a variety of analytical techniques, discussed in Section 2.0. These 16 samples were screened for the occurrence of radiogenic minerals using petrographic analysis of polished thin sections, XRD analysis, and radiogenic elements using bulk geochemistry. Based on these results, Petrologic selected a subset of 5 samples for SEM analysis to evaluate the presence of radiogenic minerals observed in thin section.

2.0 ANALYTICAL TECHNIQUES

Petrographic Analysis

Splits of the dried samples were prepared for petrographic analysis. The 16 soil samples selected from CCR2A, CCR4A, CCR5A, CCR7A, CCR13A, and CCR14A were re-dried and vacuum impregnated with clear epoxy by National Petrographic. The samples were mounted to a microscope slide; once the epoxy cured and then cut using a water-based cutoff saw. After drying the epoxy at 130 °C for 35 minutes, the billets were cut off from the microscope slides and the epoxied material was ground to approximately $35\mu m$. After reaching $35\mu m$, the samples were then polished using a roto-polishing system to a final thickness of $30\mu m$. During grinding and polishing of the clayey samples, the clays were absorbing the grinding oils; consequently, the oil was cleaned with acetone repetitively during the grinding and polishing process to prevent oil from impregnating the clays.

Photomicrographs of the thin sections were taken using plane-polarized light (PPL), cross-polarized light (XPL), or reflected light (RL) on standard using an Olympus BX-60 petrographic microscope and Pixelink 662 digital camera in the microscopy lab at the University of West Georgia, Department of Geosciences. Unless otherwise indicated, all images were taken at 5x magnification; the long-edge of the field of view in the photographs is approximately 2.5 mm in length. Representative photomicrographs are presented in Attachment 1.

Qualitative X-Ray Diffraction - XRD

Splits of the dried samples were prepared for qualitative XRD analysis. The 16 soil samples selected from CCR2A, CCR4A, CCR5A, CCR7A, CCR13A, and CCR14A were ground using a mortar and pestle to create fine-grained powders (~10-12µm-diameter). The fine powders were then loaded on Whatman GF/C glass fiber filters using the Tubular Aerosol Suspension Chamber (TASC) method. This method is used to reduce preferred orientation and allow for a uniform particle distribution over the load area. The samples were loaded into a Philips PW-3710 X-ray diffractometer using a spinning stage pedestal and Cu-K α X-ray source. The samples were run at 0.96 (~1) degree two-theta per minute from 4 to 64 degrees two-theta. Sample identification was conducted using a semi-automated search-match computer program (High Score) which utilizes a Joint Committee on Powder Diffraction Standards (JCPDS) and Crystallography Open (COD) databases; and manual identification using published reference patterns. Additionally, some of the

XRD patterns were overlain with unpublished reference patterns obtained at the University of West Georgia. Interpreted XRD patterns are presented in Attachment 2.

Bulk Geochemistry

Sixteen dried soil samples collected from CCR2A, CCR4A, CCR5A, CCR7A, CCR13A, and CCR14A were provided to American Assay Laboratory (AAL) in Sparks, Nevada for bulk geochemical elemental analysis. All 16 samples were placed in a drying oven at 90°C by AAL prior to analysis. After drying, samples were transferred into ring and puck shatterbox where samples were reduced to a fine powder (200 mesh). A 0.5-gram sample was then weighed and placed into Teflon sample tubes for acid digestion with HNO₃+HCl+HF+HClO₄ for 1 hour. Major, minor and trace element concentrations of the samples were determined by Inductively Coupled Plasma (ICP)- Mass Spectrometry (MS) using ICP-5AM48 protocol. Geochemical results are included as Attachment 3 and summarized on Table 1, presented in Section 3.0.

Scanning Electron Microscopy - SEM

The University of West Georgia Microscopy Center (WGMC) at the Department of Geosciences completed SEM analysis of five polished thin sections, one sample each from CCR2A, CCR7A, and CCR13A, and two samples from CCR14A. The selected thin sections were carbon-coated to reduce surface charging during SEM analysis. Qualitative backscattered electron imaging (BSE) and identification of potential Uranium (U)/Thorium (Th)-bearing accessory minerals in the coated polished thin-sections were conducted using the FEI Quanta 200 SEM instrument and attached Bruker EDX detector for semi-quantitative analysis. Analyses were completed using a 20 kilovolt (kV) accelerating voltage on the filament and a partial vacuum of 0.45 Torr in the sample chamber. Images, spectra, and elemental maps were collected, processed, and annotated using the Bruker ESPRIT software package. Images resulting from the SEM analyses are presented in Attachment 4.

3.0 RESULTS

Petrographic Analysis

Petrographic analysis was conducted on all 16 polished thin-sections to determine the major and minor mineralogy of each sample. Based on petrographic analysis of the upper sand, this unit is characterized by more than 95 volume percent detrital quartz, which is typically subangular to subrounded. Associated with the quartz are accessory minerals that include microcline, muscovite, staurolite, kyanite, zircon, rutile, and ilmenite. The matrix of the sand is variably comprised of kaolinite and eylettersite, and is locally cemented with wavellite.

Based on petrographic analysis of the lower clayey sand to sandy clay unit, this unit is characterized by subangular sand in a clayey matrix. Large rounded grains of collophane, marine fossils (Bryozoa and Molluska), and bone fragments also occur within this more clay-rich unit. Collophane is a massive cryptocrystalline apatite comprised of apatite, fluorapatite and hydroxyapatite. Typically, apatite-minerals are not optically isotropic; however, the cryptocrystalline nature of the collophane makes it optically isotropic in thin section. In one sample, CCR14A (28.3-28.6), dolomite is present in the clayey matrix. Accessory minerals include microcline, staurolite, ilmenite, and zircon.

Photomicrographs for selected samples are presented in Attachment 1.

Qualitative X-Ray Diffraction - XRD

X-Ray powder diffraction scans were completed on all 16 samples to identify the major minerals present. A limitation of XRD analysis is that the lower detection limit is approximately 4 to 5 weight percent. Therefore, diffraction peaks for accessory minerals that are less than approximately 5 weight percent of the rock are typically lost in the background. As previously discussed, the samples are loaded GF/C filters using an aerosol suspension chamber. This method of sample preparation reduces preferred orientation; however, it is a thin layer diffraction technique. Consequently, each of the XRD scans presented in Attachment 2 shows two aluminum peaks that represent the aluminum sample holder upon which the loaded filters are mounted; therefore, aluminum-metal is not contained in these samples.

Consistent with the petrographic analysis, XRD analysis indicates that mineralogy of the upper sand unit is primarily comprised of quartz with minor zircon. Kaolinite and wavellite were also observed, along with the presence of eylettersite occurring in increased concentration near the base of this unit.

The lower clay-rich unit is characterized by the occurrence of quartz, hydroxyapatite, fluorapatite, palygorskite, and minor wavellite. Additionally, the deepest sample, collected from CCR14A at 28.3-28.6 ft. bgs, contains dolomite. Annotated XRD scans for the selected samples are presented in Attachment 2.

Bulk Geochemistry

A summary of selected major, minor and trace elemental geochemistry of soil samples from CCR2A, CCR4A, CCR5A, CCR7A, CCR13A, and CCR14A is presented on Table 1. A complete listing of all geochemical data is presented in Attachment 3.

As indicated in these summary results, the radiogenic elements uranium and thorium were detected in all of the samples collected from the upper sand unit and lower clayey sand to sandy clay unit. The radiogenic elements rubidium and potassium were also detected in many of the samples.

Scanning Electron Microscopy - SEM

Petrographic and XRD analyses indicated the presence of minerals that are potentially radiogenic, and bulk geochemistry confirms the presence of radiogenic elements. Scanning Electron Microscopy was used to confirm the presence of the radiogenic elements detected in the bulk geochemistry in the radiogenic minerals identified in thin section and XRD patterns.

Radiogenic minerals identified from SEM analyses in representative sediment samples include the following:

Zircon Rutile

Ilmenite Wavellite

Hydroxyapatite Fluorapatite

Collophane Eylettersite

Energy dispersive spectroscopy (EDS), back scatter electron (BSE) images, and element maps of soil samples are presented as Attachment 4. In the BSE images, minerals that contain elements with low atomic numbers are shown in gray tones. Minerals that contain elements with large atomic numbers, generally show up as "bright" spots on the BSE image. Because

uranium and thorium have atomic numbers of 92 and 90, respectively, minerals that contain these elements are "brighter" than the surrounding matrix.

Once a mineral with high atomic number elements was identified in the BSE image, the mineral was analyzed using energy dispersive spectroscopy. EDS is an analytical technique for elemental analysis based on x-ray emission caused by electrons that are dislodged from the inner orbitals by an x-ray beam from the instrument. As the inner electron is ejected from the inner shell, the electron hole is filled by electrons from higher-energy shells. transformation from an outer- to an inner-shell releases energy in the form of an x-ray that can be detected and quantified. The energy of the x-ray is characteristic for different elements and can be displayed on an EDS spectrum as a function of electron volts (KeV). EDS and BSE plots for each sample analyzed is presented in Attachment 4.

Discussion

Based on review of historic aerial photographs, topographic maps and mine records, Golder has interpreted that the BSA and surrounding area are underlain by either fine-grained phosphatic mine tailings and/or unmined phosphate deposits. Results from visual observation, petrographic analysis, XRD analysis, bulk chemistry, and SEM analysis conducted for this work effort support this interpretation.

Two types of material were generally encountered in the six additional DPT borings advanced around the BSA. Based on the absence of glass (spherical or shards) in the thin sections or XRD patterns, and relatively low arsenic, beryllium and lithium concentrations, along with the high concentration of wavellite-cemented detrital quartz, microcline, zircon, staurolite, kyanite, ilmenite, and rutile, the upper sand unit encountered is not considered to represent coal combustion residuals (CCR). Although there is lithologic variability in this sand unit, there is no lateral continuity, giving the material a disturbed appearance; consequently, the absence of stratigraphy in a marine sand sequence and known land-use history indicates that this material likely represents backfilled materials, comprised of either removed and replaced overburden, unrecoverable ore, processed mine tailings, and/or mine waste. The underlying clayey-sand to sandy clay unit is interpreted to represent unmined, in-situ material, based on the occurrence of palygorskite, collophane apatite (with quartz inclusions), dolomitic carbonate, marine fossils, and bone fragments.

It is well-documented by Golder that phosphate deposits mined in this area contain naturallyoccurring radiogenic minerals. Based on petrographic, XRD and SEM analysis, several potentially radiogenic minerals were identified in the soil samples collected, including: eylettersite (thoriumbearing aluminum phosphate); wavellite (uranium-bearing aluminum phosphate); collophane, apatite, hydroxyapatite, and fluorapatite (uranium-bearing calcium phosphates); and zircon, rutile, and ilmenite (uranium-bearing oxides). This is further supported by the detection of uranium concentrations up to 467ppm and thorium concentrations up to 23.4ppm in the bulk geochemistry, as summarized in Table 1 and presented in Attachment 3.

Radioactive decay products from naturally occurring radionuclides such as uranium and thorium are potential sources of Ra²²⁶ and Ra²²⁸. Results from this investigation and regional mineral resource evaluations reveal significant uranium and other accessory constituents that are associated with the phosphate ore mined at and near the BSA. Published uranium concentrations in phosphate-bearing rocks have typical concentrations of up to 300 ppm, significantly exceeding concentrations reported for US coals and fly ash (USGS 1997). As shown on Table 1, naturally occurring radionuclides in phosphate ore and mine tailings surrounding the BSA are consistent with, and locally have higher concentrations of uranium than published concentrations in CCR.

Based on research conducted by Golder, the BSA is located in one of the most productive districts of the land-pebble phosphate mining in Florida. Because land-pebble deposits contain phosphates with elevated concentrations of uranium, this district was also of economic interest to the United States Atomic Energy Commission (USACE) (Cathcart, 1949). Uranium is associated in different ways with the aluminum phosphate and calcium phosphate mining zones that occur within these types of deposits. The upper sand unit encountered around the BSA, appears to represent materials originally derived from the aluminum phosphate zone, indicated by the presence of wavellite, eylettersite, and kaolinite. Materials located in the leached portions of the aluminum phosphate zone, originally formed by the downward migration of oxygen-rich acidic water, were noted to have uranium concentrated in the finest fraction (Cathcart, 1964). The principal fine fraction in the leached zone is kaolinitic clay and eylettersite.

The lower clayey-sand unit appears to represent the calcium phosphate zone, which was the target ore that was mined beneath the BSA. Cathcart (1964) described this zone as being comprised of unconsolidated sand, clayey sand, and sandy clay containing abundant nodules of calcium phosphate. We interpret the rounded collophane "balls" which consist of apatite, hydroxyapatite, and fluorapatite to represent the calcium phosphate nodules described by Cathart (1964). Samples from this zone represent unmined, in-situ material that are locally present beneath the BSA.

Based on the results of this work effort, multiple sources for naturally occurring uranium and thorium, and their decay products of Ra²²⁶ and Ra²²⁸, were identified in the unconsolidated samples taken from the DPT borings advanced adjacent to monitoring wells installed around the BSA.

4.0 CLOSING

Petrologic Solutions appreciates the opportunity to work with Golder Associates on this project. Should you require additional information related to this evaluation, please do not hesitate to contact us.

Respectfully submitted,

PETROLOGIC SOLUTIONS INC.

Kandy L. Kell

Randy Kath, PhD, PG

Senior Geologist and Principal

References:

Cathcart, J.B., 1964, Economic Geology of the Lakeland Quadrangle Florida. USGS Survey Bulletin 1162-G. US Government Printing Office, Washington.

USGS 1997. Radioactive Elements in Coal and Fly Ash: Abundance, Forms, and Environmental Significance. USGS Fact Sheet FS-163-97

Table 1. Summary of Selected Geochemical Data

Attachment 1: Photomicrographs of Sediment Samples

Attachment 2: Qualitative X-Ray diffraction scans

Attachment 3: Bulk Geochemistry

Attachment 4: SEM Backscatter Images and Associated EDS Spectra

Table 1: Summary of Selected Geochemical Data

		Al ₂ O ₃	TiO ₂	Fe ₂ O ₃	MgO	MnO	CaO	K ₂ O	NaO	P ₂ 0 ₅
Sample Number	Depth (ft. BGS)	wt%	wt%	wt%	wt%	wt%	wt%	wt%	wt%	wt%
CCR2A	18.7-19	1.37	1.34	0.35	<mdl< td=""><td>0.01</td><td>0.10</td><td>0.06</td><td>0.01</td><td>0.47</td></mdl<>	0.01	0.10	0.06	0.01	0.47
CCR2A	23-23.5	9.22	1.06	0.50	0.05	0.01	0.51	0.13	0.02	2.29
CCR4A	12.5-12.8	0.42	0.50	0.08	<mdl< td=""><td>0.00</td><td>0.19</td><td>0.03</td><td><mdl< td=""><td>0.05</td></mdl<></td></mdl<>	0.00	0.19	0.03	<mdl< td=""><td>0.05</td></mdl<>	0.05
CCR4A	17-17.4	3.75	0.62	0.13	0.05	0.00	0.20	0.06	0.02	0.67
CCR4A	26.1-26.4	9.12	0.36	0.45	0.10	0.01	23.38	0.36	0.13	>2.30
CCR5A	19.3-20	1.11	0.31	0.06	<mdl< td=""><td>0.00</td><td>0.13</td><td>0.04</td><td>0.03</td><td>0.22</td></mdl<>	0.00	0.13	0.04	0.03	0.22
CCR5A	22.3-22.6	9.32	0.42	0.34	0.05	0.00	0.48	0.10	0.03	1.10
CCR7A	7-7.4	0.59	0.51	0.10	<mdl< td=""><td>0.00</td><td>0.20</td><td><mdl< td=""><td><mdl< td=""><td>0.11</td></mdl<></td></mdl<></td></mdl<>	0.00	0.20	<mdl< td=""><td><mdl< td=""><td>0.11</td></mdl<></td></mdl<>	<mdl< td=""><td>0.11</td></mdl<>	0.11
CCR7A	14.6-15	0.73	0.62	0.13	<mdl< td=""><td>0.01</td><td>0.08</td><td><mdl< td=""><td><mdl< td=""><td>0.16</td></mdl<></td></mdl<></td></mdl<>	0.01	0.08	<mdl< td=""><td><mdl< td=""><td>0.16</td></mdl<></td></mdl<>	<mdl< td=""><td>0.16</td></mdl<>	0.16
CCR7A	23.2-23.5	8.70	0.51	0.71	0.05	0.00	0.90	0.07	0.20	>2.30
CCR13A	9.4-10	0.54	0.94	0.12	<mdl< td=""><td>0.00</td><td>0.41</td><td><mdl< td=""><td><mdl< td=""><td>0.13</td></mdl<></td></mdl<></td></mdl<>	0.00	0.41	<mdl< td=""><td><mdl< td=""><td>0.13</td></mdl<></td></mdl<>	<mdl< td=""><td>0.13</td></mdl<>	0.13
CCR13A	17.3-17.6	4.12	0.36	0.16	0.03	0.00	0.26	0.05	<mdl< td=""><td>1.29</td></mdl<>	1.29
CCR13A	27.8-28.2	17.87	0.68	1.41	0.81	0.01	0.59	0.66	0.05	>2.30
CCR14A	8.6-8.8	7.61	0.46	0.42	0.14	0.00	1.05	0.13	0.02	2.13
CCR14A	16.5-18	11.95	0.53	0.50	0.08	0.01	0.72	0.18	0.02	>2.30
CCR14A	28.3-28.6	2.99	0.17	3.37	6.37	0.02	20.09	0.43	0.26	>2.30
		As	Be	Cr	Pb	Rb	Th	U	V	Zr
Sample Number		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
CCR2A	18.7-19	0.30	0.17	19.5	25.00	4.00	8.50	5.0	19.00	71.0
CCR2A	23-23.5	<mdl< td=""><td>1.22</td><td>42.9</td><td>29.00</td><td>6.00</td><td>12.90</td><td>50.4</td><td>59.00</td><td>70.2</td></mdl<>	1.22	42.9	29.00	6.00	12.90	50.4	59.00	70.2
CCR4A	12.5-12.8	<mdl< td=""><td>0.01</td><td>7.7</td><td><mdl< td=""><td><mdl< td=""><td>1.70</td><td>1.2</td><td>6.00</td><td>17.6</td></mdl<></td></mdl<></td></mdl<>	0.01	7.7	<mdl< td=""><td><mdl< td=""><td>1.70</td><td>1.2</td><td>6.00</td><td>17.6</td></mdl<></td></mdl<>	<mdl< td=""><td>1.70</td><td>1.2</td><td>6.00</td><td>17.6</td></mdl<>	1.70	1.2	6.00	17.6
CCR4A	17-17.4	0.30	0.20	19.2	13.00	3.00	6.80	5.3	16.00	37.7
CCR4A	26.1-26.4	3.40	1.80	136.1	11.00	16.00	9.70	185.5	119.00	51.8
CCR5A	19.3-20	<mdl< td=""><td>0.05</td><td>6.6</td><td>6.00</td><td>2.00</td><td>2.10</td><td>4.1</td><td>5.00</td><td>15.9</td></mdl<>	0.05	6.6	6.00	2.00	2.10	4.1	5.00	15.9
CCR5A	22.3-22.6	0.70	1.22	49.6	24.00	5.00	8.20	34.2	35.00	44.0
CCR7A	7-7.4	0.60	0.05	7.9	4.00	<mdl< td=""><td>1.70</td><td>1.4</td><td>6.00</td><td>42.5</td></mdl<>	1.70	1.4	6.00	42.5
CCR7A	14.6-15	<mdl< td=""><td>0.05</td><td>10.1</td><td>4.00</td><td><mdl< td=""><td>2.00</td><td>0.9</td><td>6.00</td><td>30.7</td></mdl<></td></mdl<>	0.05	10.1	4.00	<mdl< td=""><td>2.00</td><td>0.9</td><td>6.00</td><td>30.7</td></mdl<>	2.00	0.9	6.00	30.7
CCR7A	23.2-23.5	<mdl< td=""><td>0.93</td><td>50.5</td><td>22.00</td><td>3.00</td><td>8.80</td><td>35.0</td><td>33.00</td><td>60.9</td></mdl<>	0.93	50.5	22.00	3.00	8.80	35.0	33.00	60.9
CCR13A	9.4-10	0.40	0.04	11.4	16.00	<mdl< td=""><td>4.80</td><td>3.0</td><td>13.00</td><td>76.1</td></mdl<>	4.80	3.0	13.00	76.1
CCR13A	17.3-17.6	<mdl< td=""><td>0.49</td><td>23.4</td><td>12.00</td><td>3.00</td><td>6.30</td><td>22.4</td><td>25.00</td><td>43.5</td></mdl<>	0.49	23.4	12.00	3.00	6.30	22.4	25.00	43.5
CCR13A	27.8-28.2	0.20	1.58	162.8	21.00	41.00	23.40	164.4	247.00	167.2
CCR14A	8.6-8.8	<mdl< td=""><td>1.47</td><td>48.4</td><td>26.00</td><td>8.00</td><td>11.40</td><td>96.2</td><td>50.00</td><td>93.3</td></mdl<>	1.47	48.4	26.00	8.00	11.40	96.2	50.00	93.3
CCR14A	16.5-18	0.60	4.24	112.3	31.00	10.00	16.60	467.0	48.00	94.2
CCR14A	28.3-28.6	5.30	0.69	84.3	6.00	20.00	4.00	34.8	123.00	19.0

<MDL- less than method detection limit

 $FN: T: \\ \label{eq:final_constraint} FN: T: \\ \label{eq:final_constraint} P18-2058_Lakel and Electric_ASE_Lakel and Electric_ASE_final.docx$

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ATTACHMENT 1 PHOTOMICROGRAPHS OF SELECT THIN SECTIONS

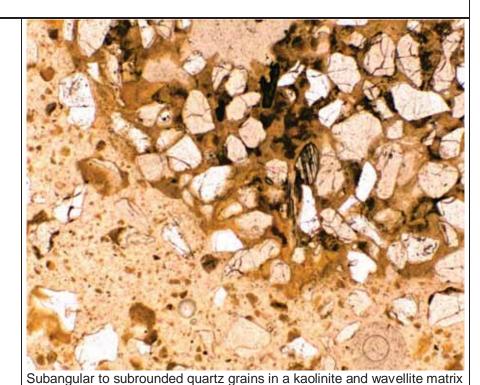
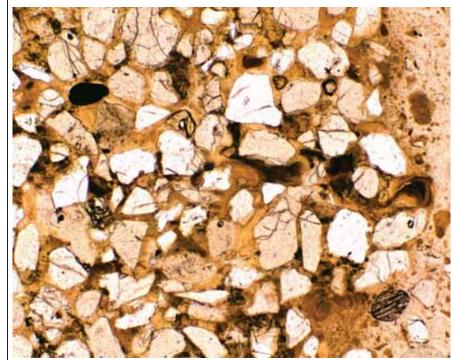


PHOTO 1

CCR2A 23.0-23.5



CCR2A 23.0-23.5



(brown). Striated high-relief mineral is kyanite. Minor rutile. Plane light.

Subangular to subrounded quartz grains in a kaolinite and wavellite matrix (brown). Striated high-relief mineral is kyanite; rounded opaque grain is ilmenite; pleochroic yellow minerals are staurolite. Plane light.



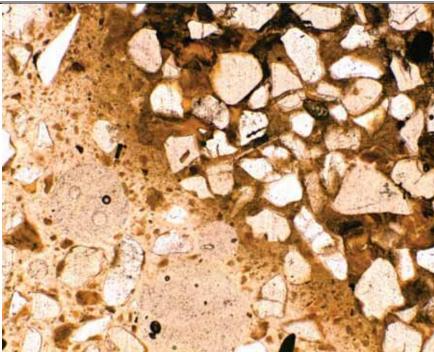


PHOTO 3 CCR2A 23.0-23.5

Subangular to subrounded quartz grains in a kaolinite and wavellite matrix (brown). Greenish mineral is zircon; elongate mineral is muscovite Plane light.

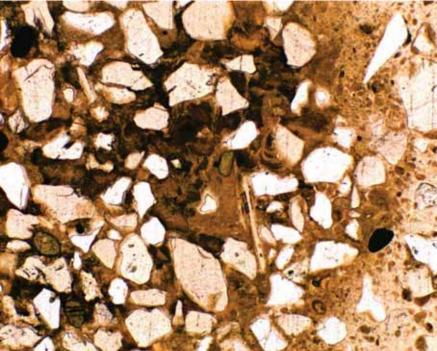


PHOTO 4 CCR2A 23.0-23.5

Subangular to subrounded quartz grains in a kaolinite and wavellite matrix (brown). Greenish minerals are zircon; elongate mineral is muscovite; rounded opaque mineral is ilmenite. Plane light.



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Lakeland Electric

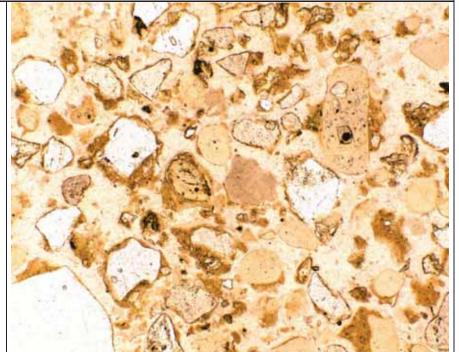


PHOTO 1

CCR4A 26.1-26.4

Subangular to subrounded quartz grains in a kaolinite, wavellite, and apatite matrix (brown). Plane light.

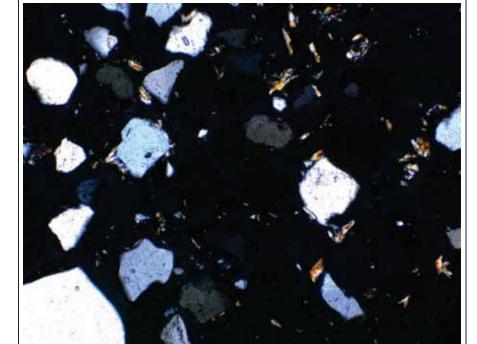


PHOTO 2

CCR4A 26.1-26.4

Subangular to subrounded quartz grains in a kaolinite, wavellite, and apatite matrix (brown). Polarized light.



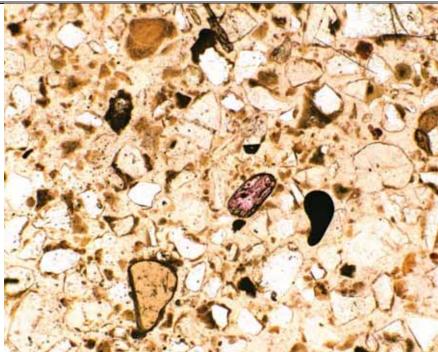


PHOTO 1 CCR7A 23.2-23.5

Subangular to subrounded quartz grains in a kaolinite, apatite, and wavellite matrix (brown). Yellow and pleochroic minerals are staurolite; opaque mineral is ilmenite. Plane light.

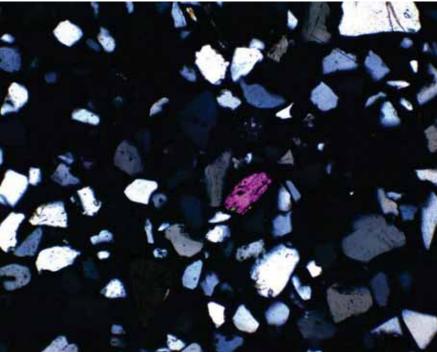


PHOTO 2

CCR7A 23.2-23.5

Subangular to subrounded quartz grains in a kaolinite, apatite, and wavellite matrix (brown). Greenish and purple mineral are staurolite. Polarized light.



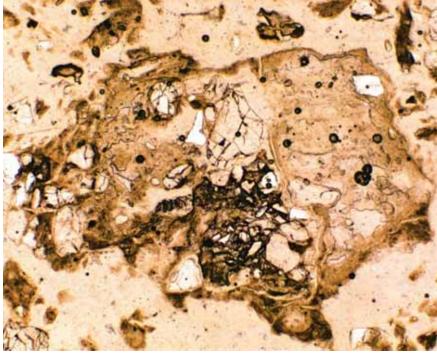


PHOTO 1

CCR13A 27.8-28.2

Minor subangular quartz grins in a clay and wavellite matrix. Plane light.

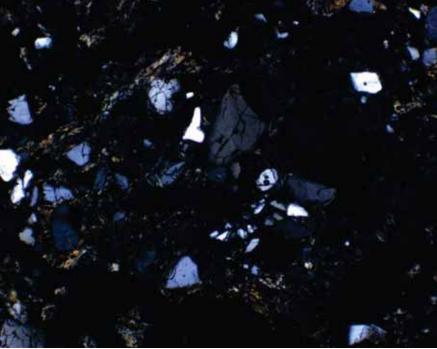


PHOTO 2 CCR13A 27.8-28.2

Minor subangular quartz grins in a clay and wavellite matrix. Polarized light.



PHOTO 3

CCR13A 27.8-28.2

Wavellite cement around an angular quartz grain. Plane light.

РНОТО 4

CCR13A 27.8-28.2

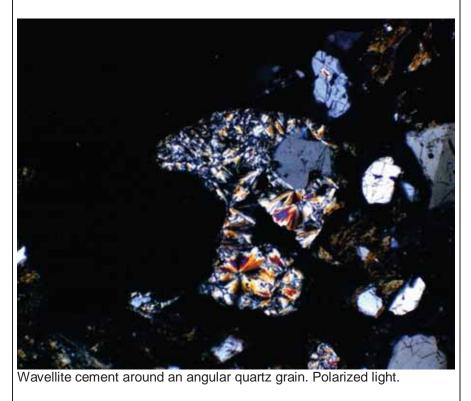




PHOTO 1

CCR14A 28.3-28.66



Collophane apatite "balls" in a clay matrix. Plane light

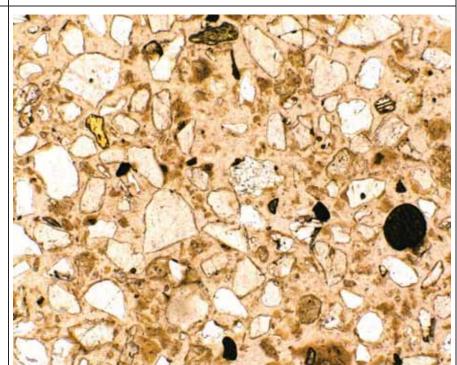
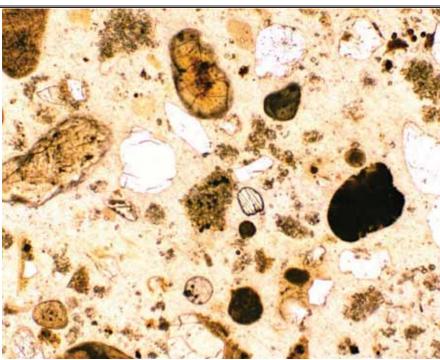


PHOTO 2 CCR14A 16.5-18.0

Subangular to subrounded quartz grains in a kaolinite and wavellite matrix (brown). Yellow mineral is staurolite, striated high-relief mineral is kyanite, and large round mineral is rutile. Plane light.



PHOTO 3 CCR14A 28.3-28.66



Collophane apatite "balls" in a clay and dolomite matrix. Pleochroic grain near the center of the image is staurolite. Plane light.

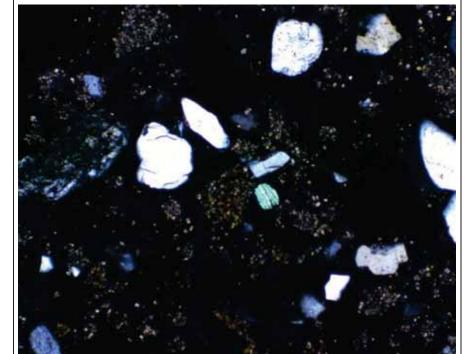


PHOTO 4 CCR14A 16.5-18.0

Collophane apatite "balls" in a clay and dolomite matrix. Greenish grain near the center of the image is staurolite. Polarized light.



PHOTO 5CCR14A 28.3-28.66

Microcline grain (showing twinning) in a clay and wavellite matrix. Polarized light.

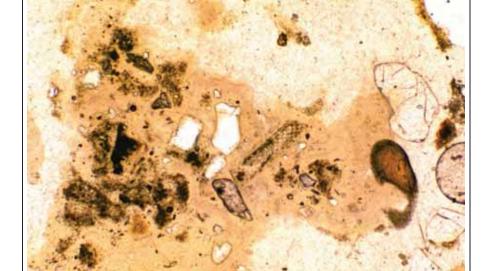


PHOTO 6

CCR14A 16.5-18.0

Fossil fragment (bryozoan?) in a clay-rich matrix . Plane light.



PHOTO 7 CCR14A 28.3-28.66

Phosphatic bone fragment and collophane "balls" in a dolomitic, clay-rich matrix (brown). Polarized light.

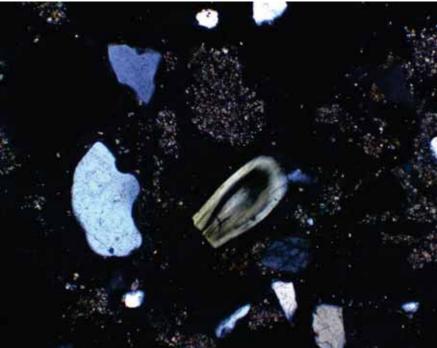


PHOTO 8CCR14A 16.5-18.0

Phosphatic bone fragment and collophane "balls" in a dolomitic, clay-rich matrix (brown). Note undulatory extinction. Polarized light.

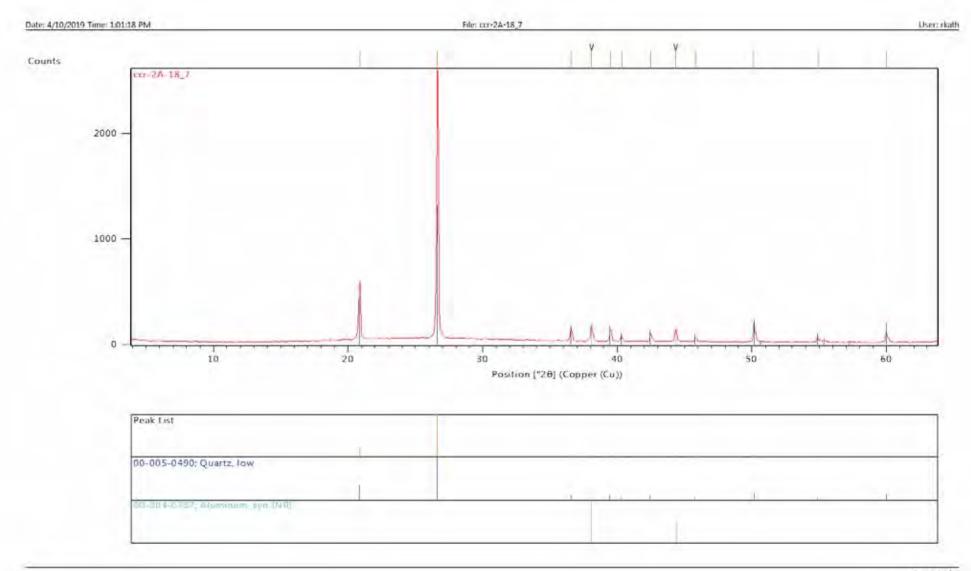


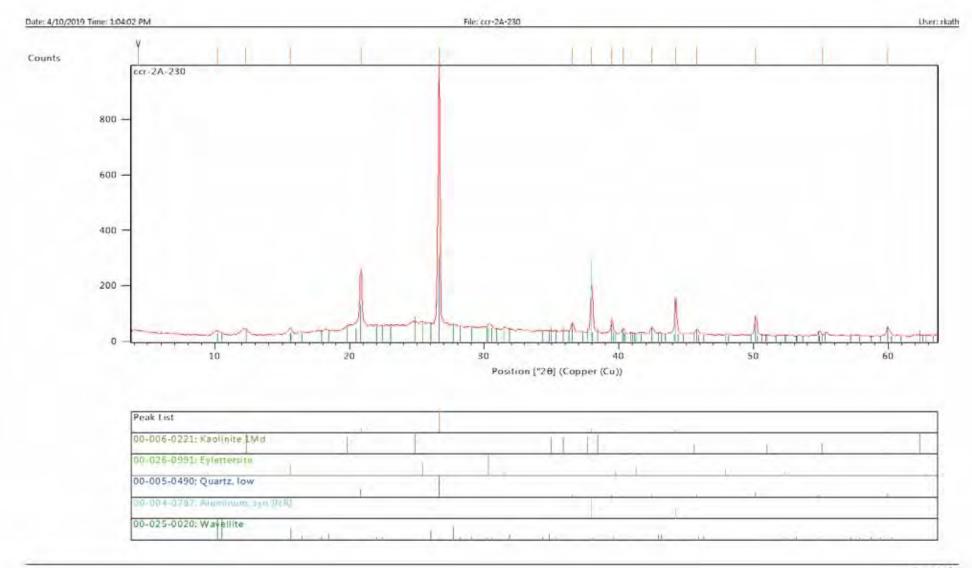
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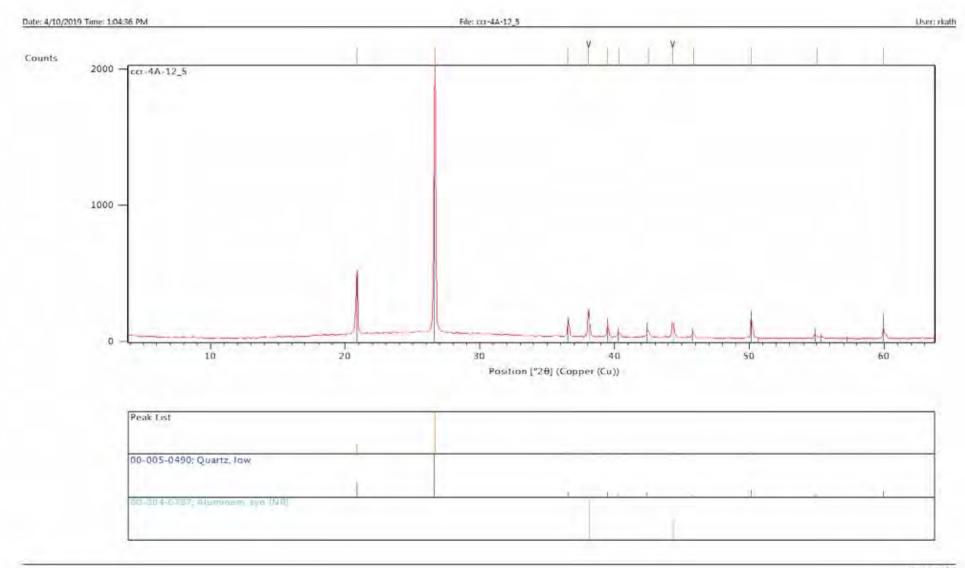
3997 Oak Hill Road Douglasville, GA 30135 *Tel:* (678) 313-4146 *email:* rlkath@comcast.net

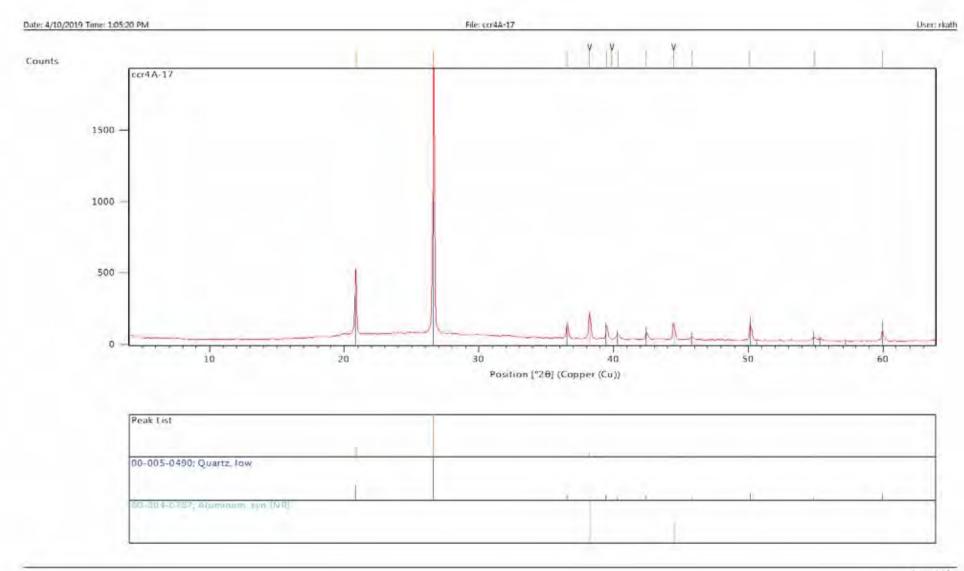


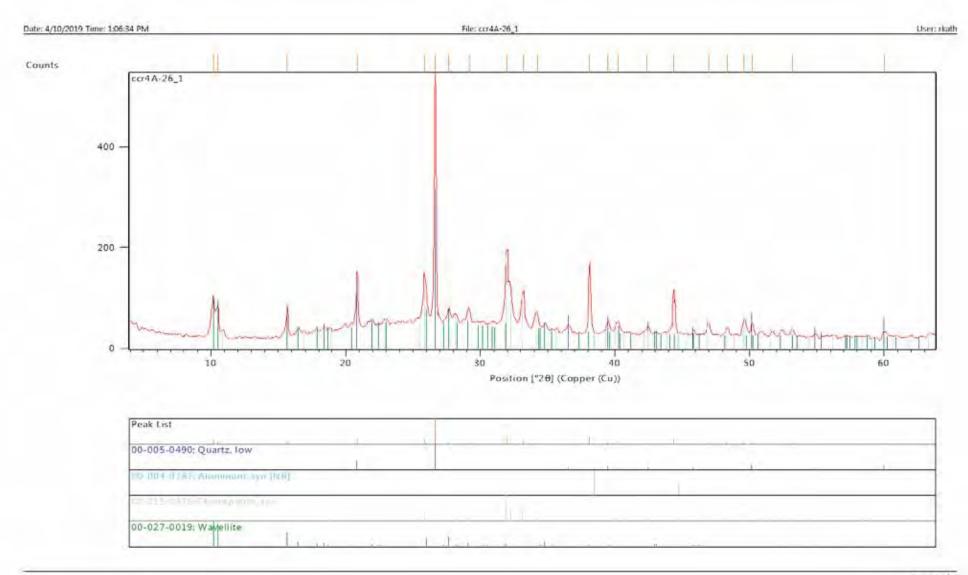
ATTACHMENT 2 QUALITATIVE X-RAY DIFFRACTION DATA

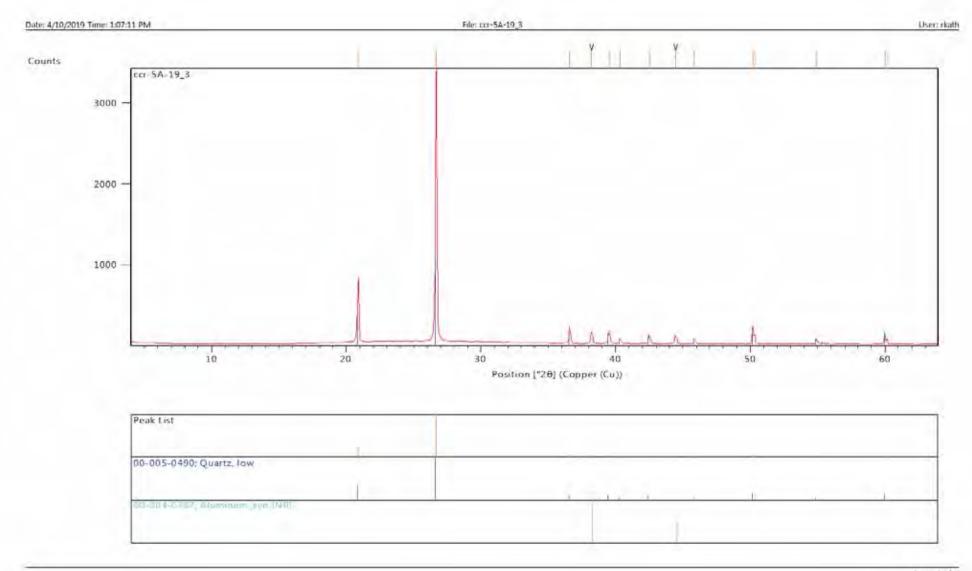


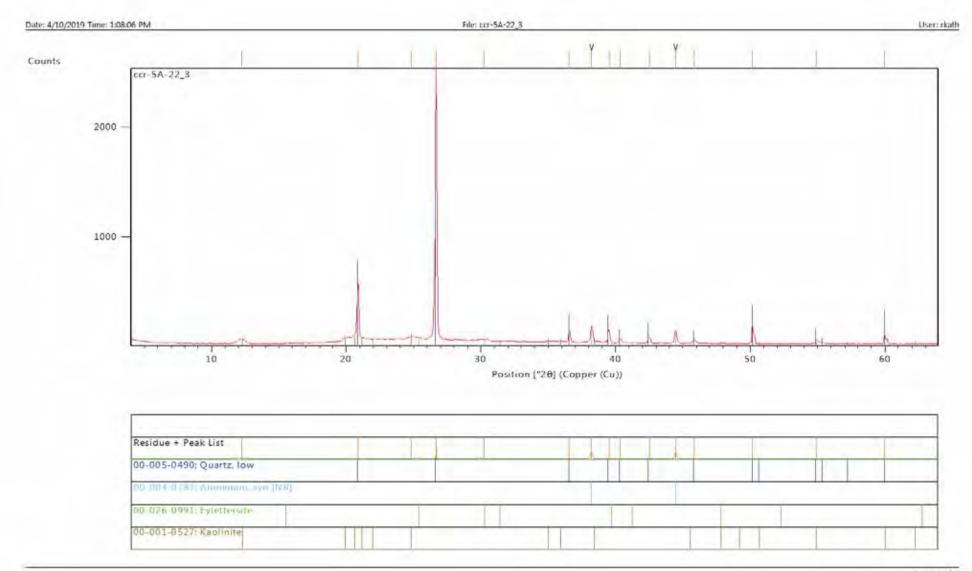


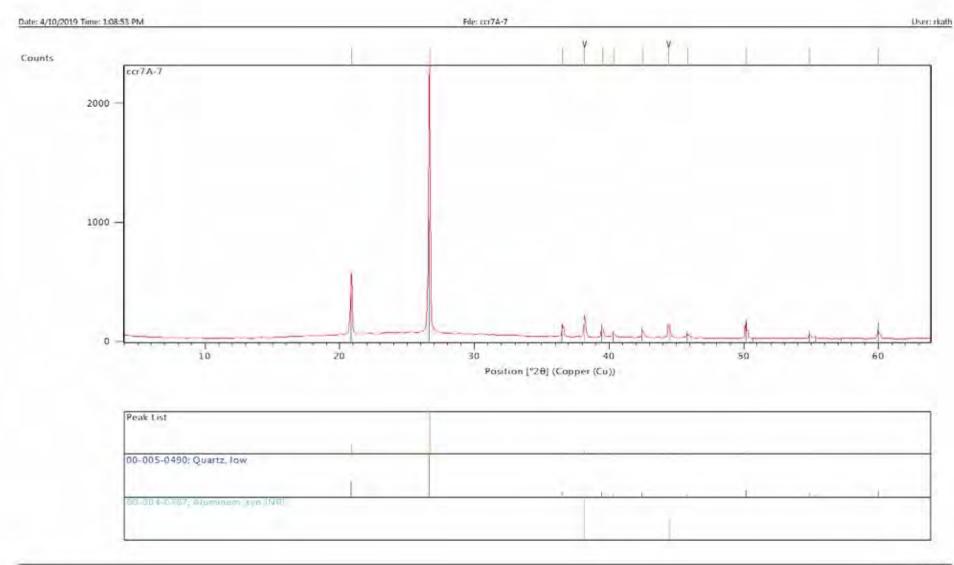




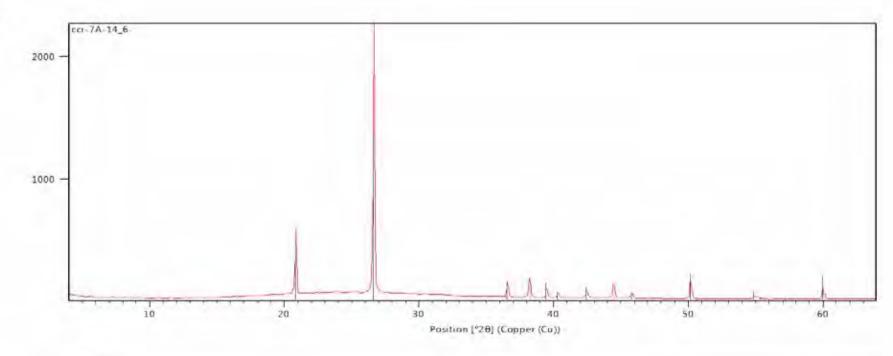


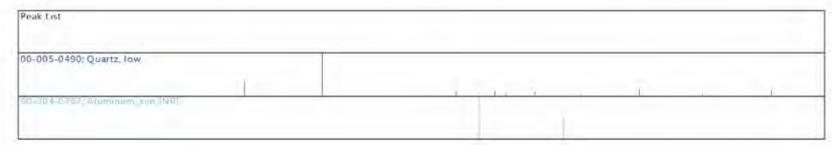


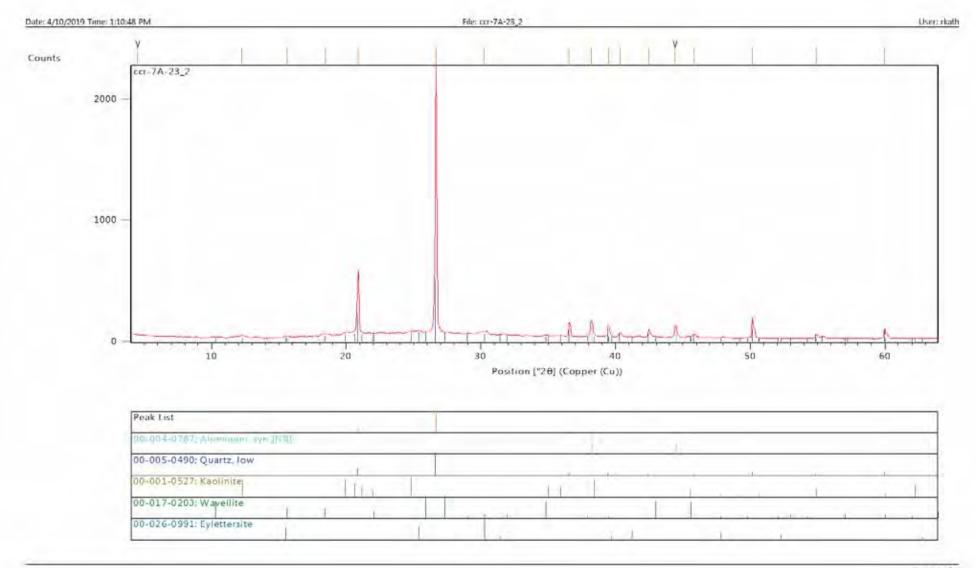


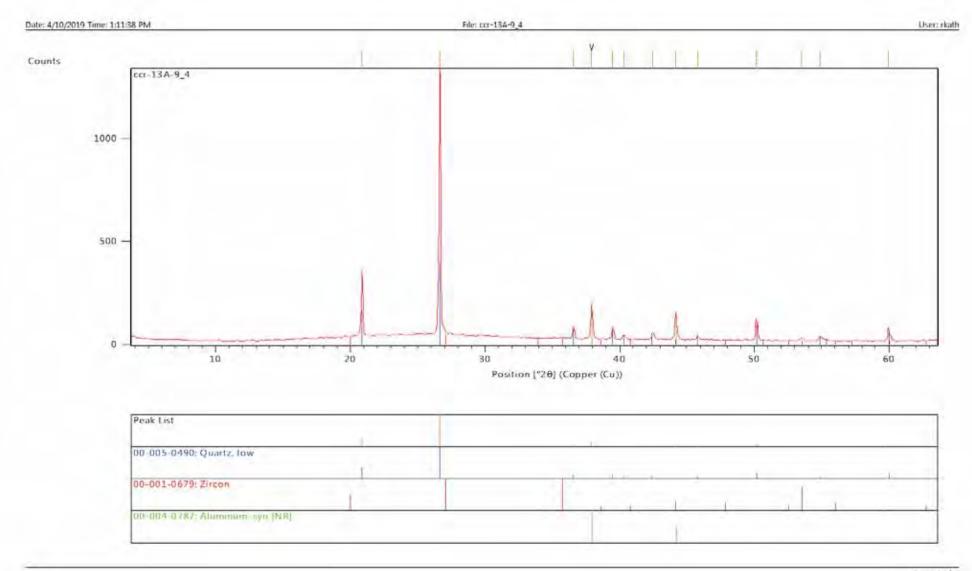


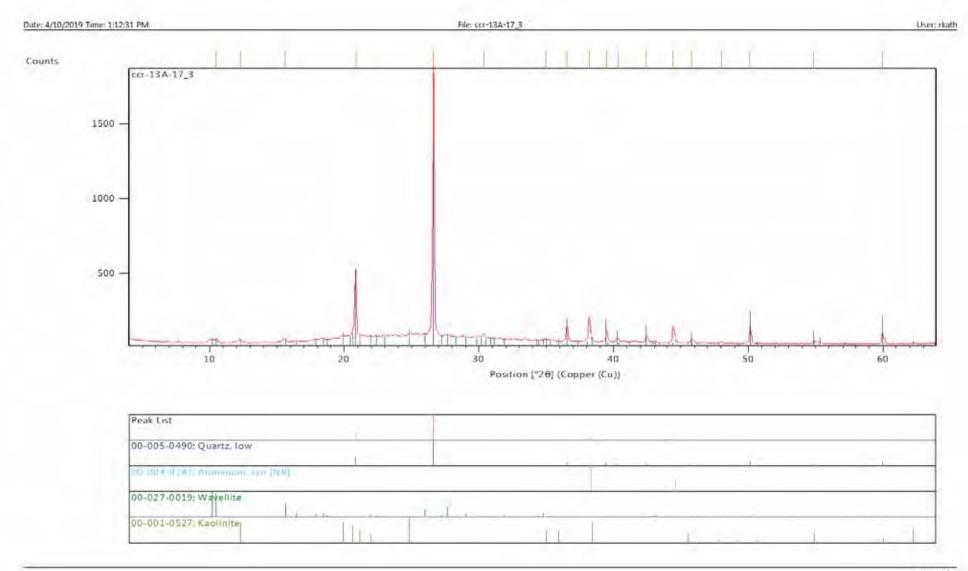




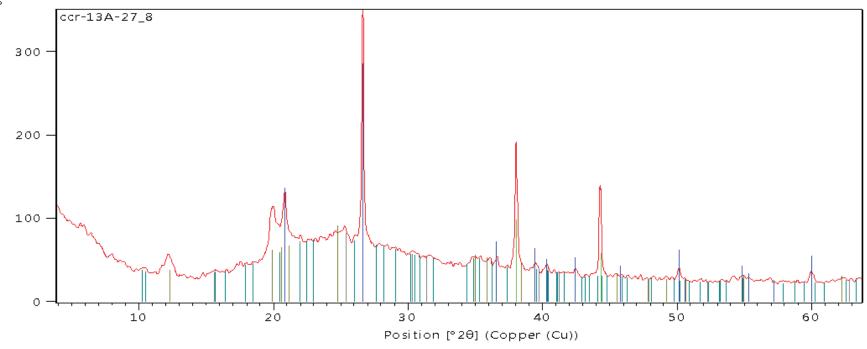


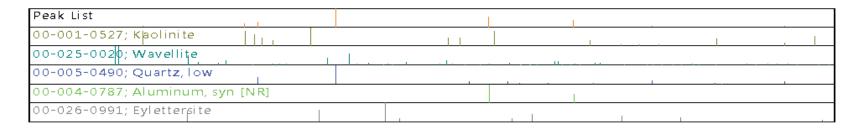


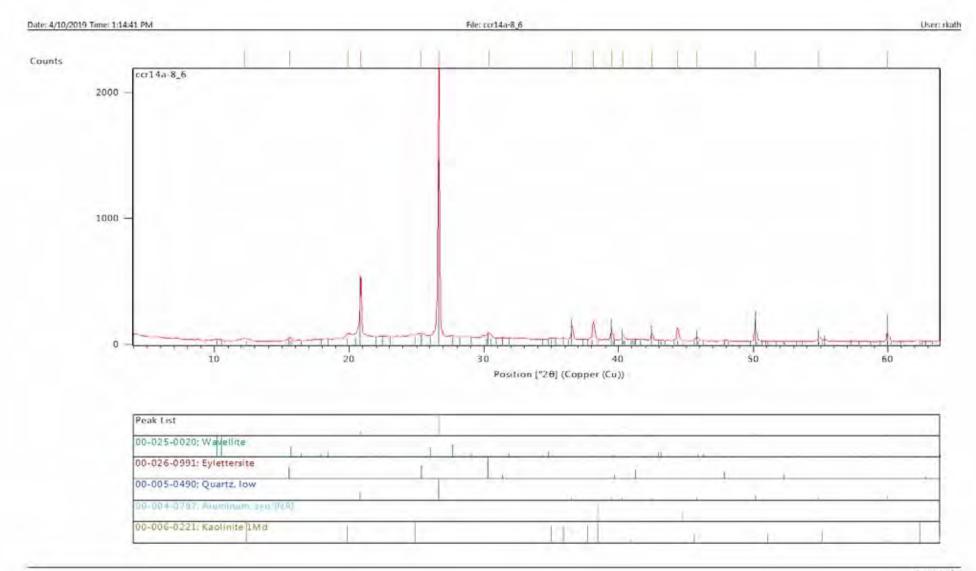


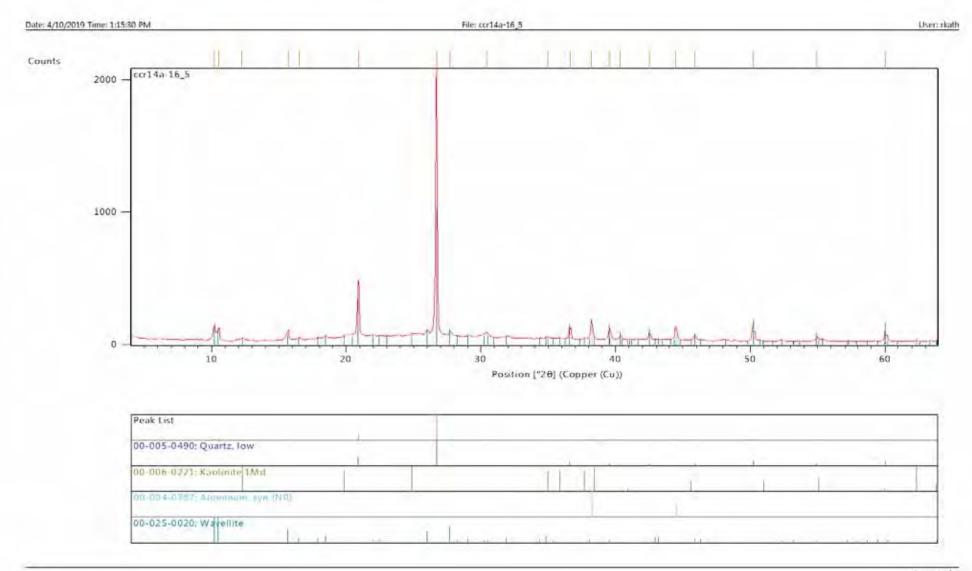


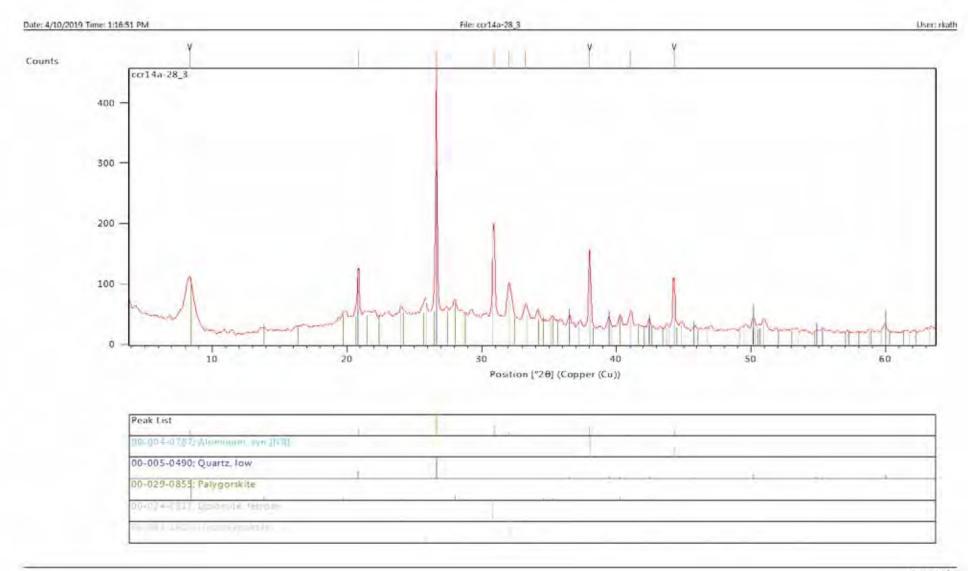












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ATTACHMENT 3 GEOCHEMISTRY DATA

	Al_2O_3	TiO_2	Fe_2O_3	MgO	MnO	CaO	K_2O	NaO	$P_{2}0_{5}$
Sample Number	wt%	wt%	wt%	wt%	wt%	wt%	wt%	wt%	wt%
CCR2A 18.7-19	1.37	1.34	0.35	<mdl< td=""><td>0.01</td><td>0.10</td><td>0.06</td><td>0.01</td><td>0.47</td></mdl<>	0.01	0.10	0.06	0.01	0.47
CCR2A 23-23.5	9.22	1.06	0.50	0.05	0.01	0.51	0.13	0.02	2.29
CCR4A 12.5-12.8	0.42	0.50	0.08	<mdl< td=""><td>0.00</td><td>0.19</td><td>0.03</td><td><mdl< td=""><td>0.05</td></mdl<></td></mdl<>	0.00	0.19	0.03	<mdl< td=""><td>0.05</td></mdl<>	0.05
CCR4A 17-17.4	3.75	0.62	0.13	0.05	0.00	0.20	0.06	0.02	0.67
CCR4A 26.1-26.4	9.12	0.36	0.45	0.10	0.01	23.38	0.36	0.13	>2.30
CCR5A 19.3-20	1.11	0.31	0.06	<mdl< td=""><td>0.00</td><td>0.13</td><td>0.04</td><td>0.03</td><td>0.22</td></mdl<>	0.00	0.13	0.04	0.03	0.22
CCR5A 22.3-22.6	9.32	0.42	0.34	0.05	0.00	0.48	0.10	0.03	1.10
CCR7A 7-7.4	0.59	0.51	0.10	<mdl< td=""><td>0.00</td><td>0.20</td><td><mdl< td=""><td><mdl< td=""><td>0.11</td></mdl<></td></mdl<></td></mdl<>	0.00	0.20	<mdl< td=""><td><mdl< td=""><td>0.11</td></mdl<></td></mdl<>	<mdl< td=""><td>0.11</td></mdl<>	0.11
CCR7A 14.6-15	0.73	0.62	0.13	<mdl< td=""><td>0.01</td><td>0.08</td><td><mdl< td=""><td><mdl< td=""><td>0.16</td></mdl<></td></mdl<></td></mdl<>	0.01	0.08	<mdl< td=""><td><mdl< td=""><td>0.16</td></mdl<></td></mdl<>	<mdl< td=""><td>0.16</td></mdl<>	0.16
CCR7A 23.2-23.5	8.70	0.51	0.71	0.05	0.00	0.90	0.07	0.20	>2.30
CCR13A 9.4-10	0.54	0.94	0.12	<mdl< td=""><td>0.00</td><td>0.41</td><td><mdl< td=""><td><mdl< td=""><td>0.13</td></mdl<></td></mdl<></td></mdl<>	0.00	0.41	<mdl< td=""><td><mdl< td=""><td>0.13</td></mdl<></td></mdl<>	<mdl< td=""><td>0.13</td></mdl<>	0.13
CCR13A 17.3-17.6	4.12	0.36	0.16	0.03	0.00	0.26	0.05	<mdl< td=""><td>1.29</td></mdl<>	1.29
CCR13A 27.8-28.2	17.87	0.68	1.41	0.81	0.01	0.59	0.66	0.05	>2.30
CCR14A 8.6-8.8	7.61	0.46	0.42	0.14	0.00	1.05	0.13	0.02	2.13
CCR14A 16.5-18	11.95	0.53	0.50	0.08	0.01	0.72	0.18	0.02	>2.30
CCR14A 28.3-28.6	2.99	0.17	3.37	6.37	0.02	20.09	0.43	0.26	>2.30
	Ag	As	Ba	Be	Bi	Ce	Cd	Co	Cr
	Ag ppm								
CCR2A 18.7-19	_	As ppm 0.30	Ba ppm 128.00	Be ppm 0.17	Bi ppm 0.29	Ce ppm 57.9	Cd ppm <mdl< td=""><td>Co ppm 12.20</td><td>Cr ppm 19.5</td></mdl<>	Co ppm 12.20	Cr ppm 19.5
CCR2A 18.7-19 CCR2A 23-23.5	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	ppm 0.27	ppm 0.30	ppm 128.00	ppm 0.17	ppm 0.29	ppm 57.9	ppm <mdl< td=""><td>ppm 12.20</td><td>ppm 19.5</td></mdl<>	ppm 12.20	ppm 19.5
CCR2A 23-23.5	ppm 0.27 <mdl< td=""><td>ppm 0.30 <mdl< td=""><td>ppm 128.00 679.00</td><td>ppm 0.17 1.22</td><td>ppm 0.29 0.19</td><td>ppm 57.9 93.7</td><td>ppm <mdl <mdl< td=""><td>ppm 12.20 10.10</td><td>ppm 19.5 42.9</td></mdl<></mdl </td></mdl<></td></mdl<>	ppm 0.30 <mdl< td=""><td>ppm 128.00 679.00</td><td>ppm 0.17 1.22</td><td>ppm 0.29 0.19</td><td>ppm 57.9 93.7</td><td>ppm <mdl <mdl< td=""><td>ppm 12.20 10.10</td><td>ppm 19.5 42.9</td></mdl<></mdl </td></mdl<>	ppm 128.00 679.00	ppm 0.17 1.22	ppm 0.29 0.19	ppm 57.9 93.7	ppm <mdl <mdl< td=""><td>ppm 12.20 10.10</td><td>ppm 19.5 42.9</td></mdl<></mdl 	ppm 12.20 10.10	ppm 19.5 42.9
CCR2A 23-23.5 CCR4A 12.5-12.8	ppm 0.27 <mdl <mdl<="" td=""><td>ppm 0.30 <mdl <mdl< td=""><td>ppm 128.00 679.00 6.00</td><td>ppm 0.17 1.22 0.01</td><td>ppm 0.29 0.19 0.03</td><td>ppm 57.9 93.7 6.1</td><td>ppm <mdl <mdl <mdl< td=""><td>ppm 12.20 10.10 4.50</td><td>ppm 19.5 42.9 7.7</td></mdl<></mdl </mdl </td></mdl<></mdl </td></mdl>	ppm 0.30 <mdl <mdl< td=""><td>ppm 128.00 679.00 6.00</td><td>ppm 0.17 1.22 0.01</td><td>ppm 0.29 0.19 0.03</td><td>ppm 57.9 93.7 6.1</td><td>ppm <mdl <mdl <mdl< td=""><td>ppm 12.20 10.10 4.50</td><td>ppm 19.5 42.9 7.7</td></mdl<></mdl </mdl </td></mdl<></mdl 	ppm 128.00 679.00 6.00	ppm 0.17 1.22 0.01	ppm 0.29 0.19 0.03	ppm 57.9 93.7 6.1	ppm <mdl <mdl <mdl< td=""><td>ppm 12.20 10.10 4.50</td><td>ppm 19.5 42.9 7.7</td></mdl<></mdl </mdl 	ppm 12.20 10.10 4.50	ppm 19.5 42.9 7.7
CCR2A 23-23.5 CCR4A 12.5-12.8 CCR4A 17-17.4	ppm 0.27 <mdl <mdl 0.06</mdl </mdl 	ppm 0.30 <mdl <mdl 0.30</mdl </mdl 	ppm 128.00 679.00 6.00 137.00	ppm 0.17 1.22 0.01 0.20	ppm 0.29 0.19 0.03 0.12	ppm 57.9 93.7 6.1 39.4	ppm <mdl <mdl <mdl 0.05</mdl </mdl </mdl 	ppm 12.20 10.10 4.50 5.70	ppm 19.5 42.9 7.7 19.2
CCR2A 23-23.5 CCR4A 12.5-12.8 CCR4A 17-17.4 CCR4A 26.1-26.4	ppm 0.27 <mdl <mdl 0.06 0.34</mdl </mdl 	ppm 0.30 <mdl <mdl 0.30 3.40</mdl </mdl 	ppm 128.00 679.00 6.00 137.00 131.00	ppm 0.17 1.22 0.01 0.20 1.80	ppm 0.29 0.19 0.03 0.12 0.13	ppm 57.9 93.7 6.1 39.4 69.8	ppm <mdl <mdl <mdl 0.05 42.65</mdl </mdl </mdl 	ppm 12.20 10.10 4.50 5.70 3.30	ppm 19.5 42.9 7.7 19.2 136.1
CCR2A 23-23.5 CCR4A 12.5-12.8 CCR4A 17-17.4 CCR4A 26.1-26.4 CCR5A 19.3-20	ppm 0.27 <mdl <mdl 0.06 0.34 <mdl< td=""><td>ppm 0.30 <mdl <mdl 0.30 3.40 <mdl< td=""><td>ppm 128.00 679.00 6.00 137.00 131.00 39.00</td><td>ppm 0.17 1.22 0.01 0.20 1.80 0.05</td><td>ppm 0.29 0.19 0.03 0.12 0.13 0.03</td><td>ppm 57.9 93.7 6.1 39.4 69.8 13.2</td><td>ppm <mdl <mdl <mdl 0.05 42.65 <mdl< td=""><td>ppm 12.20 10.10 4.50 5.70 3.30 2.80</td><td>ppm 19.5 42.9 7.7 19.2 136.1 6.6</td></mdl<></mdl </mdl </mdl </td></mdl<></mdl </mdl </td></mdl<></mdl </mdl 	ppm 0.30 <mdl <mdl 0.30 3.40 <mdl< td=""><td>ppm 128.00 679.00 6.00 137.00 131.00 39.00</td><td>ppm 0.17 1.22 0.01 0.20 1.80 0.05</td><td>ppm 0.29 0.19 0.03 0.12 0.13 0.03</td><td>ppm 57.9 93.7 6.1 39.4 69.8 13.2</td><td>ppm <mdl <mdl <mdl 0.05 42.65 <mdl< td=""><td>ppm 12.20 10.10 4.50 5.70 3.30 2.80</td><td>ppm 19.5 42.9 7.7 19.2 136.1 6.6</td></mdl<></mdl </mdl </mdl </td></mdl<></mdl </mdl 	ppm 128.00 679.00 6.00 137.00 131.00 39.00	ppm 0.17 1.22 0.01 0.20 1.80 0.05	ppm 0.29 0.19 0.03 0.12 0.13 0.03	ppm 57.9 93.7 6.1 39.4 69.8 13.2	ppm <mdl <mdl <mdl 0.05 42.65 <mdl< td=""><td>ppm 12.20 10.10 4.50 5.70 3.30 2.80</td><td>ppm 19.5 42.9 7.7 19.2 136.1 6.6</td></mdl<></mdl </mdl </mdl 	ppm 12.20 10.10 4.50 5.70 3.30 2.80	ppm 19.5 42.9 7.7 19.2 136.1 6.6
CCR2A 23-23.5 CCR4A 12.5-12.8 CCR4A 17-17.4 CCR4A 26.1-26.4 CCR5A 19.3-20 CCR5A 22.3-22.6	ppm 0.27 <mdl <mdl 0.06 0.34 <mdl 0.06</mdl </mdl </mdl 	ppm 0.30 <mdl <mdl 0.30 3.40 <mdl 0.70</mdl </mdl </mdl 	ppm 128.00 679.00 6.00 137.00 131.00 39.00 617.00	ppm 0.17 1.22 0.01 0.20 1.80 0.05 1.22	ppm 0.29 0.19 0.03 0.12 0.13 0.03 0.31	ppm 57.9 93.7 6.1 39.4 69.8 13.2 60.0	ppm <mdl <mdl <mdl 0.05 42.65 <mdl 0.16</mdl </mdl </mdl </mdl 	ppm 12.20 10.10 4.50 5.70 3.30 2.80 10.30	ppm 19.5 42.9 7.7 19.2 136.1 6.6 49.6
CCR2A 23-23.5 CCR4A 12.5-12.8 CCR4A 17-17.4 CCR4A 26.1-26.4 CCR5A 19.3-20 CCR5A 22.3-22.6 CCR7A 7-7.4	ppm 0.27 <mdl <mdl 0.06 0.34 <mdl 0.06 0.14</mdl </mdl </mdl 	ppm 0.30 <mdl <mdl 0.30 3.40 <mdl 0.70 0.60</mdl </mdl </mdl 	ppm 128.00 679.00 6.00 137.00 131.00 39.00 617.00 18.00	ppm 0.17 1.22 0.01 0.20 1.80 0.05 1.22 0.05	ppm 0.29 0.19 0.03 0.12 0.13 0.03 0.31 0.05	ppm 57.9 93.7 6.1 39.4 69.8 13.2 60.0 12.3	ppm <mdl <mdl 0.05 42.65 <mdl 0.16 <mdl< td=""><td>ppm 12.20 10.10 4.50 5.70 3.30 2.80 10.30 23.30</td><td>ppm 19.5 42.9 7.7 19.2 136.1 6.6 49.6 7.9</td></mdl<></mdl </mdl </mdl 	ppm 12.20 10.10 4.50 5.70 3.30 2.80 10.30 23.30	ppm 19.5 42.9 7.7 19.2 136.1 6.6 49.6 7.9
CCR2A 23-23.5 CCR4A 12.5-12.8 CCR4A 17-17.4 CCR4A 26.1-26.4 CCR5A 19.3-20 CCR5A 22.3-22.6 CCR7A 7-7.4 CCR7A 14.6-15	ppm 0.27 <mdl <mdl 0.06 0.34 <mdl 0.06 0.14 0.07</mdl </mdl </mdl 	ppm 0.30 <mdl <mdl 0.30 3.40 <mdl 0.70 0.60 <mdl< td=""><td>ppm 128.00 679.00 6.00 137.00 131.00 39.00 617.00 18.00 12.00</td><td>ppm 0.17 1.22 0.01 0.20 1.80 0.05 1.22 0.05 0.05</td><td>ppm 0.29 0.19 0.03 0.12 0.13 0.03 0.31 0.05 0.02</td><td>ppm 57.9 93.7 6.1 39.4 69.8 13.2 60.0 12.3 10.1</td><td>ppm <mdl <mdl 0.05 42.65 <mdl 0.16 <mdl <mdl< td=""><td>ppm 12.20 10.10 4.50 5.70 3.30 2.80 10.30 23.30 14.50</td><td>ppm 19.5 42.9 7.7 19.2 136.1 6.6 49.6 7.9 10.1</td></mdl<></mdl </mdl </mdl </mdl </td></mdl<></mdl </mdl </mdl 	ppm 128.00 679.00 6.00 137.00 131.00 39.00 617.00 18.00 12.00	ppm 0.17 1.22 0.01 0.20 1.80 0.05 1.22 0.05 0.05	ppm 0.29 0.19 0.03 0.12 0.13 0.03 0.31 0.05 0.02	ppm 57.9 93.7 6.1 39.4 69.8 13.2 60.0 12.3 10.1	ppm <mdl <mdl 0.05 42.65 <mdl 0.16 <mdl <mdl< td=""><td>ppm 12.20 10.10 4.50 5.70 3.30 2.80 10.30 23.30 14.50</td><td>ppm 19.5 42.9 7.7 19.2 136.1 6.6 49.6 7.9 10.1</td></mdl<></mdl </mdl </mdl </mdl 	ppm 12.20 10.10 4.50 5.70 3.30 2.80 10.30 23.30 14.50	ppm 19.5 42.9 7.7 19.2 136.1 6.6 49.6 7.9 10.1
CCR2A 23-23.5 CCR4A 12.5-12.8 CCR4A 17-17.4 CCR4A 26.1-26.4 CCR5A 19.3-20 CCR5A 22.3-22.6 CCR7A 7-7.4 CCR7A 14.6-15 CCR7A 23.2-23.5	ppm 0.27 <mdl <mdl 0.06 0.34 <mdl 0.06 0.14 0.07 <mdl< td=""><td>ppm 0.30 <mdl <mdl 0.30 3.40 <mdl 0.70 0.60 <mdl <mdl< td=""><td>ppm 128.00 679.00 6.00 137.00 131.00 39.00 617.00 18.00 12.00 516.00</td><td>ppm 0.17 1.22 0.01 0.20 1.80 0.05 1.22 0.05 0.05</td><td>ppm 0.29 0.19 0.03 0.12 0.13 0.03 0.31 0.05 0.02</td><td>ppm 57.9 93.7 6.1 39.4 69.8 13.2 60.0 12.3 10.1 60.0</td><td>ppm <mdl <mdl 0.05 42.65 <mdl 0.16 <mdl <mdl 0.42</mdl </mdl </mdl </mdl </mdl </td><td>ppm 12.20 10.10 4.50 5.70 3.30 2.80 10.30 23.30 14.50 21.20</td><td>ppm 19.5 42.9 7.7 19.2 136.1 6.6 49.6 7.9 10.1 50.5</td></mdl<></mdl </mdl </mdl </mdl </td></mdl<></mdl </mdl </mdl 	ppm 0.30 <mdl <mdl 0.30 3.40 <mdl 0.70 0.60 <mdl <mdl< td=""><td>ppm 128.00 679.00 6.00 137.00 131.00 39.00 617.00 18.00 12.00 516.00</td><td>ppm 0.17 1.22 0.01 0.20 1.80 0.05 1.22 0.05 0.05</td><td>ppm 0.29 0.19 0.03 0.12 0.13 0.03 0.31 0.05 0.02</td><td>ppm 57.9 93.7 6.1 39.4 69.8 13.2 60.0 12.3 10.1 60.0</td><td>ppm <mdl <mdl 0.05 42.65 <mdl 0.16 <mdl <mdl 0.42</mdl </mdl </mdl </mdl </mdl </td><td>ppm 12.20 10.10 4.50 5.70 3.30 2.80 10.30 23.30 14.50 21.20</td><td>ppm 19.5 42.9 7.7 19.2 136.1 6.6 49.6 7.9 10.1 50.5</td></mdl<></mdl </mdl </mdl </mdl 	ppm 128.00 679.00 6.00 137.00 131.00 39.00 617.00 18.00 12.00 516.00	ppm 0.17 1.22 0.01 0.20 1.80 0.05 1.22 0.05 0.05	ppm 0.29 0.19 0.03 0.12 0.13 0.03 0.31 0.05 0.02	ppm 57.9 93.7 6.1 39.4 69.8 13.2 60.0 12.3 10.1 60.0	ppm <mdl <mdl 0.05 42.65 <mdl 0.16 <mdl <mdl 0.42</mdl </mdl </mdl </mdl </mdl 	ppm 12.20 10.10 4.50 5.70 3.30 2.80 10.30 23.30 14.50 21.20	ppm 19.5 42.9 7.7 19.2 136.1 6.6 49.6 7.9 10.1 50.5
CCR2A 23-23.5 CCR4A 12.5-12.8 CCR4A 17-17.4 CCR4A 26.1-26.4 CCR5A 19.3-20 CCR5A 22.3-22.6 CCR7A 7-7.4 CCR7A 14.6-15 CCR7A 23.2-23.5 CCR13A 9.4-10	ppm 0.27 <mdl <mdl 0.06 0.34 <mdl 0.06 0.14 0.07 <mdl 0.27</mdl </mdl </mdl </mdl 	ppm 0.30 <mdl <mdl 0.30 3.40 <mdl 0.70 0.60 <mdl <mdl 0.40</mdl </mdl </mdl </mdl </mdl 	ppm 128.00 679.00 6.00 137.00 131.00 39.00 617.00 18.00 12.00 516.00 45.00	ppm 0.17 1.22 0.01 0.20 1.80 0.05 1.22 0.05 0.05 0.05	ppm 0.29 0.19 0.03 0.12 0.13 0.03 0.31 0.05 0.02 0.14 0.18	ppm 57.9 93.7 6.1 39.4 69.8 13.2 60.0 12.3 10.1 60.0 37.9	ppm <mdl <mdl 0.05 42.65 <mdl 0.16 <mdl <mdl 0.42 <mdl< td=""><td>ppm 12.20 10.10 4.50 5.70 3.30 2.80 10.30 23.30 14.50 21.20 18.40</td><td>ppm 19.5 42.9 7.7 19.2 136.1 6.6 49.6 7.9 10.1 50.5</td></mdl<></mdl </mdl </mdl </mdl </mdl 	ppm 12.20 10.10 4.50 5.70 3.30 2.80 10.30 23.30 14.50 21.20 18.40	ppm 19.5 42.9 7.7 19.2 136.1 6.6 49.6 7.9 10.1 50.5
CCR2A 23-23.5 CCR4A 12.5-12.8 CCR4A 17-17.4 CCR4A 26.1-26.4 CCR5A 19.3-20 CCR5A 22.3-22.6 CCR7A 7-7.4 CCR7A 14.6-15 CCR7A 23.2-23.5 CCR13A 9.4-10 CCR13A 17.3-17.6	ppm 0.27 <mdl <mdl 0.06 0.34 <mdl 0.06 0.14 0.07 <mdl 0.27</mdl </mdl </mdl </mdl 	ppm 0.30 <mdl <mdl 0.30 3.40 <mdl 0.70 0.60 <mdl <mdl 0.40 <mdl< td=""><td>ppm 128.00 679.00 6.00 137.00 131.00 39.00 617.00 18.00 516.00 45.00 189.00</td><td>ppm 0.17 1.22 0.01 0.20 1.80 0.05 1.22 0.05 0.05 0.93 0.04 0.49</td><td>ppm 0.29 0.19 0.03 0.12 0.13 0.03 0.31 0.05 0.02 0.14 0.18</td><td>ppm 57.9 93.7 6.1 39.4 69.8 13.2 60.0 12.3 10.1 60.0 37.9 39.3</td><td>ppm <mdl 0.05="" 0.16="" 0.42="" 42.65="" <mdl="" <mdl<="" td=""><td>ppm 12.20 10.10 4.50 5.70 3.30 2.80 10.30 23.30 14.50 21.20 18.40 20.10</td><td>ppm 19.5 42.9 7.7 19.2 136.1 6.6 49.6 7.9 10.1 50.5 11.4 23.4</td></mdl></td></mdl<></mdl </mdl </mdl </mdl </mdl 	ppm 128.00 679.00 6.00 137.00 131.00 39.00 617.00 18.00 516.00 45.00 189.00	ppm 0.17 1.22 0.01 0.20 1.80 0.05 1.22 0.05 0.05 0.93 0.04 0.49	ppm 0.29 0.19 0.03 0.12 0.13 0.03 0.31 0.05 0.02 0.14 0.18	ppm 57.9 93.7 6.1 39.4 69.8 13.2 60.0 12.3 10.1 60.0 37.9 39.3	ppm <mdl 0.05="" 0.16="" 0.42="" 42.65="" <mdl="" <mdl<="" td=""><td>ppm 12.20 10.10 4.50 5.70 3.30 2.80 10.30 23.30 14.50 21.20 18.40 20.10</td><td>ppm 19.5 42.9 7.7 19.2 136.1 6.6 49.6 7.9 10.1 50.5 11.4 23.4</td></mdl>	ppm 12.20 10.10 4.50 5.70 3.30 2.80 10.30 23.30 14.50 21.20 18.40 20.10	ppm 19.5 42.9 7.7 19.2 136.1 6.6 49.6 7.9 10.1 50.5 11.4 23.4
CCR2A 23-23.5 CCR4A 12.5-12.8 CCR4A 17-17.4 CCR4A 26.1-26.4 CCR5A 19.3-20 CCR5A 22.3-22.6 CCR7A 7-7.4 CCR7A 14.6-15 CCR7A 23.2-23.5 CCR13A 9.4-10 CCR13A 17.3-17.6 CCR13A 27.8-28.2	ppm 0.27 <mdl <mdl 0.06 0.34 <mdl 0.06 0.14 0.07 <mdl 0.27 0.14 0.48</mdl </mdl </mdl </mdl 	ppm 0.30 <mdl <mdl 0.30 3.40 <mdl 0.70 0.60 <mdl <mdl 0.40 <mdl 0.20</mdl </mdl </mdl </mdl </mdl </mdl 	ppm 128.00 679.00 6.00 137.00 131.00 39.00 617.00 18.00 12.00 516.00 45.00 189.00	0.17 1.22 0.01 0.20 1.80 0.05 1.22 0.05 0.05 0.93 0.04 0.49 1.58	0.29 0.19 0.03 0.12 0.13 0.03 0.31 0.05 0.02 0.14 0.18 0.06 0.30	ppm 57.9 93.7 6.1 39.4 69.8 13.2 60.0 12.3 10.1 60.0 37.9 39.3 64.7	ppm <mdl 0.05="" 0.16="" 0.41<="" 0.42="" 42.65="" <mdl="" td=""><td>ppm 12.20 10.10 4.50 5.70 3.30 2.80 10.30 23.30 14.50 21.20 18.40 20.10 15.10</td><td>ppm 19.5 42.9 7.7 19.2 136.1 6.6 49.6 7.9 10.1 50.5 11.4 23.4 162.8</td></mdl>	ppm 12.20 10.10 4.50 5.70 3.30 2.80 10.30 23.30 14.50 21.20 18.40 20.10 15.10	ppm 19.5 42.9 7.7 19.2 136.1 6.6 49.6 7.9 10.1 50.5 11.4 23.4 162.8

<MDL less than method detection limit

	Cs	Cu	Ga	Ge	Hf	In	La	Li	Mo
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
CCR2A 18.7-19	0.30	6.40	7.25	0.04	1.77	0.02	32.7	1.10	2.70
CCR2A 23-23.5	0.70	2.60	11.27	0.08	1.84	0.03	50.1	3.90	2.10
CCR4A 12.5-12.8	<mdl< td=""><td>1.50</td><td>2.04</td><td><mdl< td=""><td>0.51</td><td><mdl< td=""><td>2.4</td><td>0.70</td><td>1.70</td></mdl<></td></mdl<></td></mdl<>	1.50	2.04	<mdl< td=""><td>0.51</td><td><mdl< td=""><td>2.4</td><td>0.70</td><td>1.70</td></mdl<></td></mdl<>	0.51	<mdl< td=""><td>2.4</td><td>0.70</td><td>1.70</td></mdl<>	2.4	0.70	1.70
CCR4A 17-17.4	0.40	3.40	6.76	0.03	1.09	0.03	20.7	4.20	2.20
CCR4A 26.1-26.4	1.50	8.50	10.30	0.06	1.76	0.06	63.2	3.20	2.30
CCR5A 19.3-20	0.10	0.90	2.41	0.02	0.44	0.01	6.5	6.10	1.10
CCR5A 22.3-22.6	0.40	1.40	9.16	0.05	1.44	0.07	30.6	7.50	1.50
CCR7A 7-7.4	<mdl< td=""><td>1.30</td><td>2.21</td><td>0.01</td><td>0.65</td><td>0.01</td><td>4.5</td><td>1.80</td><td>1.50</td></mdl<>	1.30	2.21	0.01	0.65	0.01	4.5	1.80	1.50
CCR7A 14.6-15	<mdl< td=""><td>2.00</td><td>2.81</td><td>0.01</td><td>0.55</td><td>0.02</td><td>4.0</td><td>1.20</td><td>1.60</td></mdl<>	2.00	2.81	0.01	0.55	0.02	4.0	1.20	1.60
CCR7A 23.2-23.5	0.30	1.20	10.57	0.06	1.55	0.04	31.8	7.00	2.10
CCR13A 9.4-10	0.10	3.10	3.95	<mdl< td=""><td>1.60</td><td>0.01</td><td>20.1</td><td>2.20</td><td>4.10</td></mdl<>	1.60	0.01	20.1	2.20	4.10
CCR13A 17.3-17.6	0.30	2.20	5.30	0.05	1.06	0.02	21.3	6.40	0.90
CCR13A 27.8-28.2	4.20	6.50	19.57	0.05	5.21	0.16	39.0	20.60	2.10
CCR14A 8.6-8.8	1.00	4.00	9.10	0.06	3.10	0.05	45.2	5.40	1.30
CCR14A 16.5-18	1.00	11.60	11.94	0.12	2.97	0.06	83.6	3.00	1.70
CCR14A 28.3-28.6	1.20	1.30	4.03	0.04	0.78	0.01	21.3	8.30	2.80
	Nb	Ni	Pb	Rb	Re	\mathbf{S}	Sb	Sc	Se
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
CCR2A 18.7-19	17.45	1.50	25.00	4.00	<mdl< td=""><td>245.0</td><td>0.37</td><td>2.7</td><td>0.30</td></mdl<>	245.0	0.37	2.7	0.30
CCR2A 23-23.5	16.51	6.90	29.00	6.00	<mdl< td=""><td>315.0</td><td>0.64</td><td>4.8</td><td>0.30</td></mdl<>	315.0	0.64	4.8	0.30
CCR4A 12.5-12.8	4.81	1.30	<mdl< td=""><td><mdl< td=""><td><mdl< td=""><td>219.0</td><td>0.13</td><td>0.9</td><td>0.40</td></mdl<></td></mdl<></td></mdl<>	<mdl< td=""><td><mdl< td=""><td>219.0</td><td>0.13</td><td>0.9</td><td>0.40</td></mdl<></td></mdl<>	<mdl< td=""><td>219.0</td><td>0.13</td><td>0.9</td><td>0.40</td></mdl<>	219.0	0.13	0.9	0.40
CCR4A 17-17.4	10.05	6.30	13.00	3.00	<mdl< td=""><td>344.0</td><td>0.23</td><td>1.8</td><td>0.80</td></mdl<>	344.0	0.23	1.8	0.80
CCR4A 26.1-26.4	7.58	4.10	11.00	16.00	0.00	624.0	1.07	8.2	0.50
CCR5A 19.3-20	4.14	2.00	6.00	2.00	<mdl< td=""><td>112.0</td><td>0.10</td><td>0.7</td><td><mdl< td=""></mdl<></td></mdl<>	112.0	0.10	0.7	<mdl< td=""></mdl<>
CCR5A 22.3-22.6	7.17	10.90	24.00	5.00	0.01	144.0	0.76	8.6	0.30
CCR7A 7-7.4	5.81	2.40	4.00	<mdl< td=""><td>0.03</td><td><mdl< td=""><td>0.16</td><td>0.8</td><td><mdl< td=""></mdl<></td></mdl<></td></mdl<>	0.03	<mdl< td=""><td>0.16</td><td>0.8</td><td><mdl< td=""></mdl<></td></mdl<>	0.16	0.8	<mdl< td=""></mdl<>
CCR7A 14.6-15	6.32	1.30	4.00	<mdl< td=""><td>0.02</td><td>142.0</td><td>0.13</td><td>0.9</td><td><mdl< td=""></mdl<></td></mdl<>	0.02	142.0	0.13	0.9	<mdl< td=""></mdl<>
CCR7A 23.2-23.5	9.17	10.70	22.00	3.00	0.03	261.0	0.35	5.9	1.30
CCR13A 9.4-10	14.68	1.60	16.00	<mdl< td=""><td>0.02</td><td>218.0</td><td>0.41</td><td>1.5</td><td>0.80</td></mdl<>	0.02	218.0	0.41	1.5	0.80
CCR13A 17.3-17.6	6.31	4.70	12.00	3.00	0.03	291.0	0.29	2.3	0.30
CCR13A 27.8-28.2	15.13	21.20	21.00	41.00	0.01	270.0	1.24	82.1	<mdl< td=""></mdl<>
CCR14A 8.6-8.8 CCR14A 16.5-18	8.44 10.31	10.00 5.70	26.00 31.00	8.00 10.00	0.03 0.03	345.0 534.0	0.39 0.45	18.2 13.5	0.20 0.20
CCR14A 28.3-28.6	3.66	56.60	6.00	20.00	0.03	1645.0	1.41	2.7	0.50
CCR14A 28.3-28.0	3.00	30.00	0.00	20.00	0.01	1045.0	1.41	2.1	0.50
	Sn	Sr	Ta	Te	Th	Tl	\mathbf{U}	V	\mathbf{W}
GCP24 10 7 10	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
CCR2A 18.7-19	1.40	207.0	1.64	0.08	8.5	0.03	5.0	19.00	1.2
CCR2A 23-23.5	1.30	929.0	1.09	0.03	12.9	0.22	50.4	59.00	1.1
CCR4A 12.5-12.8	0.90	12.0	0.66	0.01	1.7	<mdl< td=""><td>1.2</td><td>6.00</td><td>0.5</td></mdl<>	1.2	6.00	0.5
CCR4A 17-17.4	1.50	227.0	1.65	0.03	6.8	0.04	5.3 185.5	16.00	0.9
CCR4A 26.1-26.4 CCR5A 19.3-20	1.50	308.0	0.12	0.05	9.7	0.50		119.00	0.8 0.4
CCR5A 22.3-22.6	0.60 1.10	63.0 748.0	0.46 0.06	<mdl 0.02</mdl 	2.1 8.2	0.01 0.10	4.1 34.2	5.00 35.00	66.3
CCR7A 7-7.4			0.60	<mdl< td=""><td></td><td></td><td></td><td>6.00</td><td>184.8</td></mdl<>				6.00	184.8
CCR7A 14.6-15	0.80 0.80	30.0 18.0	0.69	0.01	1.7 2.0	<mdl <mdl< td=""><td>1.4 0.9</td><td>6.00</td><td>97.1</td></mdl<></mdl 	1.4 0.9	6.00	97.1
CCR7A 23.2-23.5	1.20	786.0	<mdl< td=""><td>0.01</td><td>8.8</td><td>0.04</td><td>35.0</td><td>33.00</td><td>173.9</td></mdl<>	0.01	8.8	0.04	35.0	33.00	173.9
CCR13A 9.4-10	1.10	91.0	1.44	0.03	4.8	0.03	3.0	13.00	104.3
CCR13A 17.3-17.6	0.50	458.0	0.30	0.01	6.3	0.03	22.4	25.00	175.2
CCR13A 27.8-28.2	2.50	210.0	0.12	0.02	23.4	1.00	164.4	247.00	77.8
CCR14A 8.6-8.8	0.90	815.0	0.18	0.02	11.4	0.23	96.2	50.00	153.1
CCR14A 16.5-18	1.50	1185.0	1.04	<mdl< td=""><td>16.6</td><td>0.28</td><td>467.0</td><td>48.00</td><td>185.1</td></mdl<>	16.6	0.28	467.0	48.00	185.1
CCR14A 28.3-28.6	0.80	461.0	<mdl< td=""><td><mdl< td=""><td>4.0</td><td>0.60</td><td>34.8</td><td>123.00</td><td>37.0</td></mdl<></td></mdl<>	<mdl< td=""><td>4.0</td><td>0.60</td><td>34.8</td><td>123.00</td><td>37.0</td></mdl<>	4.0	0.60	34.8	123.00	37.0
20.0									27.0

<MDL less than method detection limit

Lakeland Electric

	Y	Zn	\mathbf{Zr}
	ppm	ppm	ppm
CCR2A 18.7-19	12.10	4.00	71.0
CCR2A 23-23.5	49.30	11.00	70.2
CCR4A 12.5-12.8	1.10	<mdl< td=""><td>17.6</td></mdl<>	17.6
CCR4A 17-17.4	9.40	4.00	37.7
CCR4A 26.1-26.4	96.30	87.00	51.8
CCR5A 19.3-20	3.00	<mdl< td=""><td>15.9</td></mdl<>	15.9
CCR5A 22.3-22.6	33.30	7.00	44.0
CCR7A 7-7.4	2.20	4.00	42.5
CCR7A 14.6-15	1.40	4.00	30.7
CCR7A 23.2-23.5	25.80	7.00	60.9
CCR13A 9.4-10	6.80	3.00	76.1
CCR13A 17.3-17.6	17.00	5.00	43.5
CCR13A 27.8-28.2	33.90	49.00	167.2
CCR14A 8.6-8.8	48.90	12.00	93.3
CCR14A 16.5-18	93.50	10.00	94.2
CCR14A 28.3-28.6	30.70	49.00	19.0

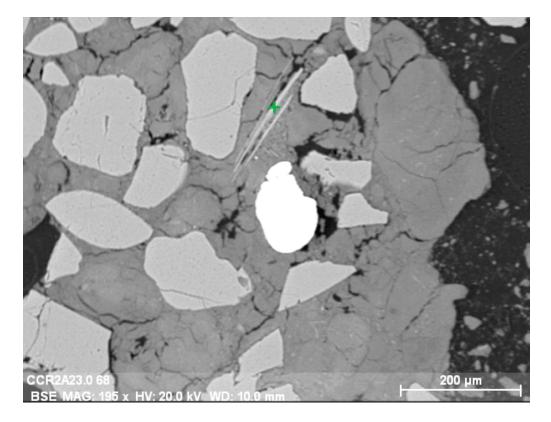
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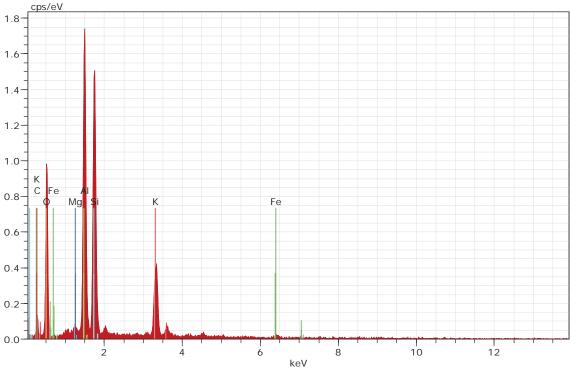
PetroLOGIC Solutions, Inc.

3997 Oak Hill Road Douglasville, GA 30135 *Tel:* (678) 313-4146 *email:* rlkath@comcast.net



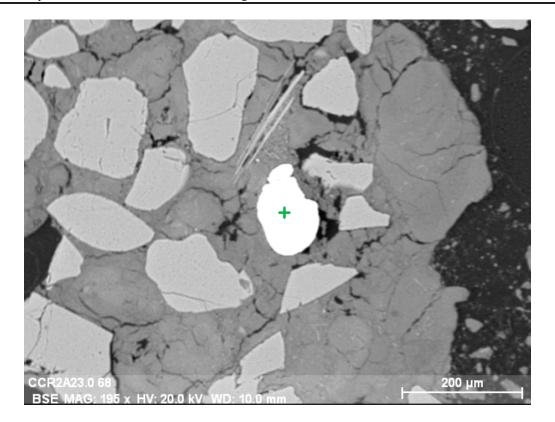
ATTACHMENT 4 SCANNING ELECTRON MICROSCOPY DATA

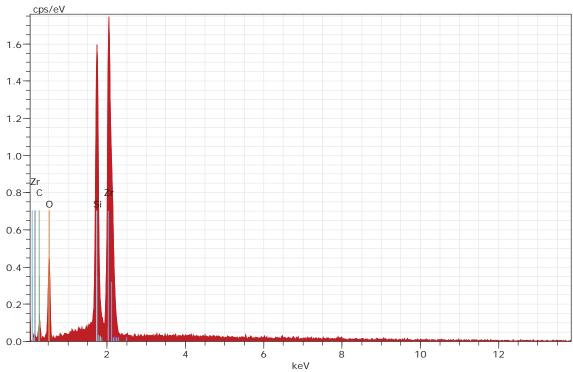




CCR2A 23.0-23.5: BSE image (top) and EDS spectrum (bottom) for muscovite; green crosshair on BSE image marks analysis location.

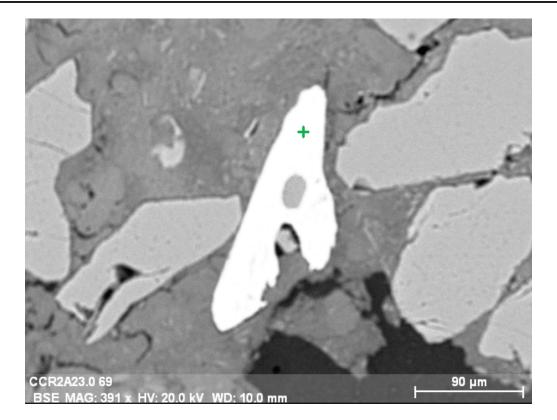


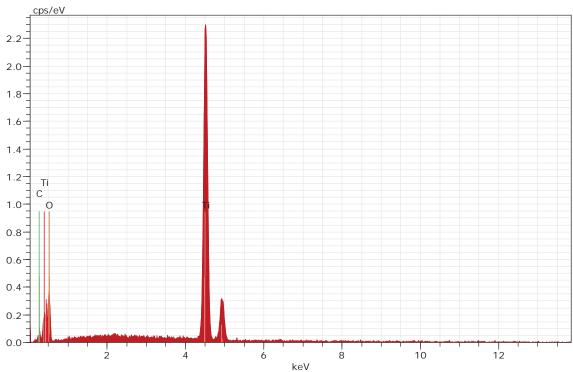




CCR2A 23.0-23.5: BSE image (top) and EDS spectrum (bottom) for zircon; green crosshair on BSE image marks analysis location.

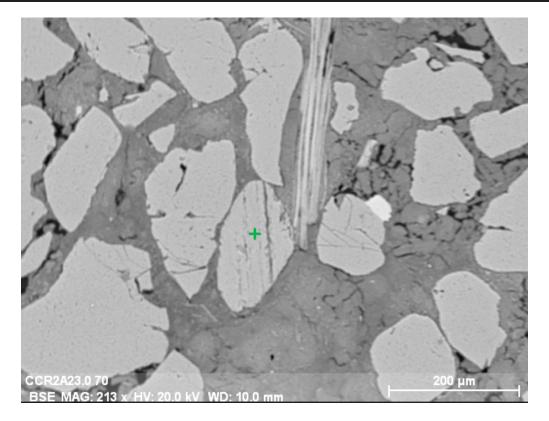


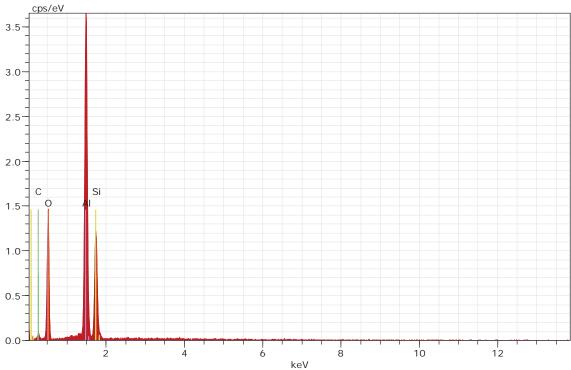




CCR2A 23.0-23.5: BSE image (top) and EDS spectrum (bottom) for rutile; green crosshair on BSE image marks analysis location.

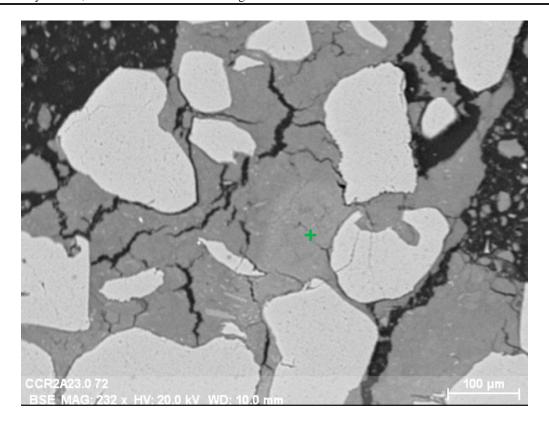


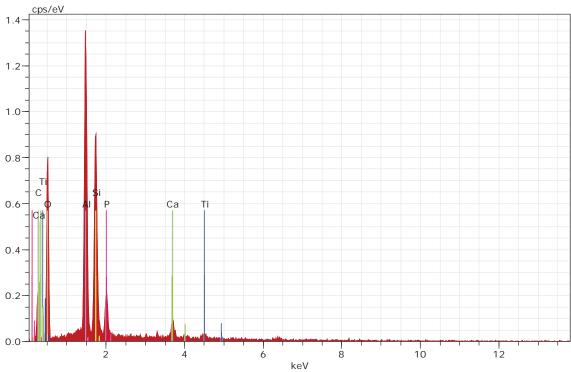




CCR2A 23.0-23.5: BSE image (top) and EDS spectrum (bottom) for kyanite; green crosshair on BSE image marks analysis location.

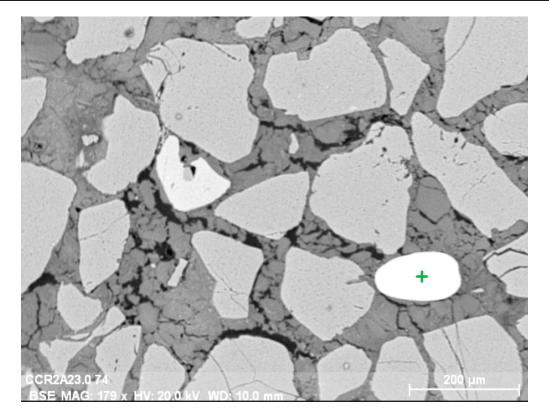


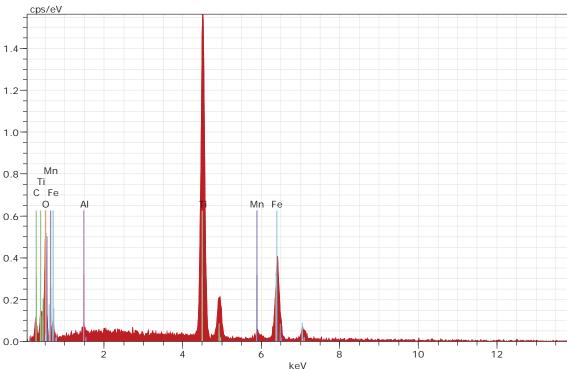




CCR2A 23.0-23.5: BSE image (top) and EDS spectrum (bottom) for wavellite and clay matrix; green crosshair on BSE image marks analysis location.

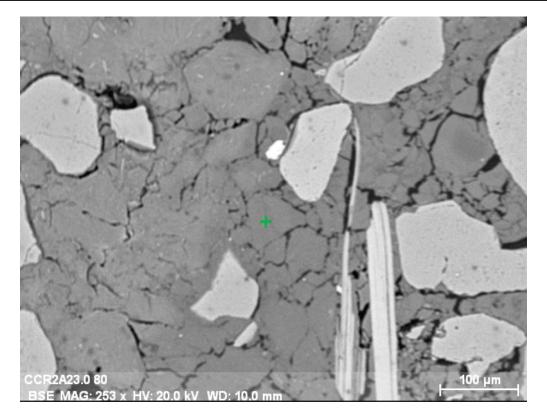


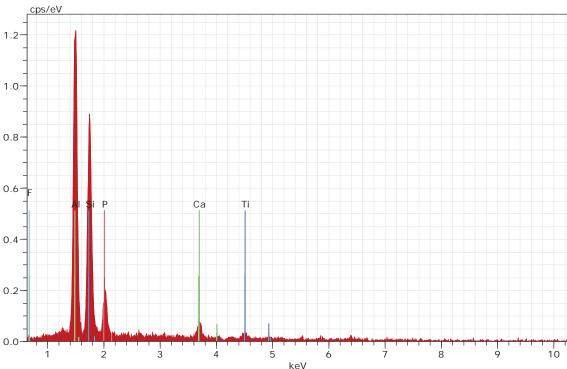




CCR2A 23.0-23.5: BSE image (top) and EDS spectrum (bottom) for ilmenite; green crosshair on BSE image marks analysis location.

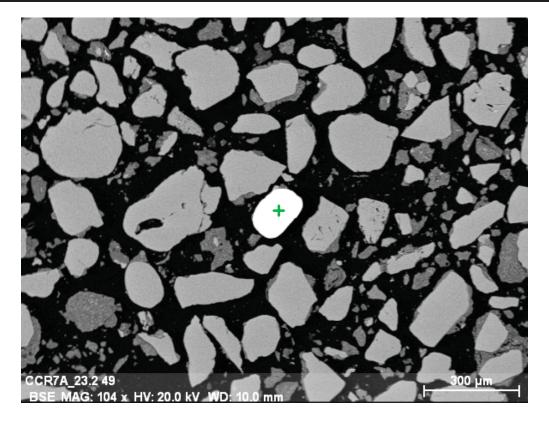


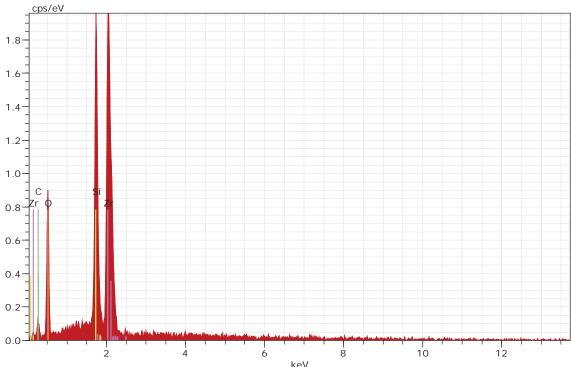




CCR2A 23.0-23.5: BSE image (top) and EDS spectrum (bottom) for wavellite and clay matrix; green crosshair on BSE image marks analysis location.

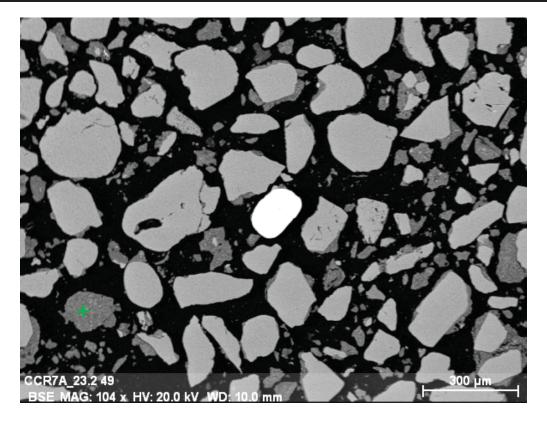


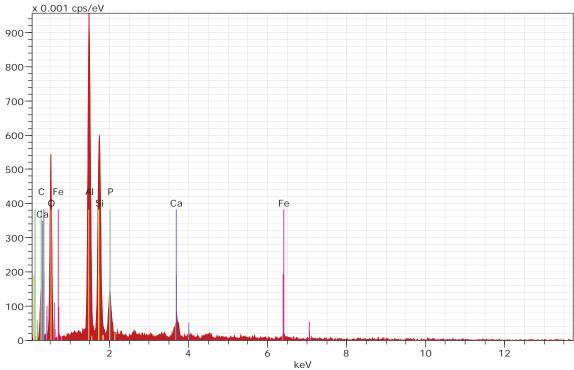




CCR7A 23.2-23.5: BSE image (top) and EDS spectrum (bottom) for zircon; green crosshair on BSE image marks analysis location.

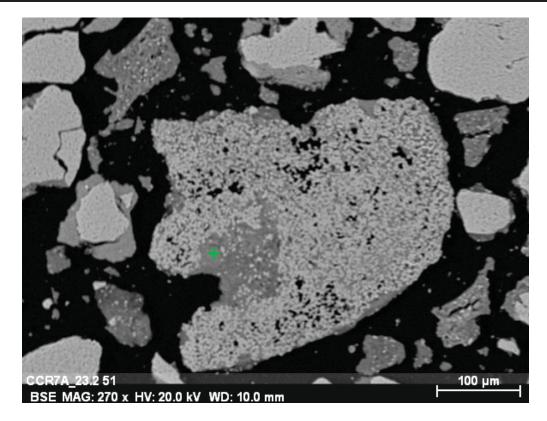


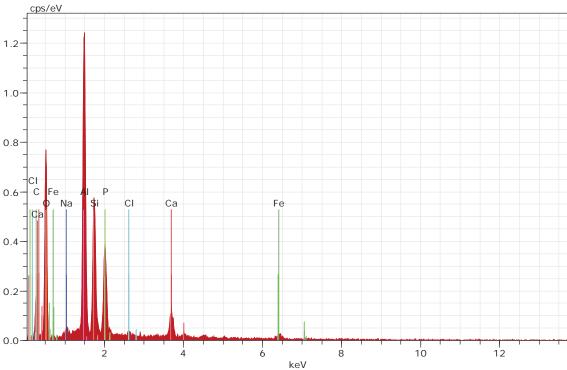




CCR7A 23.2-23.5: BSE image (top) and EDS spectrum (bottom) for Ca- and Al-phosphate matrix; green crosshair on BSE image marks analysis location.

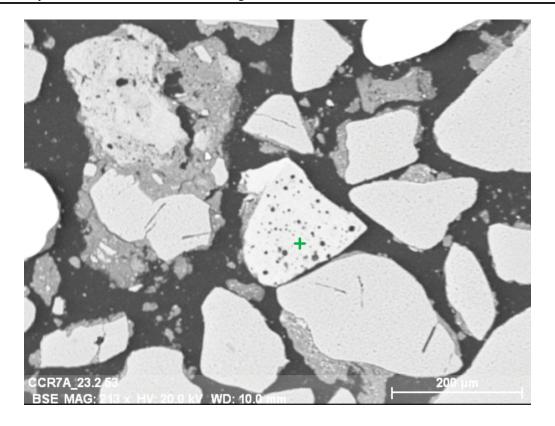


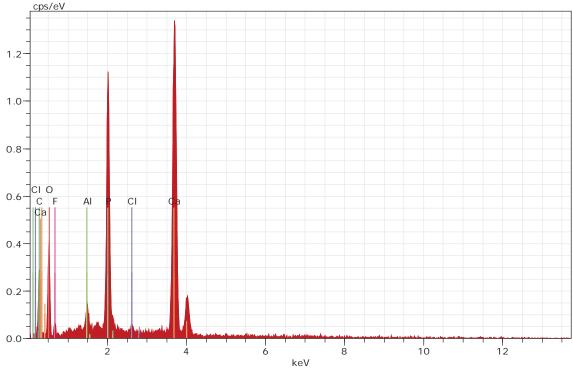




CCR7A 23.2-23.5: BSE image (top) and EDS spectrum (bottom) for wavellite and apatite matrix; green crosshair on BSE image marks analysis location.

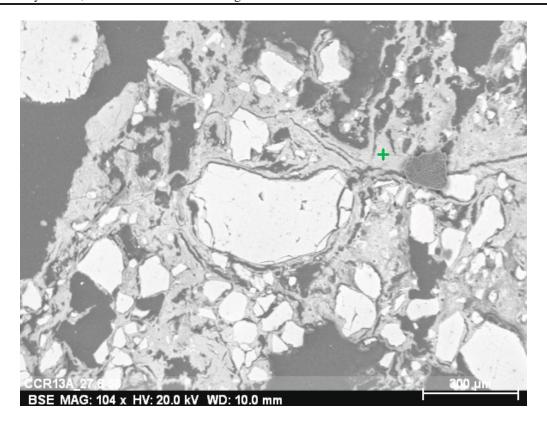


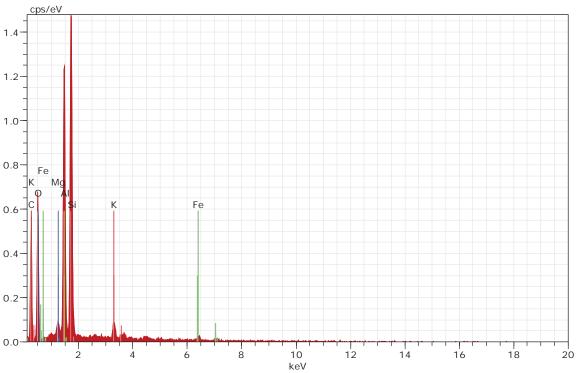




CCR7A 23.2-23.5: BSE image (top) and EDS spectrum (bottom) for apatite matrix; green crosshair on BSE image marks analysis location.

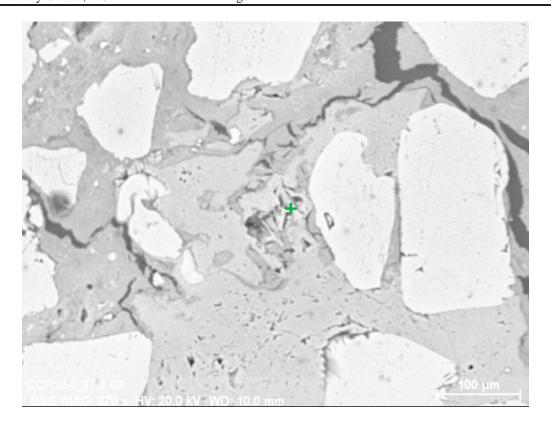


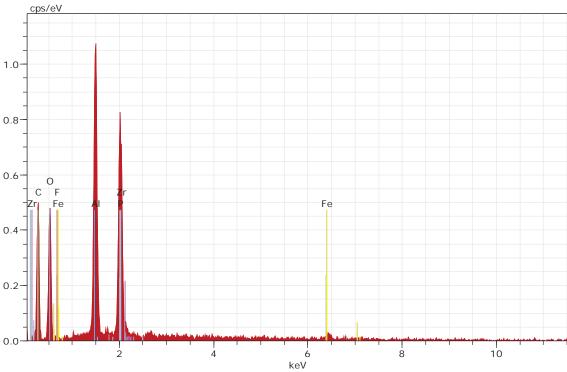




CCR13A 27.8-28.2: BSE image (top) and EDS spectrum (bottom) for kaolinite and muscovite matrix; green crosshair on BSE image marks analysis location.

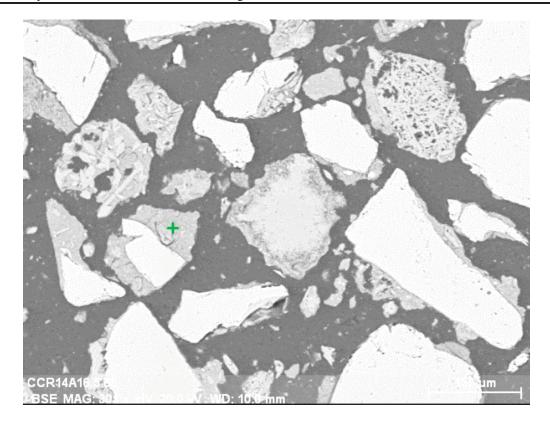


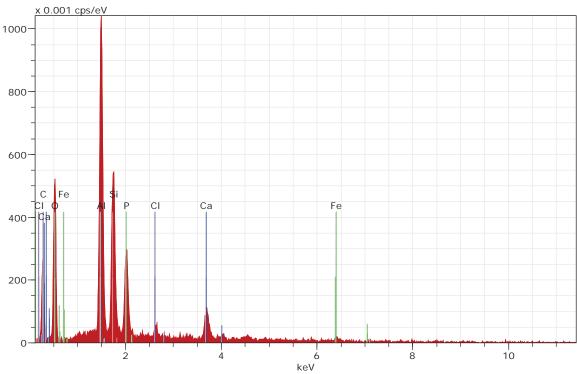




CCR13A 27.8-28.2: BSE image (top) and EDS spectrum (bottom) for wavellite; green crosshair on BSE image marks analysis location.

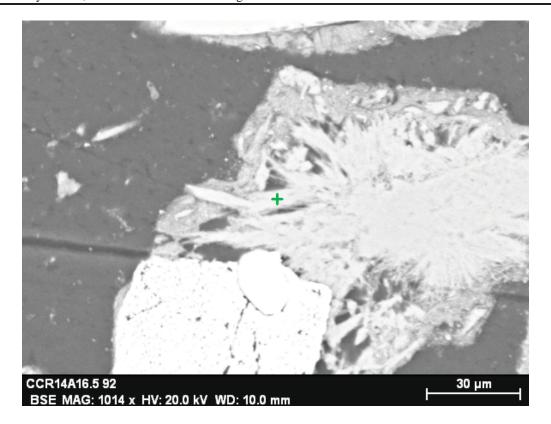


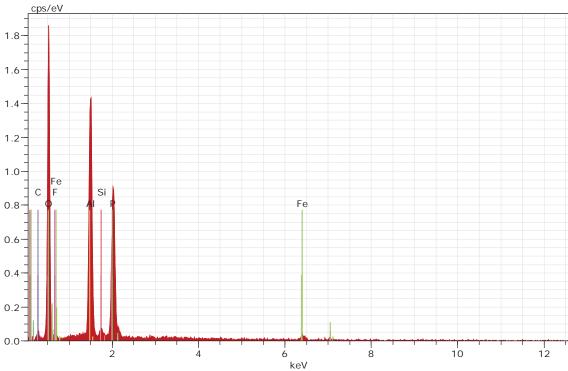




CCR14A 16.5-18.0: BSE image (top) and EDS spectrum (bottom) for apatite and wavellite matrix; green crosshair on BSE image marks analysis location.

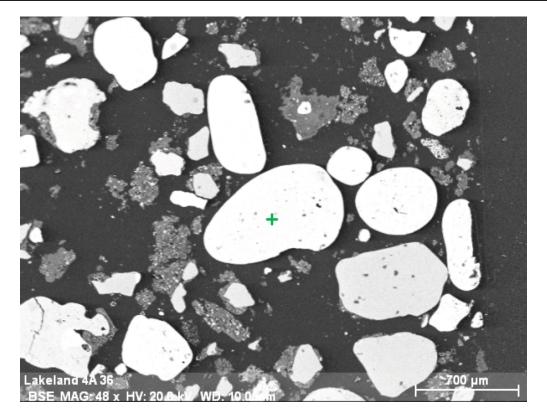


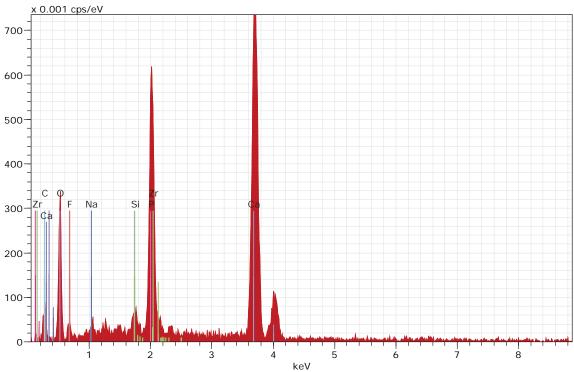




CCR14A 16.5-18.0: BSE image (top) and EDS spectrum (bottom) for wavellite; green crosshair on BSE image marks analysis location.

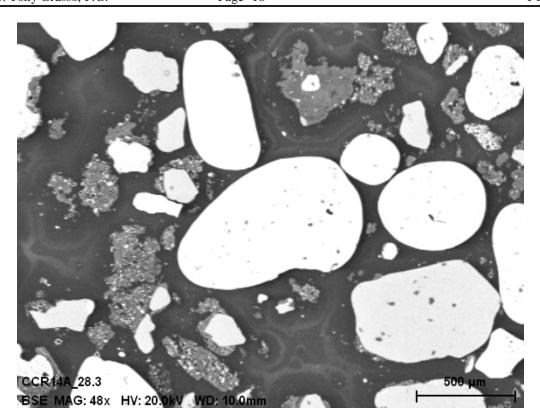


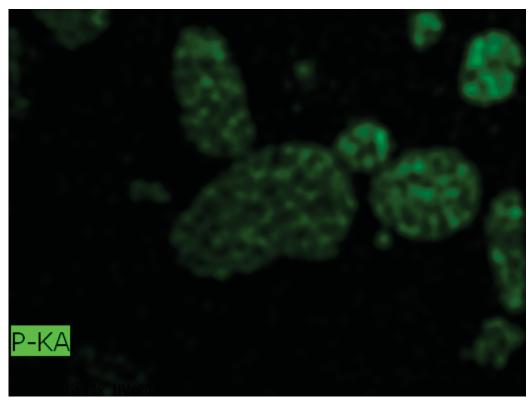




CCR14A 28.3-28.6: BSE image (top) and EDS spectrum (bottom) for collophane (apatite) "ball" with quartz inclusions (light gray); green crosshair on BSE image marks analysis location.

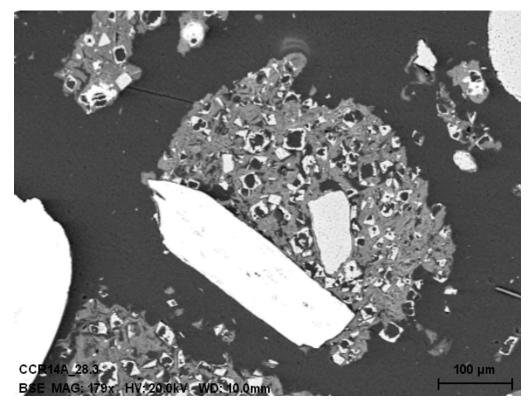


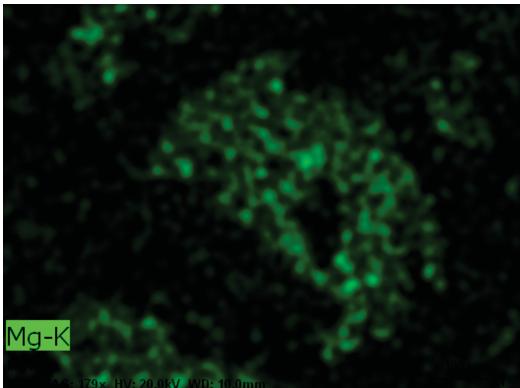




CCR7A 23.2-23.5: BSE image (top) and phosphorous map (bottom) of collophane apatite with quartz inclusions.







CCR7A 23.2-23.5: BSE image (top) of dolomite (high relief rhombohedral grains) in a clay matrix and magnesium map (bottom) of dolomite.





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