



# 2019 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT

*Byproduct Storage Area*

*C.D. McIntosh Power Plant*

*Lakeland, Florida*

Submitted to:

**Lakeland Electric**

501 East Lemon Street  
Lakeland, FL 33801 USA

Submitted by:

**Golder Associates Inc.**

9428 Baymeadows Road, Suite 400  
Jacksonville, FL 32256 USA

+1 904 363-3430

19-123457

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## Distribution List

Lakeland Electric

Golder

## Executive Summary

This Annual Groundwater Monitoring and Corrective Action Report has been prepared for the Byproduct Storage Area (BSA) at the C.D. McIntosh Jr. Power Plant (MPP or the plant) on behalf of Lakeland Electric (LE) pursuant to the Coal Combustion Residual (CCR) Rule<sup>1</sup> §257.90(e).

Pursuant to §257.94(b), LE initiated the background monitoring (the collection of a minimum of eight independent samples prior to October 2017) in August 2016 and completed it in August 2017. Detection monitoring for Appendix III constituents was initiated in October 2017. A statistical analysis of the October 2017 sampling data and subsequent verification sampling in December 2017, identified statistically significant increases (SSIs) for boron, calcium, chloride, fluoride, pH, sulfate and total dissolved solids in groundwater samples from downgradient monitoring wells.

Based on the SSI determination in January 2018, an assessment monitoring program was established in April 2018 pursuant to §257.94(e)(1). Annual assessment monitoring events for all Appendix IV parameters are conducted in April of each year. Subsequent semi-annual events are conducted in July and the following January for all Appendix III parameters and Appendix IV parameters detected during the annual event. The site is operating under the assessment monitoring program for 2019.

A statistical analysis of Appendix IV results completed in October 2018 from downgradient wells indicated that the following parameters were at statistically significant levels (SSL) above their respective groundwater protection standards:

Appendix IV Parameter	Monitoring Well at SSL
Arsenic	CCR-11 and CCR-12
Lithium	CCR-5, CCR-6, CCR-9 and CCR-13
Radium 226+228	CCR-4, CCR-5, CCR-7, CCR-13 and CCR-14

Assessment of corrective measures was initiated on January 13, 2019 and finalized June 12, 2019. An alternate source demonstration was completed for radium 226+228 on June 10, 2019. LE is currently in the process of evaluating and selecting an appropriate remedy pursuant to §257.97.

<sup>1</sup> 40 Code of Federal Regulations Part 257 (40 CFR 257), Subpart D – Standards for the Disposal of Coal Combustion Residuals in Landfills and Surface Impoundments, Published in Federal Register / Vol. 80, No. 74, April 17, 2015.

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## 1.0 INTRODUCTION

This Annual Groundwater Monitoring and Corrective Action Report has been prepared for the Byproduct Storage Area (BSA) at the C.D. McIntosh Jr. Power Plant (MPP or the plant) on behalf of Lakeland Electric (LE) pursuant to the Coal Combustion Residual (CCR) Rule<sup>2</sup> §257.90(e).

### 1.1 Site Information and Background

The MPP facility is located at 3030 East Lake Parker Drive in Lakeland, Florida. A site location map is provided as **Figure 1**. The plant has a combined generation capacity of 874 megawatts consisting of multiple units including: two diesel peaking units, a natural gas and oil-fired generator (Unit 2), a coal fired generator (Unit 3), and a combined cycle natural gas unit (Unit 5). The BSA, formerly referred to as the Southern Landfill Area, encompasses approximately 44 acres and is located in the eastern portion of the property and receives CCRs generated by Unit 3.

### 1.2 Site Hydrogeology

The BSA is underlain by two aquifers, the surficial aquifer and the Floridan aquifer which are separated by an intermediate confining unit. 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. The 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. 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 Groundwater Monitoring Well Network

The CCR groundwater monitoring network for the BSA at MPP consists of two background monitoring wells (CCR-1 and CCR-2) and twelve downgradient monitoring wells (CCR-3 through CCR-14) (Golder 2017b). Background and downgradient monitoring wells were installed with screen intervals in the surficial aquifer (total depth of approximately 25 feet below ground surface). The background wells (CCR-1 and CCR-2) are located such that they represent background groundwater quality estimated not to have been affected by the BSA and represent groundwater quality in the same zone as the downgradient monitoring wells. Downgradient monitoring wells (CCR-3 through CCR-14) have been installed as close as practical to the waste boundary to represent the quality of groundwater passing the waste boundary. The monitoring wells have been encased in a manner that maintains the integrity of the monitoring well borehole. CCR groundwater monitoring well locations (CCR 1 through CCR-14) are shown on **Figure 2** and monitoring well construction data are provided in **Table 1**.

## 2.0 CCR GROUNDWATER MONITORING ACTIVITIES

In October 2017, LE performed the initial detection monitoring event under the CCR Rule. Statistical analysis of the initial results and subsequent verification sampling in November and December 2017 indicated several statistically significant increases over background limits for Appendix III constituents (Golder 2018a). Pursuant to

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<sup>2</sup> 40 Code of Federal Regulations Part 257 (40 CFR 257), Subpart D – Standards for the Disposal of Coal Combustion Residuals in Landfills and Surface Impoundments, Published in Federal Register / Vol. 80, No. 74, April 17, 2015.

§257.94(e)(1), an assessment monitoring program was established for the BSA in April 2018. The initial annual assessment monitoring event was conducted on April 11 and 12, 2018 and subsequent semi-annual assessment monitoring events were conducted in July 2018 and January 2019.

A statistical analysis of the Appendix IV results following the July 2018 assessment monitoring event was performed to evaluate if constituent concentrations detected in the samples were at statistically significant levels (SSLs) relative to the groundwater protection standards (GWPS) established for the site (Golder 2018d). The following SSLs above the GWPS were identified:

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 and Radium-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

Assessment of corrective measures was initiated in January 2019 and completed June 12, 2019 (Golder 2019d). Based on site conditions (i.e. naturally occurring radionuclides in soil) and results obtained from additional site characterization work, Golder prepared an alternate source demonstration for radium-226+228 present in groundwater (Golder 2019c) provided in **Appendix A**. Pursuant to §257.96(a), the assessment of corrective measures was extended for 60 days (Golder 2019b). The assessment of corrective measures extension certification is provided in **Appendix A**.

Pursuant to §257.90(e), the following sections describe the groundwater monitoring activities performed during the preceding calendar year.

## 2.1 Monitoring Well Installation and Decommissioning

The CCR groundwater monitoring network for the BSA at MPP was installed in 2016 (Golder 2016) and consists of two background monitoring wells (CCR-1 and CCR-2) and twelve downgradient monitoring wells (CCR-3 through CCR-14). Monitoring well CCR-10 was struck and damaged by LE equipment and was abandoned and replaced by CCR-10R in March 2018 (Golder 2018c).

A total of nine additional monitoring wells (designated CCR-15 through CCR-23) were installed as part of the characterization required by §257.95(g)(1) in February 2019 (Golder 2019d). 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. Monitoring well construction details are provided in **Table 1** and locations are presented on **Figure 2**.

## 2.2 Groundwater Sampling Activities

The groundwater sampling activities related to the CCR groundwater monitoring program for BSA that occurred during 2019 are described in the sections below.

### 2.2.1 Assessment Monitoring

The second semi-annual assessment monitoring (year one) was performed between January 8 and January 10, 2019. Groundwater samples were analyzed for Appendix III constituents and Appendix IV constituents that were detected during the initial annual monitoring event (i.e. arsenic, barium, fluoride, lithium, molybdenum, radium 226+228, and selenium).

The second annual assessment monitoring event was conducted between April 16 and 18, 2019. During the second annual assessment monitoring event, groundwater samples were collected from the CCR groundwater monitoring well network (CCR-1 through CCR-14) and analyzed for Appendix IV constituents (other than mercury) in accordance with §257.95(a). Mercury was not analyzed due to a laboratory error and was therefore included on subsequent semi-annual events. During the subsequent semi-annual assessment monitoring event conducted between July 17 and July 30, 2019, groundwater samples were collected from the CCR groundwater monitoring well network (CCR-1 through CCR-14) and analyzed for Appendix III constituents and Appendix IV constituents that were detected during the second annual monitoring event (i.e. antimony, arsenic, barium, cadmium, chromium, cobalt, fluoride, lead, lithium, mercury, molybdenum, radium 226+228, selenium, and thallium).

Assessment monitoring laboratory analytical data is provided in **Appendix B**.

### 2.2.2 Characterization Sampling

In order to characterize the nature and extent of the release as part of the assessment of corrective measures and alternate source demonstration, a sampling event was performed in March 2019 for the following parameters:

Sample Location	Analytical Parameter List
CCR-15, CCR-17, CCR-23, MW-26S	Characterization parameters <sup>1</sup> , RA 226 and 228
CCR-16, CCR-22, MW-25S, Lake B, Lake C, Lake D	Characterization parameters, RA 226 and 228, Lithium
CCR-17, CCR-19, MW-24S	Characterization parameters, Lithium
CCR-20, CCR-21	Characterization parameters, Arsenic
Fish Lake	Characterization parameters, RA 226 and 228, Lithium, Arsenic

1 – Characterization parameters include: calcium, chloride, iron, potassium, magnesium, manganese, nitrate, sodium, phosphate, sulfate, total dissolved solids, and field parameters

Additional characterization sampling was performed during the July 2019 sampling event for the following parameters:

Parameter	Monitoring Well
Lithium	CCR-15, CCR-16, CCR-17, CCR-19, CCR-22
Arsenic	CCR-20

Laboratory analytical results are provided in **Appendix B**.

## 2.3 Groundwater Sampling Methodology

CCR groundwater sampling is performed in accordance with §257.93(a) and with the procedures presented in the Groundwater Sampling Methodology and Analytical Procedures Technical Memorandum (Golder 2017a). Prior to purging the CCR monitoring wells, the depth to water level was measured at each well using an electronic water level indicator. The monitoring wells were purged and sampled using non-dedicated sampling equipment. Calibrated water quality meters were used to monitor field stabilization parameters including pH, specific conductance, temperature, dissolved oxygen, and turbidity. After the water quality parameters measurements stabilized, groundwater samples were collected and placed into iced coolers under chain-of-custody control pending delivery to an analytical laboratory.

## 3.0 CCR GROUNDWATER DATA EVALUATION

### 3.1 Groundwater Flow Rate and Direction

Groundwater elevation measurements were recorded for the CCR groundwater monitoring network during each sampling event at the BSA. A summary of groundwater measurements and corresponding groundwater elevations for each CCR monitoring well for the background and detection monitoring events is provided in **Table 2**. Groundwater elevation data were used to develop a potentiometric surface map for the sampling events in January, March, April and July (**Figures 3 through 6**). Consistent with past observations (Golder 2005), groundwater flow is inferred to flow radially under the BSA with horizontal hydraulic gradients ranging from 0.002 to 0.02 feet per foot. The groundwater flow rate in the vicinity of the BSA is estimated to range from 0.08 to 0.8 feet per day based on the horizontal hydraulic gradients, an average hydraulic conductivity of 5.7 feet per day, estimated from slug tests conducted in monitoring wells CCR-1 through CCR-14, and an estimated effective porosity of 0.15 (Golder 2005).

### 3.2 Groundwater Protection Standards

The CCR Rule requires the establishment of groundwater protection standards (GWPS) for any Appendix IV constituent that is detected in downgradient monitoring wells (§257.95(d)(2) and §257.95(h)). Beryllium was not detected in the second annual assessment event. The following GWPS have been established for the BSA:

Parameter	BSA GWPS	Basis
Antimony	0.006 mg/L	MCL
Arsenic	0.010 mg/L	MCL
Barium	2 mg/L	MCL

Parameter	BSA GWPS	Basis
Cadmium	0.005 mg/L	MCL
Chromium	0.1 mg/L	MCL
Cobalt	0.006 mg/L	CCR Rule GWPS
Fluoride	4 mg/L	MCL
Lead	0.015 mg/L	CCR Rule GWPS
Lithium	0.040 mg/L	CCR Rule GWPS
Mercury	0.002 mg/L	MCL
Molybdenum	0.100 mg/L	CCR Rule GWPS
Selenium	0.05 mg/L	MCL
Thallium	0.002 mg/L	MCL
Radium 226+228	7.94 pCi/L	Background Tolerance Limit

### 3.3 Assessment Monitoring Statistical Analysis

The goal of the assessment monitoring program is to determine if groundwater analyzed from downgradient monitoring wells are at concentrations that are at statistically significant levels (SSL) relative to the GWPS. A confidence interval approach is recommended to determine if downgradient concentrations are at SSL above the GWPS. As recommended in the Unified Guidance, a confidence interval around the mean was employed for normal or normalized data (USEPA 2009). If the downgradient well data are not normal and cannot be transformed to normal, the non-parametric confidence interval around the median was employed. There is evidence of an SSL if the lower confidence limit (LCL) of the mean at 95% confidence level exceeds the GWPS. The statistical analysis was performed in accordance with the Statistical Analysis Plan for CCR Groundwater Monitoring (Golder 2017c).

The assessment monitoring statistical analyses was limited to those wells and parameters that had a mean detected concentration<sup>3</sup> above the GWPS. Given that BSA is an existing unlined unit and if there is no evidence of a shift in the constituent results from a well, then the Appendix IV data from background period as well as assessment monitoring was used to calculate the LCL.

Appendix IV groundwater data collected during the previous monitoring periods are presented in the past annual groundwater reports (Golder 2018b, Golder 2019a).

#### 3.3.1 January 2019 Monitoring Event Statistical Analysis Evaluation

The statistical analysis of the results from the January 2019 semi-annual assessment monitoring event are summarized below:

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<sup>3</sup> The mean concentration of results above the MDL were used to screen parameters and wells for statistical analysis. If the mean concentration is less than the GWPS, the LCL will be less than the GWPS.

Parameter	Well	LCL	Method
Arsenic	CCR-4	0.0012 mg/L	Non-parametric confidence interval around median
Arsenic	CCR-5	0.00099 mg/L	Non-parametric confidence band around Theil-Sen trend line
Arsenic	CCR-9	0.0035 mg/L	Non-parametric confidence interval around median
Arsenic	CCR-11	0.094 mg/L	Confidence interval around normal mean
Arsenic	CCR-12	0.035 mg/L	Confidence interval around arithmetic mean
Arsenic	CCR-13	0.0011 mg/L	Non-parametric confidence band around Theil-Sen trend line
Lithium	CCR-4	0.033 mg/L	Confidence interval around arithmetic mean
Lithium	CCR-5	2.4 mg/L	Non-parametric confidence band around Theil-Sen trend line
Lithium	CCR-6	0.148 mg/L	Confidence interval around normal mean
Lithium	CCR-7	0.023 mg/L	Confidence interval around arithmetic mean
Lithium	CCR-9	0.09 mg/L	Confidence band around linear regression line
Lithium	CCR-13	0.13 mg/L	Non-parametric confidence interval around median

The following SSLs were identified using the updated Appendix IV results from the January 2019 sampling event:

- Arsenic – CCR-11 and CCR-12
- Lithium – CCR-5, CCR-6, CCR-9 and CCR-13

### 3.3.2 July 2019 Monitoring Event Statistical Analysis Evaluation

The statistical analysis of the results from the July 2019 semi-annual assessment monitoring event are summarized below:

Parameter	Well	LCL	Method
Antimony	CCR-7	<0.001 mg/L	Non-parametric confidence interval around median
Arsenic	CCR-3	0.00051 mg/L	Non-parametric confidence interval around median
Arsenic	CCR-4	0.0012 mg/L	Non-parametric confidence interval around median
Arsenic	CCR-5	0.00086 mg/L	Non-parametric confidence interval around median
Arsenic	CCR-7	0.00051 mg/L	Non-parametric confidence interval around median
Arsenic	CCR-8	0.002 mg/L	Non-parametric confidence band around Theil-Sen trend line

Parameter	Well	LCL	Method
Arsenic	CCR-9	0.005 mg/L	Confidence interval around arithmetic mean
Arsenic	CCR-11	0.092 mg/L	Confidence interval around normal mean
Arsenic	CCR-12	0.032 mg/L	Confidence interval around normal mean
Arsenic	CCR-13	0.002 mg/L	Confidence interval around arithmetic mean
Cadmium	CCR-4	0.002 mg/L	Confidence interval around arithmetic mean
Lithium	CCR-4	0.029 mg/L	Confidence interval around arithmetic mean
Lithium	CCR-5	3.963 mg/L	Confidence band around linear regression line
Lithium	CCR-6	0.149 mg/L	Confidence interval around normal mean
Lithium	CCR-7	0.021 mg/L	Non-parametric confidence band around Theil-Sen trend line
Lithium	CCR-9	0.101 mg/L	Confidence interval around normal mean
Lithium	CCR-12	<0.0032 mg/L	Non-parametric confidence interval around median
Lithium	CCR-13	0.182 mg/L	Non-parametric confidence interval around median
Thallium	CCR-4	<0 mg/L	Non-parametric confidence band around Theil-Sen trend line
Thallium	CCR-5	<0.000085 mg/L	Non-parametric confidence interval around median
Thallium	CCR-9	<0.000085 mg/L	Non-parametric confidence interval around median
Thallium	CCR-12	<0.000085 mg/L	Non-parametric confidence interval around median

The following SSLs were identified using the updated Appendix IV results from the July 2019 sampling event:

- Arsenic – CCR-11 and CCR-12
- Lithium – CCR-5, CCR-6, CCR-9 and CCR-13

## 4.0 CONCLUSIONS AND RECOMMENDATIONS

Assessment of Corrective Measures was completed in June 2019 and noted that additional site characterization and data was necessary to further evaluate appropriate remedies and corrective measures. LE is currently in the process of evaluating and selecting an appropriate remedy pursuant to §257.97.

Assessment monitoring will continue during the remedy selection process. The second semi-annual assessment monitoring event of the second year will be performed in January 2020. The third annual assessment monitoring event is scheduled to be performed in April 2020. The subsequent semi-annual assessment monitoring events will be performed in July 2020 and January 2021.

## 5.0 REFERENCES

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- Golder. 2019c. Alternate Source Demonstration for Radium 226&228 in Groundwater, Byproduct Storage Area B, C.D. McIntosh Power Plant, Lakeland, Polk County, Florida, dated June 10.
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## Signature Page

This Annual Report has been prepared to meet the requirements of §257.90(e).

**Golder Associates Inc.**



Samuel F. Stafford, PE  
*Senior Project Engineer*



Donald J. Miller  
*Principal and Practice Leader*

SFS/DJM/ams

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## TABLES

**TABLE 1**

**CCR MONITORING WELL CONSTRUCTION DETAILS  
BYPRODUCT STORAGE AREA  
C.D. MCINTOSH JR. POWER PLANT**

Well ID	Date Installed	Northing (ft NAD83)	Easting (ft NAD83)	Ground Surface Elevation (ft NAVD88)	Top of Casing Elevation (ft NAVD88)	Stick-up Height (ft ags)	Well Depth (ft bgs)	Screen Interval (ft bgs)
CCR-1	6/24/2016	1362405.2	681287.1	138.3	141.30	3.0	25.7	15.7 - 25.2
CCR-2	6/23/2016	1362203.9	681787.6	137.6	140.57	3.0	25.8	15.7 - 25.2
CCR-3	6/23/2016	1362334.6	682451.3	137.5	137.04	-0.5	25.8	15.9 - 25.3
CCR-4	6/24/2016	1362450.0	683042.7	140.3	143.13	2.9	25.7	15.6 - 25.1
CCR-5	6/22/2016	1362716.0	683376.9	138.6	141.07	2.5	26.2	16.2 - 25.7
CCR-6	6/22/2016	1363168.4	683578.6	138.5	141.34	2.9	25.7	15.7 - 25.2
CCR-7	6/22/2016	1363631.9	683772.2	139.1	142.10	3.0	25.8	15.7 - 25.2
CCR-8	6/22/2016	1363917.6	683411.6	139.4	142.12	2.7	26.0	15.9 - 25.4
CCR-9	6/21/2016	1364085.2	683045.3	138.6	141.67	3.1	25.6	15.5 - 25.0
CCR-10 *	6/20/2016	1364309.4	682722.2	135.9	138.54	2.6	24.5	14.4 - 23.9
CCR-10R	3/13/2018	1364262.1	682706.3	133.8	133.56	-0.2	24.7	14.6 - 24.1
CCR-11	6/20/2016	1363835.4	682577.2	134.3	137.12	2.8	25.6	15.6 - 25.1
CCR-12	6/20/2016	1363353.1	682430.5	134.1	136.99	2.9	25.8	15.7 - 25.2
CCR-13	6/21/2016	1362936.6	682164.1	135.0	137.95	3.0	25.7	15.6 - 25.1
CCR-14	6/21/2016	1362771.1	681761.2	135.8	138.70	2.9	25.5	15.4 - 24.9
CCR-15	2/18/2019	1362341.3	683123.5	141.8	144.65	2.9	25.7	15.4 - 25.0
CCR-16	2/18/2019	1362533.2	683385.6	141.2	144.10	2.9	25.6	15.3 - 24.9
CCR-17	2/19/2019	1363019.9	683712.7	142.9	145.80	2.9	25.7	15.4 - 25.0
CCR-18	2/18/2019	1363631.1	683869.7	138.2	140.81	2.6	25.9	15.6 - 25.2
CCR-19	2/15/2019	1364205.4	683064.5	133.8	136.47	2.7	25.8	15.5 - 25.1
CCR-20	2/14/2019	1363855.5	682474.9	133.1	136.05	2.9	25.2	14.9 - 24.5
CCR-21	2/13/2019	1363454.0	682331.4	134.5	137.12	2.6	25.9	15.6 - 25.2
CCR-22	2/13/2019	1363017.4	682078.7	134.0	137.51	3.5	25.1	14.8 - 24.4
CCR-23	2/12/2019	1362812.1	681744.7	136.2	135.78	-0.5	25.4	15.1 - 24.7

Notes:

ft bgs - feet below ground surface

ft ags - feet aboveground surface

NAD83 - Horizontal Control: North American Datum, State Plan Coordinate System Florida, East Zone

NAVD88 - Vertical Control: North American Vertical Datum of 1988

\* - Monitoring well CCR-10 was abandoned on March 13, 2018

**TABLE 2**

**SUMMARY OF GROUNDWATER ELEVATION MEASUREMENTS  
BYPRODUCT STORAGE AREA  
C.D. MCINTOSH JR. POWER PLANT**

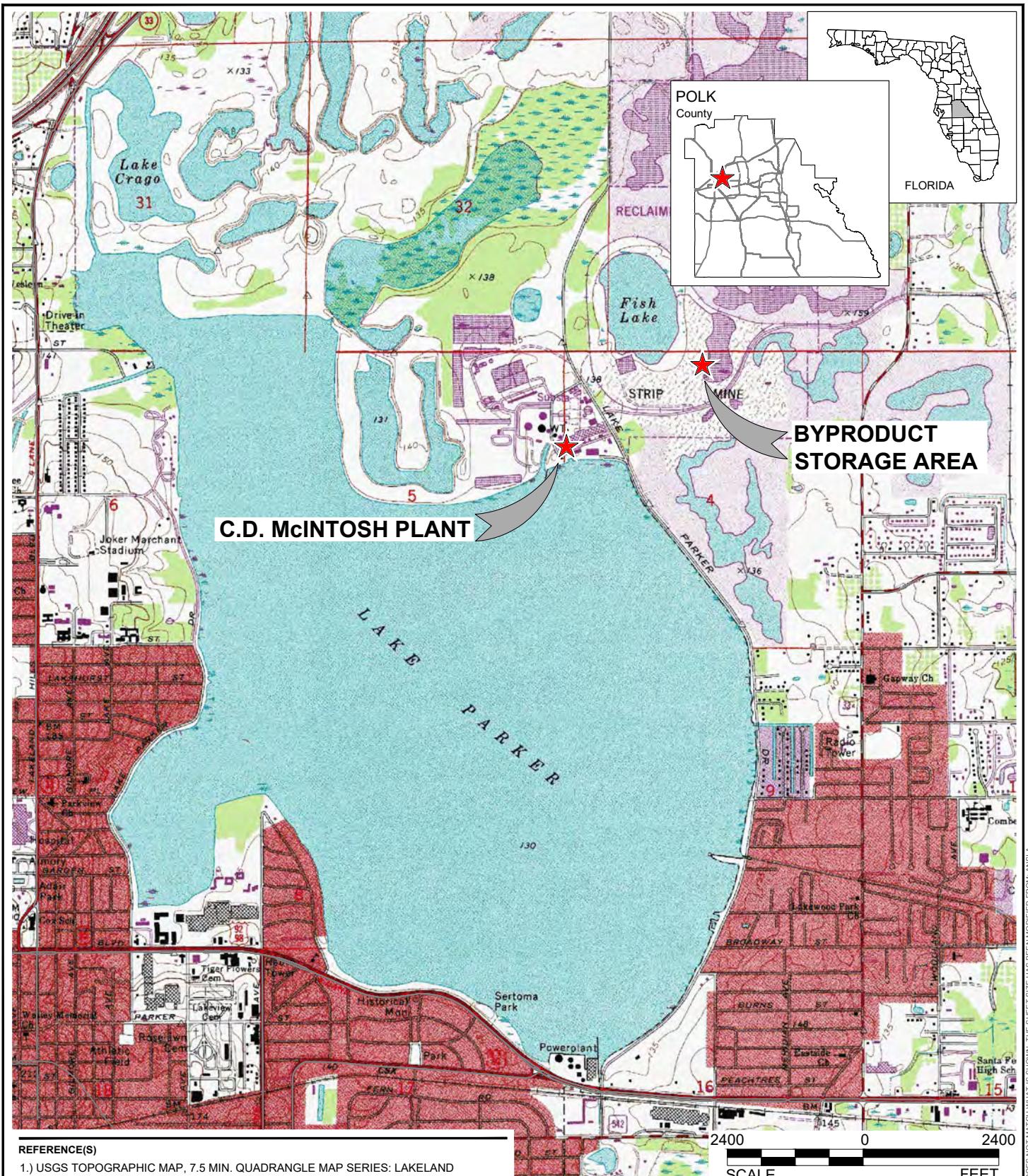
Well / Staff Gauge ID	Top of Casing Elevation (ft NAVD88)	Jan-19		Mar-19		Apr-19		Jul-19	
		Depth to Water (ft btoc)	Groundwater/ Surface Water Elevation (ft NAVD88)						
CCR-1	141.30	8.6	132.70	8.95	132.35	9.68	131.62	10.00	131.30
CCR-2	140.57	8.88	131.69	8.87	131.70	9.55	131.02	9.60	130.97
CCR-3	137.04	4.91	132.13	5.30	131.74	6.01	131.03	6.15	130.89
CCR-4	143.13	13.6	129.53	13.88	129.25	14.11	129.02	14.00	129.13
CCR-5	141.07	9.4	131.67	9.76	131.31	10.09	130.98	10.18	130.89
CCR-6	141.34	7.4	133.94	8.02	133.32	8.48	132.86	8.40	132.94
CCR-7	142.10	7.86	134.24	8.43	133.67	8.96	133.14	8.71	133.39
CCR-8	142.12	7.3	134.82	7.62	134.50	8.64	133.48	8.40	133.72
CCR-9	141.67	8.60	133.07	8.80	132.87	9.21	132.46	9.22	132.45
CCR-10R	133.56	0.60	132.96	1.00	132.56	1.37	132.19	1.72	131.84
CCR-11	137.12	3.8	133.32	4.24	132.88	4.67	132.45	5.26	131.86
CCR-12	136.99	3.66	133.33	4.17	132.82	4.66	132.33	5.30	131.69
CCR-13	137.95	4.61	133.34	5.34	132.61	5.89	132.06	6.35	131.60
CCR-14	138.70	6.5	132.20	6.66	132.04	7.33	131.37	8.10	130.60
CCR-15	144.65	NM	NM	16.54	128.11	NM	NM	17.00	127.65
CCR-16	144.10	NM	NM	14.89	129.21	NM	NM	15.05	129.05
CCR-17	145.80	NM	NM	13.33	132.47	NM	NM	14.25	131.55
CCR-18	140.81	NM	NM	7.56	133.25	NM	NM	7.92	132.89
CCR-19	136.47	NM	NM	4.11	132.36	NM	NM	4.38	132.09
CCR-20	136.05	NM	NM	3.31	132.74	NM	NM	4.29	131.76
CCR-21	137.12	NM	NM	4.53	132.59	NM	NM	6.00	131.12
CCR-22	137.51	NM	NM	5.01	132.50	NM	NM	6.13	131.38
CCR-23	135.78	NM	NM	3.75	132.03	NM	NM	4.70	131.08
Fish Lake (SG)	NA	NA	NM	NA	132.75	NM	NM	NM	NM
Lake B (SG)	NA	NA	NM	NA	132.06	NM	NM	NM	NM
Lake C (SG)	NA	NA	NM	NA	132.31	NM	NM	NM	NM
Lake D (SG)	NA	NA	NM	NA	124.17	NM	NM	NM	NM
Lake Parker (SG)	NA	NA	NM	NA	129.60	NM	NM	NM	NM

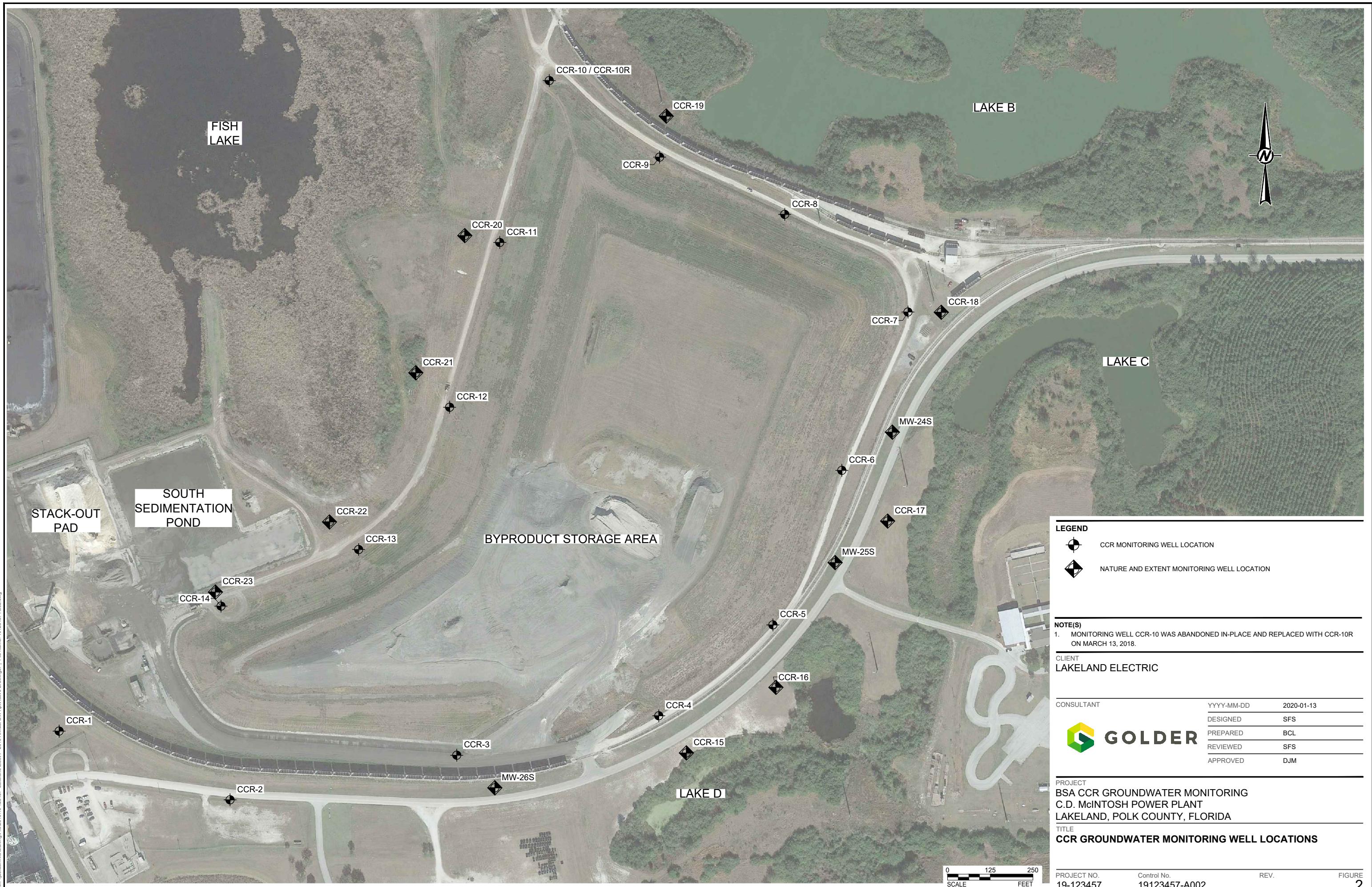
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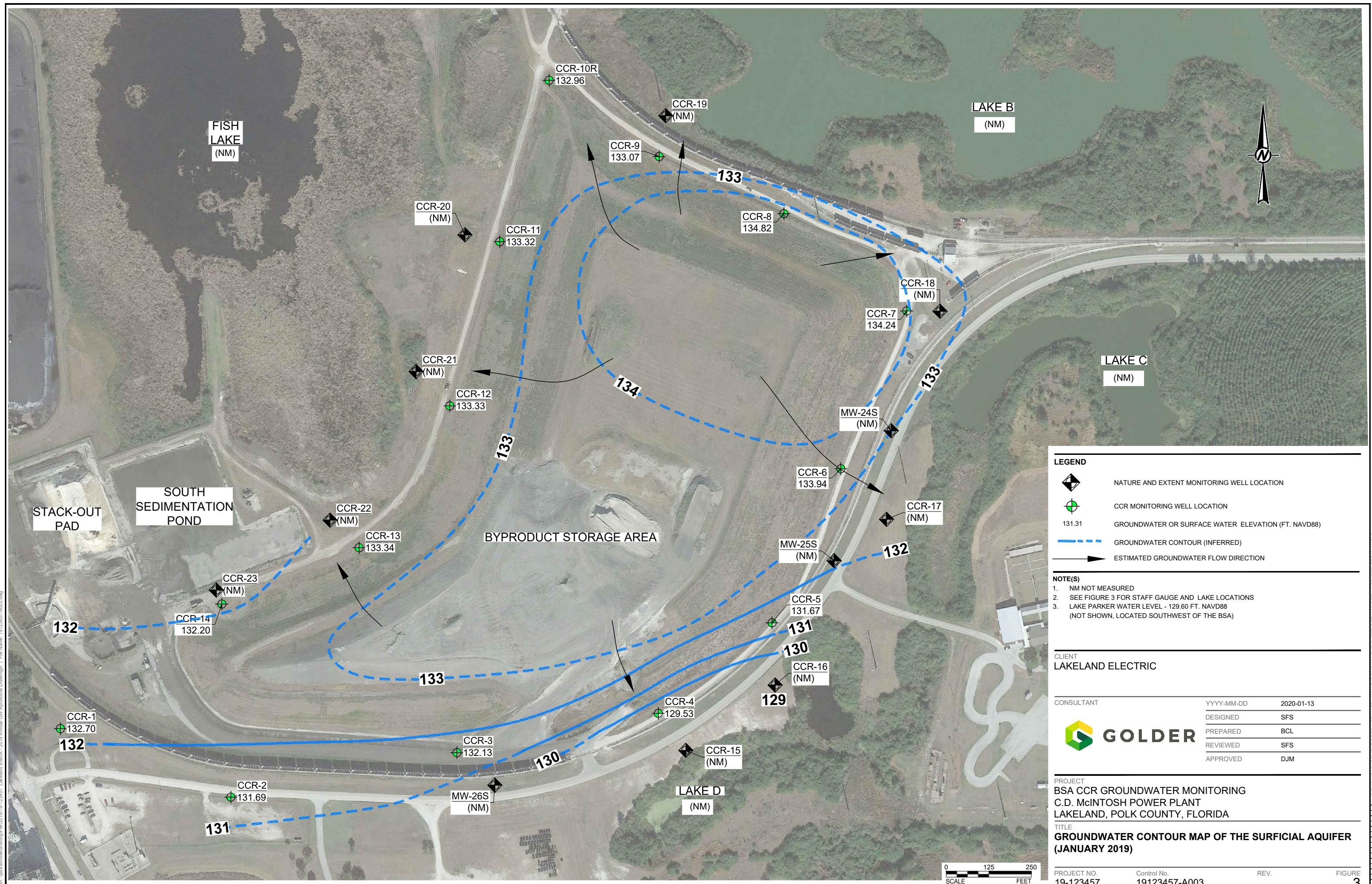
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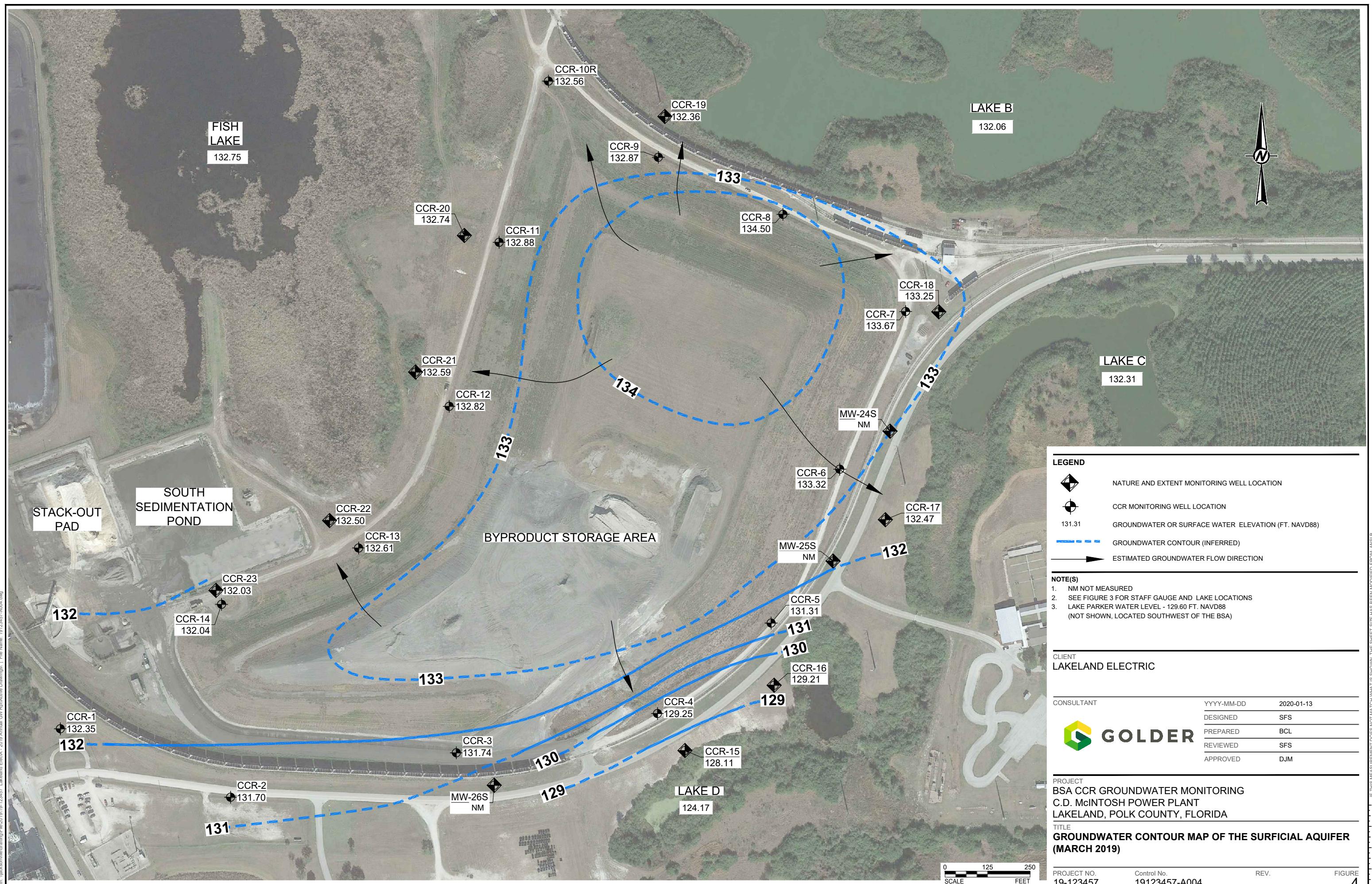
NAVD88 - Vertical Control: North American Vertical Datum of 1988

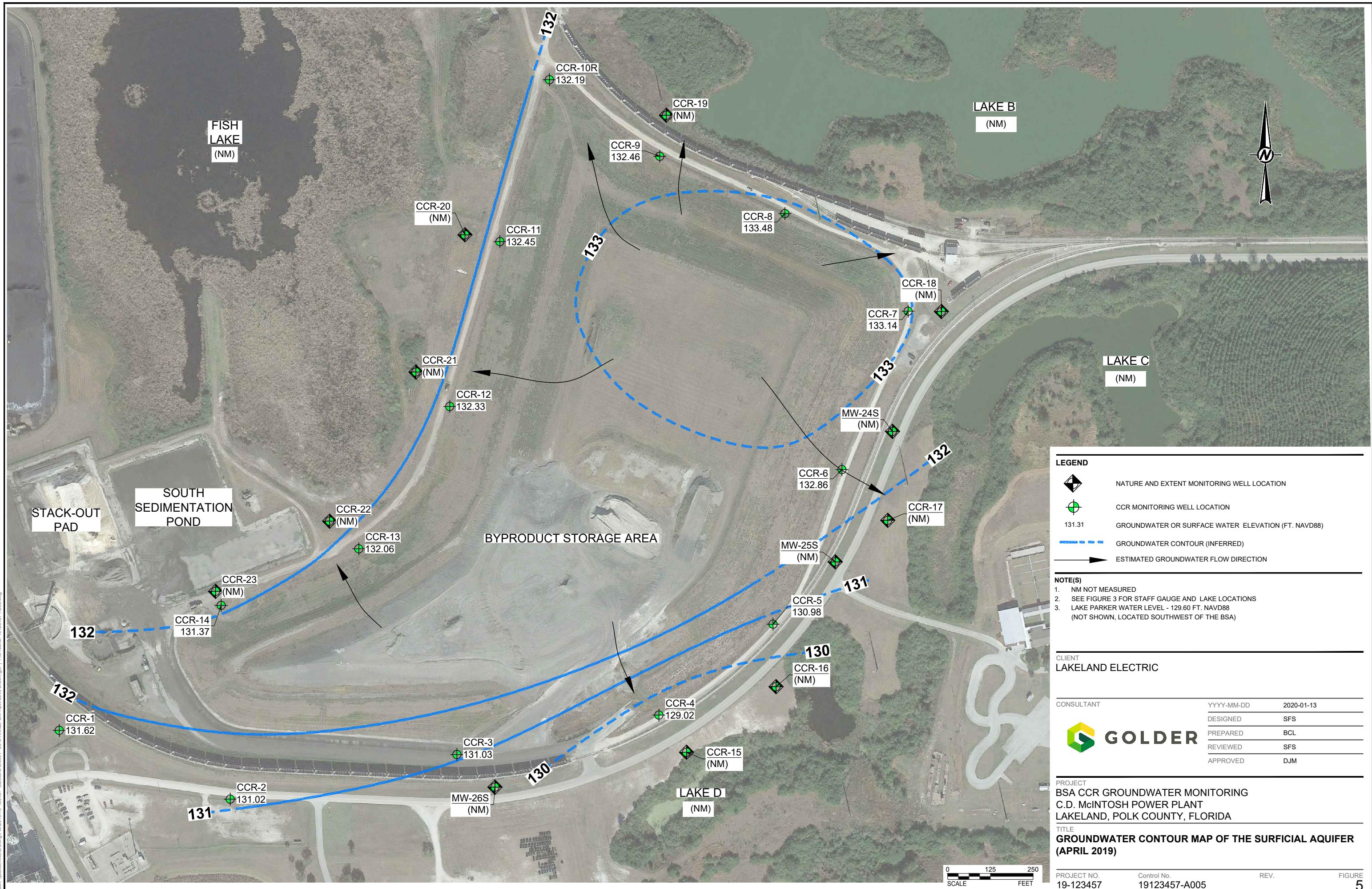
## FIGURES

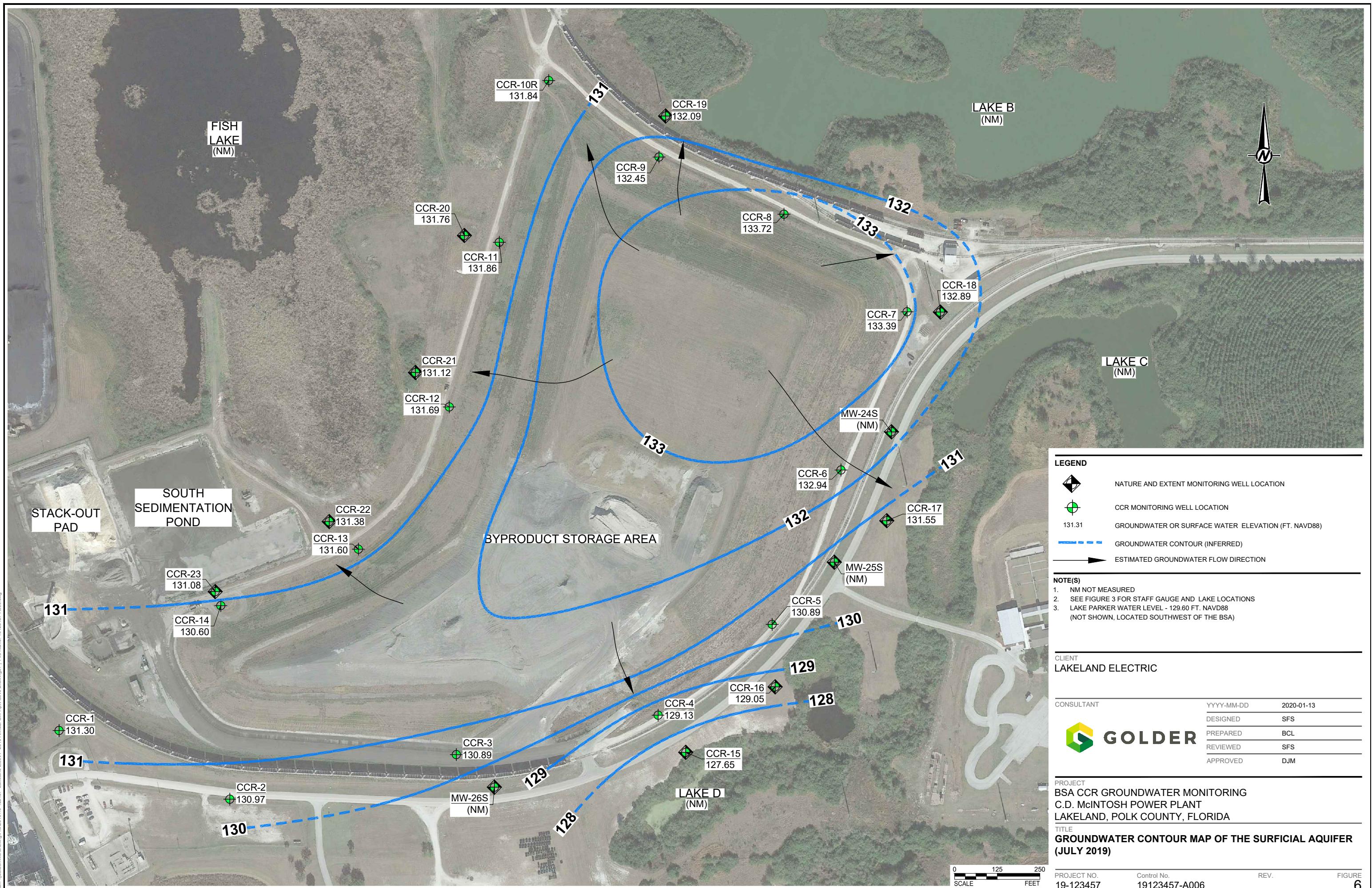












## **APPENDIX A**

### **Demonstrations**



April 12, 2019

19-115694

**Mr. Sean McGinnis, Environmental Coordinator**

Lakeland Electric  
501 East Lemon Street  
Lakeland, FL 33801

**RE: EXTENSION OF ASSESSMENT OF CORRECTIVE MEASURES  
BYPRODUCT STORAGE AREA – C.D. MCINTOSH POWER PLANT  
LAKELAND, POLK COUNTY, FLORIDA**

Dear Mr. McGinnis:

Golder is providing this notification of the extension of assessment of corrective measures for the Byproduct Storage Area at Lakeland Electric's C.D. McIntosh Power Plant in Lakeland, Florida. Pursuant to §257.95(a) of the CCR Rule<sup>1</sup>, additional time is needed to complete the assessment of corrective measures due to the following:

- Delays in completing the nature and extent evaluation due to complexity of the site, procurement procedures, and long turn-around times associated with radionuclide analysis.
- Additional time to evaluate the feasibility of corrective measures including monitored natural attenuation.
- Additional time to evaluate a potential alternate source associated with naturally-occurring site geologic conditions.

Pursuant to §257.95(a), the assessment of corrective measures will be extended for no longer than 60 days.

Sincerely,

**Golder Associates Inc.**

A handwritten signature in blue ink, appearing to read "Sam F. Stafford".

Samuel F. Stafford, PE  
*Senior Project Engineer*

SFS/ALG/ams

A handwritten signature in blue ink, appearing to read "Anthony L. Grasso".

Anthony L. Grasso, PG  
*Principal and Practice Leader*

<https://golderassociates.sharepoint.com/sites/102912/Deliverables/Final/ACM Extension/LE ACM Extension Letter.docx>

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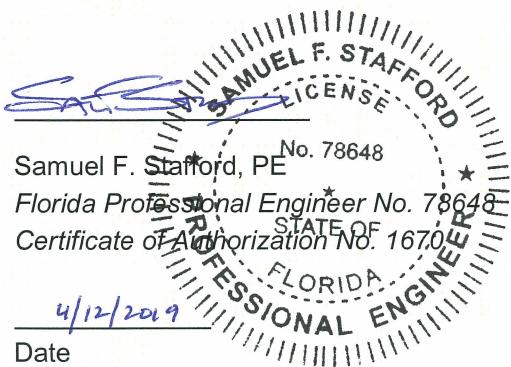
<sup>1</sup> 40 Code of Federal Regulations Part 257 (40 CFR 257), Subpart D – Standards for the Disposal of Coal Combustion Residuals in Landfills and Surface Impoundments, Published in Federal Register/Vol 80, No. 74, April 17, 2015.

---

## PROFESSIONAL CERTIFICATION

I hereby certify that the information contained in this letter is accurate to the best of my knowledge as required by 40 CFR §257.96(a).

Golder Associates Inc.





# ALTERNATE SOURCE DEMONSTRATION FOR RADIUM 226 & 228 IN GROUNDWATER BYPRODUCT STORAGE AREA C.D. MCINTOSH POWER PLANT

*LAKELAND, POLK COUNTY, FLORIDA*

Submitted to:

**Lakeland Electric**

501 East Lemon Street  
Lakeland, FL 33801

Submitted by:

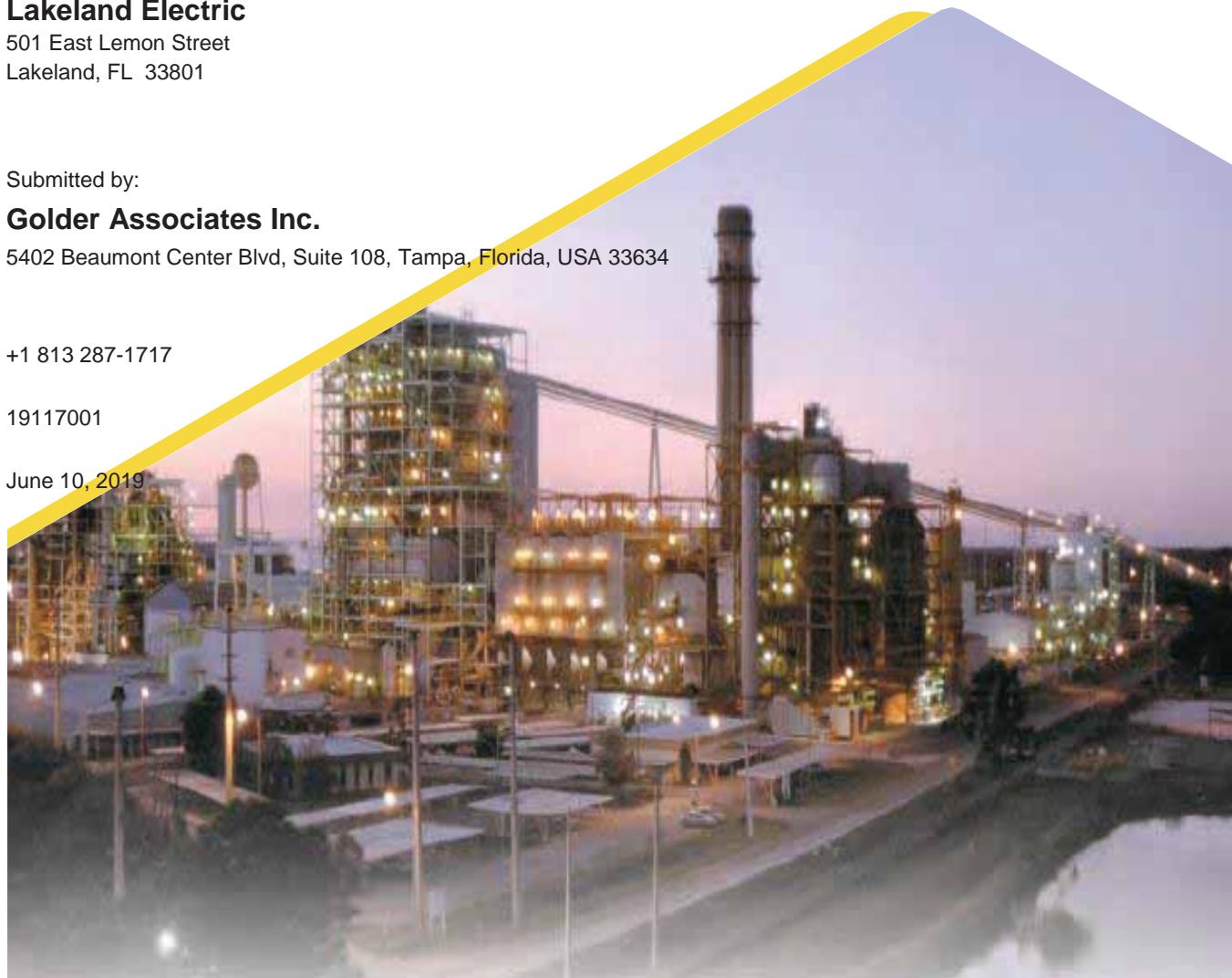
**Golder Associates Inc.**

5402 Beaumont Center Blvd, Suite 108, Tampa, Florida, USA 33634

+1 813 287-1717

19117001

June 10, 2019



## Distribution List

Sean P. McGinnis, CHMM, Lakeland Electric

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## 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) Rule<sup>1</sup> 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.<sup>2</sup> 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 above-grade earthen containment unit surrounded by a perimeter ditch system.

<sup>1</sup> Chapter 40 Code of Federal Regulations (CFR), Part 257, Subpart D.

<sup>2</sup> Chapter 40 CFR Section 257.95(g)(3)(ii).

## 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 wells<sup>3</sup> 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

<sup>3</sup> 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 phosphate-bearing 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 ( $\text{ft}^2/\text{day}$ ), where fine clayey sand predominates, to greater than 5,000  $\text{ft}^2/\text{day}$  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  $\text{ft}^2/\text{day}$  to greater than 9,000,000  $\text{ft}^2/\text{day}$ . 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-14<sup>4</sup>, 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.

<sup>4</sup> 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 land<sup>5</sup> 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 Member<sup>6</sup> 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.

<sup>5</sup> Historic stratigraphic nomenclature differs from the regional/site geology included in Section 3 of this report.

<sup>6</sup> 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.

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<sup>7</sup> 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 hydraulic<sup>8</sup> 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).

<sup>7</sup> 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.

<sup>8</sup> Hydraulic mining is performed using high-pressure jets of water to dislodge rock material.

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 concentrates<sup>9</sup> 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 hydrocyclones<sup>10</sup> 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)<sup>11</sup>. 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.

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<sup>9</sup> 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).

<sup>10</sup> Hydrocyclones are typically funnel-shaped equipment used to separate materials by particle size.

<sup>11</sup> 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.

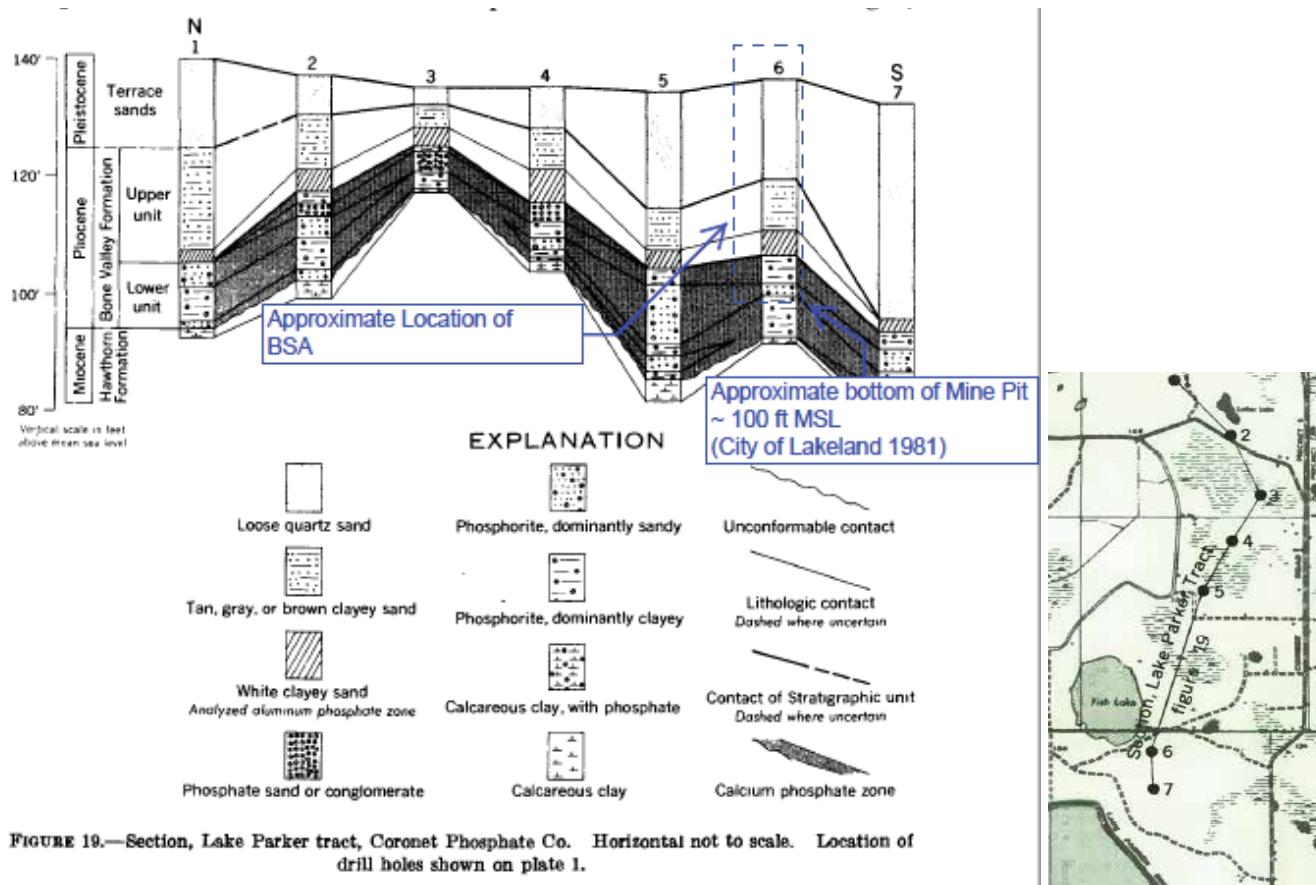


FIGURE 19.—Section, Lake Parker tract, Coronet Phosphate Co. Horizontal not to scale. Location of drill holes shown on plate 1.

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 $\frac{1}{4}$ NW $\frac{1}{4}$  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 percent	Chemical analyses, in percent					
		P <sub>2</sub> O <sub>5</sub>	CaO	Insoluble	Al <sub>2</sub> O <sub>3</sub>	Fe <sub>2</sub> O <sub>3</sub>	U
Top sample; 17-26 ft below surface							
Pebble.....	0.3	2.55	1.01	92.42	2.18	0.42	0.0001
Sand.....	70.4	.33	.....	28.13	.28	.18	.....
Slime.....	29.3	6.79	3.36	64.74	14.62	.40	.010
Head.....	100.0	2.23	.90	88.24	4.48	.25	.002
Bottom sample; 26-30 ft below surface							
Pebble.....	0.5	14.18	8.52	56.57	11.96	0.68	0.047
Sand.....	62.4	.80	2.77	96.63	.85	.17	.001
Slime.....	37.1	5.08	1.50	72.81	12.50	.28	.022
Head.....	100.0	2.45	2.33	87.61	5.22	.21	.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<sub>2</sub>O<sub>5</sub> than the Bottom sample (26 to 30 ft bgs); both have similar aluminum oxide (Al<sub>2</sub>O<sub>3</sub>) concentrations. The P<sub>2</sub>O<sub>5</sub> 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 fraction<sup>12</sup> 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.

<sup>12</sup> 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 rocks<sup>13</sup> 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).

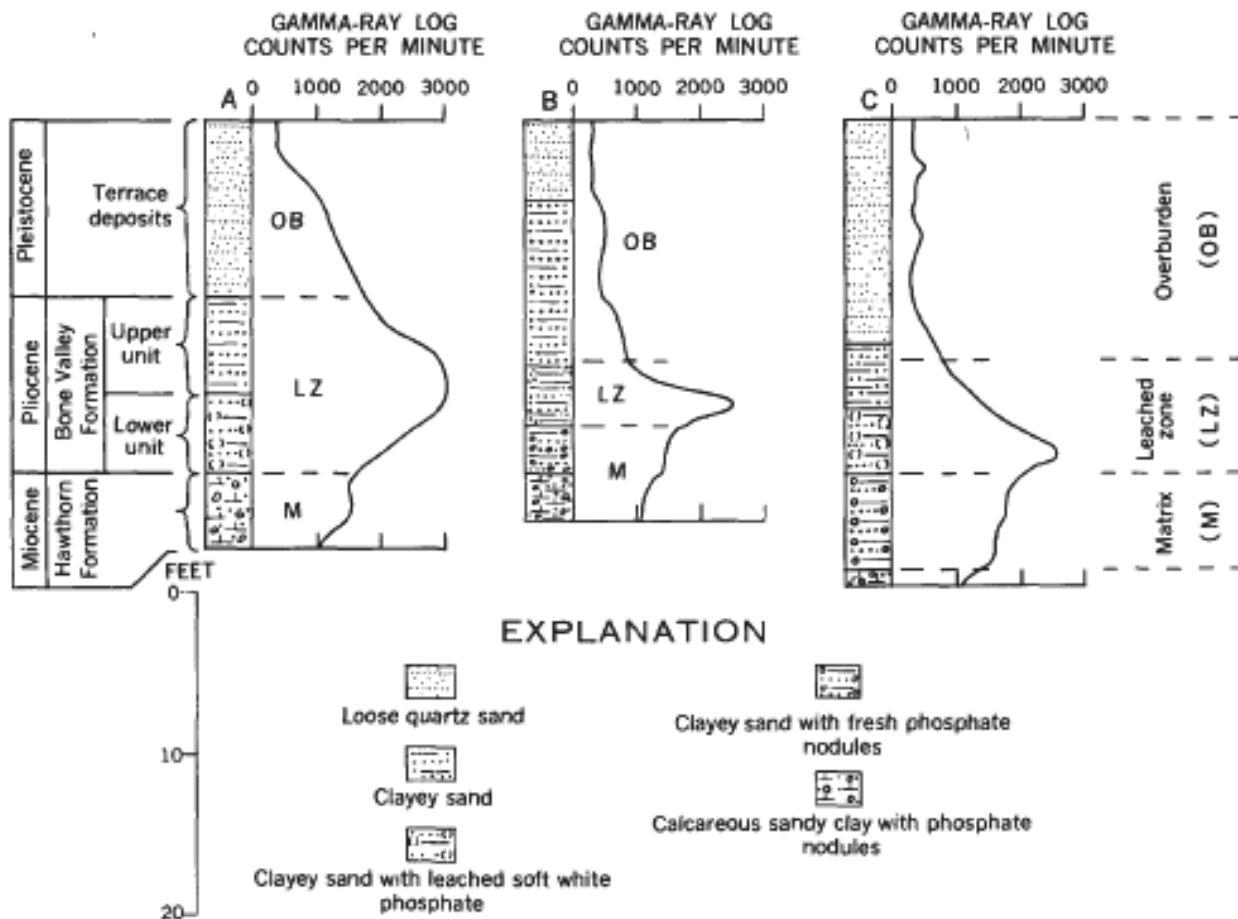


FIGURE 17.—Typical drill hole and gamma logs, Orange Park tract. Location of drill holes shown on plate 1.

Source for above: Page G86 Cathcart US Geologic Survey (USGS) 1964.

<sup>13</sup> 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.

### 4.3.3 Teneroc Mine

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 (mesh size)	Chemical analyses, average, (in percent)				Ratio U:P <sub>2</sub> O <sub>5</sub> (average)
			P <sub>2</sub> O <sub>5</sub>	I and A <sup>1</sup>	Acid Insoluble	U	
90	Park and Orange tracts, T. 27 S., R. 24 E.	+20.....	33.9	2.39	7.20	0.012	1:2820
		-20+150 <sup>2</sup> .....	35.0	2.28	4.24	.010	1:3500
		-150.....	19.8	12.85	32.57	.011	1:1800
		Head <sup>3</sup> .....	23.1	-----	-----	.008	-----
39	Tenoroc mine, T. 27 S., Rs. 24 and 25 E.	+24.....	31.8	2.33	8.14	.015	1:2120
		-24+150 <sup>2</sup> .....	35.2	1.83	1.88	.010	1:3520
		-150.....	14.7	NA	42.69	.011	1:1340
		Head <sup>3</sup> .....	12.1	-----	-----	.006	-----
27	Lake Parker tract, T. 28 S., R. 24 E.	+24.....	32.2	3.31	9.67	.015	1:2150
		-24+150 <sup>2</sup> .....	31.4	2.01	2.30	.012	1:2620
		-150.....	16.8	NA	39.55	.010	1:1680
		Head <sup>3</sup> .....	12.6	-----	-----	.006	-----

<sup>1</sup> Percent Fe<sub>2</sub>O<sub>3</sub>+Al<sub>2</sub>O<sub>3</sub>.

<sup>2</sup> Concentrate fraction—quartz sand removed by flotation.

<sup>3</sup> Calculated, assuming that the sand tailing contained 2 percent P<sub>2</sub>O<sub>5</sub> 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 <sub>2</sub> O <sub>5</sub>	CaO	U	Al <sub>2</sub> O <sub>3</sub>	Fe <sub>2</sub> O <sub>3</sub>	CaO:P <sub>2</sub> O <sub>5</sub>	U:P <sub>2</sub> O <sub>5</sub>
Lake Parker tract, T. 27 S., R. 24 E.; T. 28 S., R. 24 E.									
27	+24	1.1	13.09	3.97	0.009	11.50	0.56	0.303	1:1450
	+150	68.4	.72	.08	.0001	.56	.26	.111	-----
	-150	30.5	6.10	3.64	.012	8.28	.71	.597	1:510
	Head	100.0	2.52	1.24	.004	3.05	.40	.492	1:630
Tenoroc mine, T. 27 S., R. 24 E.; T. 27 S., R. 25 E.; T. 28 S., R. 24 E.									
39	+24	0.7	11.99	5.88	0.005	8.42	0.80	0.490	1:2390
	+150	72.1	.52	.37	.0001	.41	.31	.712	-----
	-150	27.2	5.42	3.65	.009	6.94	.86	.673	1:600
	Head	100.0	1.93	1.30	.0025	2.28	.46	.674	1:770
Orange tract, T. 27 S., R. 24 E.									
57	+20	1.5	26.02	28.03	0.015	8.29	0.69	1.077	1:1630
	+150	56.7	2.25	2.08	.002	.78	.36	.924	1:1130
	-150	41.8	8.66	6.26	.017	11.10	1.22	.723	1:510
	Head	100.0	5.29	4.23	.008	5.17	.72	.800	1:660
Park tract, T. 27 S., R. 24 E.									
33	+20	3.2	31.84	34.09	0.016	8.11	0.91	1.071	1:1990
	+150	52.0	3.85	3.94	.003	.94	.41	1.023	1:1280
	-150	44.8	14.63	14.05	.018	11.64	1.89	.960	1:810
	Head	100.0	9.58	9.44	.010	5.97	1.09	.985	1:960

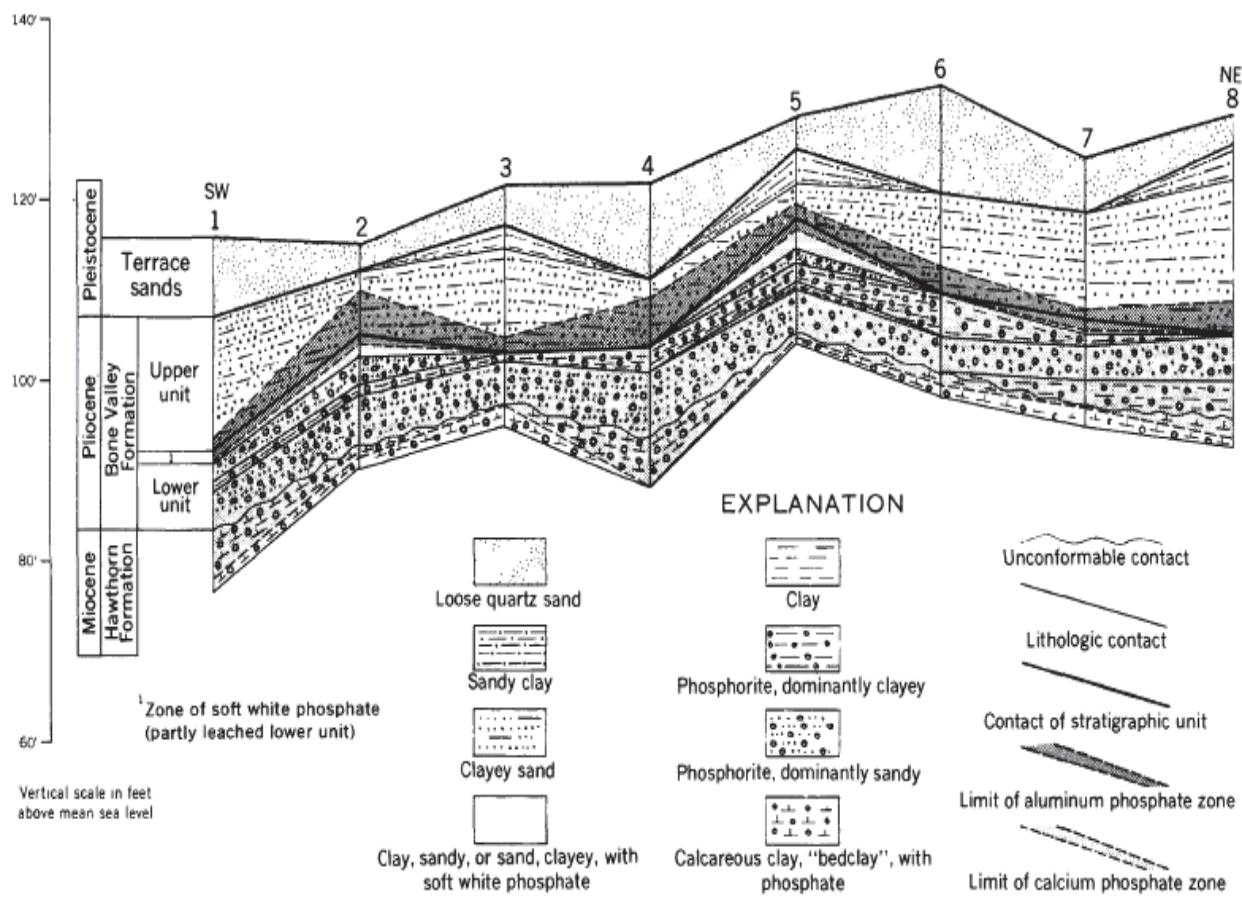


FIGURE 18.—Section, Tenoroc mine, showing relations of stratigraphy and economic geology. Horizontal not to scale. Location of drill holes shown on plate 1.

## 5.0 NATURALLY-OCCURRING 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:

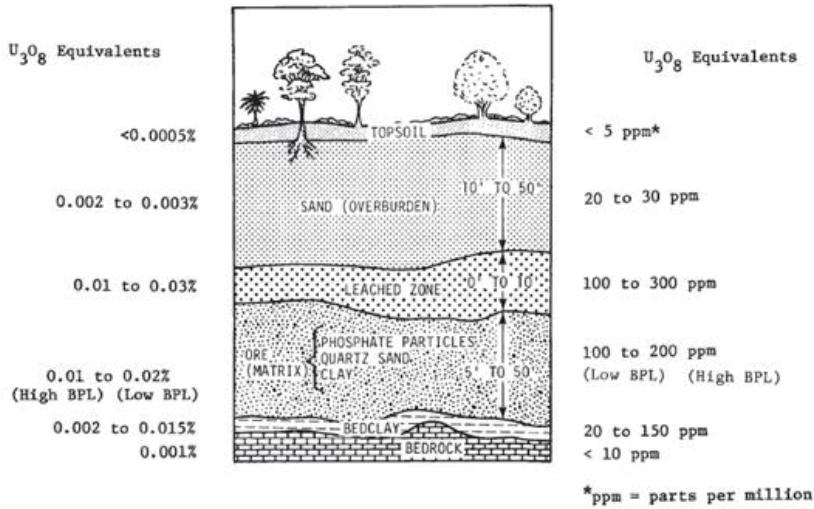
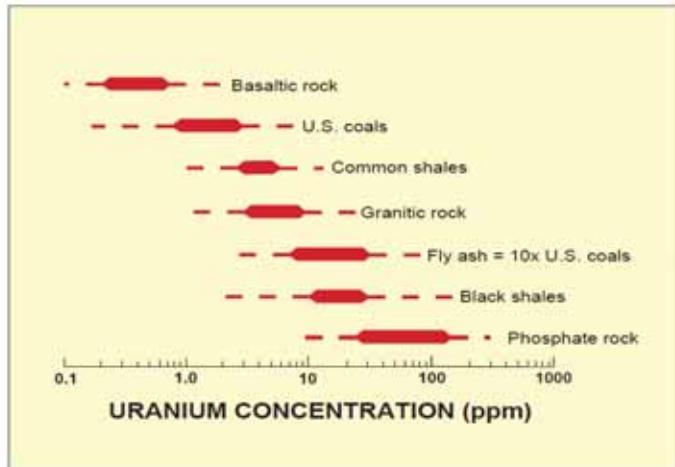


Figure 1.15. Average Uranium Concentrations as U<sub>3</sub>O<sub>8</sub> (Altschuler et al 1956, Cathcart 1965, McKelvey 1956) in Typical Central Florida Phosphate District Profile (Fountain and Zellars 1972)

Source for above: Environmental Impact Statement: Central Florida Phosphate Industry: Volume II Background and Alternatives Assessment. EPA Nov 1978.

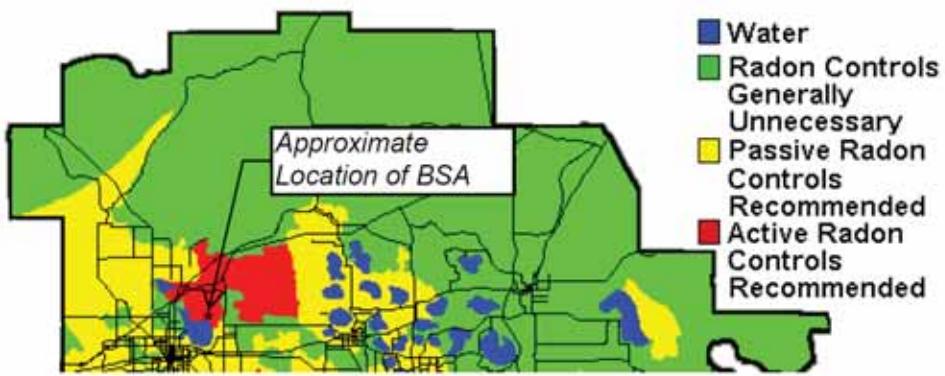
- Uranium in leached- and matrix-zones exhibits typical concentrations between 100 and 300 parts per million (ppm), which is approximately 1 to 2 orders of magnitude higher than U.S. coals and fly ash, respectively, as depicted below (USGS 1997, Figure 2):



**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](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 EPA<sup>14</sup> 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).

<sup>14</sup> 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 ( $R^2$ ) 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/L<sup>15</sup> 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).

<sup>15</sup> 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 10 JUNE 2019



## 10.0 SIGNATURE PAGE

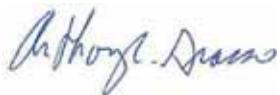
**Golder Associates Inc.**



Samuel F. Stafford, PE  
*Senior Project Engineer*



Gregory A. O'Neal II, PG  
*Senior Geologist*



Anthony L. Grasso, PG  
*Principal and Practice Leader*

GAO/SFS/ALG/sjh

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## TABLES

\* Monitoring well CCR-10 was abandoned and replaced with CCR-10R on 3/13/2018.  
 ft ags = feet above ground surface  
 ft bgs = feet below ground surface  
 NAVD88 = North American Vertical Datum of 1988  
 NAD83 = North American 1983 Datum  
 ft = feet  
 CCR Monitoring Wells are CCR-1 through CCR-14 and CCR-10R.  
 Natural and Extent Monitoring Wells are CCR-15 through CCR-23.  
 Notes:  
 CCR-19  
 2/15/2019 1364205.4 683064.5 1333.8 136.05 2.9 25.8 15.6 - 25.1  
 CCR-18  
 2/18/2019 1363631.1 683869.7 142.9 140.81 2.6 25.9 15.6 - 25.2  
 CCR-17  
 2/19/2019 1363019.9 683712.7 142.9 145.80 2.9 25.7 15.4 - 25.0  
 CCR-16  
 2/18/2019 1362533.2 683385.6 141.2 144.10 2.9 25.7 15.4 - 24.9  
 CCR-15  
 2/18/2019 1362341.3 683123.5 135.8 138.70 2.9 25.5 15.4 - 24.9  
 CCR-14  
 6/21/2016 1362771.1 681761.2 141.2 144.12 2.9 25.7 15.6 - 25.1  
 CCR-13  
 6/21/2016 1362936.6 682164.1 135.0 137.95 3.0 25.7 15.7 - 25.2  
 CCR-12  
 6/20/2016 1363353.1 682430.5 134.1 136.99 2.9 25.6 15.6 - 25.1  
 CCR-11  
 6/20/2016 1363835.4 682577.2 134.3 137.12 2.8 24.7 14.6 - 24.1  
 CCR-10R  
 3/13/2018 1364262.1 682706.3 133.8 133.56 0.2 24.5 14.4 - 23.9  
 CCR-10 \*  
 6/20/2016 1364309.4 682722.2 135.9 138.54 2.6 24.5 15.5 - 25.0  
 CCR-9  
 6/21/2016 1364085.2 683045.3 138.6 141.67 3.1 25.6 15.9 - 25.4  
 CCR-8  
 6/22/2016 1363917.6 683411.6 139.4 142.12 2.7 26.0 15.7 - 25.2  
 CCR-7  
 6/22/2016 1363631.9 683772.2 139.1 141.34 2.9 25.7 15.7 - 25.2  
 CCR-6  
 6/22/2016 1363168.4 683578.6 138.5 141.34 2.9 25.7 16.2 - 25.7  
 CCR-5  
 6/22/2016 1362716.0 683376.9 138.6 141.07 2.5 26.2 15.6 - 25.1  
 CCR-4  
 6/24/2016 1362450.0 683042.7 140.3 143.13 2.9 25.7 15.9 - 25.3  
 CCR-3  
 6/23/2016 1362334.6 682451.3 137.5 137.04 0.5 25.8 15.7 - 25.2  
 CCR-2  
 6/23/2016 1362203.9 681787.6 137.6 140.57 3.0 25.8 15.7 - 25.2  
 CCR-1  
 6/24/2016 1362405.2 681287.1 138.3 141.30 3.0 25.7 15.7 - 25.2

Well ID	Date Installed	Northings (ft NAD83)	Easting (ft NAD83)	Ground Surface Elevation (ft NAVD88)	TOC Stick-up Depth (ft bgs)	Screen Interval Depth (ft bgs)	Well Depth (ft bgs)	Interval Depth (ft bgs)	Surface Height (ft NAVD88)
CCR-1	6/24/2016	1362405.2	681287.1	138.3	141.30	3.0	25.7	15.7 - 25.2	135.78
CCR-2	6/23/2016	1362203.9	681787.6	137.6	140.57	3.0	25.8	15.7 - 25.2	136.2
CCR-3	6/23/2016	1362334.6	682451.3	137.5	137.04	0.5	25.8	15.7 - 25.2	135.7
CCR-4	6/24/2016	1362450.0	683042.7	140.3	143.13	2.9	25.7	15.6 - 25.1	137.51
CCR-5	6/22/2016	1362716.0	683376.9	138.6	141.07	2.5	26.2	16.2 - 25.7	134.0
CCR-6	6/22/2016	1363168.4	683578.6	138.5	141.34	2.9	25.7	15.7 - 25.2	137.5
CCR-7	6/22/2016	1363631.9	683772.2	139.1	141.34	2.9	25.7	15.7 - 25.2	139.1
CCR-8	6/22/2016	1363917.6	683411.6	139.4	142.12	3.0	25.8	15.7 - 25.2	139.4
CCR-9	6/21/2016	1364085.2	683045.3	138.6	141.67	3.1	25.6	15.9 - 25.4	134.1
CCR-10R	3/13/2018	1364262.1	682706.3	133.8	133.56	0.2	24.7	14.6 - 24.1	135.9
CCR-10 *	6/20/2016	1364309.4	682722.2	135.9	138.54	2.6	24.5	14.4 - 23.9	135.9
CCR-11	6/20/2016	1363835.4	682577.2	134.3	137.12	2.8	24.7	14.6 - 24.1	135.7
CCR-12	6/20/2016	1363353.1	682430.5	134.1	136.99	2.9	25.6	15.6 - 25.1	134.1
CCR-13	6/21/2016	1362936.6	682164.1	135.0	137.95	3.0	25.7	15.6 - 25.1	135.0
CCR-14	6/21/2016	1362771.1	681761.2	141.2	144.10	2.9	25.5	15.4 - 24.9	144.1
CCR-15	2/18/2019	1362341.3	683123.5	141.8	144.65	2.9	25.7	15.4 - 25.0	141.8
CCR-16	2/18/2019	1362533.2	683385.6	141.2	144.12	2.9	25.6	15.3 - 24.9	141.2
CCR-17	2/19/2019	1363019.9	683712.7	142.9	145.80	2.9	25.7	15.4 - 25.0	142.9
CCR-18	2/18/2019	1363631.1	683869.7	142.9	140.81	2.6	25.9	15.6 - 25.2	142.9
CCR-19	2/15/2019	1364205.4	683064.5	133.8	136.05	2.9	25.8	15.5 - 25.1	133.8
CCR-20	2/14/2019	1363855.5	682474.9	133.1	136.5	2.9	25.2	14.9 - 24.5	133.1
CCR-21	2/13/2019	1363454.0	682331.4	134.5	137.12	2.6	25.9	15.6 - 25.2	134.5
CCR-22	2/13/2019	1363017.4	682078.7	134.0	137.51	3.5	25.1	14.8 - 24.4	134.0
CCR-23	2/12/2019	1362812.1	681744.7	136.2	135.78	-0.5	25.4	15.1 - 24.7	136.2

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



**Table 3: Summary of Radium 226 & 228 in Nature and Extent Groundwater and Surface 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

**Table 4: Summary of Radium 228 & 228 Concentrations in Groundwater (CCR Monitoring Wells)**  
**Byproduct Storage Area**  
**Lakeland Electric - C.D. McIntosh Jr. Power Plant**

Event	Date Sampled	CCR Monitoring Well Designation												
		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
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	3	29.7
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
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	30.7
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	28.4
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	27
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	42.1
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	36.4
Background	3/15/2017	4.39	6.07	4.43	59	16.2	6.53	15.1	8.77	14.4	1.58	5.89	2.68	35.8
Background	4/12/2017	4.62	5.54	4.62	66.8	16	7.3	19.4	9.28	15.3	1.5	7.78	2.11	29.4
Background	5/17/2017	3.58	5.07	3.81	71.1	13.8	8.53	20.6	7.32	13.5	1.38	8.93	2.01	32.4
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	24.8
Background	7/11/2017	4.59	4.54	5.02	71.9	15.9	6.86	12.3	4.41	14.4	1.02	7.11	2.46	42.2
Background	8/15/2017	5.65	2.41	4.17	61.7	17.2	4.05	4.93	5.27	15.5	0.864	7.99	2.55	35.1
Detection	10/13/2017	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Detection	11/30/2017	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Detection	12/7/2017	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Assessment	4/12/2018	6.6	5.8	3.9	45.8	18.8	4.8	11.7	6.4	0.86	3.6	1.3	3	23.3
Assessment	7/18/2018	6.8	3.2	4.1	51	21.1	2.9	5.5	9.1	2.7	6.1	3.6	40.6	17.5
Assessment	1/8/2019	6.8	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:

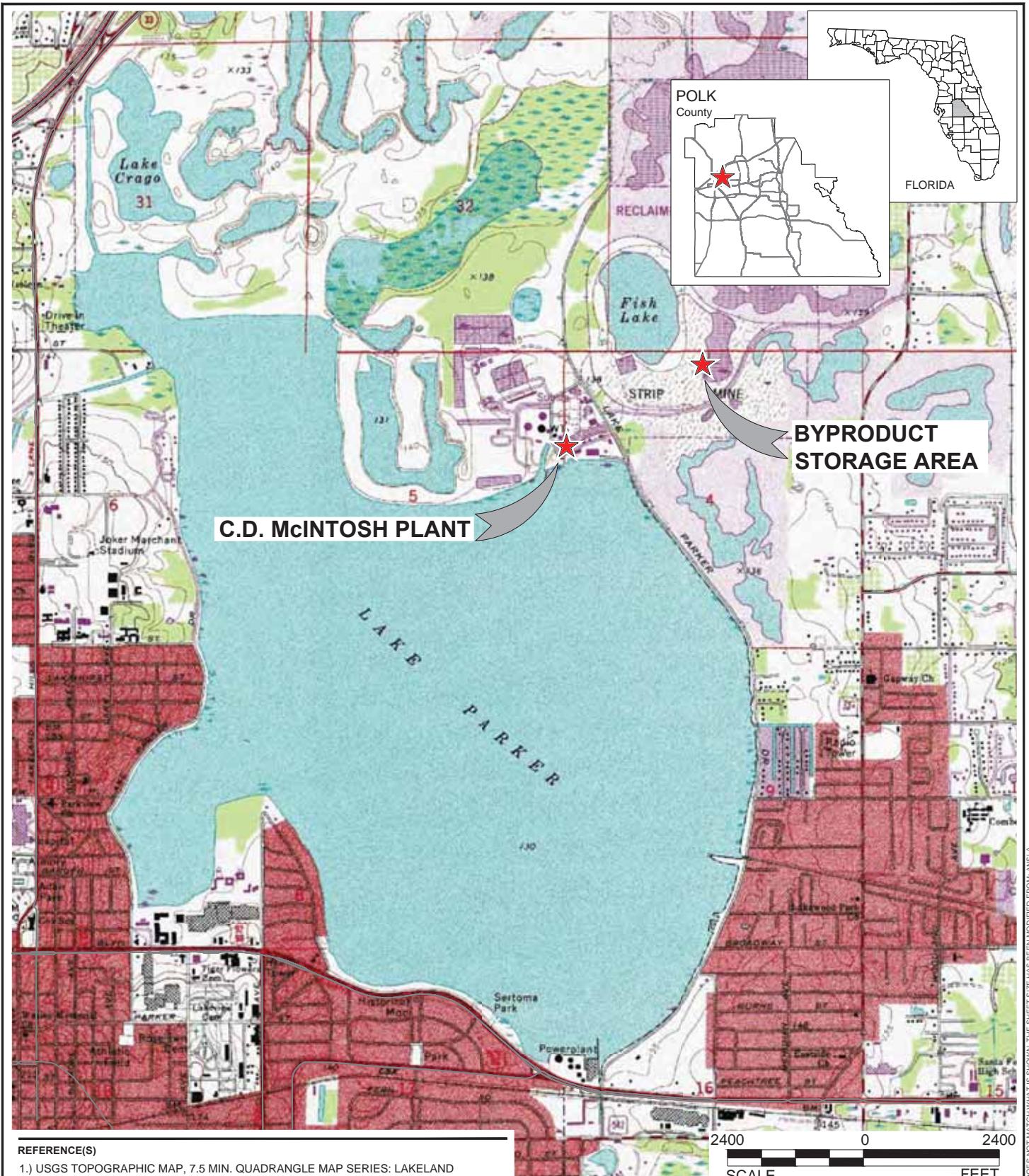
Dates shown are representative of sampling events that took place over multiple days  
 Radium values represent sum of Radium 226 and Radium 228

All concentrations reported in picocuries per liter (pCi/L)  
 NA - Not analyzed

\* Monitoring well CCR-10 was abandoned and replaced with CCR-10R on 3/13/2018

Checked by: SJH 5/10/19  
 Reviewed by: ALG 5/24/2019

## FIGURES



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**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**  
**LAKELAND, POLK COUNTY, FLORIDA**

**TITLE**  
**SITE LOCATION MAP**

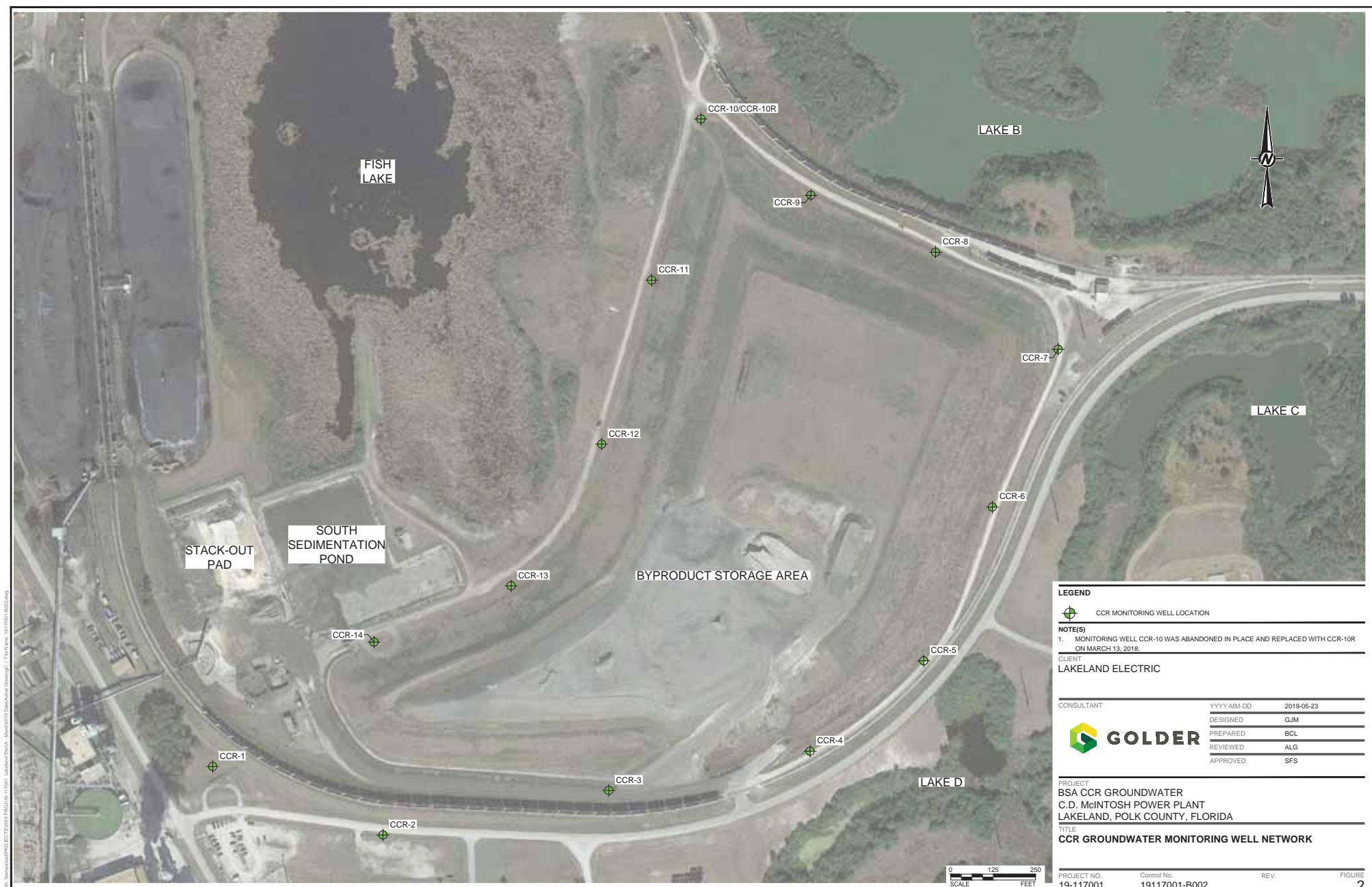
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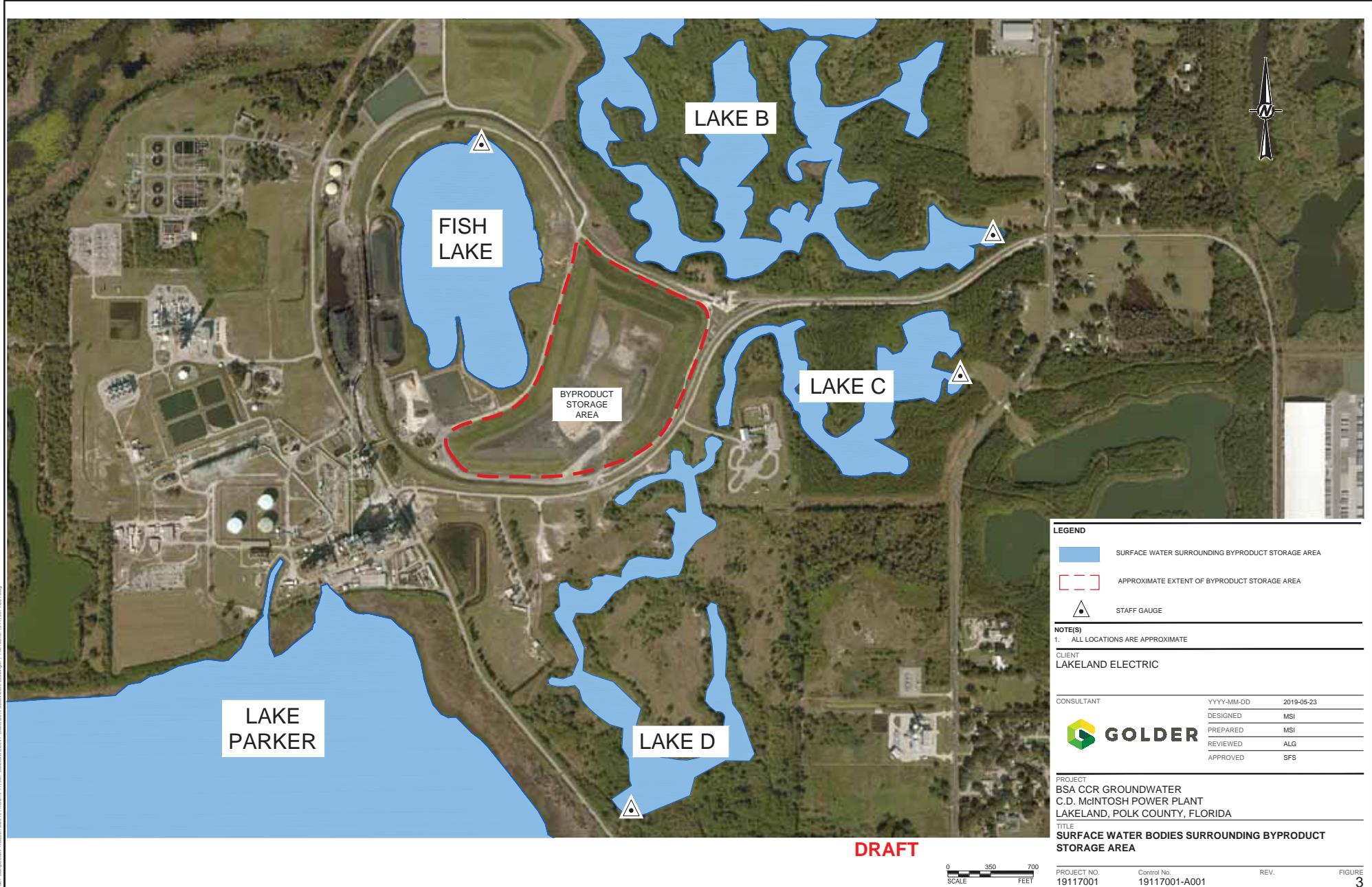
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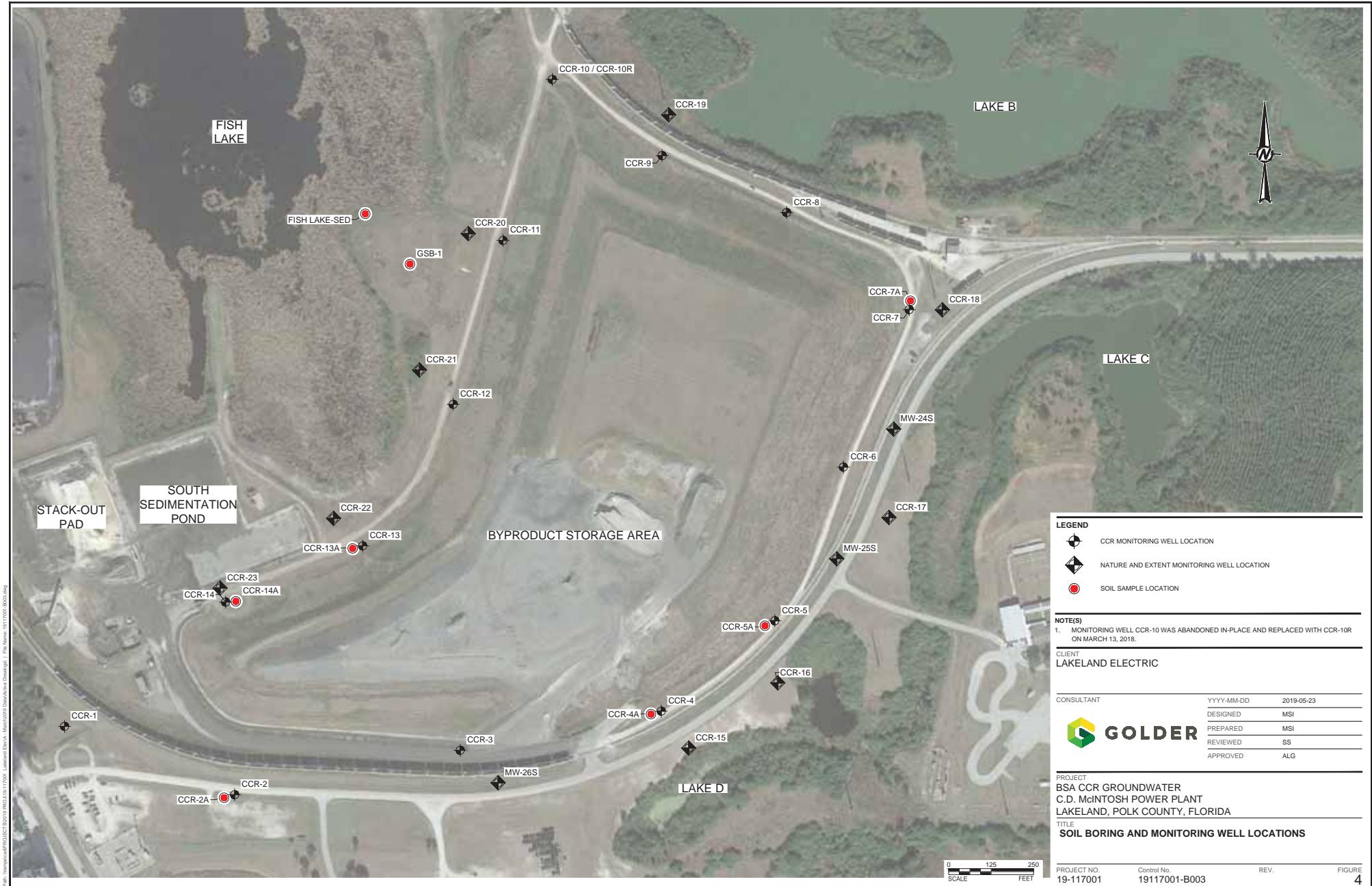
FIGURE

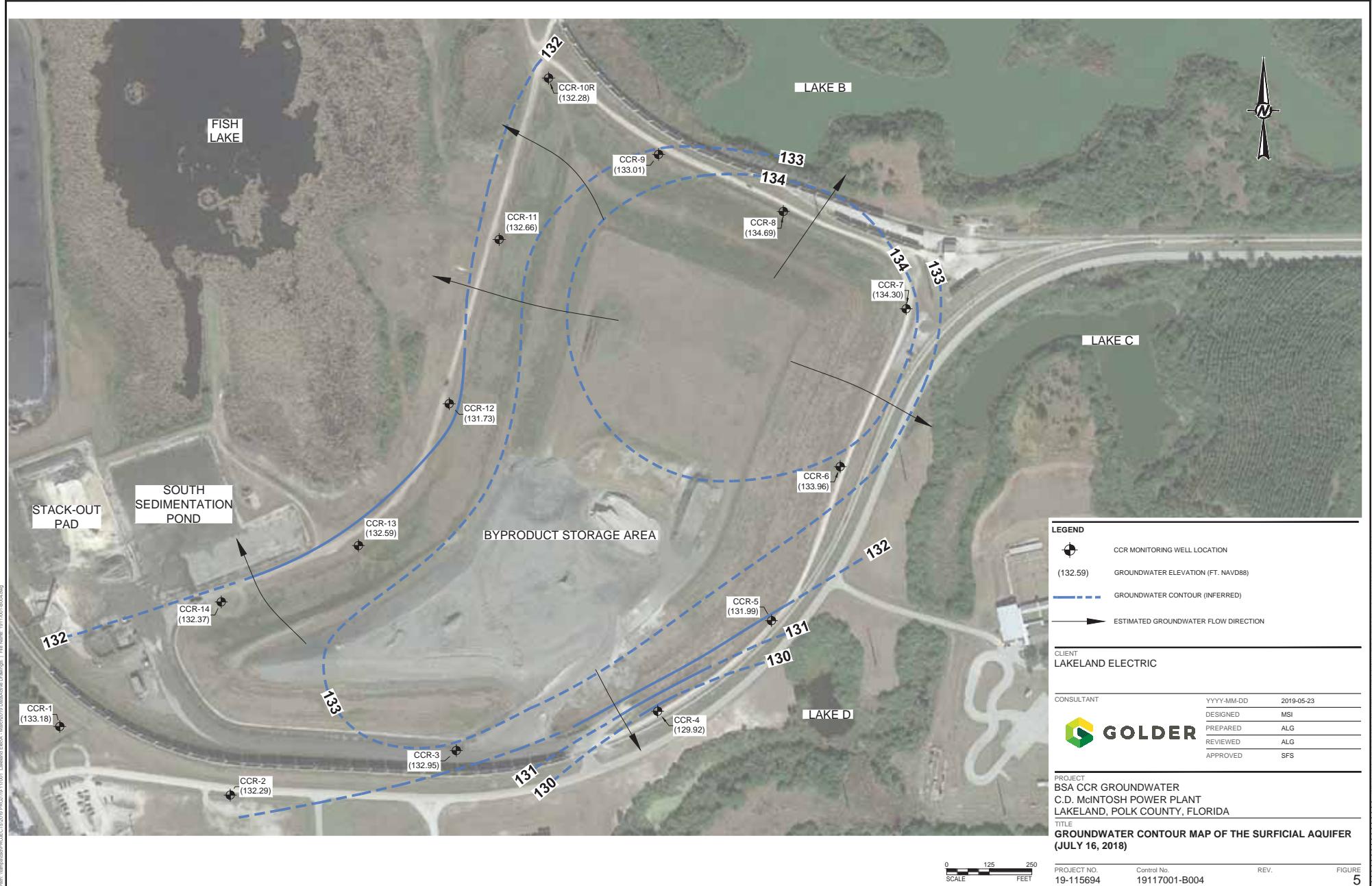
1

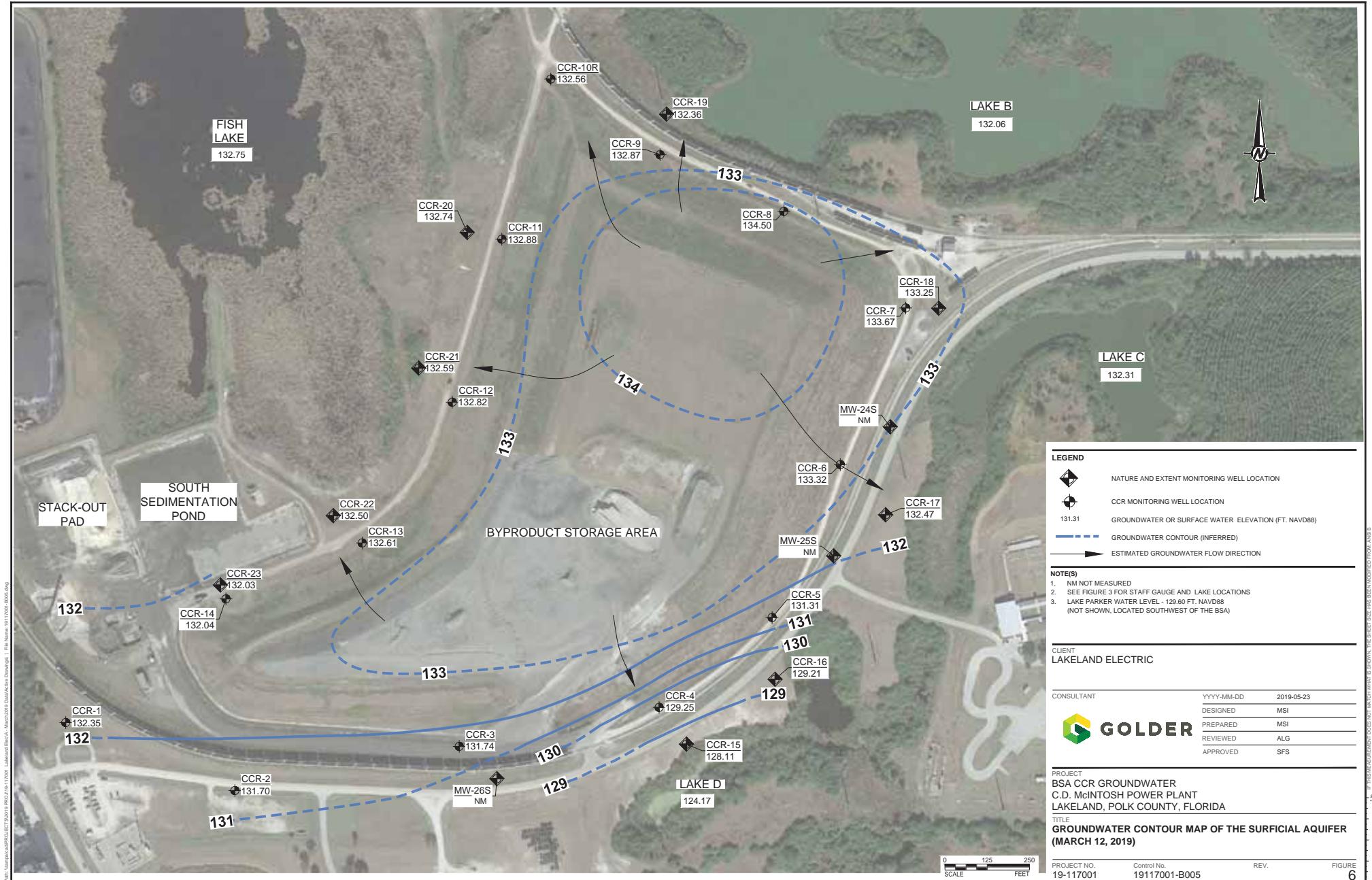
1 in IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ANSIA

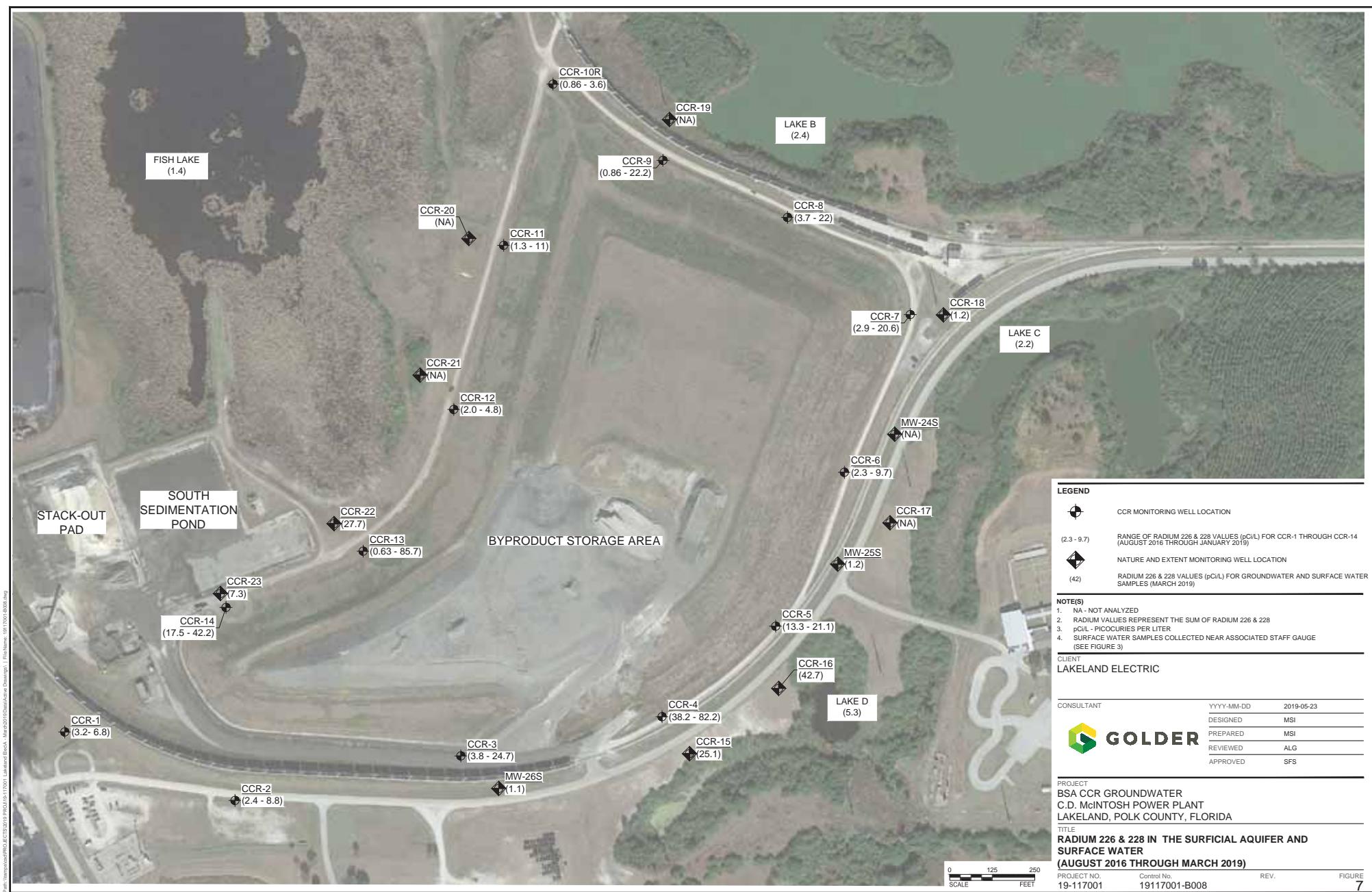








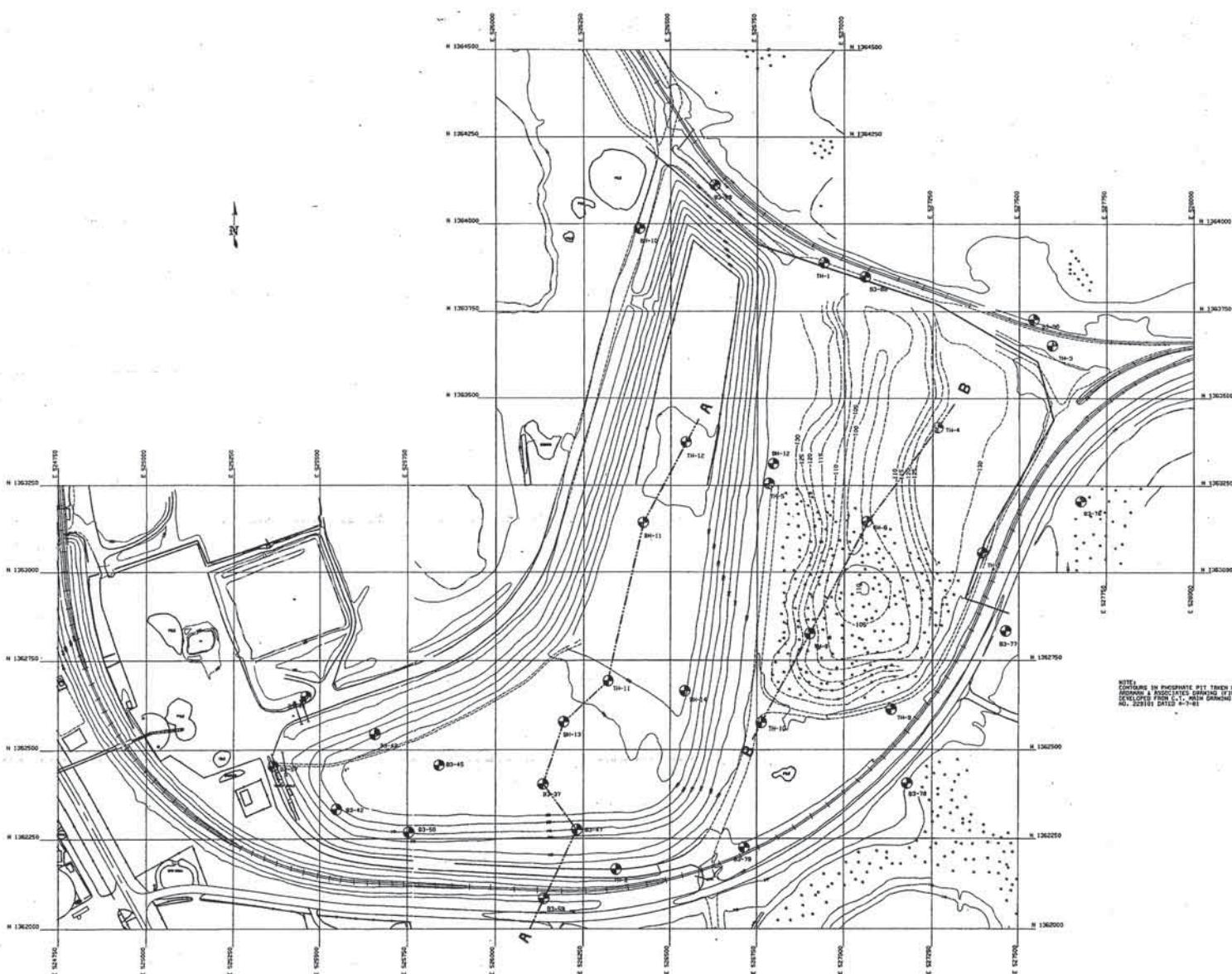




**APPENDIX A**

**Soil Boring Logs and Location Map**

23



SOIL BORING LOCATION PLAN

GENERAL	REVISIONS	REVISIONS AND RECORD OF ISSUE	BY ENGINEER
00	00	00	

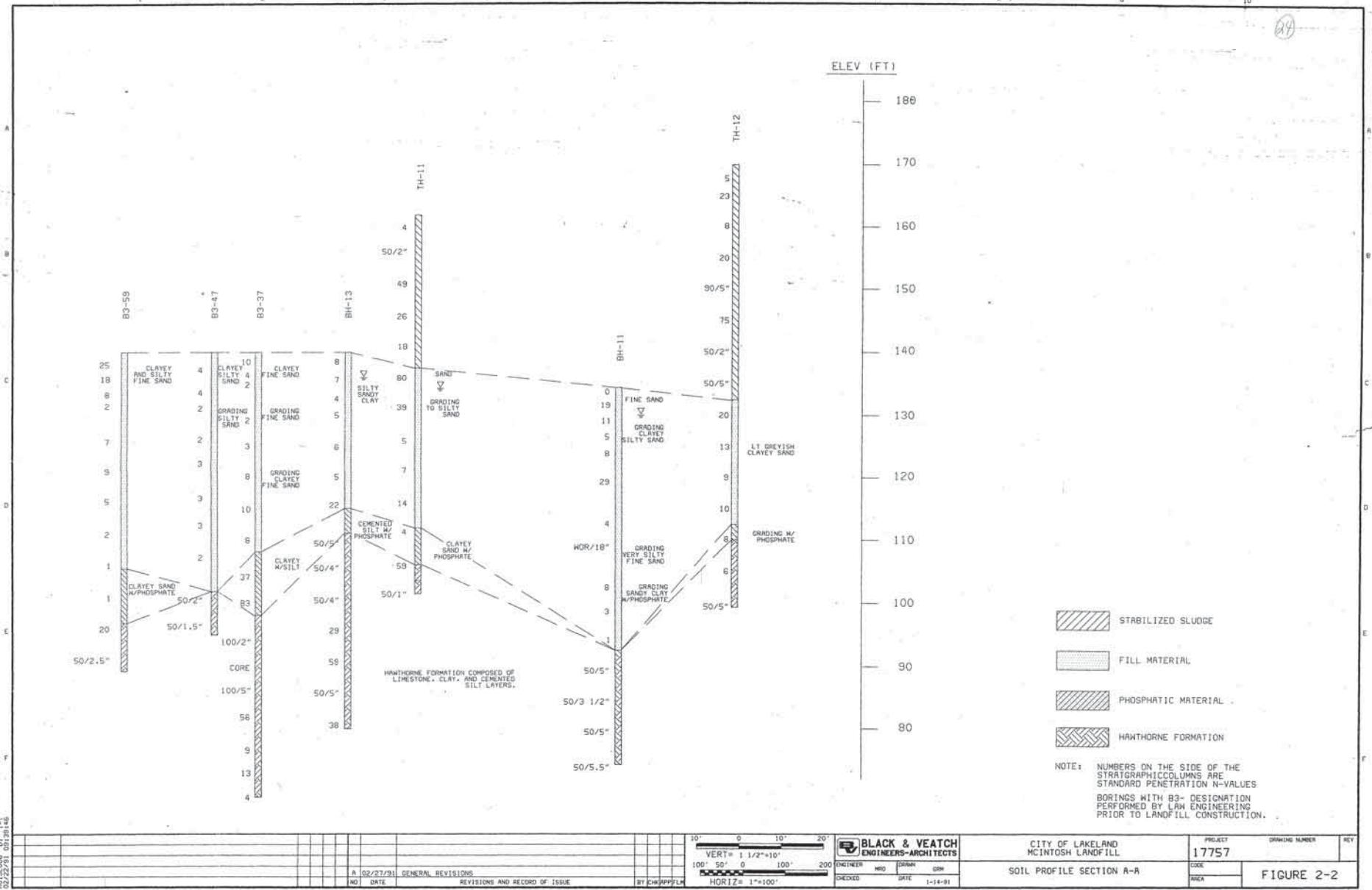
100' 50' 0' 100' 200'

1'=100'

BLACK & VEATCH  
ENGINEERS-ARCHITECTS  
PROJECT: C.D. MCINTOSH PLANT LANDFILL STUDY

LAKELAND ELECTRIC & WATER  
SOIL BORING LOCATION  
PLAN

PROJECT NUMBER 17757  
DRAWING NUMBER A  
DATE FIGURE 2-1



0889167ULLER ACO 10 07  
A01SLOG6 D1 1=1

R 02/27/91 GENERAL REVISIONS  
NO. DATE REVISIONS AND RECORD OF ISS

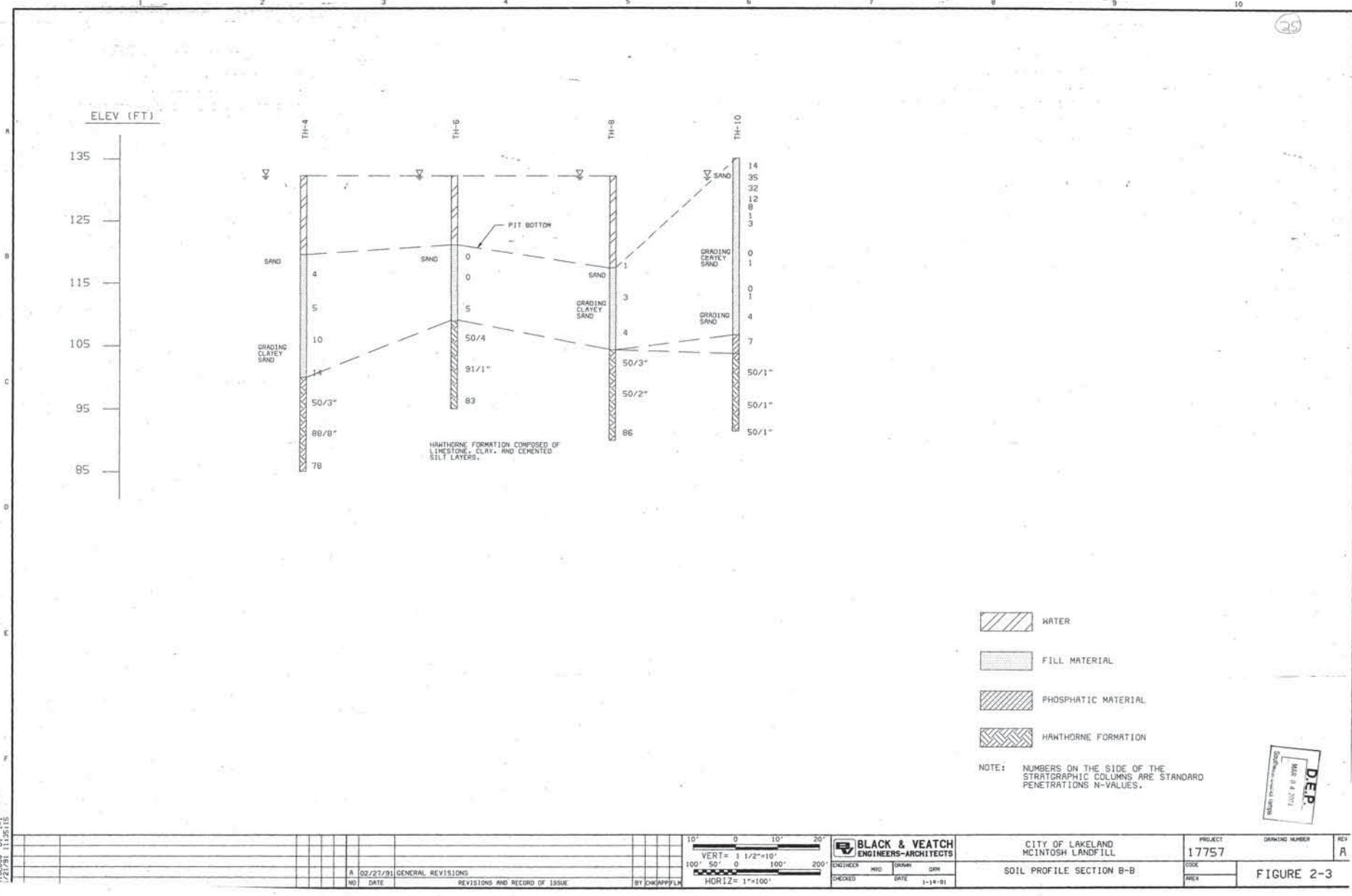
BY K

VERT = 1 1/2"=10°  
HORIZ = 1"=100'

The logo consists of a square containing a stylized 'B' and 'V' intertwined, followed by the company name "BLACK & VEATCH" and "ENGINEERS-ARCHITECTS" stacked vertically.

CITY OF LAKELAND  
MCINTOSH LANDFILL

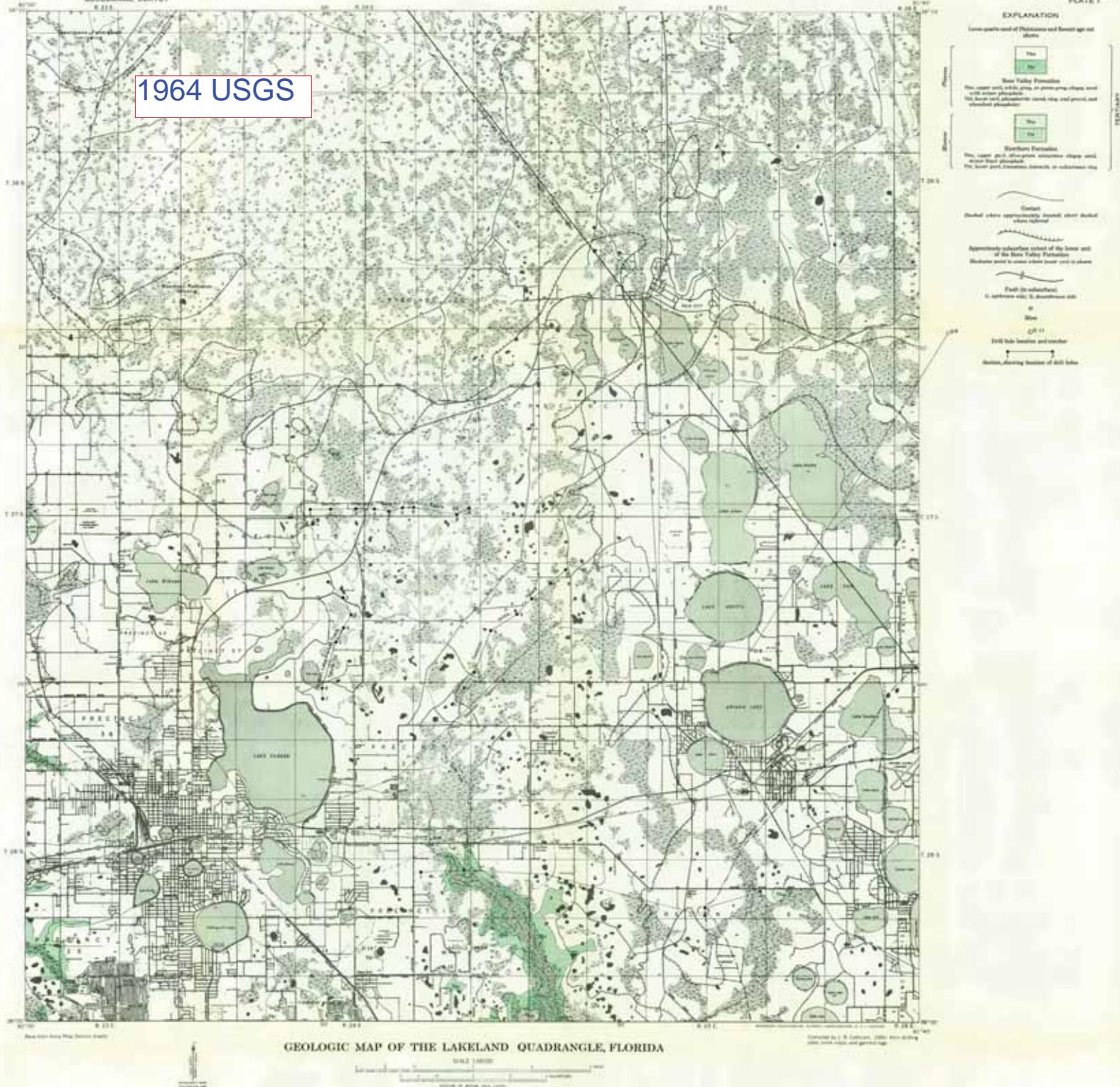
	PROJECT <b>17757</b>	DRAWING NUMBER	REV
CODE			
AREA	<b>FIGURE 2-2</b>		



## **APPENDIX B**

# **Historical Aerial Photographs and Maps**

1964 USGS



McIntosh 1968

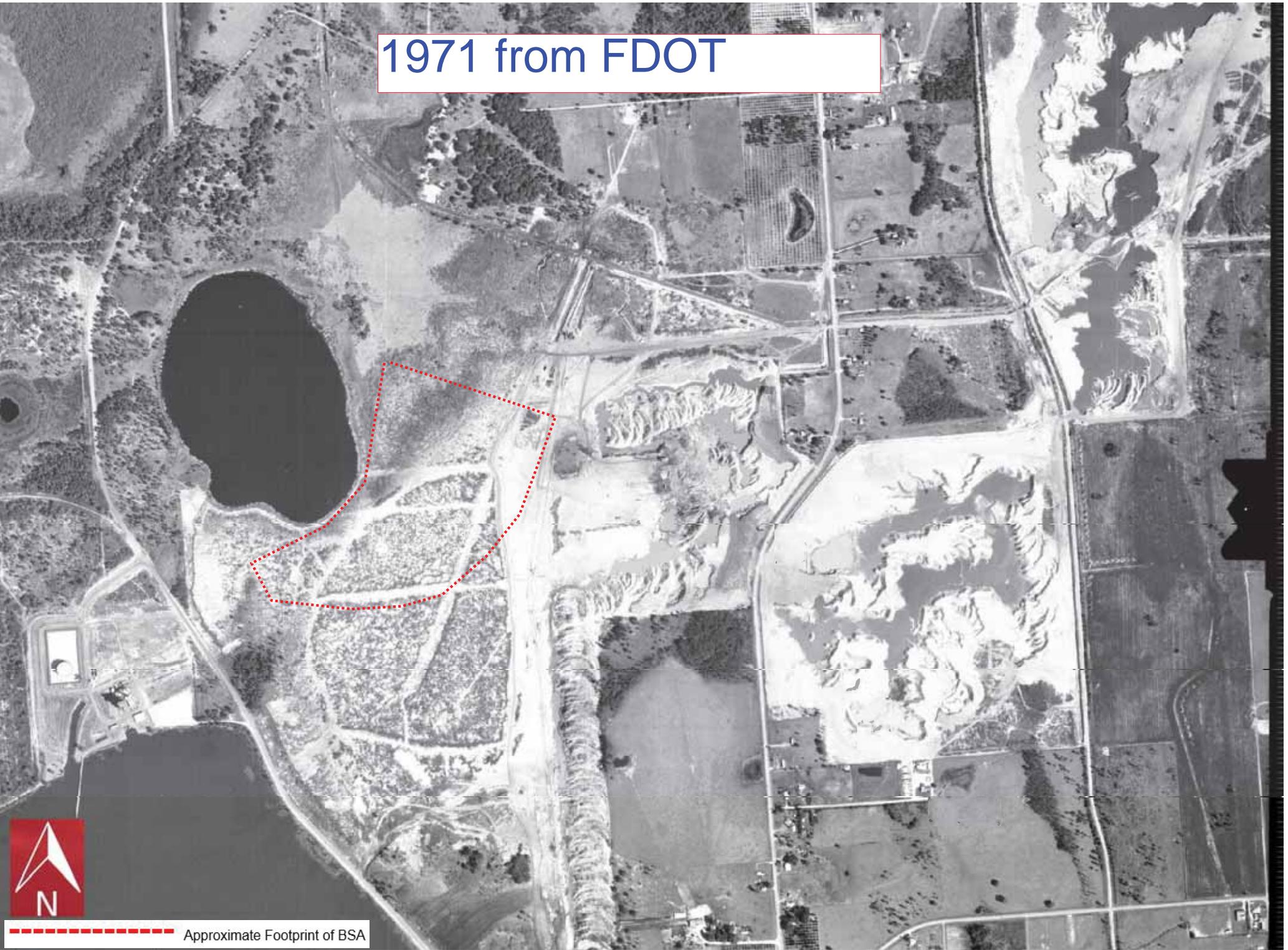
Mud Lake

Fish Lake

Lake Parker

↑  
N

1971 from FDOT



-----  
Approximate Footprint of BSA



-----  
Approximate Footprint of BSA



BSA at Lakeland Electric USGS  
11/30/1971  
(Current boundary shown by dashed red line)

**GeoSearch**

1975 USGS 7.5-minute topographic map including December 2, 1972 Aerial Photograph

## 1972 Photo on 1975 USGS Topographic Map

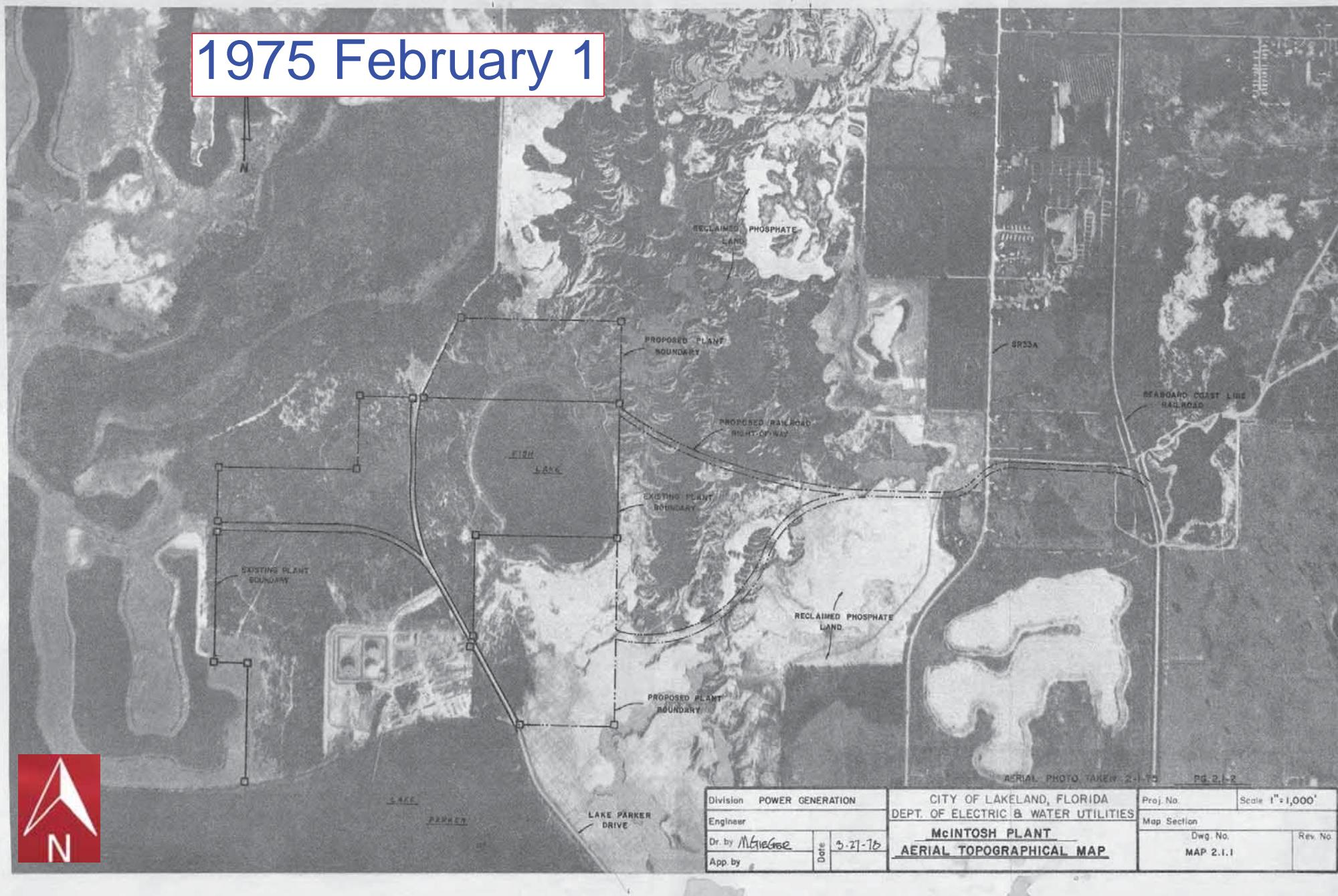


1973 from Lakeland Electric

1973 from Lakeland Electric



1975 February 1





----- Approximate Footprint of BSA

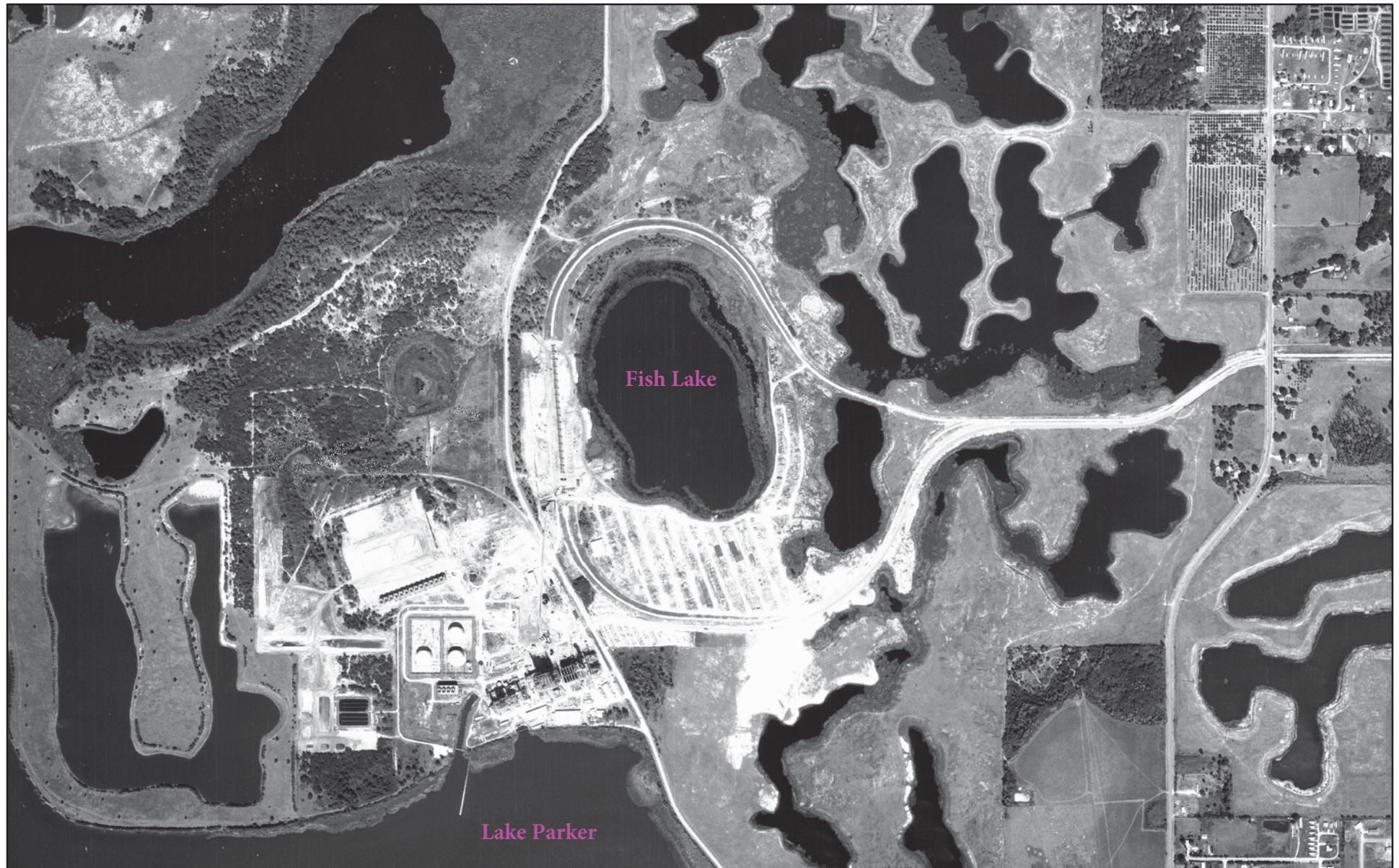
0 500  
feet



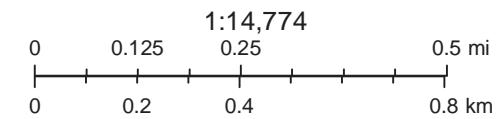
BSA at Lakeland Electric USGS  
11/26/1977  
(Current boundary shown by dashed red line)

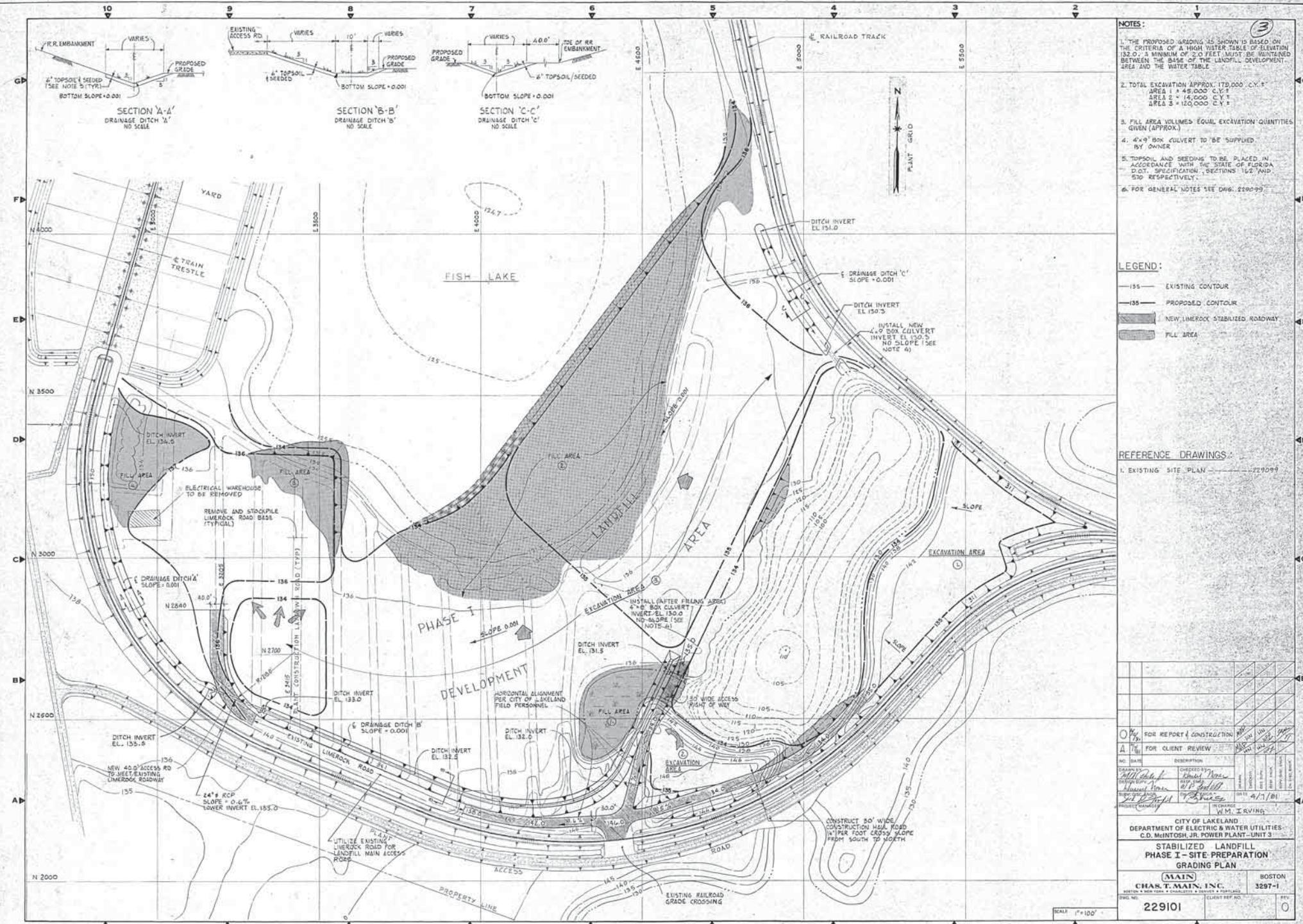
**GeoSearch**

# McIntosh 1980



N  
↑





**NOTES :**

L. THE PROPOSED GRADING AS SHOWN IS BASED ON THE CRITERIA OF A HIGH WATER TABLE OF ELEVATION BEING A MINIMUM OF 2 FEET MUST BE MAINTAINED BASED ON THE LANDFILL DEVELOPMENT AREA AND THE WATER TABLE.

(3)

2. TOTAL EXCAVATION APPROX. 170,000. C.Y.'S

AREA 1 = 45,000 C.Y.'S  
AREA 2 = 100,000 C.Y.'S  
AREA 3 = 120,000 C.Y.'S

3. FILL AREA VOLUMES EQUAL EXCAVATION QUANTITIES GIVEN (APPROX.).

4. 4'x9' BOX CULVERT TO BE SUPPLIED BY OWNER

5. TOPSOIL AND SEEDING TO BE PLACED IN ACCORDANCE WITH THE STATE OF FLORIDA D.O.T. SPECIFICATION, SECTIONS 162 AND 520 RESPECTIVELY.

6. FOR GENERAL NOTES SEE DRNG. 2200-99

**LEGEND**

- 135 — EXISTING CONTOUR  
— 135 — PROPOSED CONTOUR  
[Hatched] NEW LIMEROCK STABILIZED ROADWAY  
[Hatched] FILL AREA

**REFERENCE DRAWINGS**

- I. EXISTING SITE PLAN - 229099

W	FOR REPORT & CONSTRUCTION	ISSUE DATE
A	FOR CLIENT REVIEW	RECEIVED BY
NO. DATE	DESCRIPTION	REMARKS
DRAWINGS DRAFTS DESIGN EURO Hansel Rose		RECORDED REVIEWED 05/01/81 P. J. Gosselin P. J. Gosselin
PROJECT MANAGER		IN CHARGE
		TECHNICAL

CITY OF LAKELAND  
DEPARTMENT OF ELECTRIC & WATER UTILITIES  
C.D. McINTOSH, JR. POWER PLANT-UNIT 3

**STABILIZED LANDFILL  
PHASE I - SITE PREPARATION  
GRADING PLAN**

**MAIN**  
CHAS. T. MAIN, INC.

\* NEW YORK \* CHARLOTTE \* DENVER \* PORTLAND  
CLIENT REF. NO. \_\_\_\_\_

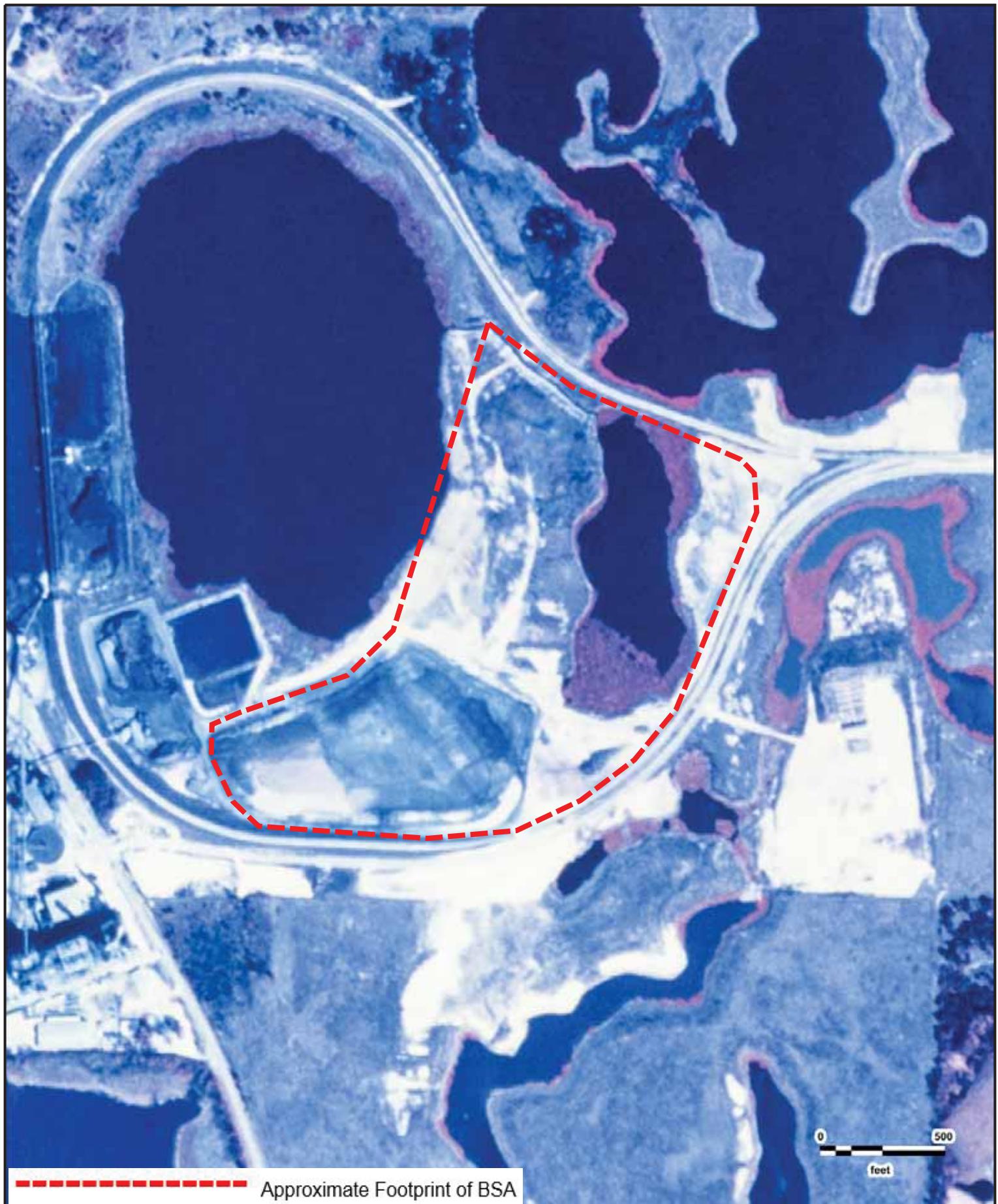
229101

◆ 2010年1月号

— 1 —

MECH  CUSUMA  A I & C  EECT  MECH 

1996-1997-1998-1999



-----  
Approximate Footprint of BSA



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

SHEET 1 of 1

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: 1,362,203.9 E: 681,787.6  
 GS ELEVATION: 137.6 ft  
 TRC ELEVATION: N/A ft  
 TEMPERATURE: 74° F

INCLINATION: -90  
 DEPTH W.L.: 5.9 ft  
 ELEVATION W.L.: 131.70 ft  
 DATE W.L.: 3/12/2019  
 TIME W.L.: 10:45

DEPTH (ft)	ELEVATION (ft)	SOIL PROFILE			COMMENTS
		USCS	GRAPHIC LOG	ELEV. DEPTH (ft)	
0	0.0 - 1.0 SAND, fine; brown, dry	SP		136.6	1.) Borehole location is adjacent to monitoring well CCR-2; survey coordinates shown are from CCR-2.
1.0 - 2.0 SAND, fine; grayish brown, dry	SP			1.0 135.6	2.) Ground surface elevation is estimated based on ground surface elevation of monitoring well CCR-2.
2.0 - 4.0 SAND, fine; light gray, dry	SP			2.0 133.6	3.) Boreholes were backfilled with 20/30 graded silica sand to 5 ft bgs and the remaining borehole was filled with bentonite chips to land surface.
4.0 - 7.5 SAND, trace organics, fine to medium, subrounded to subangular, poorly graded; dark brown to black	SP			4.0 130.1	4.) Water-level elevations are estimated based on depth-to-water measurements from adjacent monitoring well CCR-2.
7.5 - 10.8 SAND, fine to medium, subround to subangular, uniform grading; light tan to white, moist	SP			7.5 126.9	5.) Density descriptions are based on field observations and not form SPT blow counts.
10.8 - 13.5 SAND, fine, subrounded, uniform; dark brown to black, compact, wet	SP			10.8 124.1	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.
13.5 - 15.8 No Recovery	SP			13.5 121.9	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.
15.8 - 18.4 SAND, fine, subrounded; light brown to light grey (white with small round black heavy mineral), wet	SP			15.8 119.2	
18.4 - 19.5 SAND, fine; dark brown to black (grains are brown), compact to dense, wet	SP			18.4 118.1	
19.5 - 20.0 No Recovery	SP			117.6 20.0	
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			20.0 114.6	
23.0 - 23.5 CLAYEY SAND; tan to light brown, wet	SC	/		114.1 23.5	
23.5 - 25.0 SAND, very fine, subrounded; light brown to tan with a dark brown to black coating with small black heavy mineral, compact to very dense, wet	SP			23.5 112.6	
25.0 - 27.5 SAND, fine subrounded, uniform grading; brown, loose to compact, wet	SP			25.0 110.1	
27.5 - 30.0 SAND, fine, subrounded; tan to white with small black heavy minerals, compact to dense, wet	SP			27.5 107.6	
Boring completed at 30.0 ft					

# RECORD OF BOREHOLE CCR-4A

SHEET 1 of 1

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

DEPTH (ft)	ELEVATION (ft)	SOIL PROFILE				COMMENTS
		USCS	GRAPHIC LOG	ELEV. ft)	DEPTH (ft)	
0						
-140	0.0 - 1.0 SAND, fine; brown, dry	SP		139.3		1.) Borehole location is adjacent to monitoring well CCR-4; survey coordinates shown are from CCR-4.
-140	1.0 - 2.0 SAND, fine, some gravel and silt; brown, dry	SP		1.0		2.) Ground surface elevation is estimated based on ground surface elevation of monitoring well CCR-4.
-140	2.0 - 5.0 SAND, fine, some silt; brown, dry	SP-SM		138.3	2.0	3.) Boreholes were backfilled with 20/30 graded silica sand to 5 ft bgs and the remaining borehole was filled with bentonite chips to land surface.
-135	5.0 - 10.4 SILTY SAND, fine, subrounded to subangular, uniform grading; dark brown to black, dry to moist	SM		135.3	5.0	4.) Water-level elevations are estimated based on depth-to-water measurements from adjacent monitoring well CCR-4.
-130	10.4 - 13.6 SAND, fine to medium, subrounded, uniform grading; dark brown with small black heavy minerals, loose to very loose, wet	SP		129.9	10.4	5.) Density descriptions are based on field observations and not form SPT blow counts.
-130	12.0 - 13.6 contact water is black	SP			126.7	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.
-125	13.6 - 15.0 SAND, very fine, subrounded, uniform grading; dark brown with small black heavy minerals, compact, wet	SP			13.6	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 from 19.5 ft bgs to terminal depth.
-125	15.0 - 15.8 SAND, fine to medium, subrounded, uniform grading; dark brown with small black heavy minerals, loose to very loose, wet, water is black	SP		125.3	15.0	
-125	15.8 - 19.5 SAND, fine, subrounded, uniform grading; light to dark brown, compact to dense, wet	SP		124.5	15.8	
-120	19.5 - 21.1 SAND little to some clay; fine, angular to subrounded, uniform grading; white to tan with small black heavy minerals, wet	SP-SC		120.8	19.5	
-120	21.1 - 22.8 SAND some clay, fine, subrounded; white to pale green, moist	SP-SC		119.2	21.1	
-115	22.8 - 23.4 CLAY some sand and trace gravel; soft; fine, limestone gravel, brownish gray; pale green to greenish gray, moist	CL		117.5	23.4	
-115	23.4 - 28.2 Sandy CLAY, trace to some silt; pale green to white, loose to compact, wet, fossiliferous (weathered limestone)	CL		116.9	28.2	
-110	28.2 - 30.0 CLAY trace sand and gravel; soft; fine angular sand, fine rounded gravel; green, moist (weathered limestone)	CL		112.1	28.2	
-110	Boring completed at 30.0 ft				110.3	

LOG SCALE: 1 in = 4 ft

DRILLING COMPANY: Action Environmental

DRILLER: Omar Velazquez

INSPECTOR: M. Boatman

CHECKED BY: G. Morelli

DATE: 5/30/19



## RECORD OF BOREHOLE CCR-5A

SHEET 1 of 1

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: 1,362,716.0 E: 683,376.9  
GS ELEVATION: 138.6 ft  
TRC ELEVATION: N/A ft  
TEMPERATURE: 88° F

**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

DRILLING COMPANY: Action Environmental

DRILLER: Omar Velazquez

INSPECTOR: M. Boatman

CHECKED BY: G. Morelli

DATE: 5/30/19



# RECORD OF BOREHOLE CCR-7A

SHEET 1 of 1

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: 1,363,631.9 E: 683,772.2  
 GS ELEVATION: 139.1 ft  
 TRC ELEVATION: N/A ft  
 TEMPERATURE: 86° F

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

DEPTH (ft)	ELEVATION (ft)	SOIL PROFILE			COMMENTS
		USCS	GRAPHIC LOG	ELEV. DEPTH (ft)	
0	0.0 - 5.0 SAND, fine; light brownish gray, dry to wet	SP			1.) Borehole location is adjacent to monitoring well CCR-7; survey coordinates shown are from CCR-7.
4.0: ~ moist at 4 ft bgs				134.1	2.) Ground surface elevation is estimated based on ground surface elevation of monitoring well CCR-7.
5.0 - 6.0 No Recovery				5.0	3.) Boreholes were backfilled with 20/30 graded silica sand to 5 ft bgs and the remaining borehole was filled with bentonite chips to land surface.
6.0 - 7.0 SAND with pockets of sand/clay; fine, subrounded, uniform grading; fine sand/clay matrix, firm; tan to dark brown, loose to compact, wet	SP			133.1	4.) Water-level elevations are estimated based on depth-to-water measurements from adjacent monitoring well CCR-7.
7.0 - 7.4 SAND, fine, subrounded, uniform grading; black, loose to compact, wet	SP			6.0	5.) Density descriptions are based on field observations and not form SPT blow counts.
7.4 - 10.0 SAND with pockets of sand/clay; fine, subrounded, uniform grading; fine sand/clay matrix, firm; tan to dark brown, loose to compact, wet	SP			132.1	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.
10.0 - 11.0 No Recovery				131.7	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 from 17 ft bgs to terminal depth.
11.0 - 15.0 SILTY SAND, fine, subrounded, uniform grading, dark brown with black heavy minerals, loose, wet	SM			7.4	
13.4: 13.4-13.8 pockets of white sand/clay matrix				129.1	
15.0 - 17.0 No Recovery				10.0	
				128.1	
				11.0	
17.0 - 17.8 SAND trace to some silt; fine, uniform grading; dark brown to black, wet	SP-SM			124.1	
17.8 - 18.5 CLAY; white, soft to firm, moist	CL			15.0	
18.5 - 20.0 SAND trace to some silt and sandy clay; fine, uniform grading; dark brown, wet	SP-SM			122.1	
20.0 - 25.0 SAND with pockets of sandy clay; fine, uniform grading; white clay; brown with black heavy minerals, wet	SP/CL			17.0	
				121.3	
				17.8	
				120.6	
				18.5	
				119.1	
25.0 - 26.1 No Recovery				20.0	
				114.1	
26.1 - 26.6 SAND, fine, subrounded, uniform grading; dark brown, loose, wet	SP			25.0	
26.6 - 27.2 SAND and CLAY; fine to coarse; soft; white to pale green, wet	SC/CL			113.0	
27.2 - 28.6 SAND, fine, subrounded, uniform grading; light brown, loose, wet	SP			112.5	
				111.9	
				27.2	
				110.5	
28.6 - 29.3 Sandy CLAY; fine to coarse, subrounded; compact, pale green, moist	CL			28.6	
29.3 - 30.0 Sandy CLAY, fine, subrounded, uniform grading; light to dark brown, loose, wet	CL			109.8	
Boring completed at 30.0 ft				29.3	
				109.1	

LOG SCALE: 1 in = 4 ft

DRILLING COMPANY: Action Environmental

DRILLER: Omar Velazquez

INSPECTOR: M. Boatman

CHECKED BY: G. Morelli

DATE: 5/30/19



## RECORD OF BOREHOLE CCR-13A

SHEET 1 of 1

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: 2/12/2019  
DATE COMPLETED: 2/12/2019  
WEATHER: Partly cloudy

DATUM: NAD83 / NAVD88  
COORDS: N: 1,362,936.6 E: 682,164.1  
GS ELEVATION: 135.0 ft  
TRC ELEVATION: N/A ft  
TEMPERATURE: 72° F

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

LOCATION: Lakeland, FL		WEATHER: Partly cloudy		TEMPERATURE: 72° F		TIME W.E.: 11:00	
DEPTH (ft)	ELEVATION (ft)	SOIL PROFILE				COMMENTS	
		DESCRIPTION	USCS	GRAPHIC LOG	ELEV. DEPTH (ft)		
0	135	0.0 - 2.0 SAND, fine; light brown, dry	SP		133.0 2.0	1.) Borehole location is adjacent to monitoring well CCR-13; survey coordinates shown are from CCR-13.	
	2.0 - 4.0 SAND, fine; dark grayish brown, dry	SP			131.0	2.) Ground surface elevation is estimated based on ground surface elevation of monitoring well CCR-13.	
5	130	4.0 - 5.0 SAND, fine; brown, dry	SP		4.0 130.0	3.) Boreholes were backfilled with 20/30 graded silica sand to 5 ft bgs and the remaining borehole was filled with bentonite chips to land surface.	
	5.0 - 7.1 SAND, fine, subrounded, uniform grading; black to dark gray, loose, moist to wet	SP			5.0 127.9	4.) Water-level elevations are estimated based on depth-to-water measurements from adjacent monitoring well CCR-13.	
	7.1 - 9.4 SILTY SAND, fine, uniform grading; tan to white, compact to dense, wet	SM			7.1 125.6	5.) Density descriptions are based on field observations and not from SPT blow counts.	
10	125	9.4 - 10.0 SAND, fine, uniform grading; black with heavy minerals, loose, wet	SP		125.0	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.	
	10.0 - 12.0 No Recovery				10.0	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 from 25 ft bgs to terminal depth.	
	12.0 - 15.0 SAND, fine to medium, subrounded; dark brown, loose to compact, wet	SP			123.0 12.0		
15	120	14.2: root encountered			120.0		
	15.0 - 17.0 No Recovery				15.0		
	17.0 - 19.0 SAND trace to some clay, fine, uniform grading; grayish brown/tan with black heavy minerals, loose, wet. - two black bands at 17.3 and 17.6 ft bgs	SP-SC			118.0 17.0 116.0		
20	115	19.0 - 20.0 SAND, fine, uniform grading; grayish brown with black heavy minerals, compact, moist	SP		19.0 115.0		
	20.0 - 25.0 SAND, fine to medium, uniform grading; tan to white with heavy minerals grains, wet				20.0		
	25.0 - 30.0 CLAY trace sand; fine, sand; white to pale green, firm to stiff, slight mottling, moist	CL			110.0 25.0		
30	105	Boring completed at 30.0 ft			105.0		

LOG SCALE: 1 in = 4 ft

DRILLING COMPANY: Action Environmental

DRILLER: Omar Velazquez

INSPECTOR: M. Boatman

CHECKED BY: G. Morelli

DATE: 5/30/19



# RECORD OF BOREHOLE CCR-14A

SHEET 1 of 1

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: 2/12/2019  
 DATE COMPLETED: 2/12/2019  
 WEATHER: Partly cloudy

DATUM: NAD83 / NAVD88  
 COORDS: N: 1,362,771.1 E: 681,761.2  
 GS ELEVATION: 135.8 ft  
 TRC ELEVATION: N/A ft  
 TEMPERATURE: 75° F

INCLINATION: -90  
 DEPTH W.L.: 3.76 ft  
 ELEVATION W.L.: 132.04 ft  
 DATE W.L.: 3/12/2019  
 TIME W.L.: 12:06

DEPTH (ft)	ELEVATION (ft)	SOIL PROFILE			COMMENTS
		USCS	GRAPHIC LOG	ELEV. DEPTH (ft)	
0	135	0.0 - 5.0 SAND, fine; brown, dry to moist	SP	130.8	1.) Borehole location is adjacent to monitoring well CCR-14; survey coordinates shown are from CCR-14.
5	130	5.0 - 7.4 SAND some silt; fine, subrounded, uniform grading; grayish brown, wet, loose 6.3: 6.3-6.7 ft bgs, CLAY pocket; soft; white, moist	SP-SM	5.0 128.4	2.) Ground surface elevation is estimated based on ground surface elevation of monitoring well CCR-14. 3.) Boreholes were backfilled with 20/30 graded silica sand to 5 ft bgs and the remaining borehole was filled with bentonite chips to land surface.
10	125	7.4 - 10.0 SAND, fine, subrounded, uniform grading; light to medium grayish brown, moist 8.6: 8.6-8.8 ft bgs, (CL) CLAY; soft; white, moist	SP	7.4 125.8	4.) Water-level elevations are estimated based on depth-to-water measurements from adjacent monitoring well CCR-14. 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.
15	120	10.0 - 11.2 No Recovery		10.0 124.6 11.2 123.5	7.) Based on lithologic descriptions, in-situ residual soil and/or weathered rock was encountered from approximately ground surface to terminal depth.
20	115	11.2 - 12.3 SILTY SAND, fine, subrounded, uniform graded; white to light gray, wet, loose 12.3 - 15.0 CLAYEY SAND to Sandy CLAY, fine, subrounded; white to tan, moist, compact	SM	12.3 120.8	
25	110	15.0 - 16.4 No Recovery		15.0 119.4	
30	105	16.4 - 18.3 CLAYEY SAND to Sandy CLAY, fine to coarse, subangular, fossil fragments; white to pale green, wet, loose to compact 18.3 - 20.0 SAND, fine to medium, subrounded to subangular, uniform grading; moist, compact to dense	SC/CL	16.4 117.5 18.3 115.8	
		20.0 - 22.8 Sandy CLAY; fine to coarse, subangular coarse (fossil fragments); pale green to green, compact to dense (weathered limestone)	CL	20.0 113.0	
		22.8 - 25.0 Sandy CLAY, fine to medium; white to pale green, moist, loose to compact	CL	22.8 110.8	
		25.0 - 27.0 Sandy CLAY; fine to coarse, subangular coarse (fossil fragments); pale green to green, compact to dense (weathered limestone)	CL	25.0 108.8	
		27.0 - 30.0 CLAY trace sand; coarse sand; green and olive brown mottled, phosphatic grains, moist, stiff to hard (weathered limestone)	CL	27.0 105.8	
		Boring completed at 30.0 ft			

LOG SCALE: 1 in = 4 ft

DRILLING COMPANY: Action Environmental

DRILLER: Omar Velazquez

INSPECTOR: M. Boatman

CHECKED BY: G. Morelli

DATE: 5/30/19



**APPENDIX D**

**Geochemical Evaluation of  
Radium-226+228 in Soils**



**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 ( $Ra^{226}$ ) and Radium-228 ( $Ra^{228}$ ) 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 35µm. After reaching 35µm, the samples were then polished using a roto-polishing system to a final thickness of 30µm. 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 $\alpha$  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 overlaid 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  $\text{HNO}_3 + \text{HCl} + \text{HF} + \text{HClO}_4$  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. This 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 naturally-occurring radiogenic minerals. Based on petrographic, XRD and SEM analysis, several potentially radiogenic minerals were identified in the soil samples collected, including: 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). 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 Ra<sup>226</sup> and Ra<sup>228</sup>. 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 Ra<sup>226</sup> and Ra<sup>228</sup>, 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.



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

Sample Number	Depth (ft. BGS)	Al <sub>2</sub> O <sub>3</sub> wt%	TiO <sub>2</sub> wt%	Fe <sub>2</sub> O <sub>3</sub> wt%	MgO wt%	MnO wt%	CaO wt%	K <sub>2</sub> O wt%	NaO wt%	P <sub>2</sub> O <sub>5</sub> wt%
CCR2A	18.7-19	1.37	1.34	0.35	<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	0.00	0.19	0.03	<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	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	0.00	0.20	<MDL	<MDL	0.11
CCR7A	14.6-15	0.73	0.62	0.13	<MDL	0.01	0.08	<MDL	<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	0.00	0.41	<MDL	<MDL	0.13
CCR13A	17.3-17.6	4.12	0.36	0.16	0.03	0.00	0.26	0.05	<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
Sample Number	Depth (ft. BGS)	As ppm	Be ppm	Cr ppm	Pb ppm	Rb ppm	Th ppm	U ppm	V ppm	Zr 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	1.22	42.9	29.00	6.00	12.90	50.4	59.00	70.2
CCR4A	12.5-12.8	<MDL	0.01	7.7	<MDL	<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	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	1.70	1.4	6.00	42.5
CCR7A	14.6-15	<MDL	0.05	10.1	4.00	<MDL	2.00	0.9	6.00	30.7
CCR7A	23.2-23.5	<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	4.80	3.0	13.00	76.1
CCR13A	17.3-17.6	<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	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:\PetrologicSolutions\P18-2058\_Lakeland Electric ASE\LakelandElectric\_ASE\_final.docx

*PetroLOGIC Solutions, Inc.*

3997 Oak Hill Road  
Douglasville, GA 30135  
Tel: (678) 313-4146  
email: rlkath@comcast.net



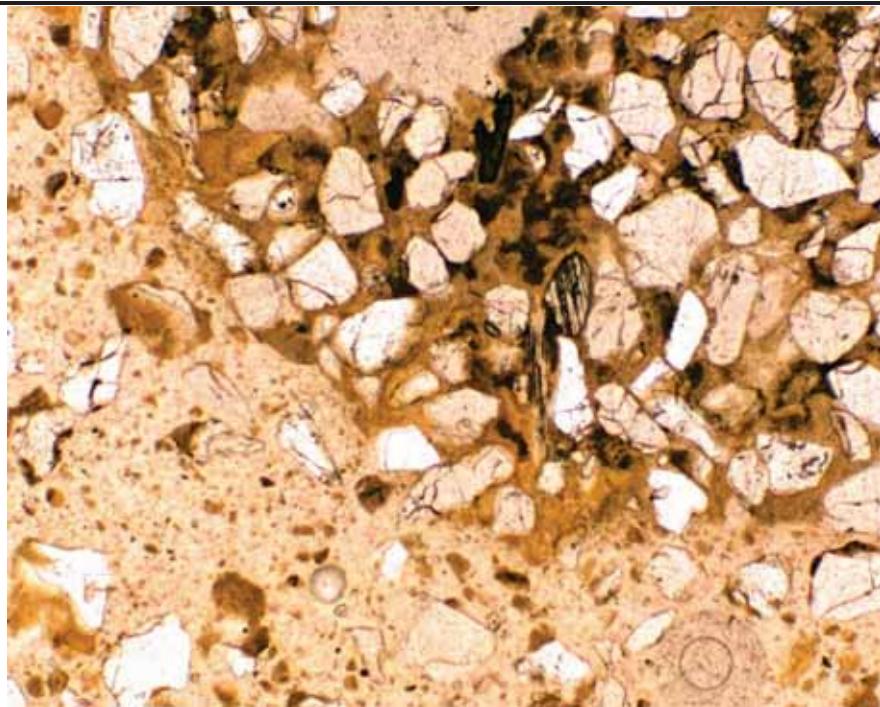
**ATTACHMENT 1**

**PHOTOMICROGRAPHS OF SELECT THIN SECTIONS**

**Lakeland Electric**

**PHOTO 1**

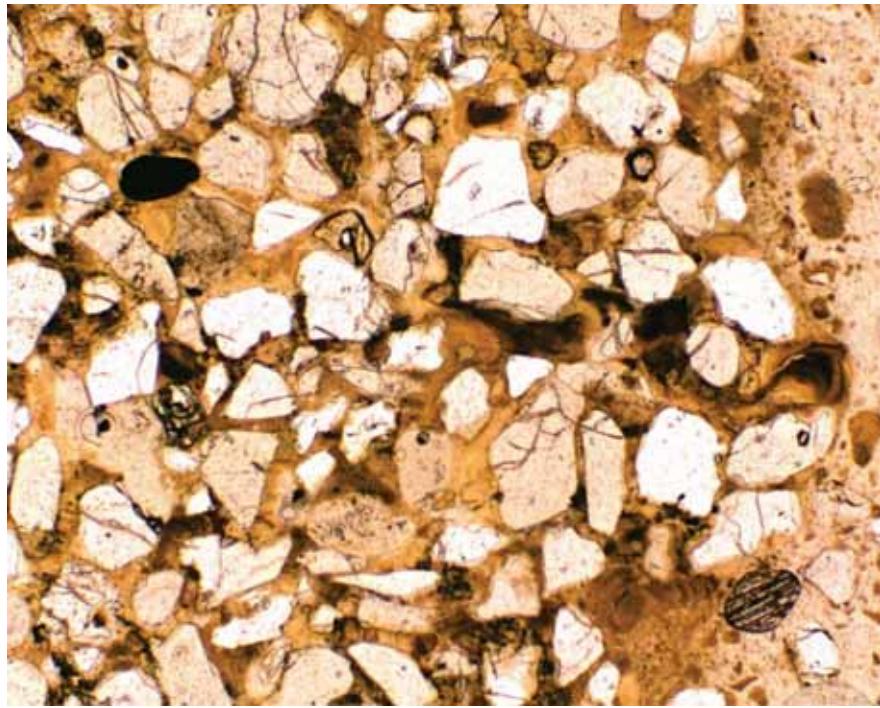
CCR2A 23.0-23.5



Subangular to subrounded quartz grains in a kaolinite and wavellite matrix (brown). Striated high-relief mineral is kyanite. Minor rutile. Plane light.

**PHOTO 2**

CCR2A 23.0-23.5



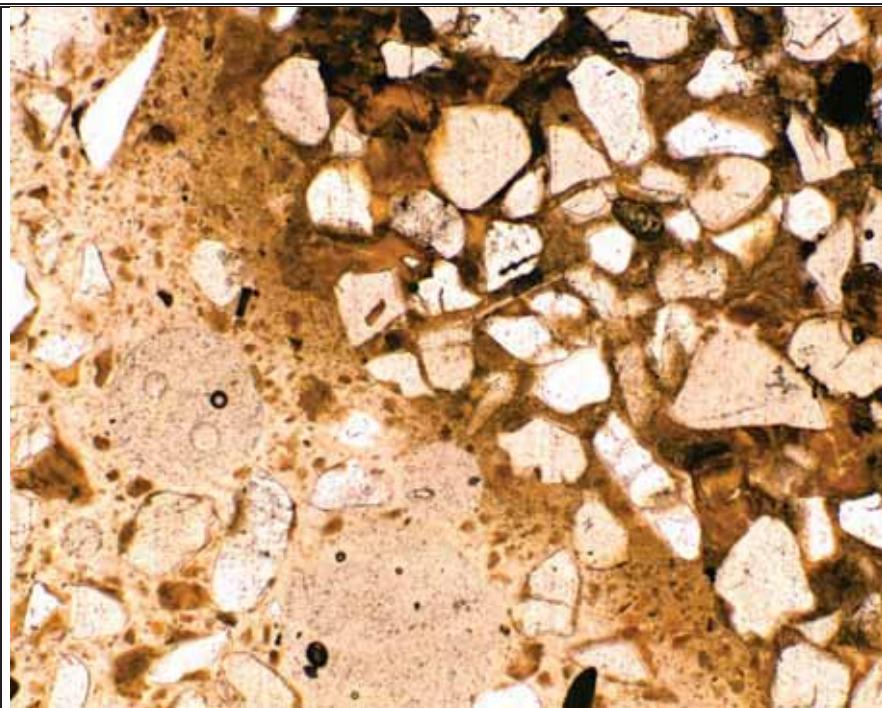
Subangular to subrounded quartz grains in a kaolinite and wavellite matrix (brown). Striated high-relief mineral is kyanite; rounded opaque grain is ilmenite; pleochroic yellow minerals are staurolite. Plane light.

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.

**Lakeland Electric**

**PHOTO 3**

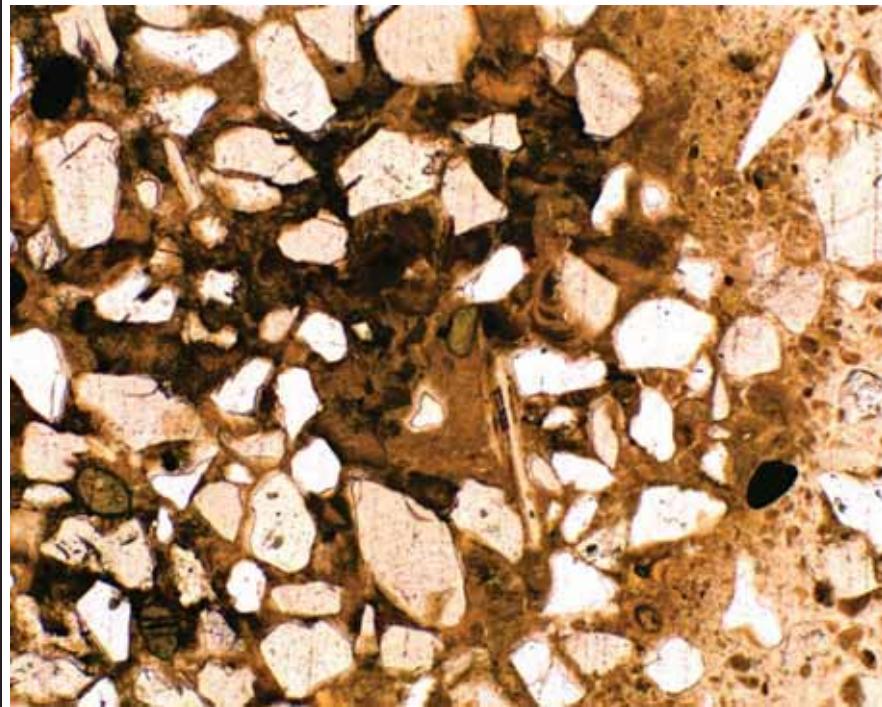
CCR2A 23.0-23.5



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



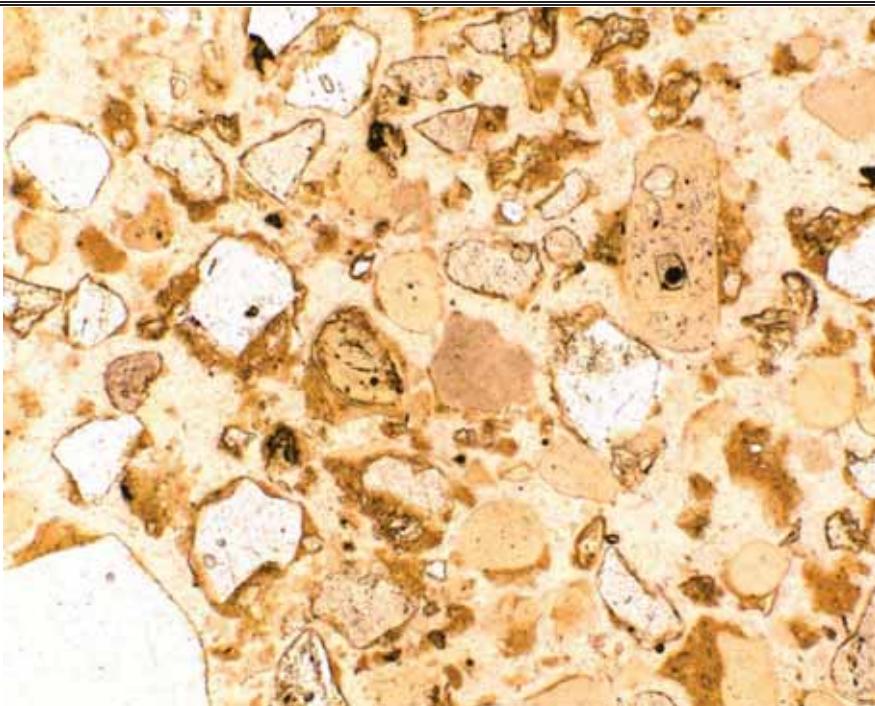
Subangular to subrounded quartz grains in a kaolinite and wavellite matrix (brown). Greenish minerals are zircon; elongate mineral is muscovite; rounded opaque mineral is ilmenite. Plane light.

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.

**Lakeland Electric**

**PHOTO 1**

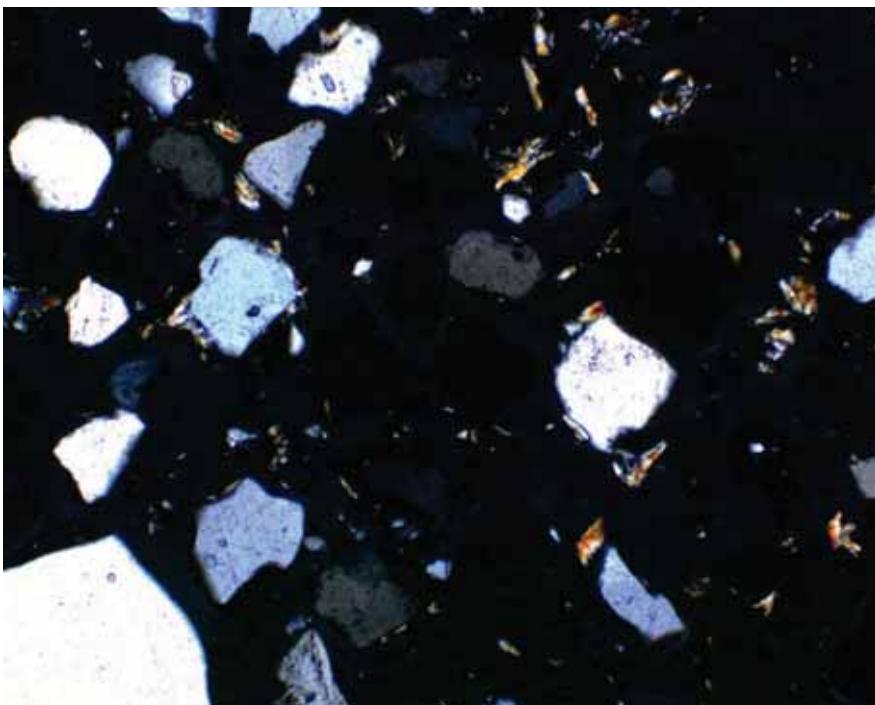
CCR4A 26.1-26.4



Subangular to subrounded quartz grains in a kaolinite, wavellite, and apatite matrix (brown). Plane light.

**PHOTO 2**

CCR4A 26.1-26.4



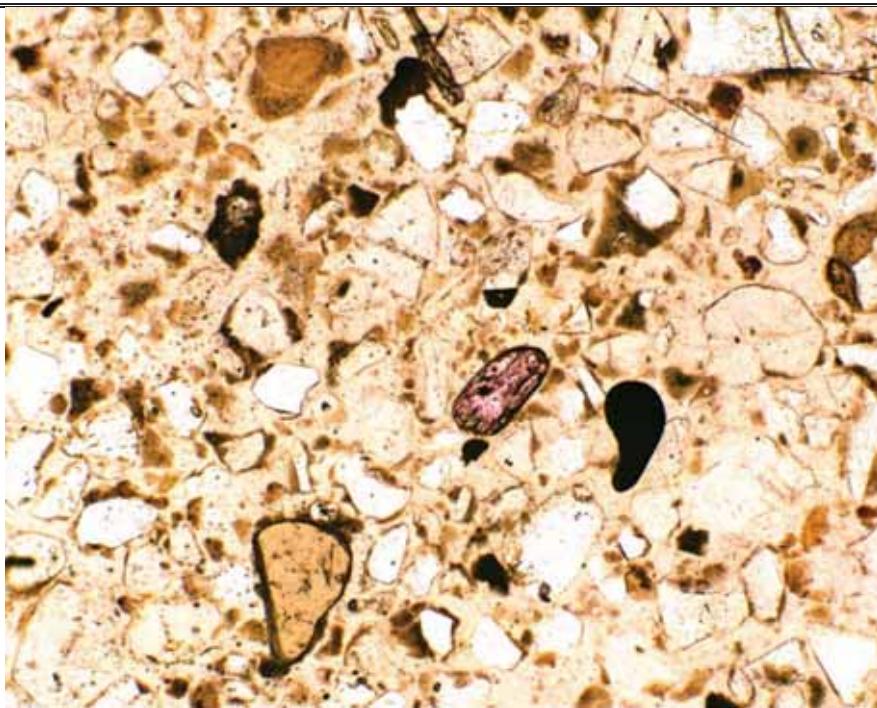
Subangular to subrounded quartz grains in a kaolinite, wavellite, and apatite matrix (brown). Polarized light.

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.

**Lakeland Electric**

**PHOTO 1**

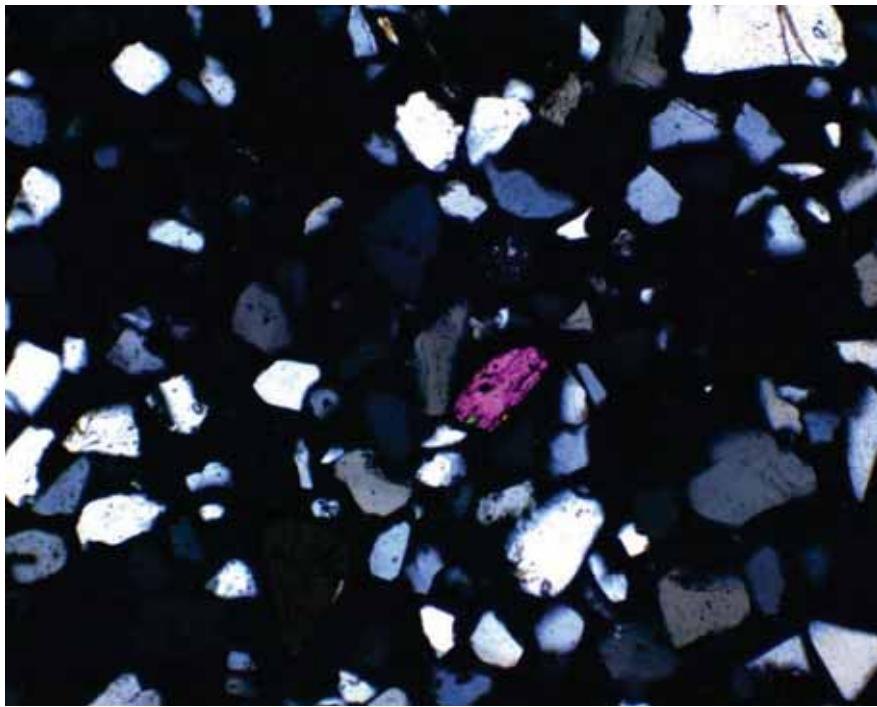
CCR7A 23.2-23.5



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



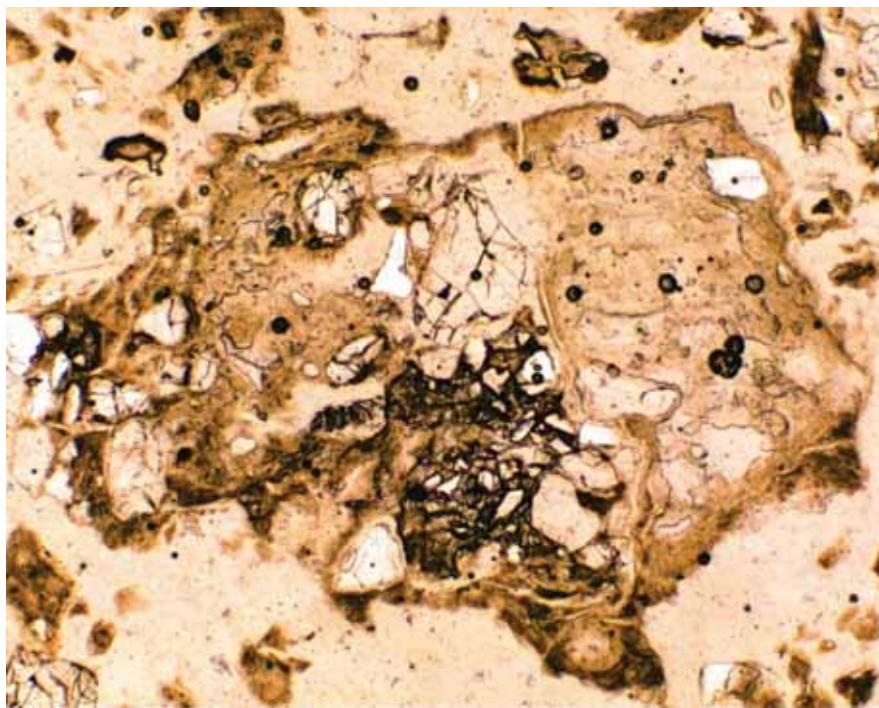
Subangular to subrounded quartz grains in a kaolinite, apatite, and wavellite matrix (brown). Greenish and purple mineral are staurolite. Polarized light.

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.

**Lakeland Electric**

**PHOTO 1**

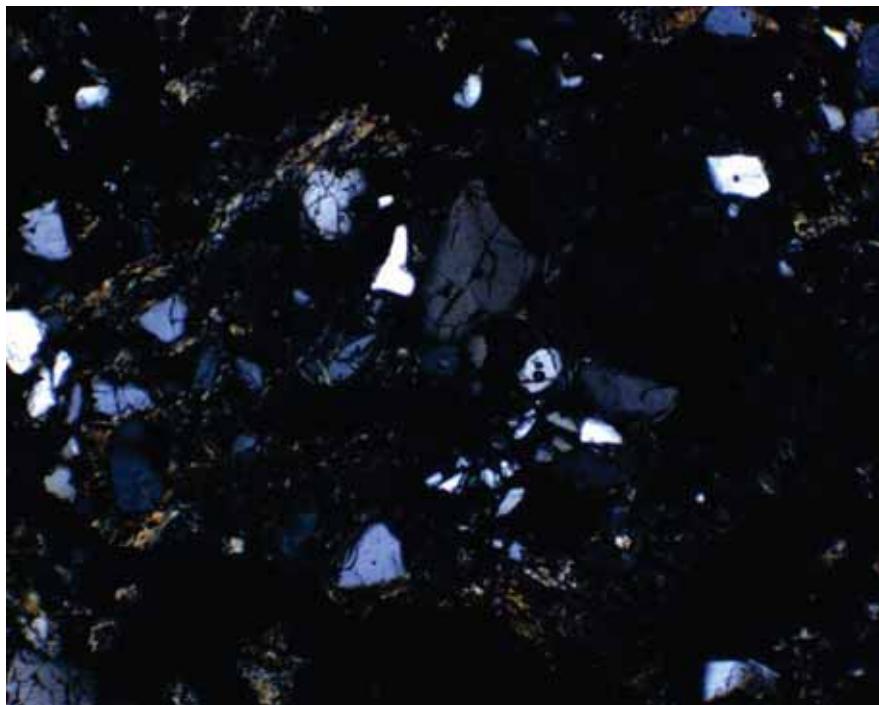
CCR13A 27.8-28.2



Minor subangular quartz grains in a clay and wavellite matrix. Plane light.

**PHOTO 2**

CCR13A 27.8-28.2

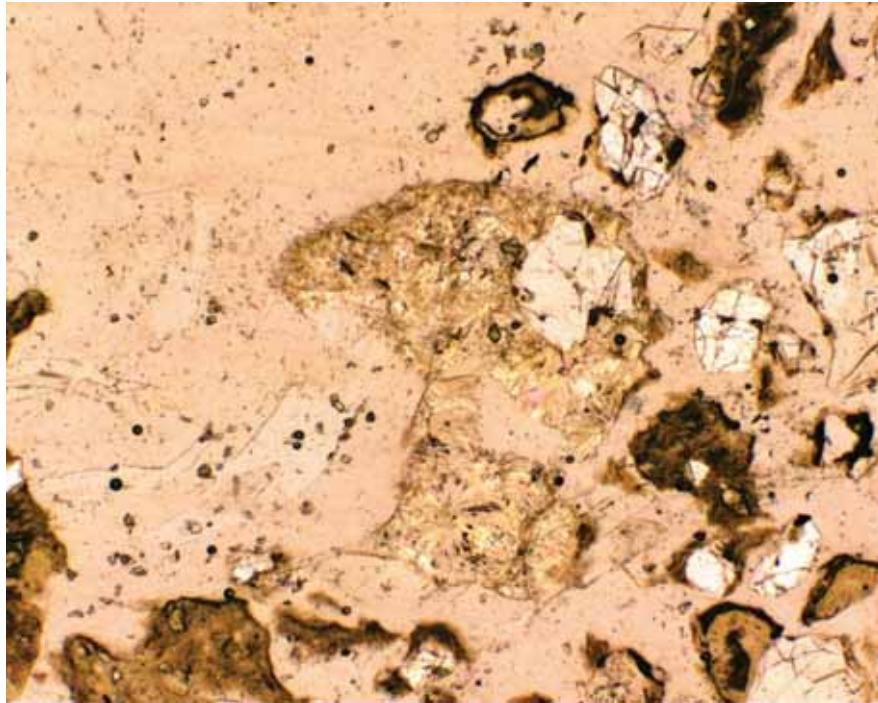


Minor subangular quartz grains in a clay and wavellite matrix. Polarized light.

**Lakeland Electric**

**PHOTO 3**

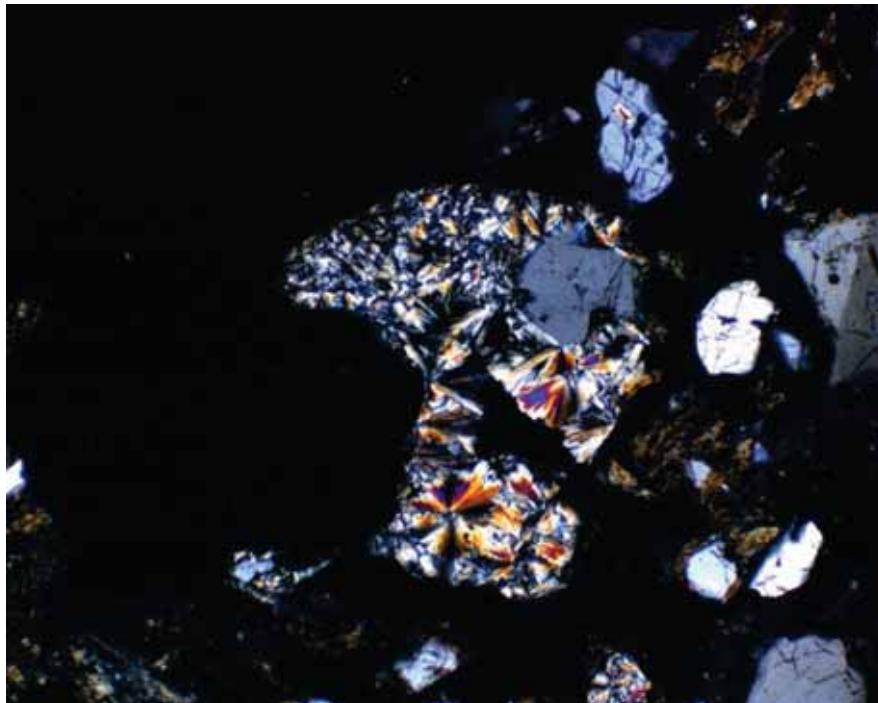
CCR13A 27.8-28.2



Wavellite cement around an angular quartz grain. Plane light.

**PHOTO 4**

CCR13A 27.8-28.2



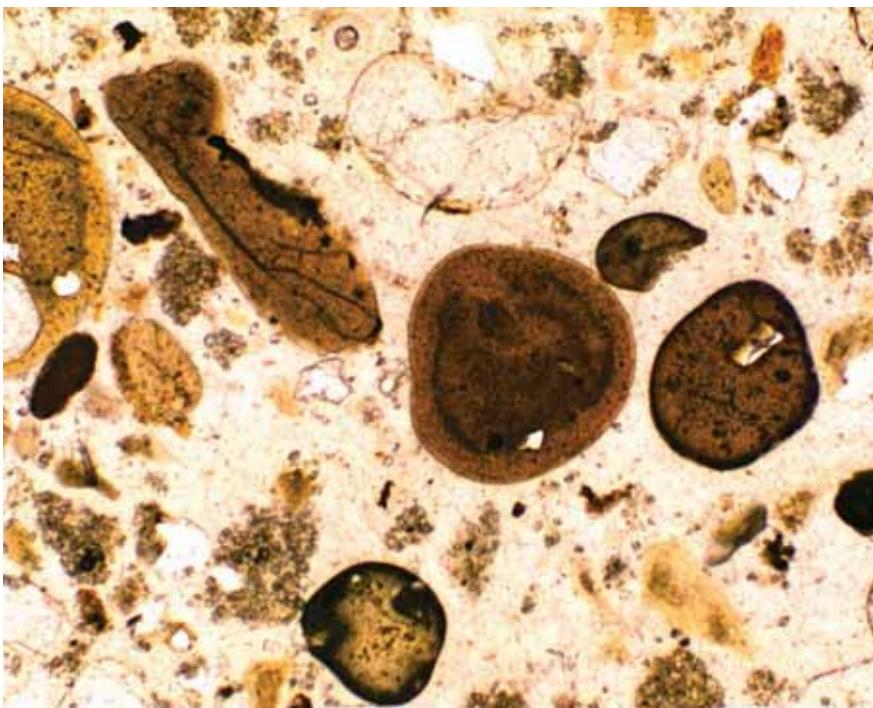
Wavellite cement around an angular quartz grain. Polarized light.

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

**Lakeland Electric**

**PHOTO 1**

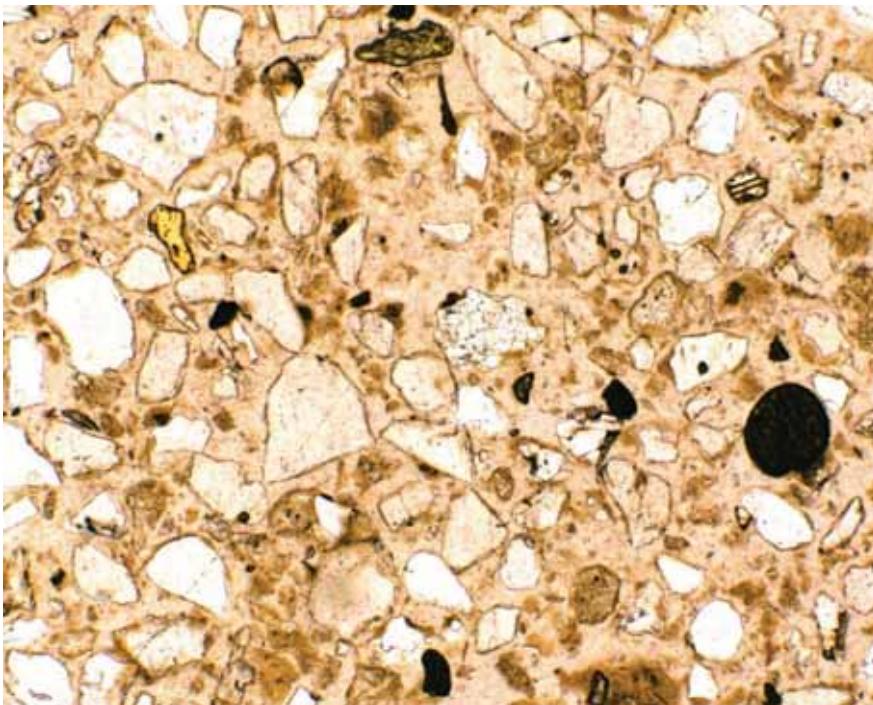
CCR14A 28.3-28.66



Collophane apatite "balls" in a clay matrix. Plane light

**PHOTO 2**

CCR14A 16.5-18.0



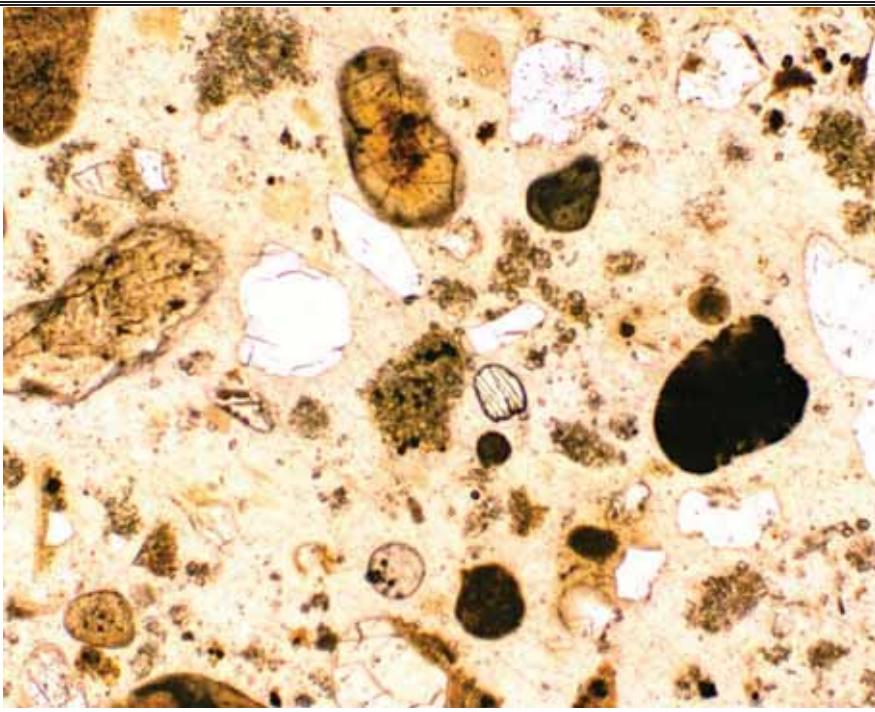
Subangular to subrounded quartz grains in a kaolinite and wavellite matrix (brown). Yellow mineral is staurolite, striated high-relief mineral is kyanite, and large round mineral is rutile. Plane light.

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

**Lakeland Electric**

**PHOTO 3**

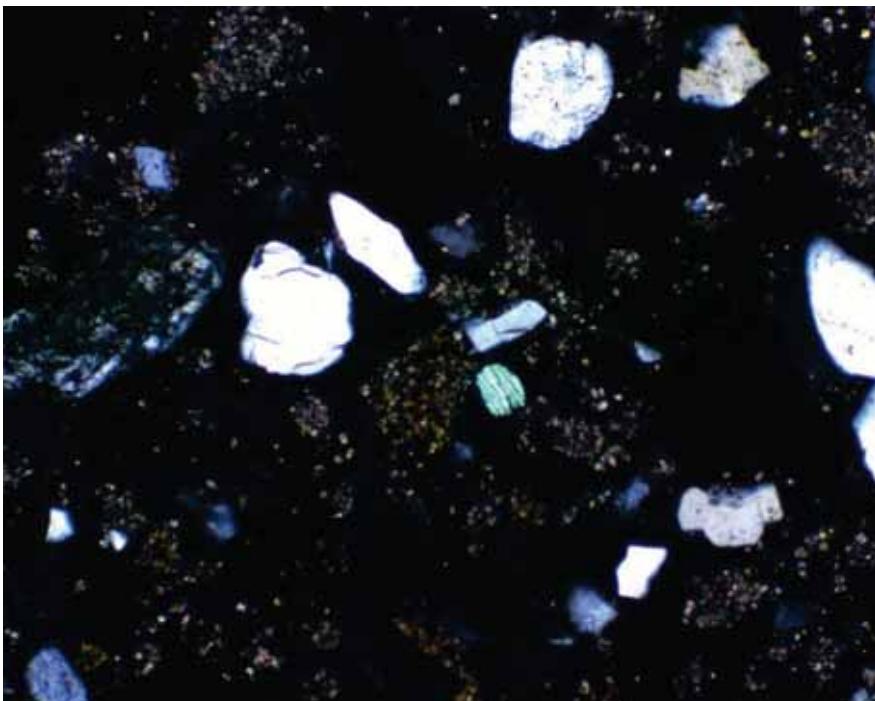
CCR14A 28.3-28.66



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



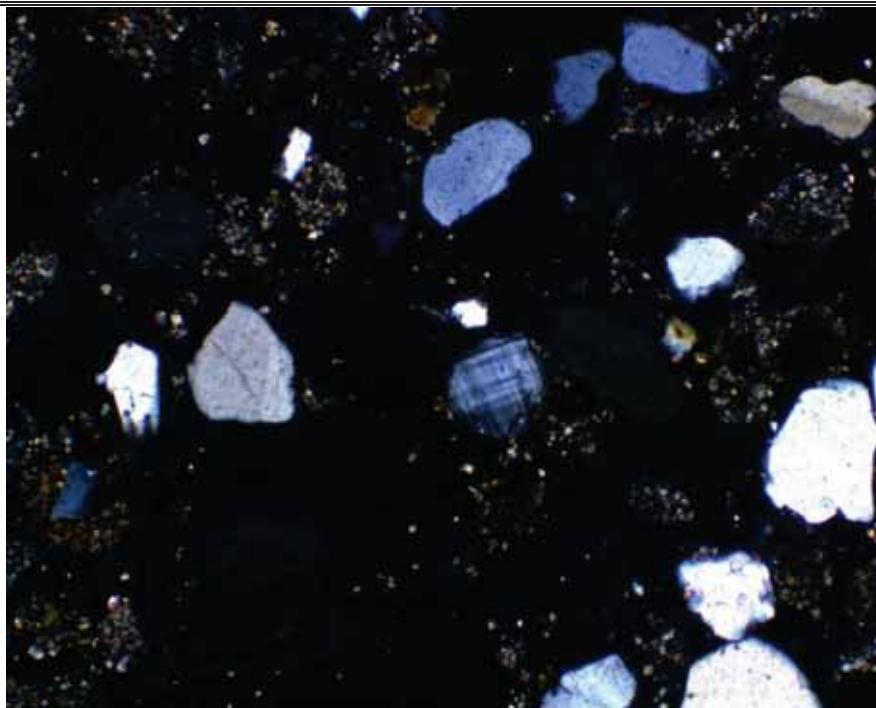
Collophane apatite "balls" in a clay and dolomite matrix. Greenish grain near the center of the image is staurolite. Polarized light.

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

**Lakeland Electric**

**PHOTO 5**

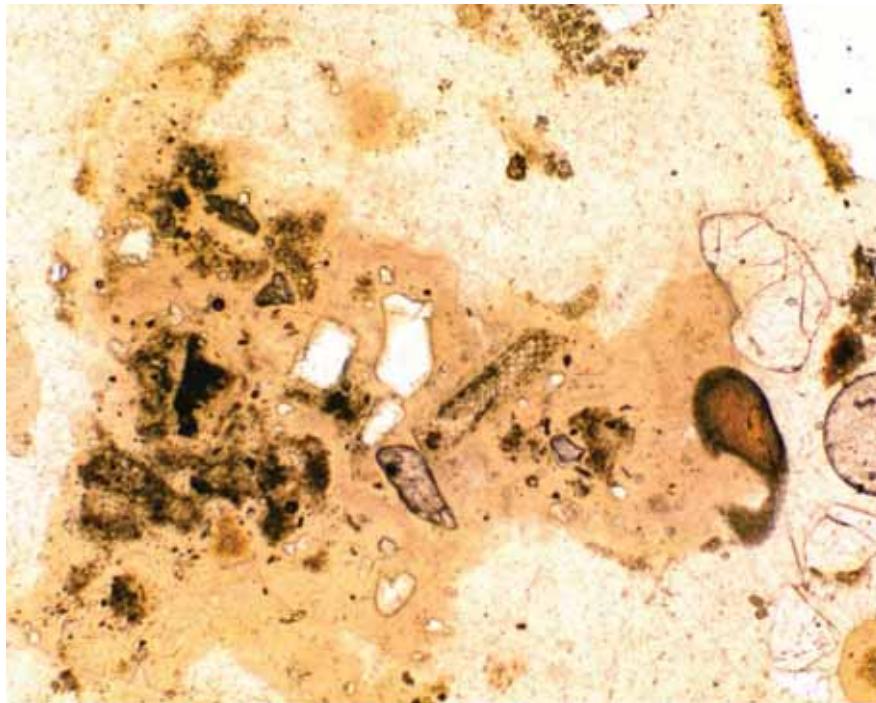
CCR14A 28.3-28.66



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.

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

**Lakeland Electric**

**PHOTO 7**

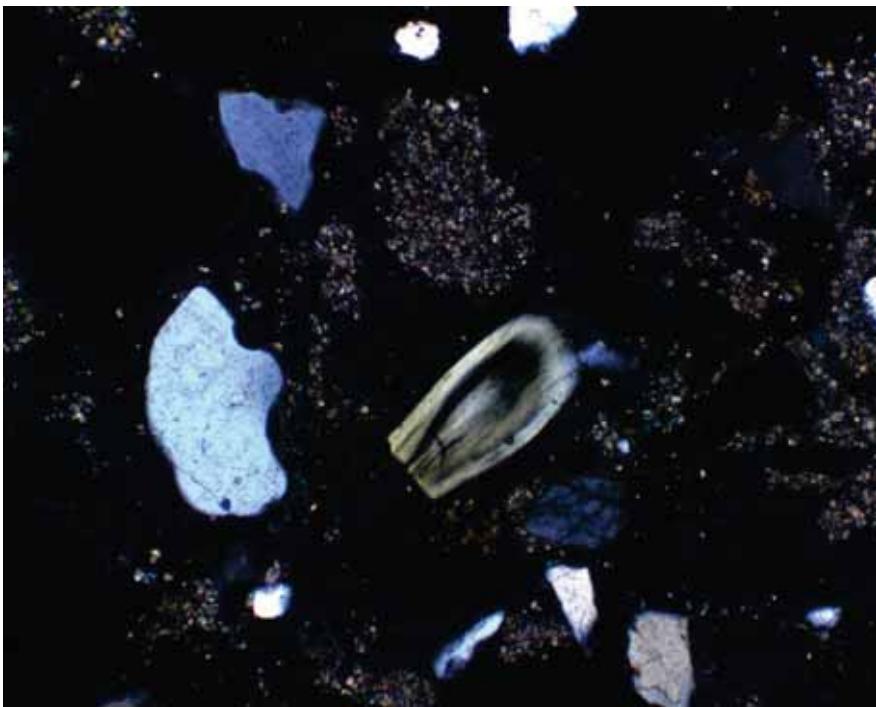
CCR14A 28.3-28.66



Phosphatic bone fragment and collophane "balls" in a dolomitic, clay-rich matrix (brown). Polarized light.

**PHOTO 8**

CCR14A 16.5-18.0



Phosphatic bone fragment and collophane "balls" in a dolomitic, clay-rich matrix (brown). Note undulatory extinction. Polarized light.

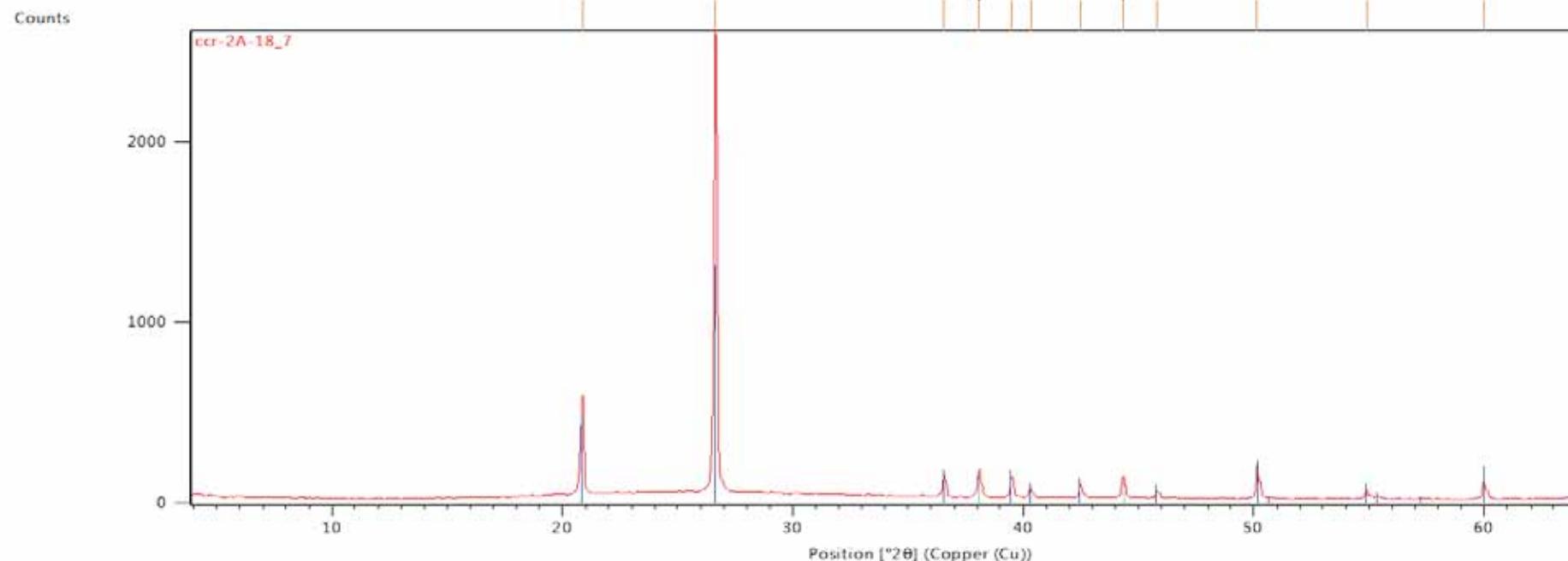
Unless otherwise indicated, all images were taken at 5x magnification; the long-edge of the field of view in the photographs is approximately 2.5 mm in length

*PetroLOGIC Solutions, Inc.*

3997 Oak Hill Road  
Douglasville, GA 30135  
Tel: (678) 313-4146  
email: rlkath@comcast.net



**ATTACHMENT 2**  
**QUALITATIVE X-RAY DIFFRACTION DATA**

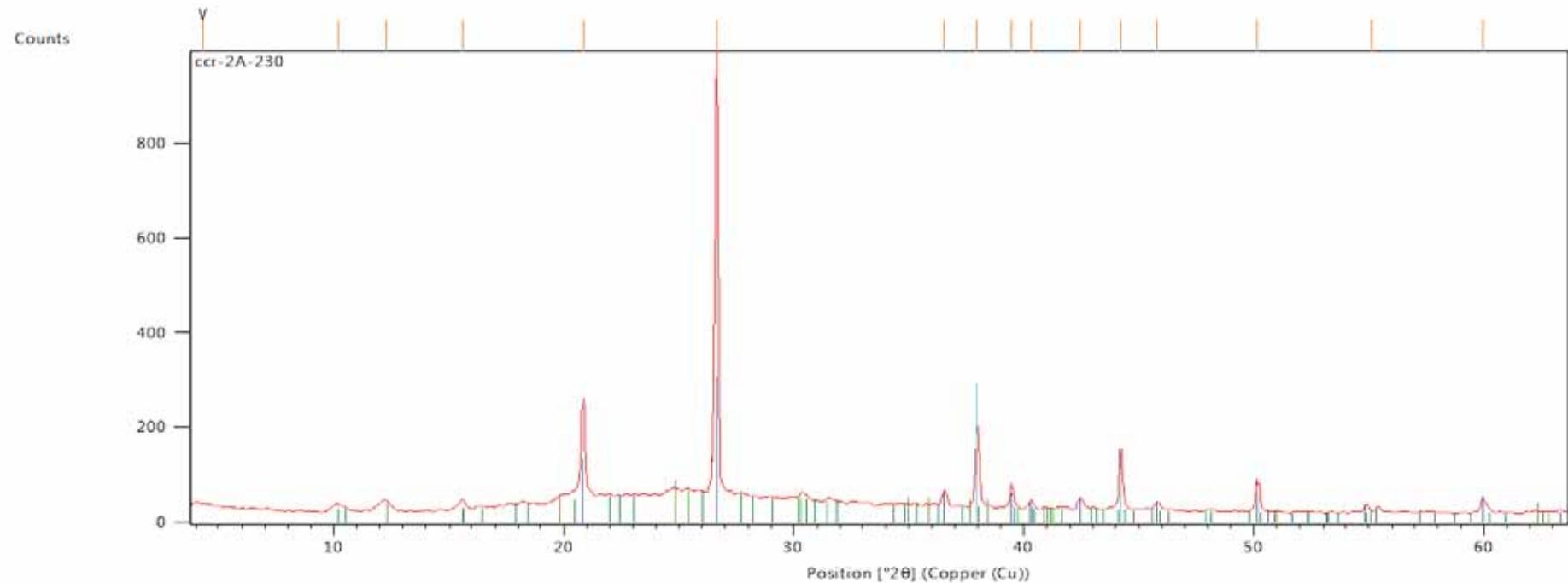


Peak List
00-005-0490: Quartz, low
00-004-0787: Aluminum, syn [NR]

Date: 4/10/2019 Time: 1:04:02 PM

File: ccr-2A-230

User: rkath

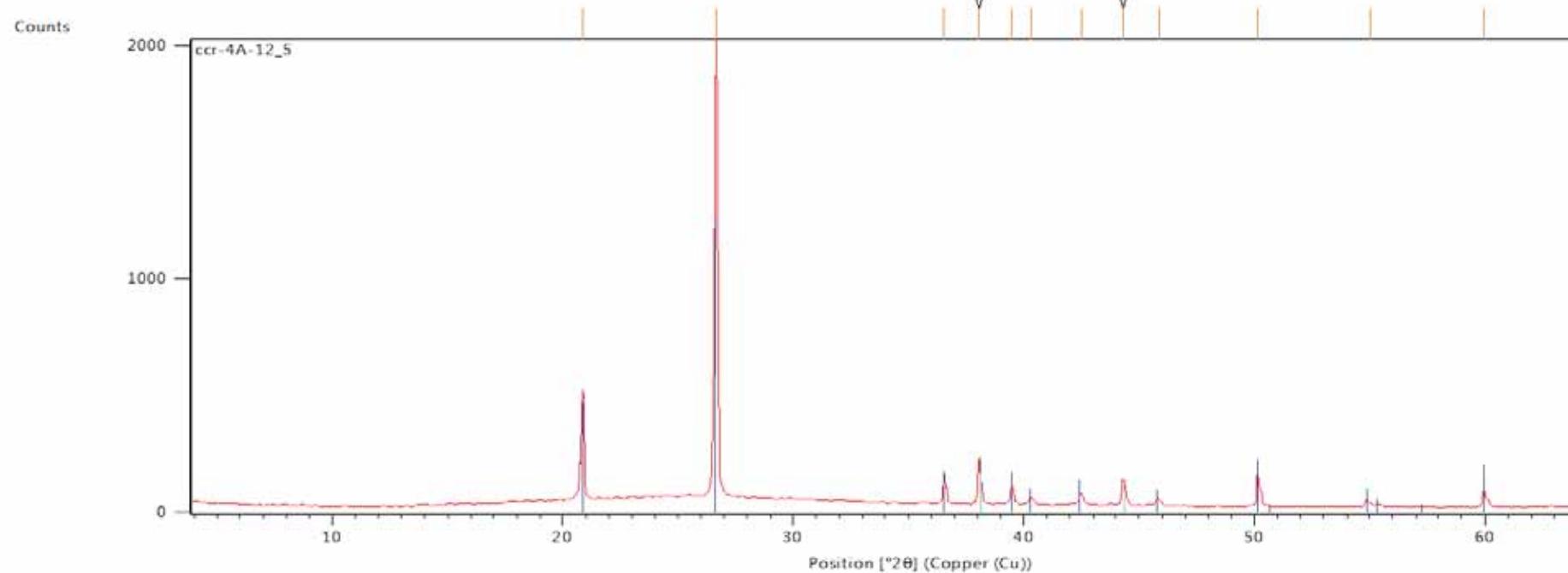


Peak List
00-006-0221: Kaolinite 1Md
00-026-0991: Eylettersite
00-005-0490: Quartz, low
00-004-0787: Aluminum, syn. [NR]
00-025-0020: Wavellite

Date: 4/10/2019 Time: 1:04:36 PM

File: ccr-4A-12\_5

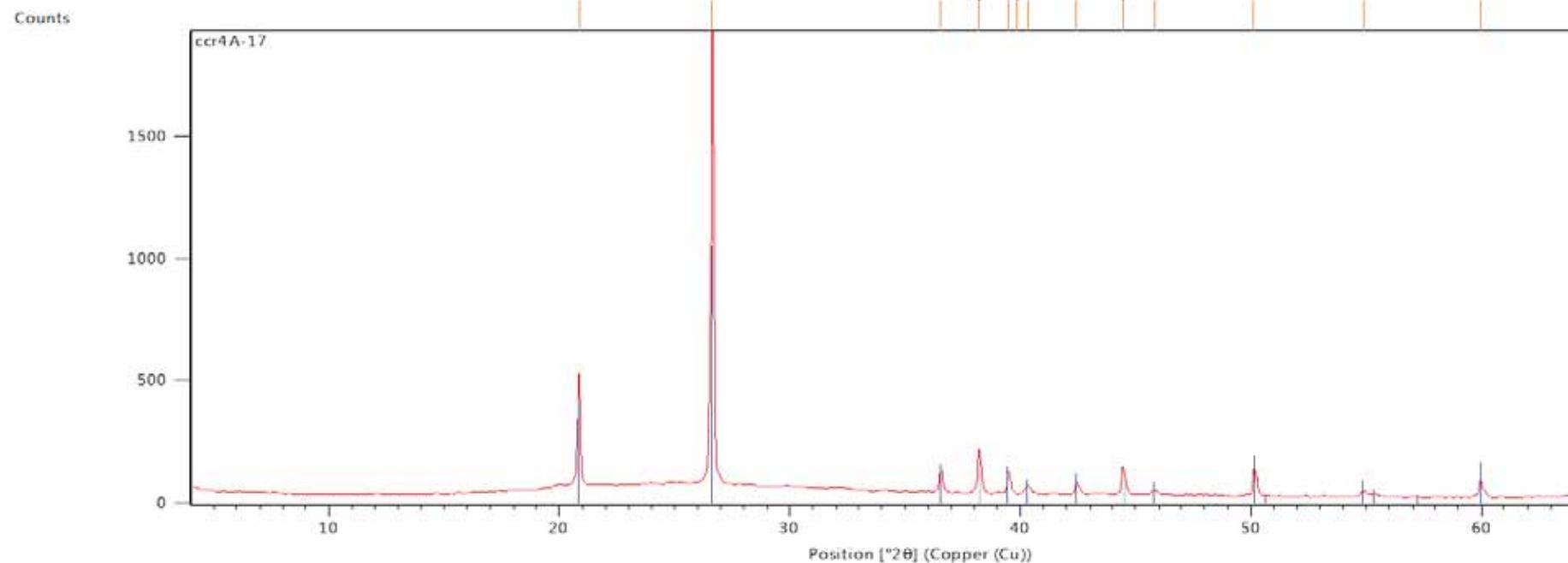
User: rkath



Peak List

00-005-0490: Quartz, low

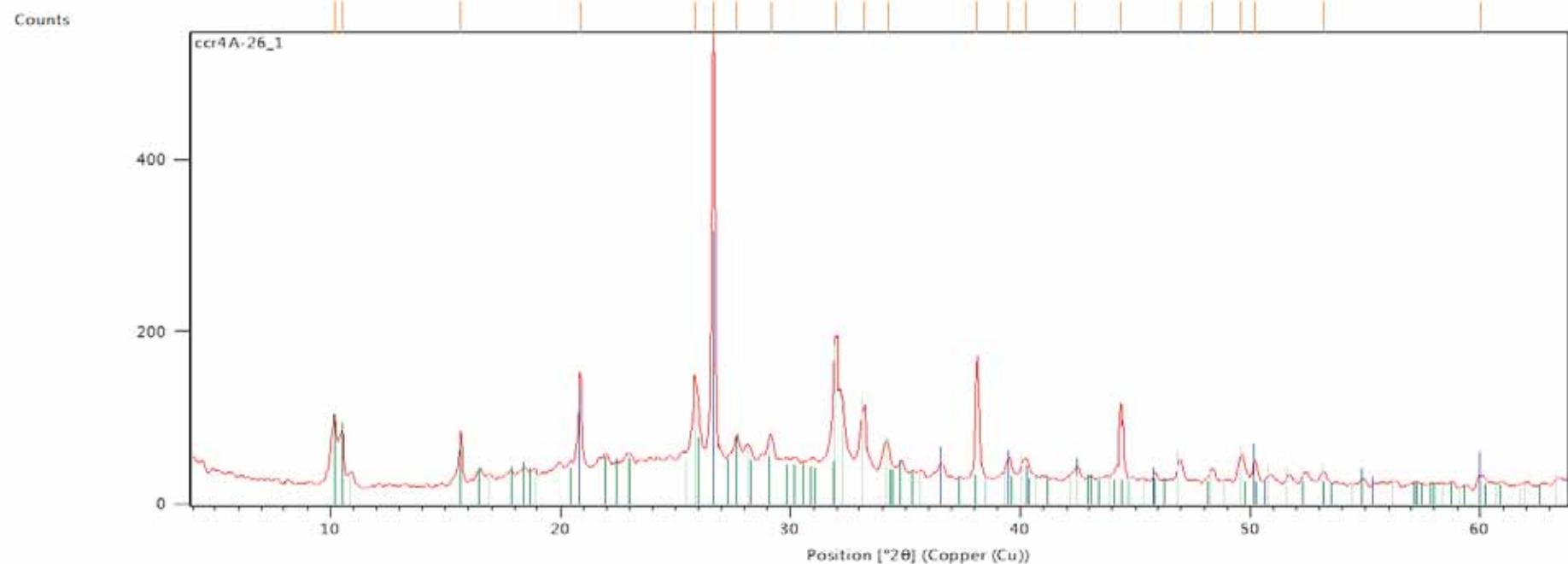
00-004-0787: Aluminum, syn [NR]



## Peak List

00-005-0490: Quartz, low

00-004-0787: Aluminum, syn [NR]



## Peak List

00-005-0490: Quartz, low

00-004-0787: Aluminum, syn [NR]

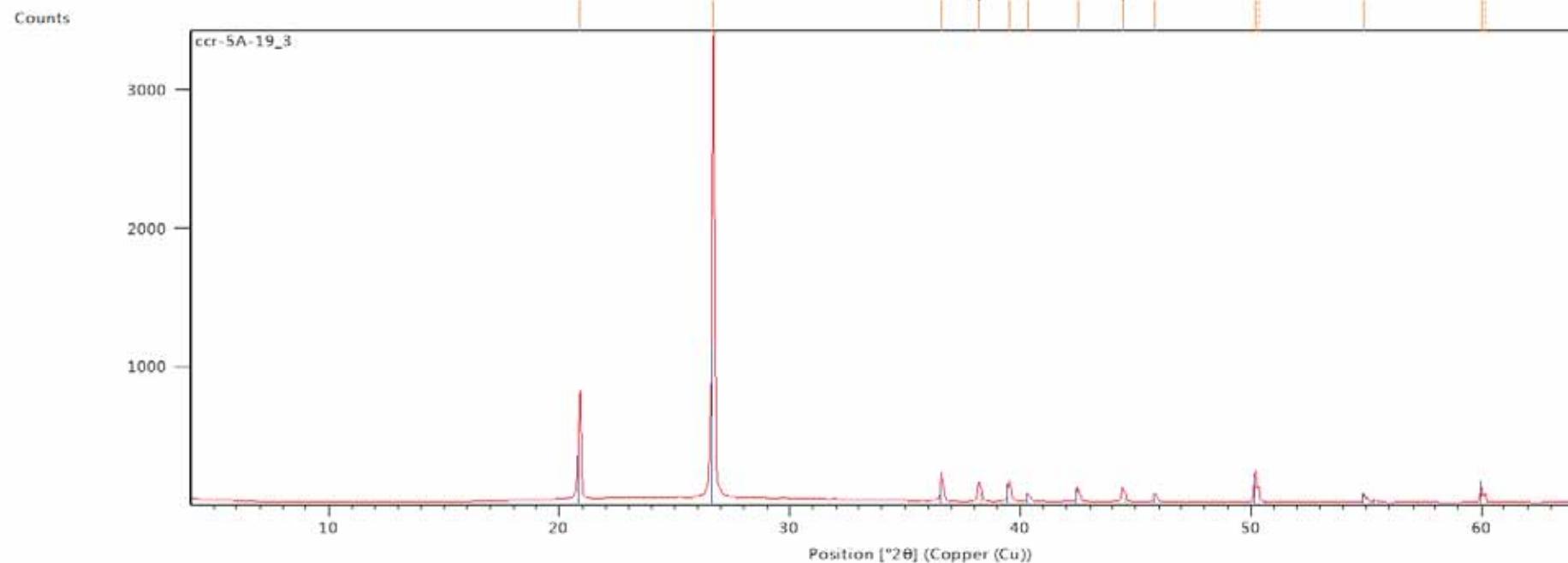
00-015-0876: Fluorapatite, syn

00-027-0019: Wackellite

Date: 4/10/2019 Time: 1:07:11 PM

File: ccr-5A-19\_3

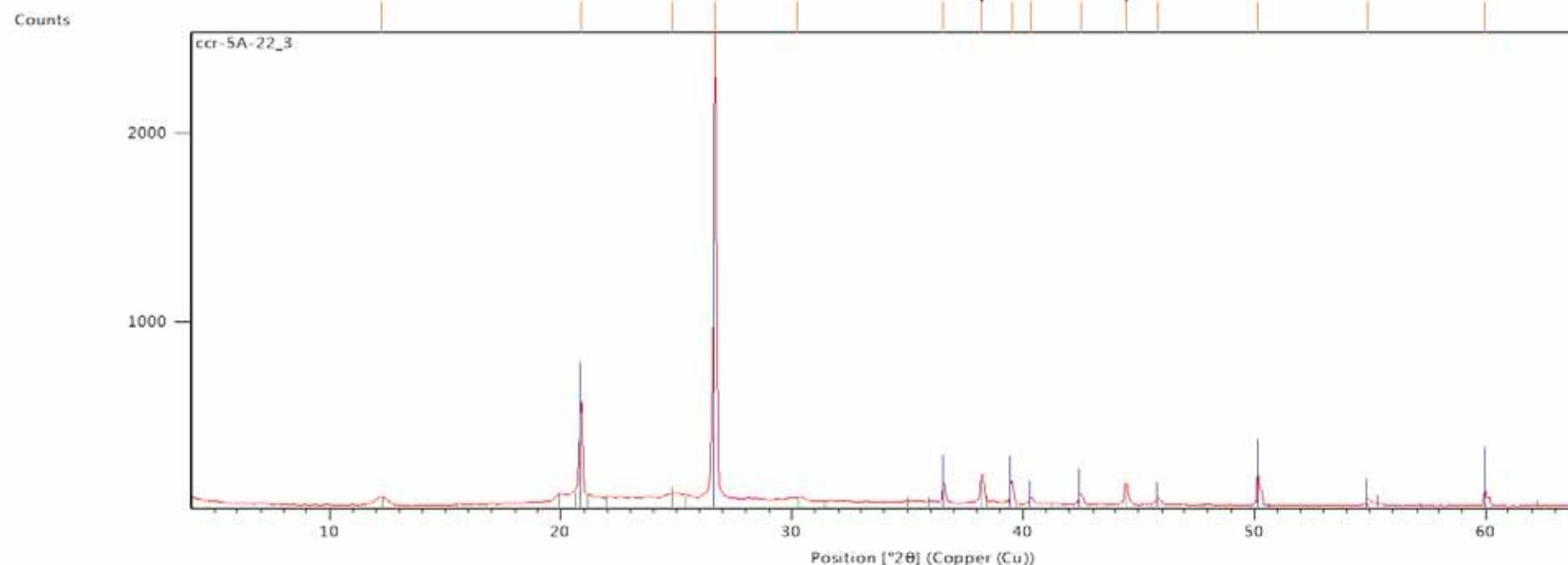
User: rkath



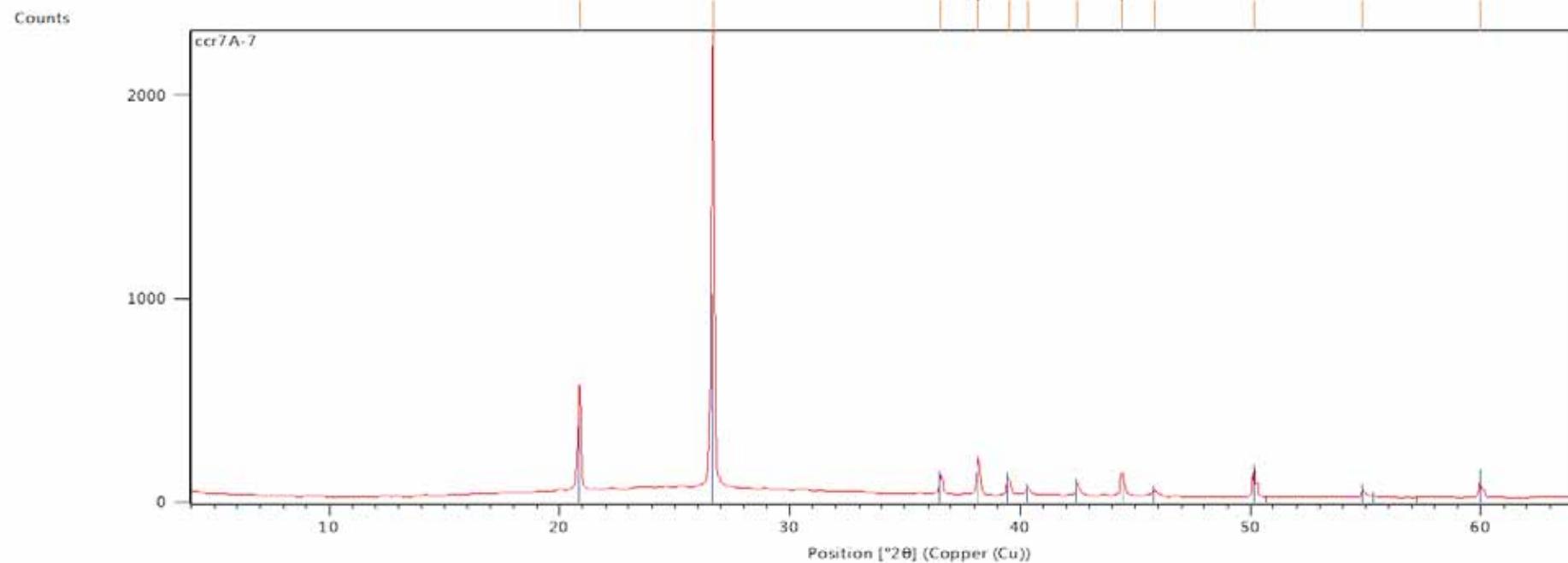
Peak List

00-005-0490: Quartz, low

00-004-0787: Aluminum, syn [NR]



Residue + Peak List
00-005-0490; Quartz, low
00-004-0787; Aluminum, syn [NRI]
00-026-0993; Eleytersite
00-001-0527; Kaolinite

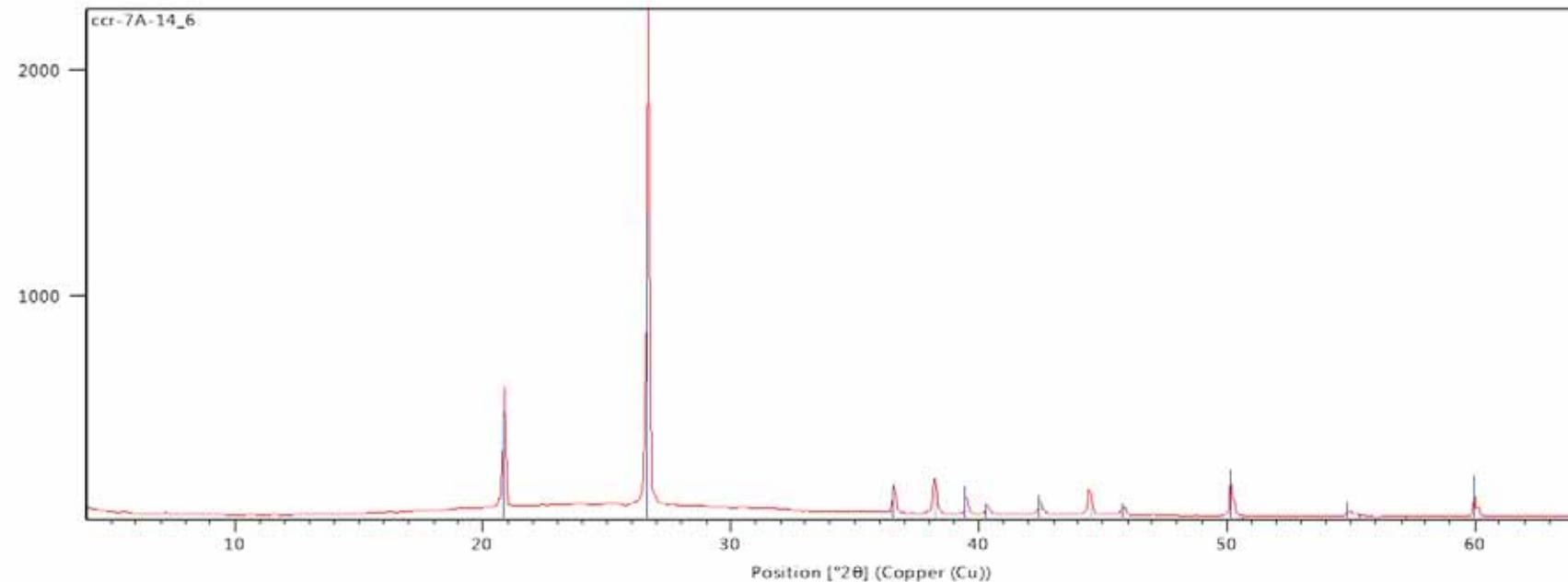


## Peak List

00-005-0490: Quartz, low

00-004-0787: Aluminum, syn [NR]

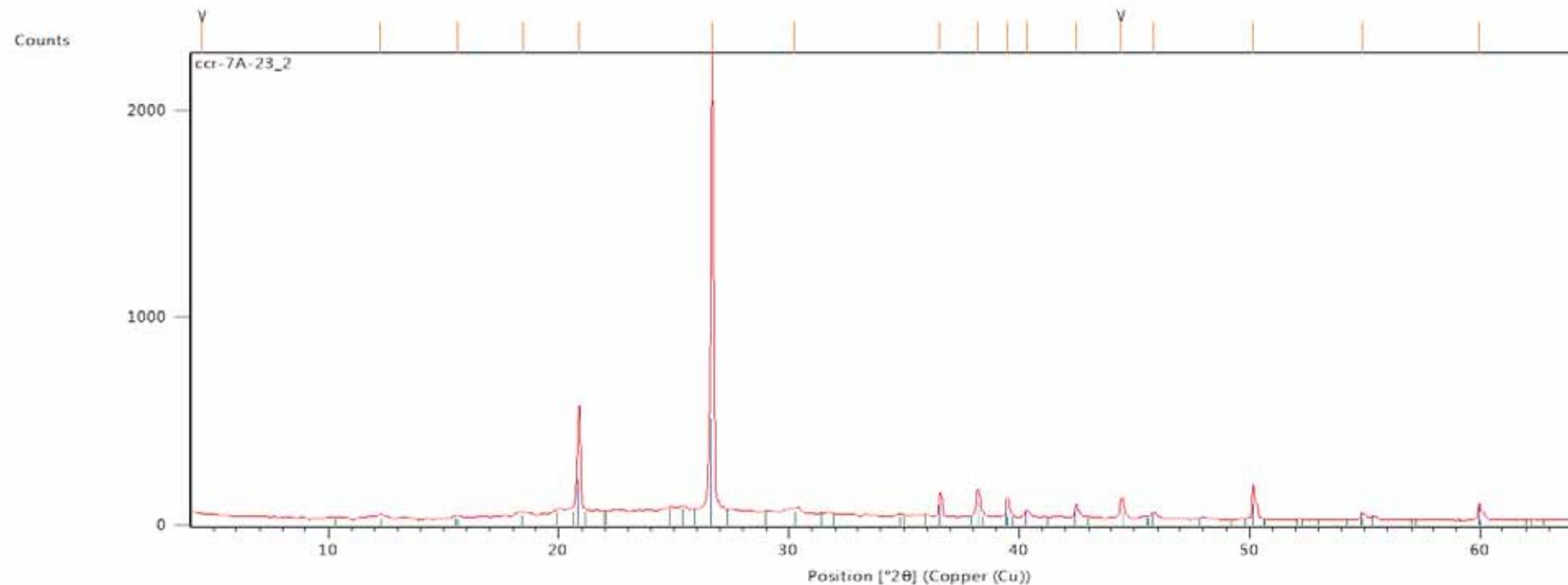
Counts



Peak List

00-005-0490: Quartz, low

00-004-0787: Aluminum, syn [NR]



## Peak List

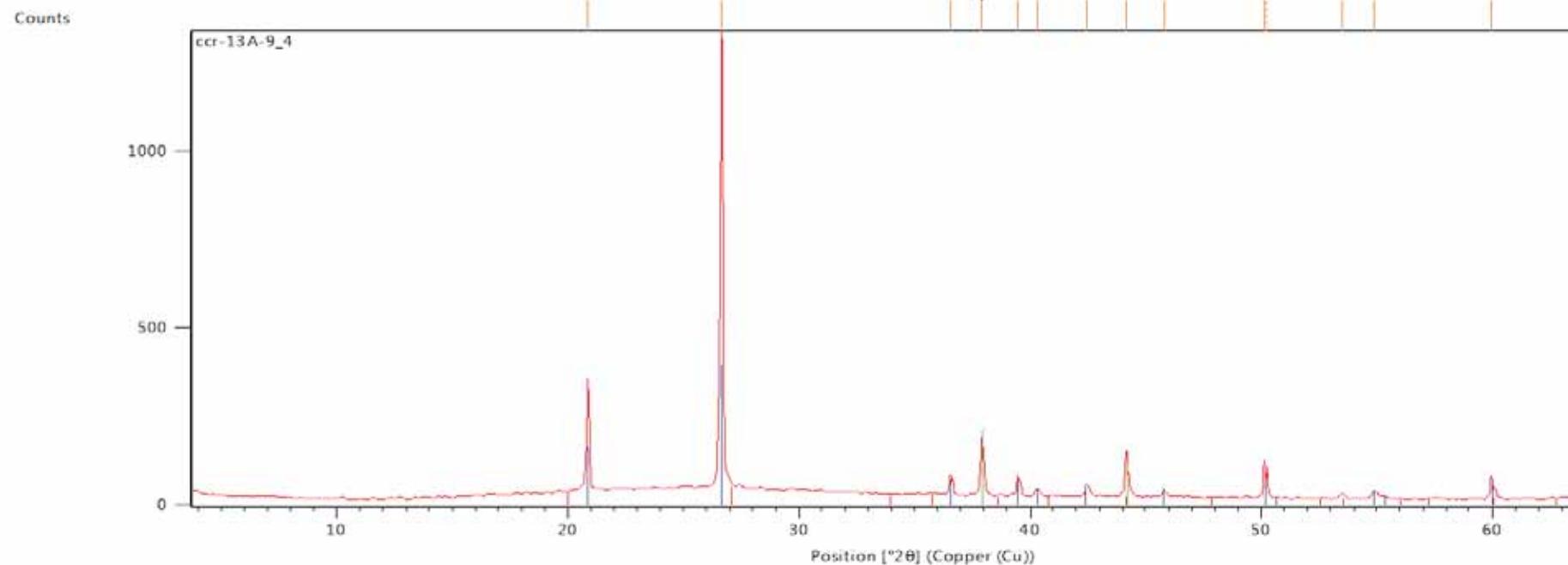
00-004-0787: Aluminum, syn [NR]

00-005-0490: Quartz, low

00-001-0527: Kaolinite

00-017-0203: Wavellite

00-026-0991: Eylettersite

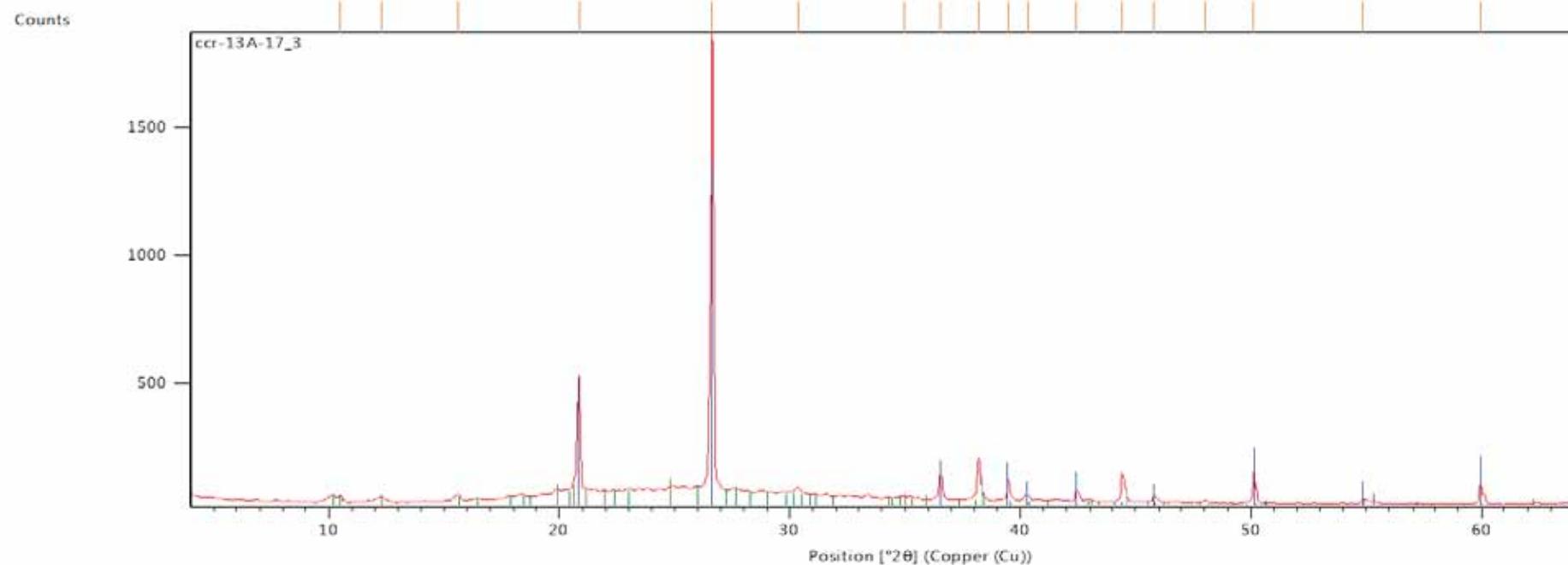


## Peak List

00-005-0490; Quartz, low

00-001-0679; Zircon

00-004-0782; Aluminum, syn [NR]



## Peak List

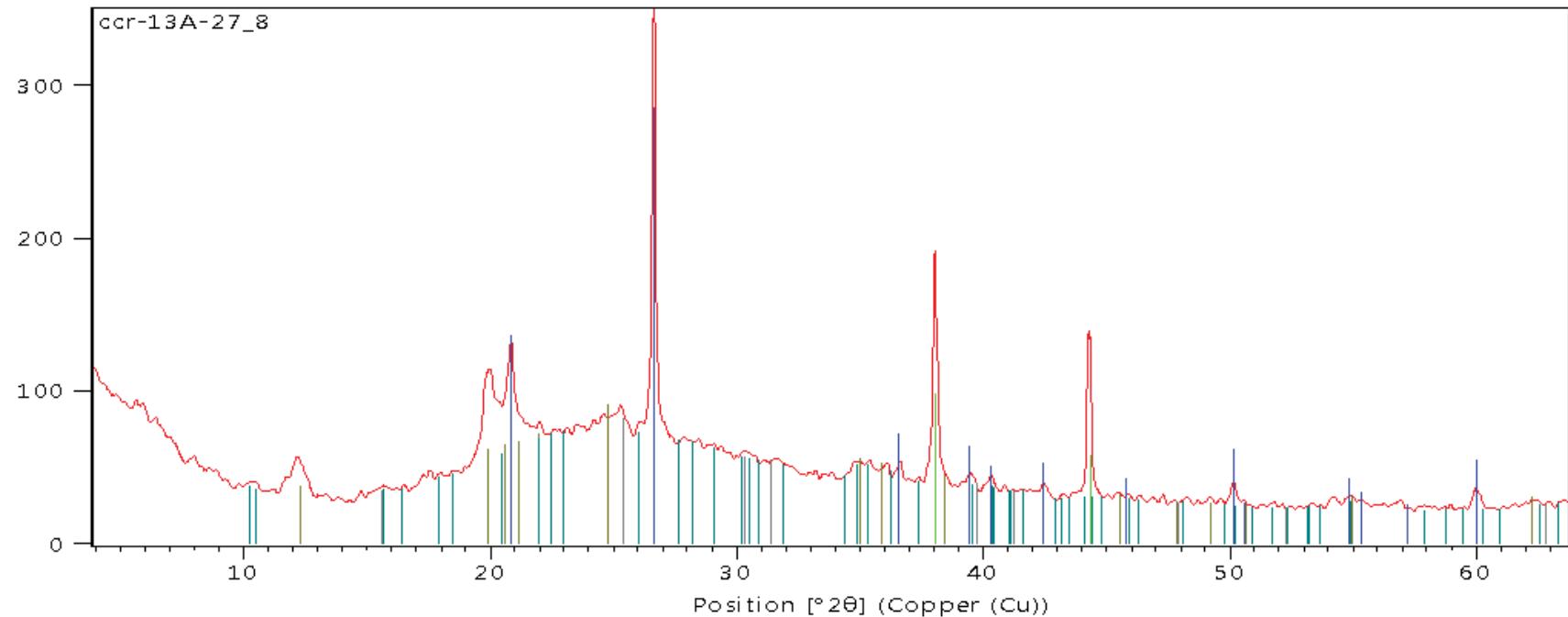
00-005-0490: Quartz, low

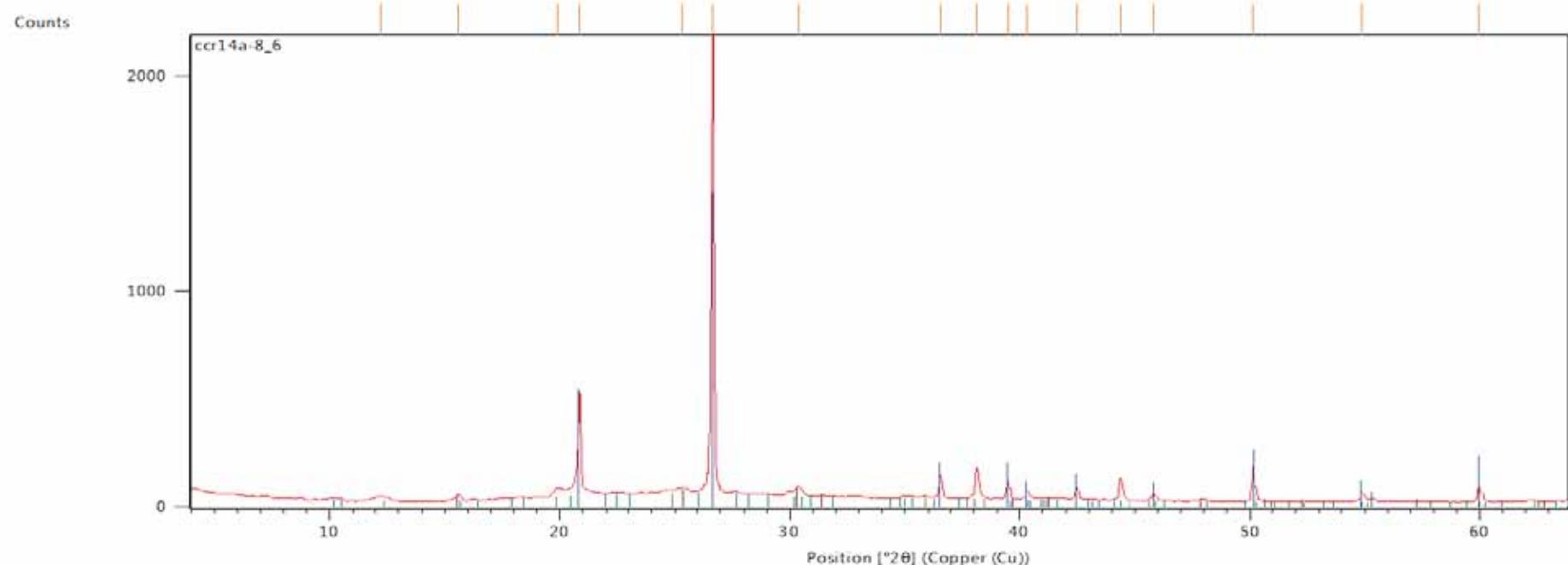
00-004-0787: Aluminum, syn [NR]

00-027-0019: Wavellite

00-001-0527: Kaolinite

### Counts



**Peak List**

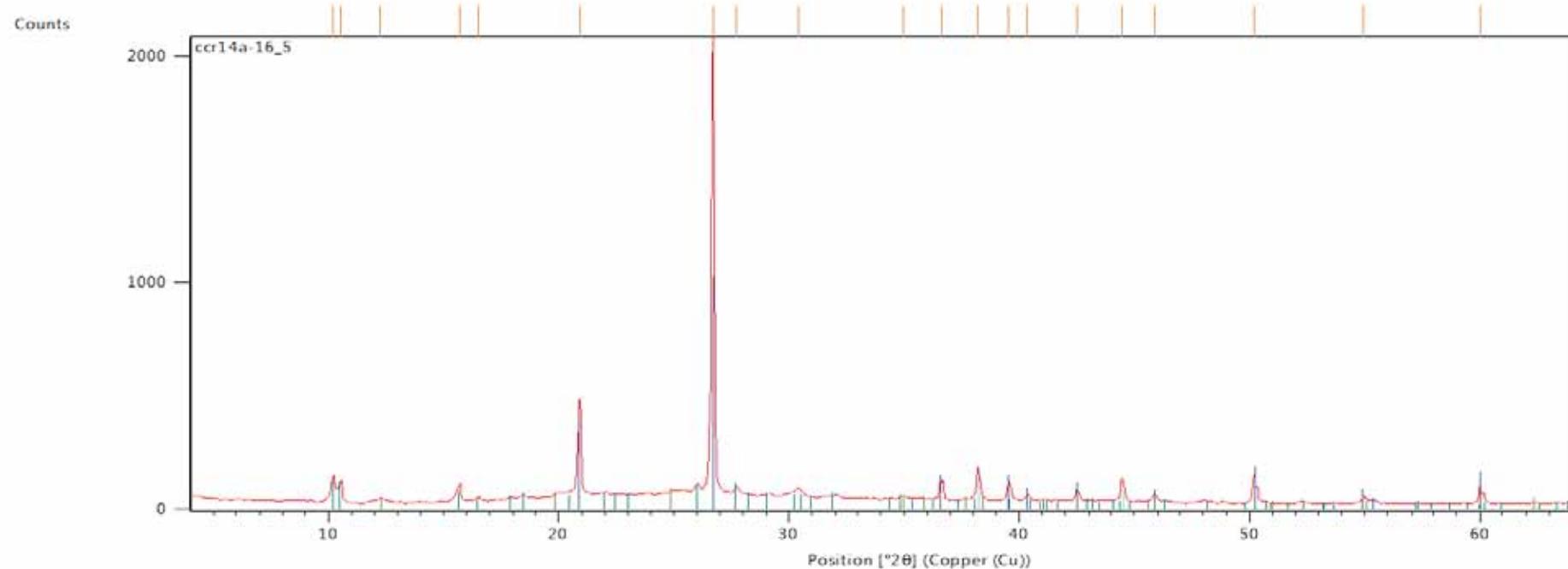
00-025-0020: Wavellite

00-026-0991: Eylettersite

00-005-0490: Quartz, low

00-004-0787: Aluminum, syn. [NR]

00-006-0221: Kaolinite 1Md



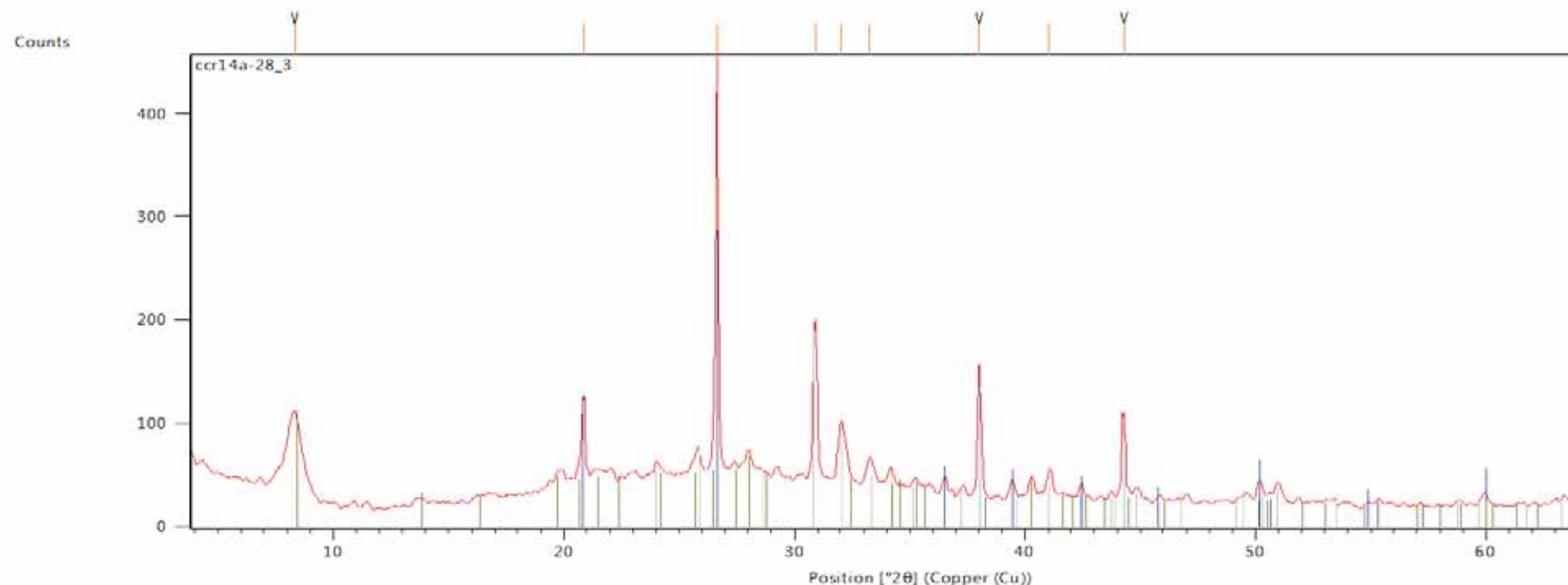
## Peak List

00-005-0490; Quartz, low

00-006-0221; Kaolinite 1Md

00-004-0787; Aluminum, syn [NR]

00-025-0020; Wavellite



## Peak List

00-004-0787: Aluminum, syn [NR]

00-005-0490: Quartz, low

00-029-0855: Palygorskite

00-034-0517: Dolomite, ferroan

00-001-1000: Hydroxyapatite

**PetroLOGIC Solutions, Inc.**

3997 Oak Hill Road  
Douglasville, GA 30135  
Tel: (678) 313-4146  
email: rlkath@comcast.net



**ATTACHMENT 3**  
**GEOCHEMISTRY DATA**

<i>Sample Number</i>	<b>Al<sub>2</sub>O<sub>3</sub></b>	<b>TiO<sub>2</sub></b>	<b>Fe<sub>2</sub>O<sub>3</sub></b>	<b>MgO</b>	<b>MnO</b>	<b>CaO</b>	<b>K<sub>2</sub>O</b>	<b>NaO</b>	<b>P<sub>2</sub>O<sub>5</sub></b>
	<b>wt%</b>	<b>wt%</b>	<b>wt%</b>	<b>wt%</b>	<b>wt%</b>	<b>wt%</b>	<b>wt%</b>	<b>wt%</b>	<b>wt%</b>
<i>CCR2A 18.7-19</i>	1.37	1.34	0.35	<MDL	0.01	0.10	0.06	0.01	0.47
<i>CCR2A 23-23.5</i>	9.22	1.06	0.50	0.05	0.01	0.51	0.13	0.02	2.29
<i>CCR4A 12.5-12.8</i>	0.42	0.50	0.08	<MDL	0.00	0.19	0.03	<MDL	0.05
<i>CCR4A 17-17.4</i>	3.75	0.62	0.13	0.05	0.00	0.20	0.06	0.02	0.67
<i>CCR4A 26.1-26.4</i>	9.12	0.36	0.45	0.10	0.01	23.38	0.36	0.13	>2.30
<i>CCR5A 19.3-20</i>	1.11	0.31	0.06	<MDL	0.00	0.13	0.04	0.03	0.22
<i>CCR5A 22.3-22.6</i>	9.32	0.42	0.34	0.05	0.00	0.48	0.10	0.03	1.10
<i>CCR7A 7-7.4</i>	0.59	0.51	0.10	<MDL	0.00	0.20	<MDL	<MDL	0.11
<i>CCR7A 14.6-15</i>	0.73	0.62	0.13	<MDL	0.01	0.08	<MDL	<MDL	0.16
<i>CCR7A 23.2-23.5</i>	8.70	0.51	0.71	0.05	0.00	0.90	0.07	0.20	>2.30
<i>CCR13A 9.4-10</i>	0.54	0.94	0.12	<MDL	0.00	0.41	<MDL	<MDL	0.13
<i>CCR13A 17.3-17.6</i>	4.12	0.36	0.16	0.03	0.00	0.26	0.05	<MDL	1.29
<i>CCR13A 27.8-28.2</i>	17.87	0.68	1.41	0.81	0.01	0.59	0.66	0.05	>2.30
<i>CCR14A 8.6-8.8</i>	7.61	0.46	0.42	0.14	0.00	1.05	0.13	0.02	2.13
<i>CCR14A 16.5-18</i>	11.95	0.53	0.50	0.08	0.01	0.72	0.18	0.02	>2.30
<i>CCR14A 28.3-28.6</i>	2.99	0.17	3.37	6.37	0.02	20.09	0.43	0.26	>2.30

	<b>Ag</b>	<b>As</b>	<b>Ba</b>	<b>Be</b>	<b>Bi</b>	<b>Ce</b>	<b>Cd</b>	<b>Co</b>	<b>Cr</b>
	<b>ppm</b>								
<i>CCR2A 18.7-19</i>	0.27	0.30	128.00	0.17	0.29	57.9	<MDL	12.20	19.5
<i>CCR2A 23-23.5</i>	<MDL	<MDL	679.00	1.22	0.19	93.7	<MDL	10.10	42.9
<i>CCR4A 12.5-12.8</i>	<MDL	<MDL	6.00	0.01	0.03	6.1	<MDL	4.50	7.7
<i>CCR4A 17-17.4</i>	0.06	0.30	137.00	0.20	0.12	39.4	0.05	5.70	19.2
<i>CCR4A 26.1-26.4</i>	0.34	3.40	131.00	1.80	0.13	69.8	42.65	3.30	136.1
<i>CCR5A 19.3-20</i>	<MDL	<MDL	39.00	0.05	0.03	13.2	<MDL	2.80	6.6
<i>CCR5A 22.3-22.6</i>	0.06	0.70	617.00	1.22	0.31	60.0	0.16	10.30	49.6
<i>CCR7A 7-7.4</i>	0.14	0.60	18.00	0.05	0.05	12.3	<MDL	23.30	7.9
<i>CCR7A 14.6-15</i>	0.07	<MDL	12.00	0.05	0.02	10.1	<MDL	14.50	10.1
<i>CCR7A 23.2-23.5</i>	<MDL	<MDL	516.00	0.93	0.14	60.0	0.42	21.20	50.5
<i>CCR13A 9.4-10</i>	0.27	0.40	45.00	0.04	0.18	37.9	<MDL	18.40	11.4
<i>CCR13A 17.3-17.6</i>	0.14	<MDL	189.00	0.49	0.06	39.3	<MDL	20.10	23.4
<i>CCR13A 27.8-28.2</i>	0.48	0.20	136.00	1.58	0.30	64.7	0.12	15.10	162.8
<i>CCR14A 8.6-8.8</i>	0.22	<MDL	377.00	1.47	0.27	81.5	0.54	18.80	48.4
<i>CCR14A 16.5-18</i>	0.91	0.60	673.00	4.24	0.32	138.8	0.31	21.90	112.3
<i>CCR14A 28.3-28.6</i>	1.01	5.30	81.00	0.69	0.11	25.3	35.09	11.30	84.3

&lt;MDL less than method detection limit

	Cs ppm	Cu ppm	Ga ppm	Ge ppm	Hf ppm	In ppm	La ppm	Li ppm	Mo ppm
<i>CCR2A 18.7-19</i>	0.30	6.40	7.25	0.04	1.77	0.02	32.7	1.10	2.70
<i>CCR2A 23-23.5</i>	0.70	2.60	11.27	0.08	1.84	0.03	50.1	3.90	2.10
<i>CCR4A 12.5-12.8</i>	<MDL	1.50	2.04	<MDL	0.51	<MDL	2.4	0.70	1.70
<i>CCR4A 17-17.4</i>	0.40	3.40	6.76	0.03	1.09	0.03	20.7	4.20	2.20
<i>CCR4A 26.1-26.4</i>	1.50	8.50	10.30	0.06	1.76	0.06	63.2	3.20	2.30
<i>CCR5A 19.3-20</i>	0.10	0.90	2.41	0.02	0.44	0.01	6.5	6.10	1.10
<i>CCR5A 22.3-22.6</i>	0.40	1.40	9.16	0.05	1.44	0.07	30.6	7.50	1.50
<i>CCR7A 7-7.4</i>	<MDL	1.30	2.21	0.01	0.65	0.01	4.5	1.80	1.50
<i>CCR7A 14.6-15</i>	<MDL	2.00	2.81	0.01	0.55	0.02	4.0	1.20	1.60
<i>CCR7A 23.2-23.5</i>	0.30	1.20	10.57	0.06	1.55	0.04	31.8	7.00	2.10
<i>CCR13A 9.4-10</i>	0.10	3.10	3.95	<MDL	1.60	0.01	20.1	2.20	4.10
<i>CCR13A 17.3-17.6</i>	0.30	2.20	5.30	0.05	1.06	0.02	21.3	6.40	0.90
<i>CCR13A 27.8-28.2</i>	4.20	6.50	19.57	0.05	5.21	0.16	39.0	20.60	2.10
<i>CCR14A 8.6-8.8</i>	1.00	4.00	9.10	0.06	3.10	0.05	45.2	5.40	1.30
<i>CCR14A 16.5-18</i>	1.00	11.60	11.94	0.12	2.97	0.06	83.6	3.00	1.70
<i>CCR14A 28.3-28.6</i>	1.20	1.30	4.03	0.04	0.78	0.01	21.3	8.30	2.80
	Nb ppm	Ni ppm	Pb ppm	Rb ppm	Re ppm	S ppm	Sb ppm	Sc ppm	Se ppm
<i>CCR2A 18.7-19</i>	17.45	1.50	25.00	4.00	<MDL	245.0	0.37	2.7	0.30
<i>CCR2A 23-23.5</i>	16.51	6.90	29.00	6.00	<MDL	315.0	0.64	4.8	0.30
<i>CCR4A 12.5-12.8</i>	4.81	1.30	<MDL	<MDL	<MDL	219.0	0.13	0.9	0.40
<i>CCR4A 17-17.4</i>	10.05	6.30	13.00	3.00	<MDL	344.0	0.23	1.8	0.80
<i>CCR4A 26.1-26.4</i>	7.58	4.10	11.00	16.00	0.00	624.0	1.07	8.2	0.50
<i>CCR5A 19.3-20</i>	4.14	2.00	6.00	2.00	<MDL	112.0	0.10	0.7	<MDL
<i>CCR5A 22.3-22.6</i>	7.17	10.90	24.00	5.00	0.01	144.0	0.76	8.6	0.30
<i>CCR7A 7-7.4</i>	5.81	2.40	4.00	<MDL	0.03	<MDL	0.16	0.8	<MDL
<i>CCR7A 14.6-15</i>	6.32	1.30	4.00	<MDL	0.02	142.0	0.13	0.9	<MDL
<i>CCR7A 23.2-23.5</i>	9.17	10.70	22.00	3.00	0.03	261.0	0.35	5.9	1.30
<i>CCR13A 9.4-10</i>	14.68	1.60	16.00	<MDL	0.02	218.0	0.41	1.5	0.80
<i>CCR13A 17.3-17.6</i>	6.31	4.70	12.00	3.00	0.03	291.0	0.29	2.3	0.30
<i>CCR13A 27.8-28.2</i>	15.13	21.20	21.00	41.00	0.01	270.0	1.24	82.1	<MDL
<i>CCR14A 8.6-8.8</i>	8.44	10.00	26.00	8.00	0.03	345.0	0.39	18.2	0.20
<i>CCR14A 16.5-18</i>	10.31	5.70	31.00	10.00	0.03	534.0	0.45	13.5	0.20
<i>CCR14A 28.3-28.6</i>	3.66	56.60	6.00	20.00	0.01	1645.0	1.41	2.7	0.50
	Sn ppm	Sr ppm	Ta ppm	Te ppm	Th ppm	Tl ppm	U ppm	V ppm	W ppm
<i>CCR2A 18.7-19</i>	1.40	207.0	1.64	0.08	8.5	0.03	5.0	19.00	1.2
<i>CCR2A 23-23.5</i>	1.30	929.0	1.09	0.03	12.9	0.22	50.4	59.00	1.1
<i>CCR4A 12.5-12.8</i>	0.90	12.0	0.66	0.01	1.7	<MDL	1.2	6.00	0.5
<i>CCR4A 17-17.4</i>	1.50	227.0	1.65	0.03	6.8	0.04	5.3	16.00	0.9
<i>CCR4A 26.1-26.4</i>	1.50	308.0	0.12	0.05	9.7	0.50	185.5	119.00	0.8
<i>CCR5A 19.3-20</i>	0.60	63.0	0.46	<MDL	2.1	0.01	4.1	5.00	0.4
<i>CCR5A 22.3-22.6</i>	1.10	748.0	0.06	0.02	8.2	0.10	34.2	35.00	66.3
<i>CCR7A 7-7.4</i>	0.80	30.0	0.60	<MDL	1.7	<MDL	1.4	6.00	184.8
<i>CCR7A 14.6-15</i>	0.80	18.0	0.69	0.01	2.0	<MDL	0.9	6.00	97.1
<i>CCR7A 23.2-23.5</i>	1.20	786.0	<MDL	0.03	8.8	0.04	35.0	33.00	173.9
<i>CCR13A 9.4-10</i>	1.10	91.0	1.44	0.01	4.8	0.03	3.0	13.00	104.3
<i>CCR13A 17.3-17.6</i>	0.50	458.0	0.30	0.01	6.3	0.08	22.4	25.00	175.2
<i>CCR13A 27.8-28.2</i>	2.50	210.0	0.12	0.02	23.4	1.00	164.4	247.00	77.8
<i>CCR14A 8.6-8.8</i>	0.90	815.0	0.18	0.02	11.4	0.23	96.2	50.00	153.1
<i>CCR14A 16.5-18</i>	1.50	1185.0	1.04	<MDL	16.6	0.28	467.0	48.00	185.1
<i>CCR14A 28.3-28.6</i>	0.80	461.0	<MDL	<MDL	4.0	0.60	34.8	123.00	37.0

&lt;MDL less than method detection limit

	<b>Y</b>	<b>Zn</b>	<b>Zr</b>
	<b>ppm</b>	<b>ppm</b>	<b>ppm</b>
<i>CCR2A 18.7-19</i>	12.10	4.00	71.0
<i>CCR2A 23-23.5</i>	49.30	11.00	70.2
<i>CCR4A 12.5-12.8</i>	1.10	<MDL	17.6
<i>CCR4A 17-17.4</i>	9.40	4.00	37.7
<i>CCR4A 26.1-26.4</i>	96.30	87.00	51.8
<i>CCR5A 19.3-20</i>	3.00	<MDL	15.9
<i>CCR5A 22.3-22.6</i>	33.30	7.00	44.0
<i>CCR7A 7-7.4</i>	2.20	4.00	42.5
<i>CCR7A 14.6-15</i>	1.40	4.00	30.7
<i>CCR7A 23.2-23.5</i>	25.80	7.00	60.9
<i>CCR13A 9.4-10</i>	6.80	3.00	76.1
<i>CCR13A 17.3-17.6</i>	17.00	5.00	43.5
<i>CCR13A 27.8-28.2</i>	33.90	49.00	167.2
<i>CCR14A 8.6-8.8</i>	48.90	12.00	93.3
<i>CCR14A 16.5-18</i>	93.50	10.00	94.2
<i>CCR14A 28.3-28.6</i>	30.70	49.00	19.0

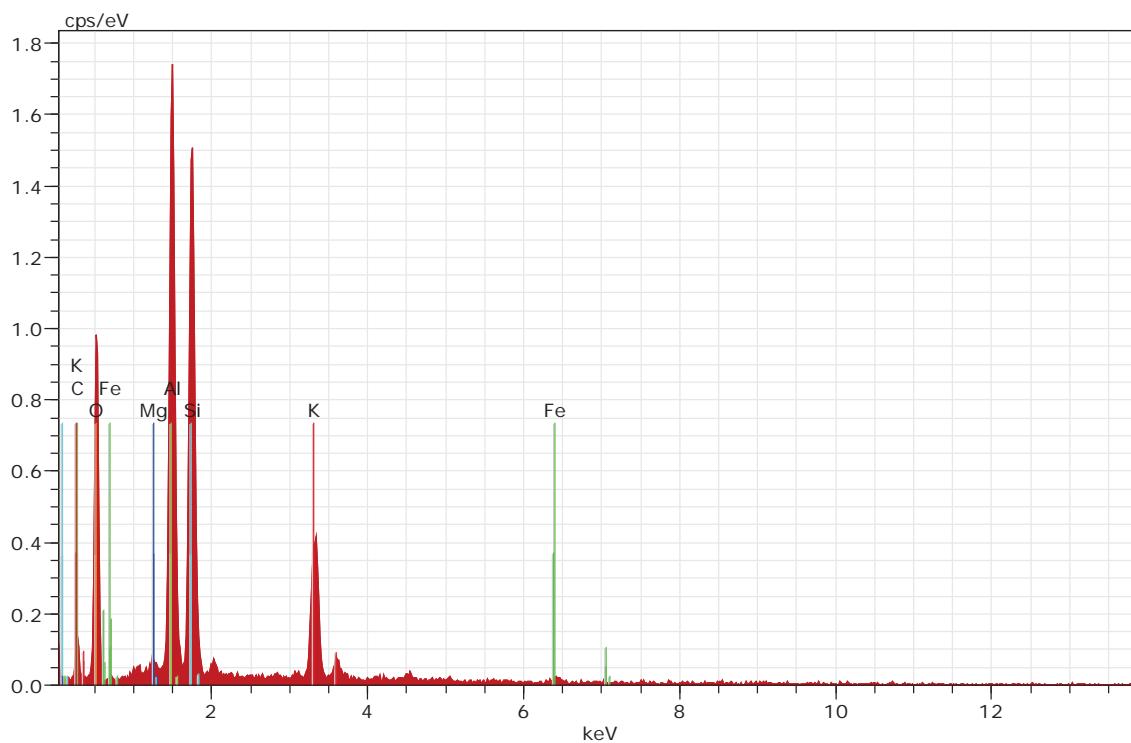
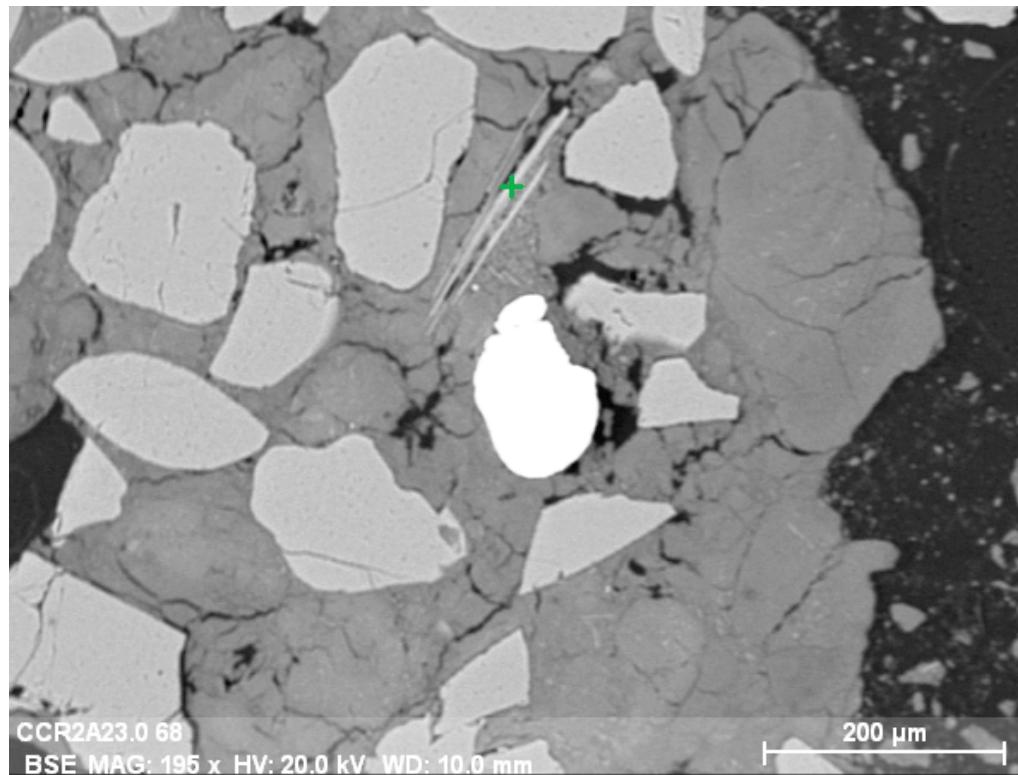
<MDL less than method detection limit

**PetroLOGIC Solutions, Inc.**

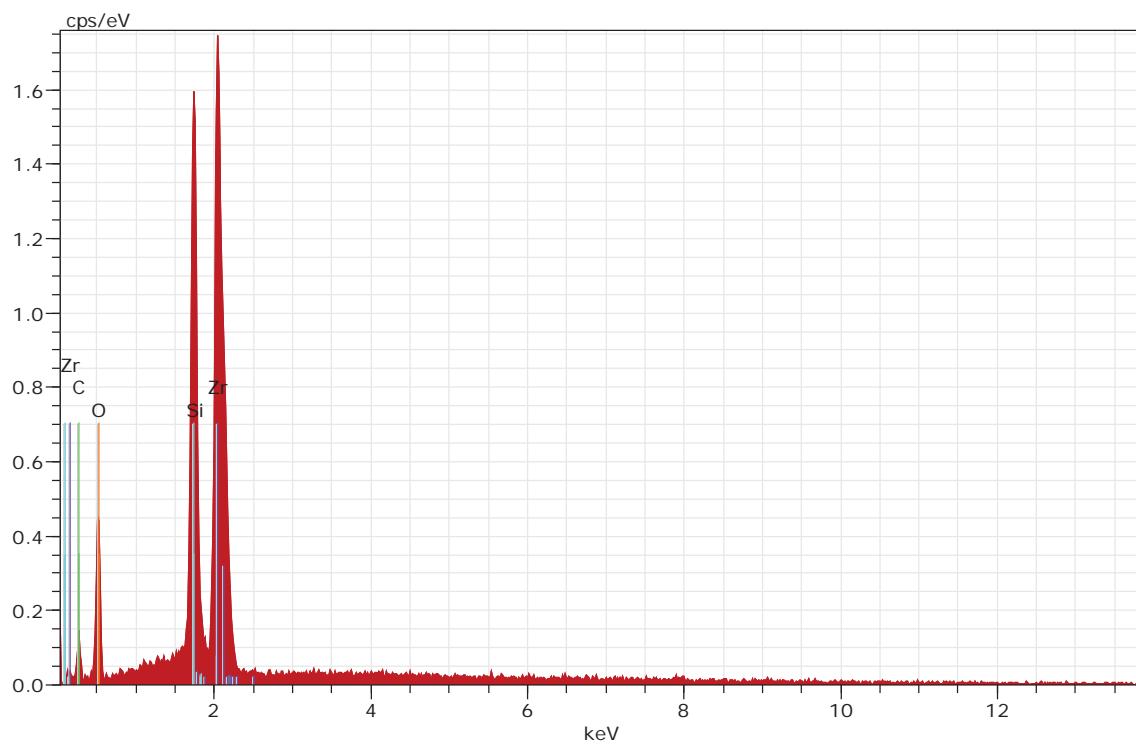
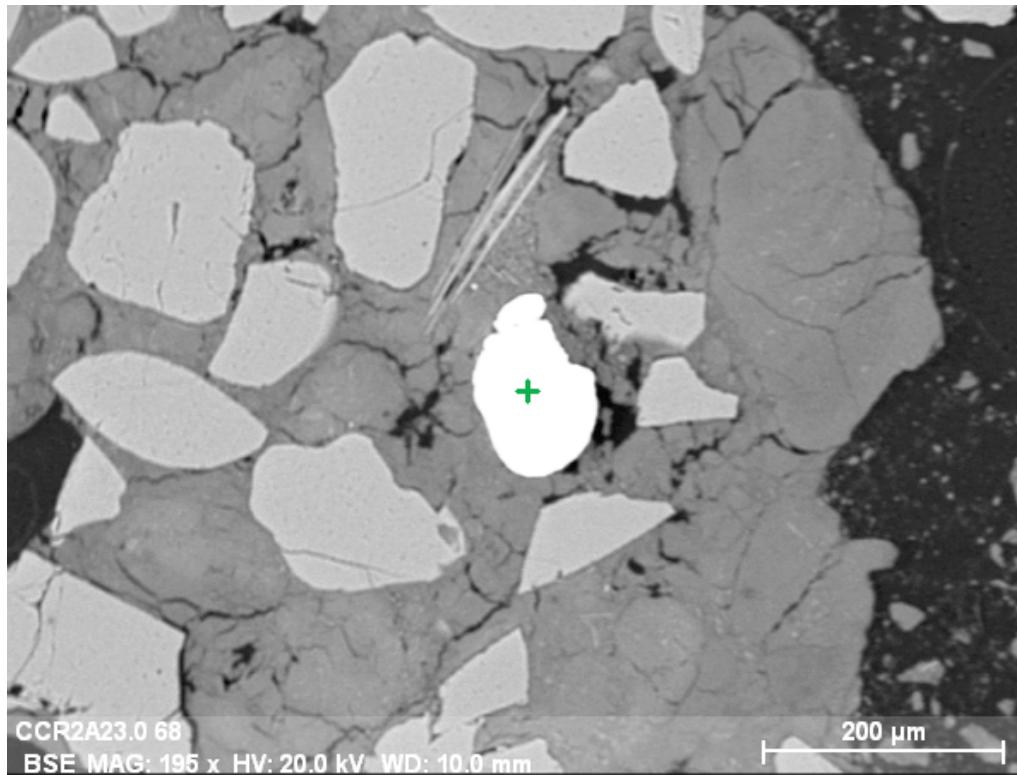
3997 Oak Hill Road  
Douglasville, GA 30135  
Tel: (678) 313-4146  
email: rlkath@comcast.net



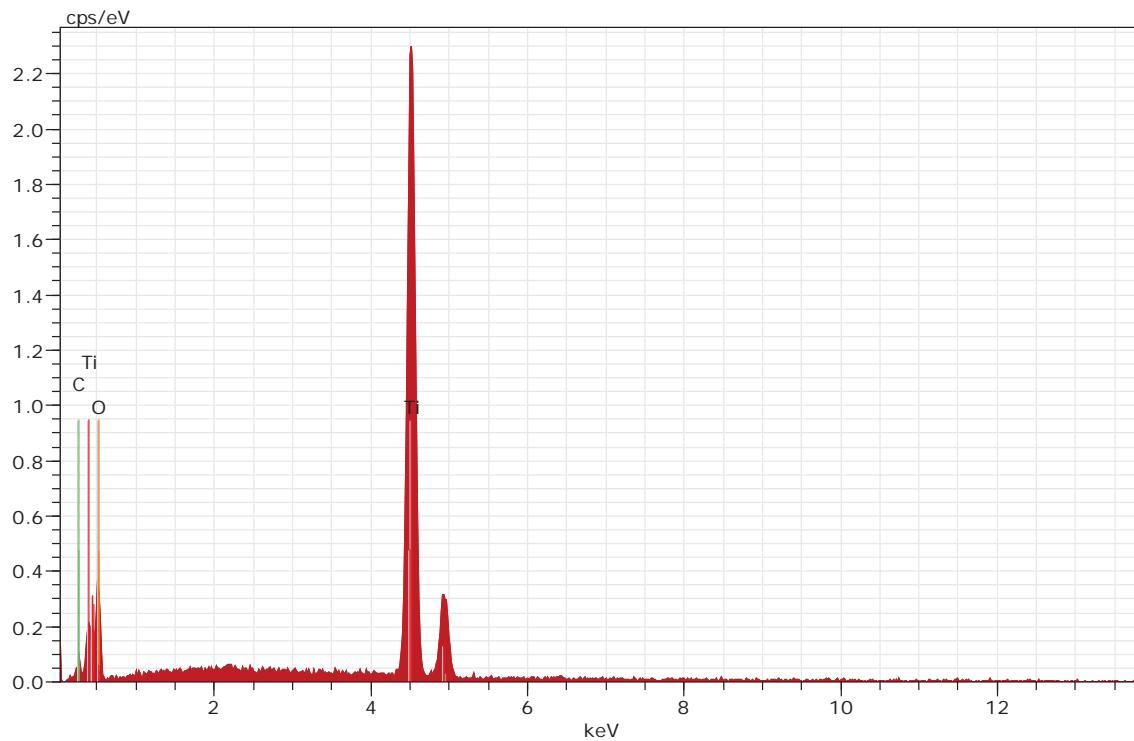
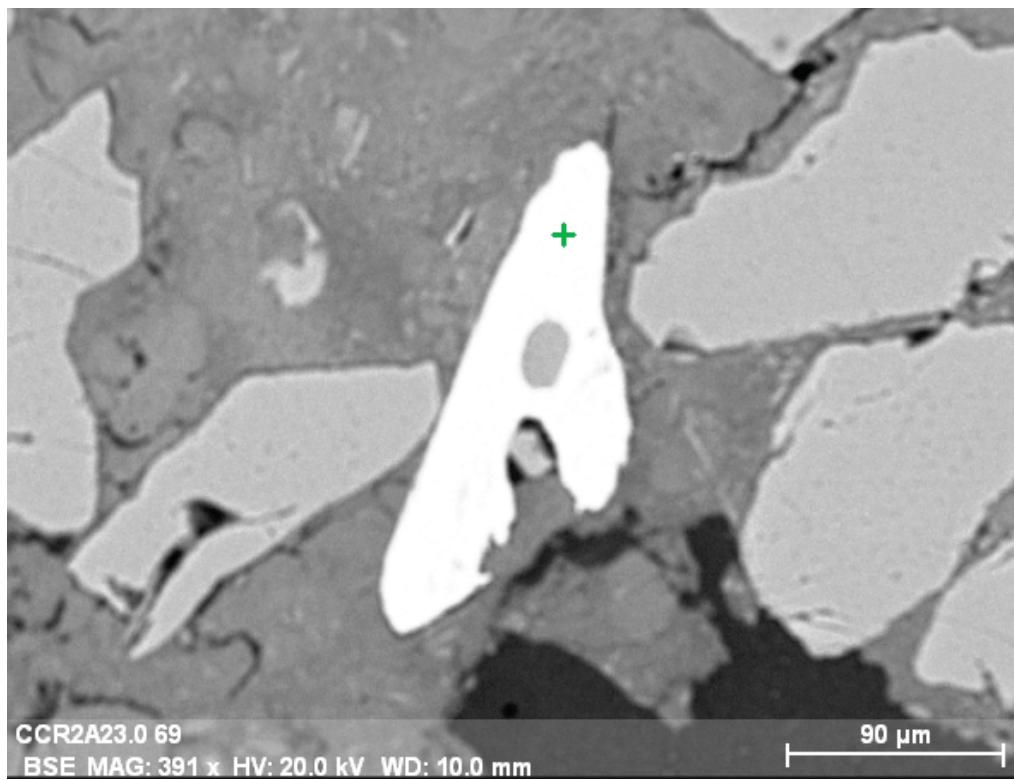
**ATTACHMENT 4**  
**SCANNING ELECTRON MICROSCOPY DATA**



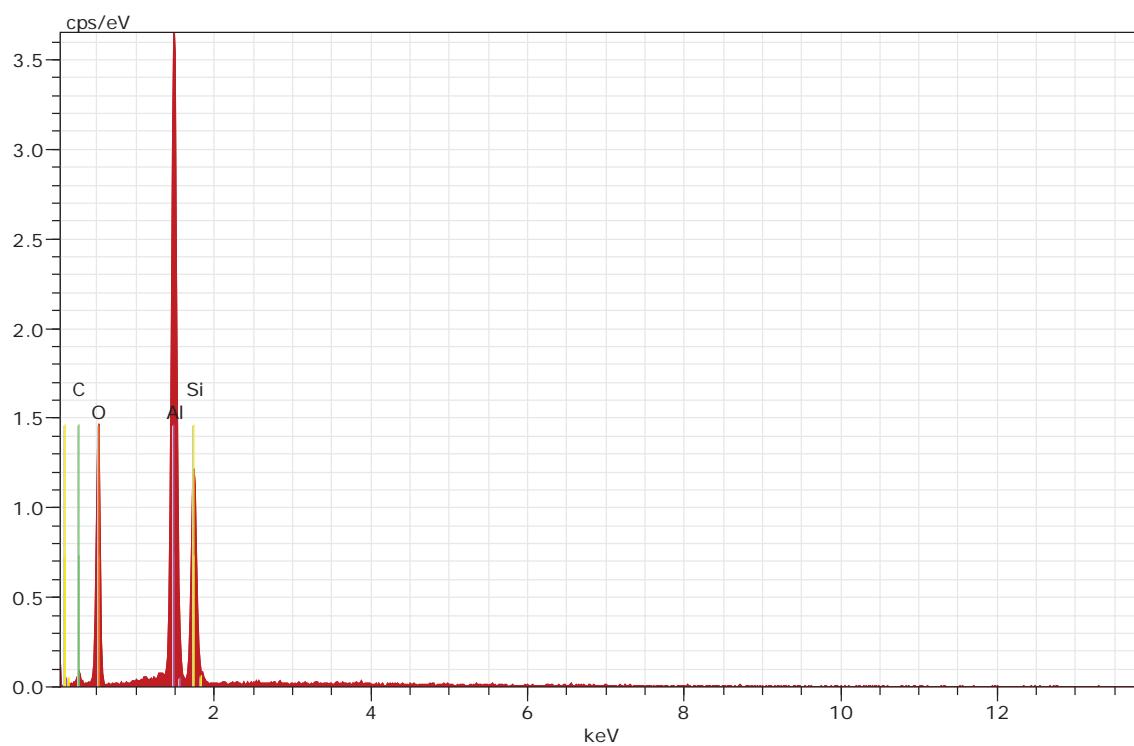
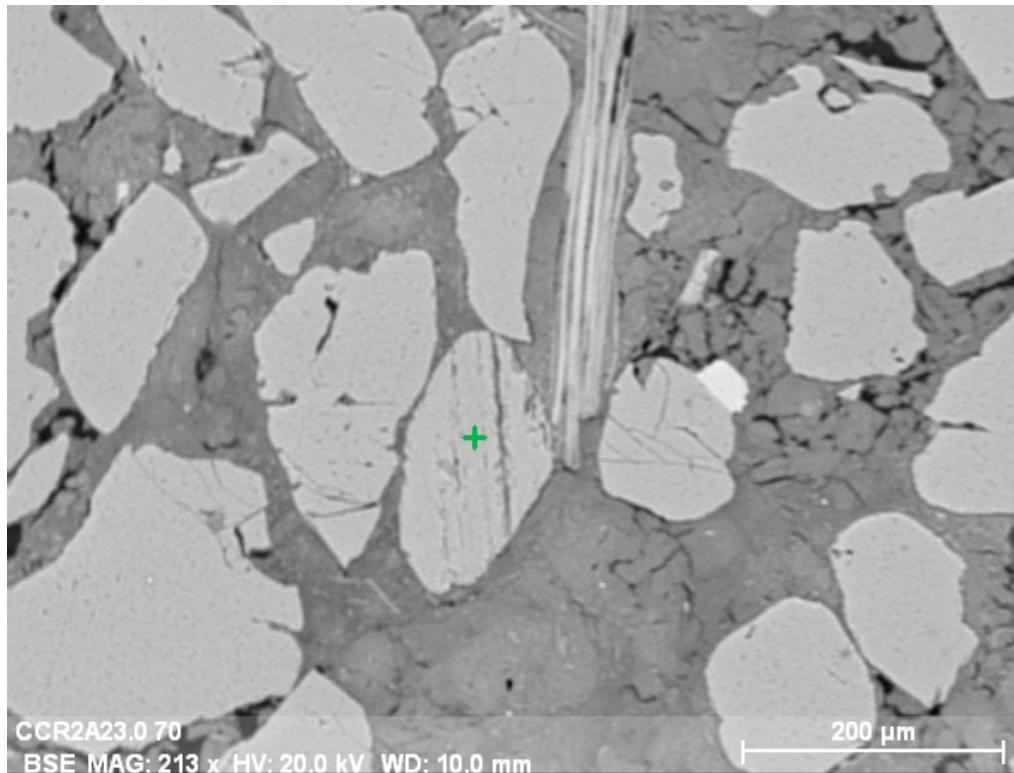
**CCR2A 23.0-23.5:** BSE image (top) and EDS spectrum (bottom) for muscovite; green crosshair on BSE image marks analysis location.



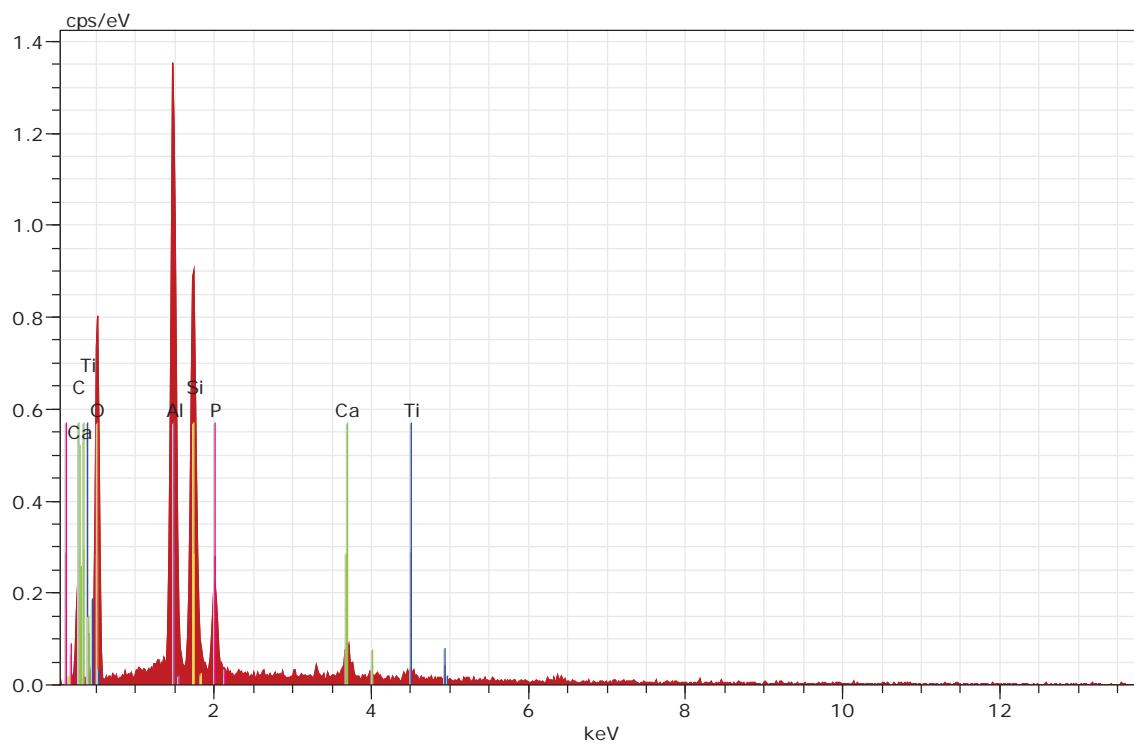
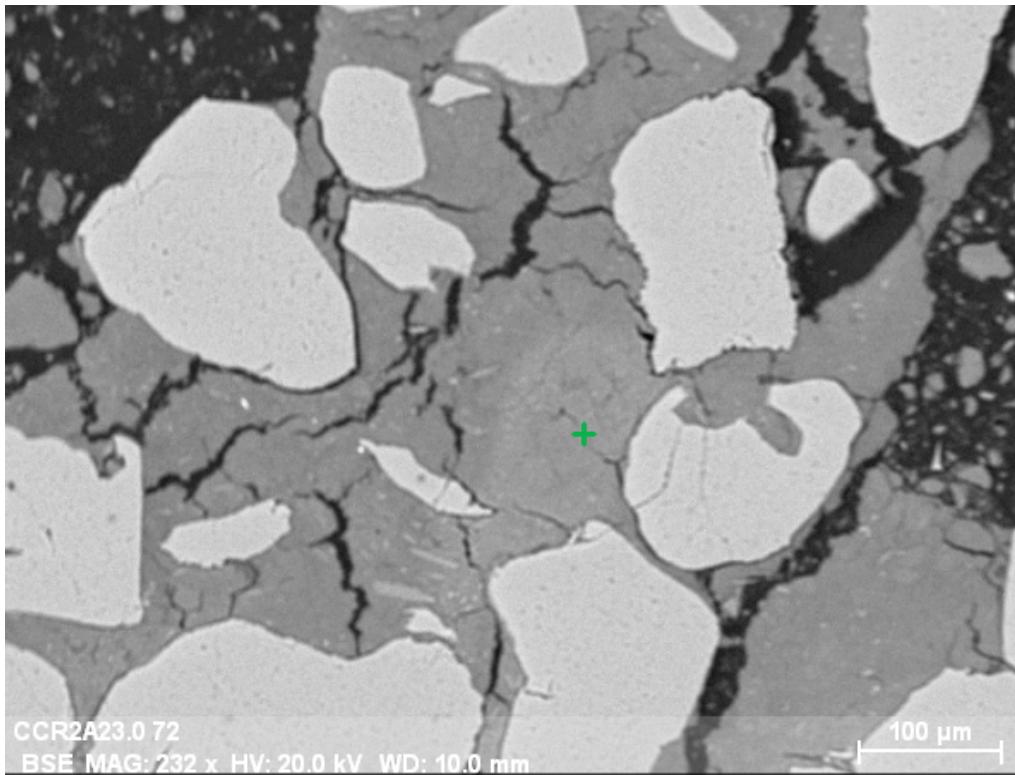
*CCR2A 23.0-23.5:* BSE image (top) and EDS spectrum (bottom) for zircon; green crosshair on BSE image marks analysis location.



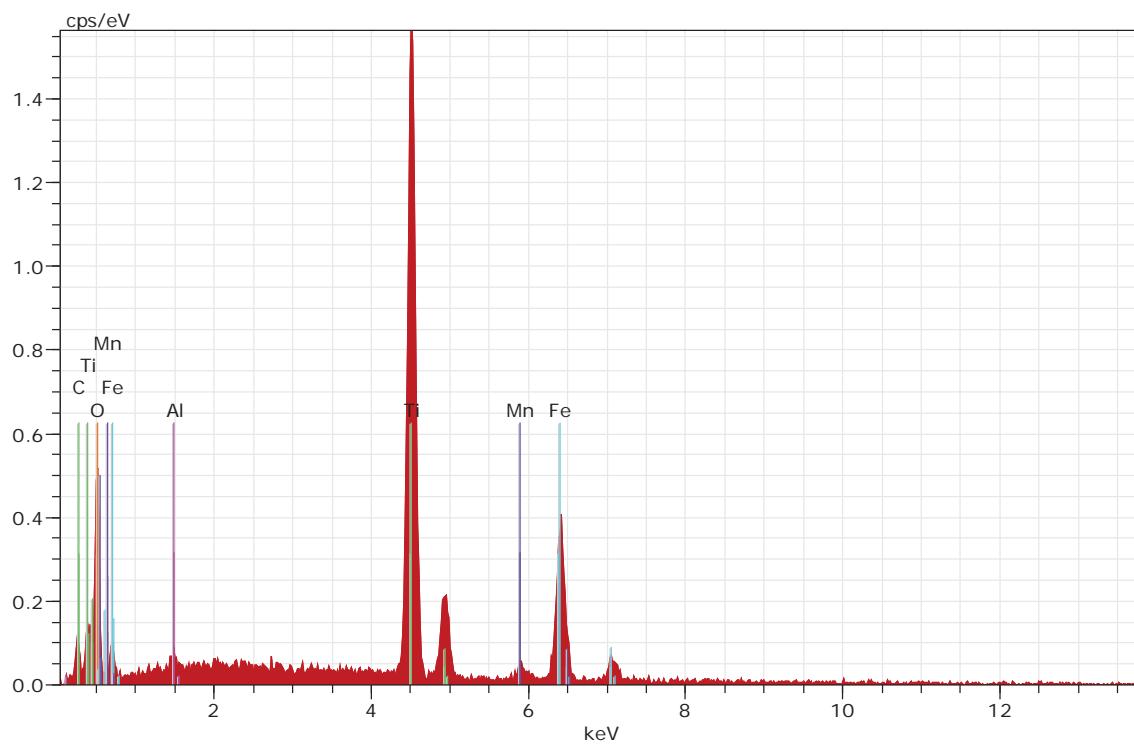
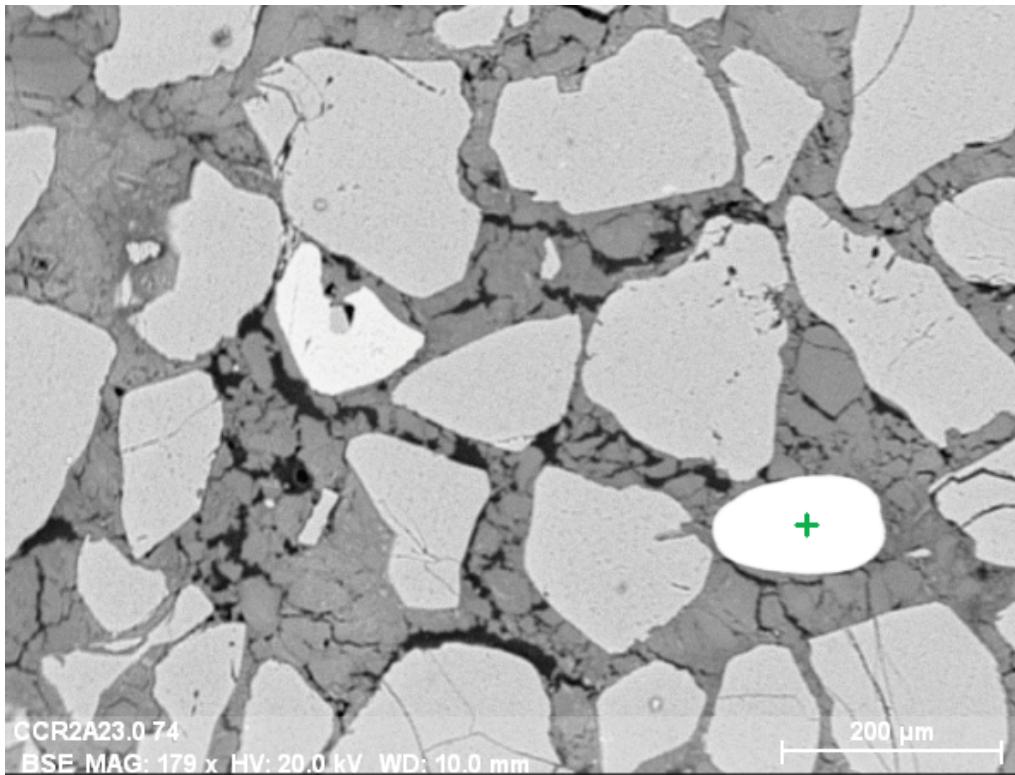
*CCR2A 23.0-23.5:* BSE image (top) and EDS spectrum (bottom) for rutile; green crosshair on BSE image marks analysis location.



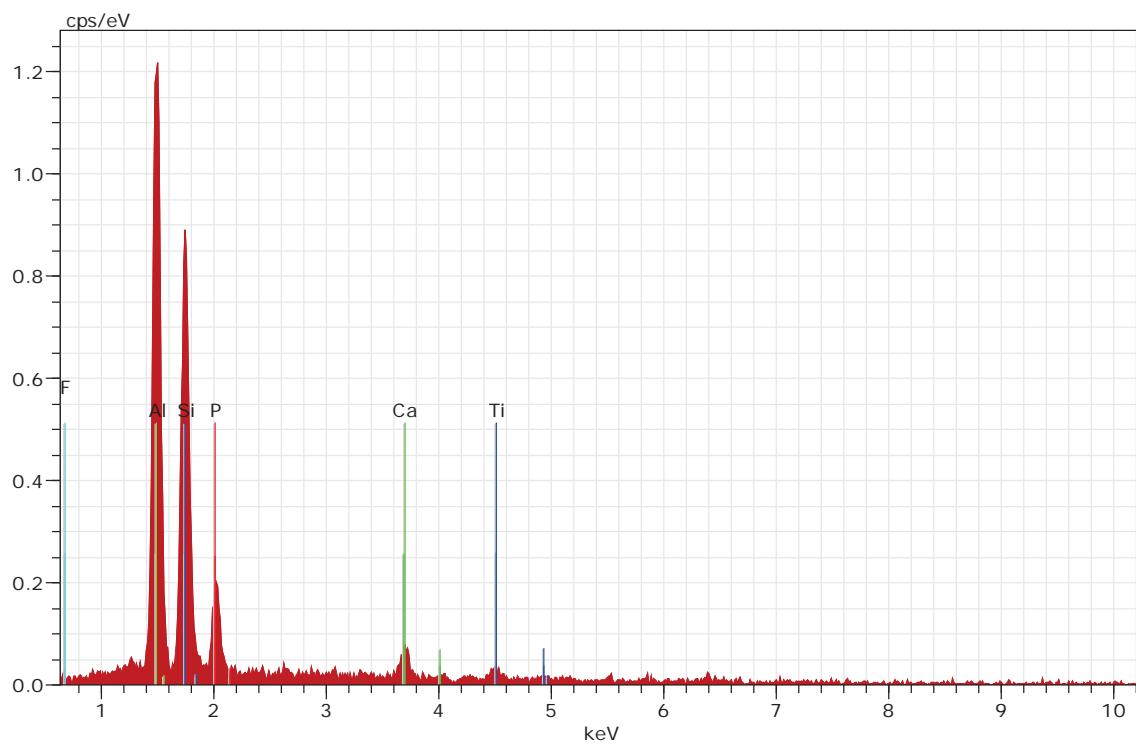
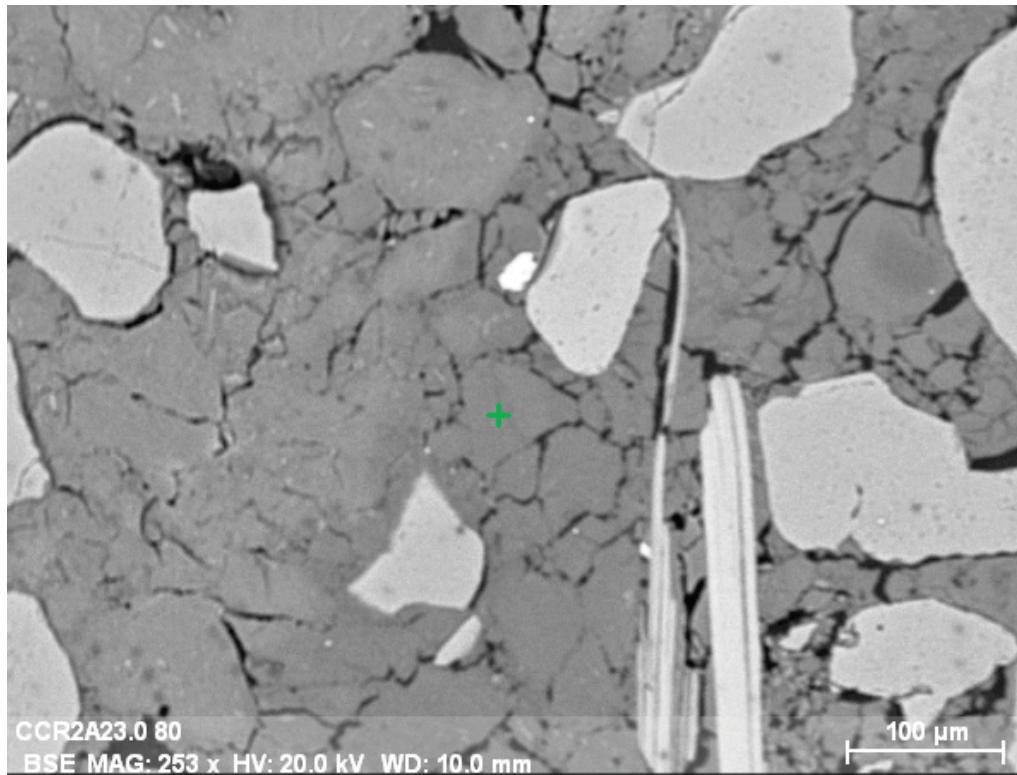
**CCR2A 23.0-23.5:** BSE image (top) and EDS spectrum (bottom) for kyanite; green crosshair on BSE image marks analysis location.



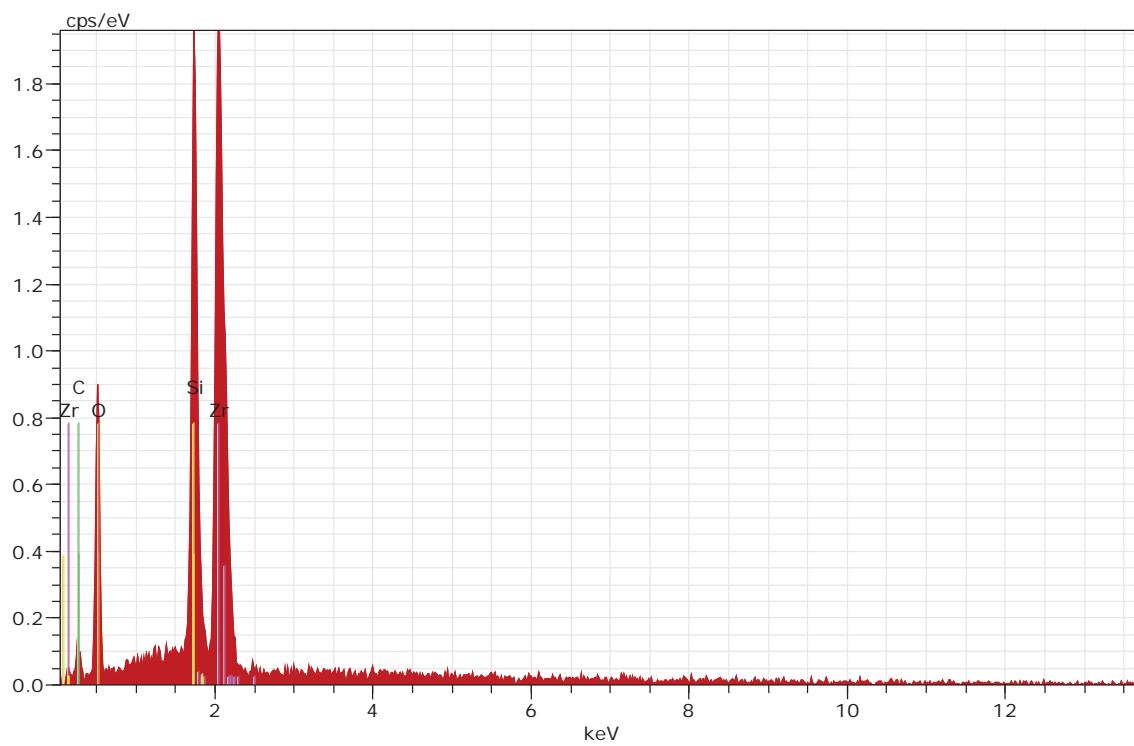
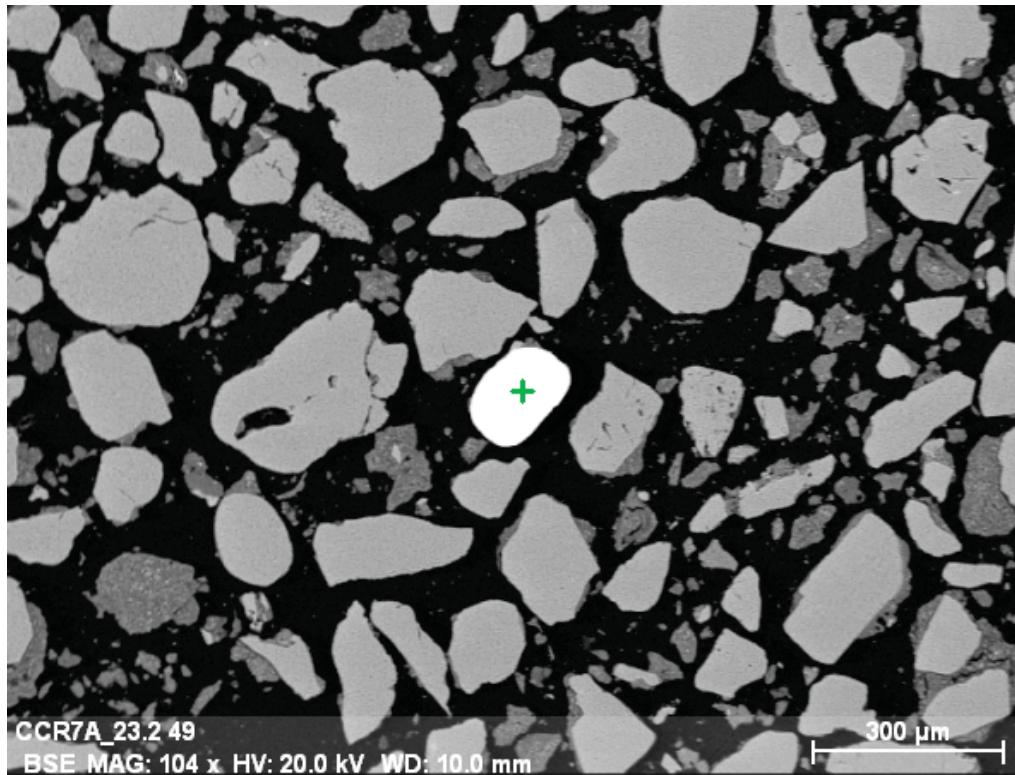
**CCR2A 23.0-23.5:** BSE image (top) and EDS spectrum (bottom) for wavellite and clay matrix; green crosshair on BSE image marks analysis location.



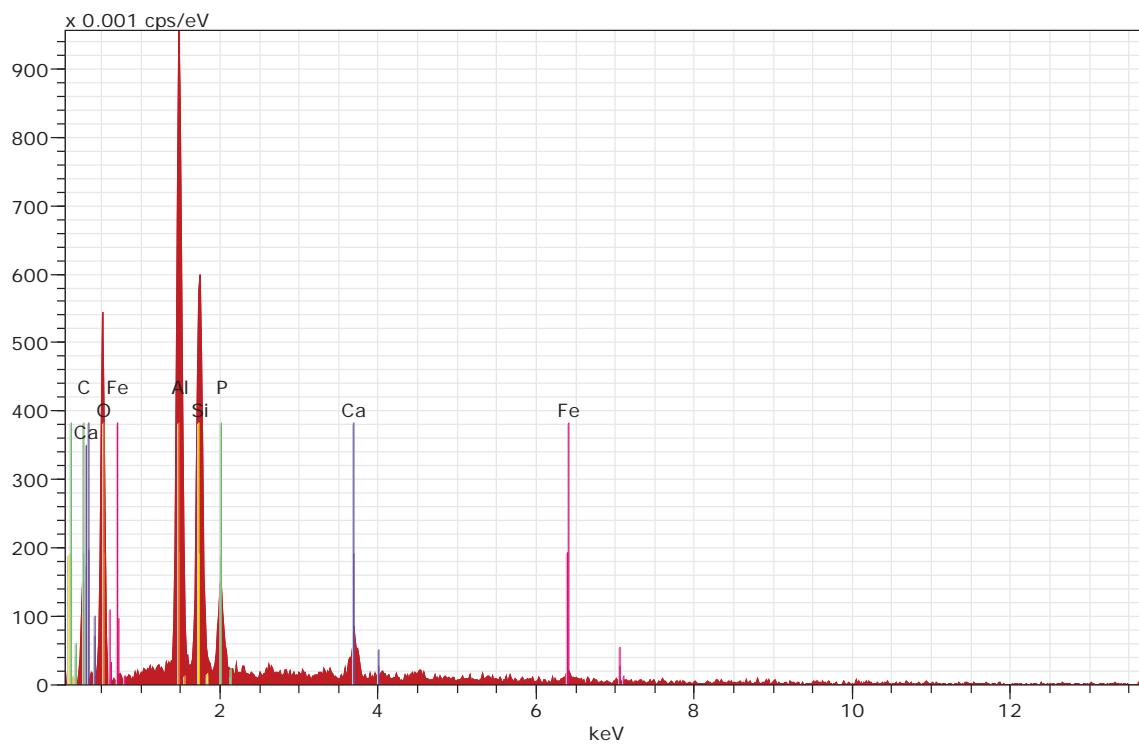
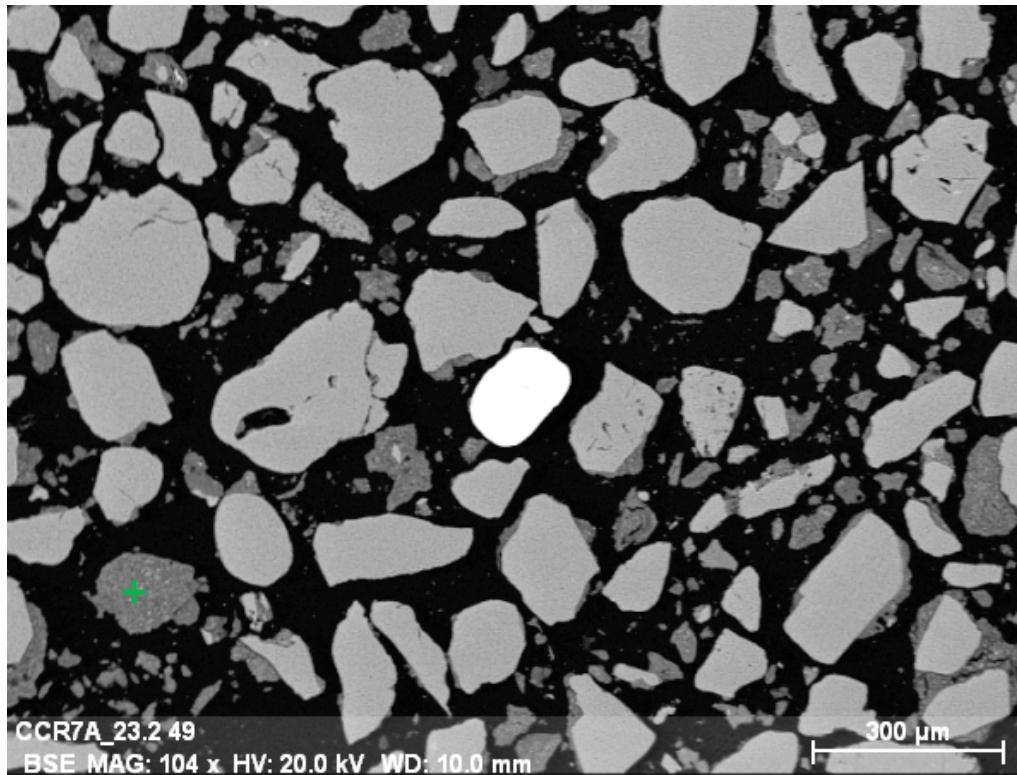
**CCR2A 23.0-23.5:** BSE image (top) and EDS spectrum (bottom) for ilmenite; green crosshair on BSE image marks analysis location.



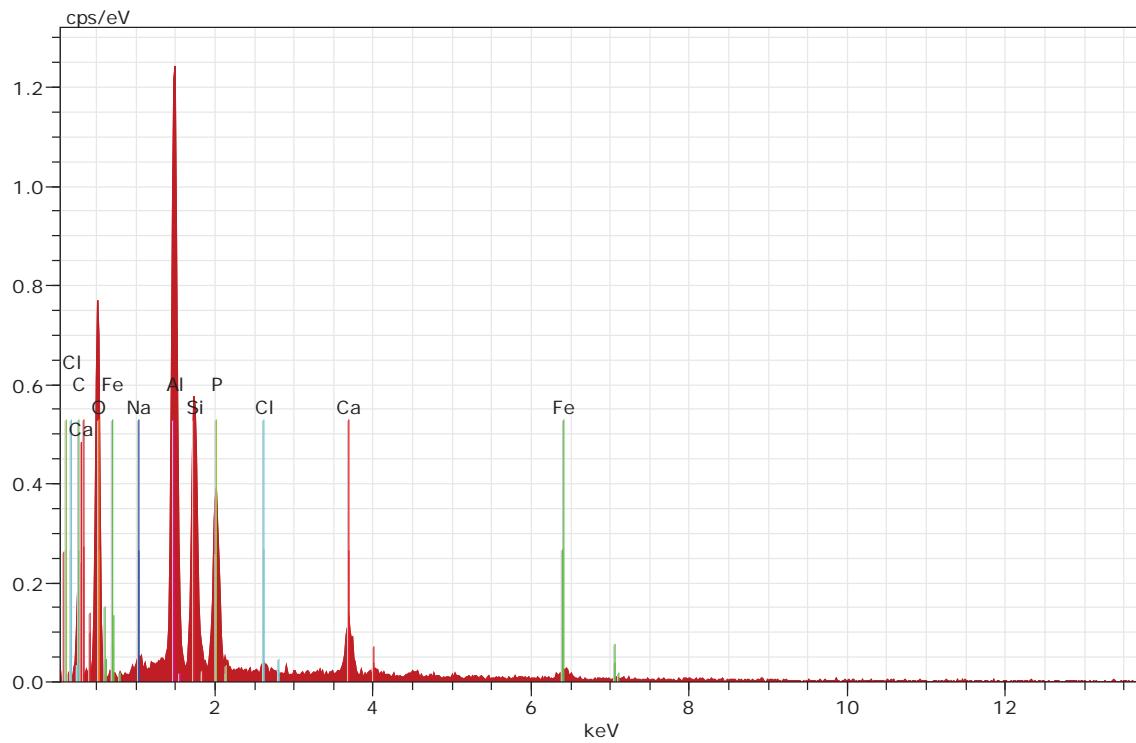
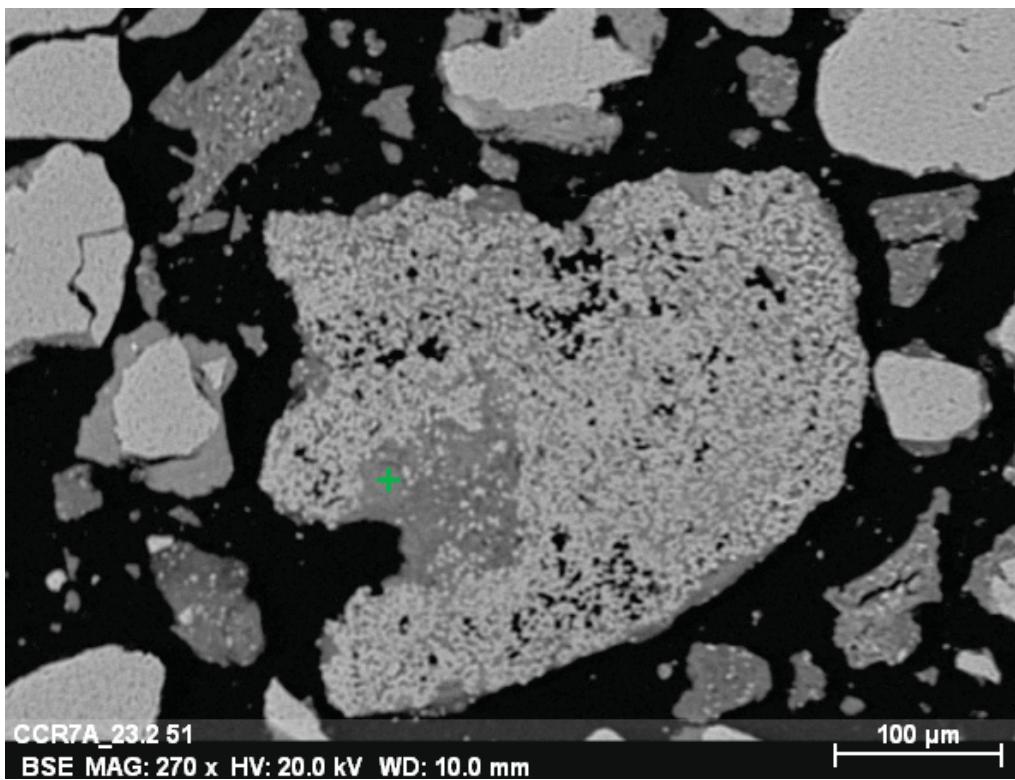
**CCR2A 23.0-23.5:** BSE image (top) and EDS spectrum (bottom) for wavellite and clay matrix; green crosshair on BSE image marks analysis location.



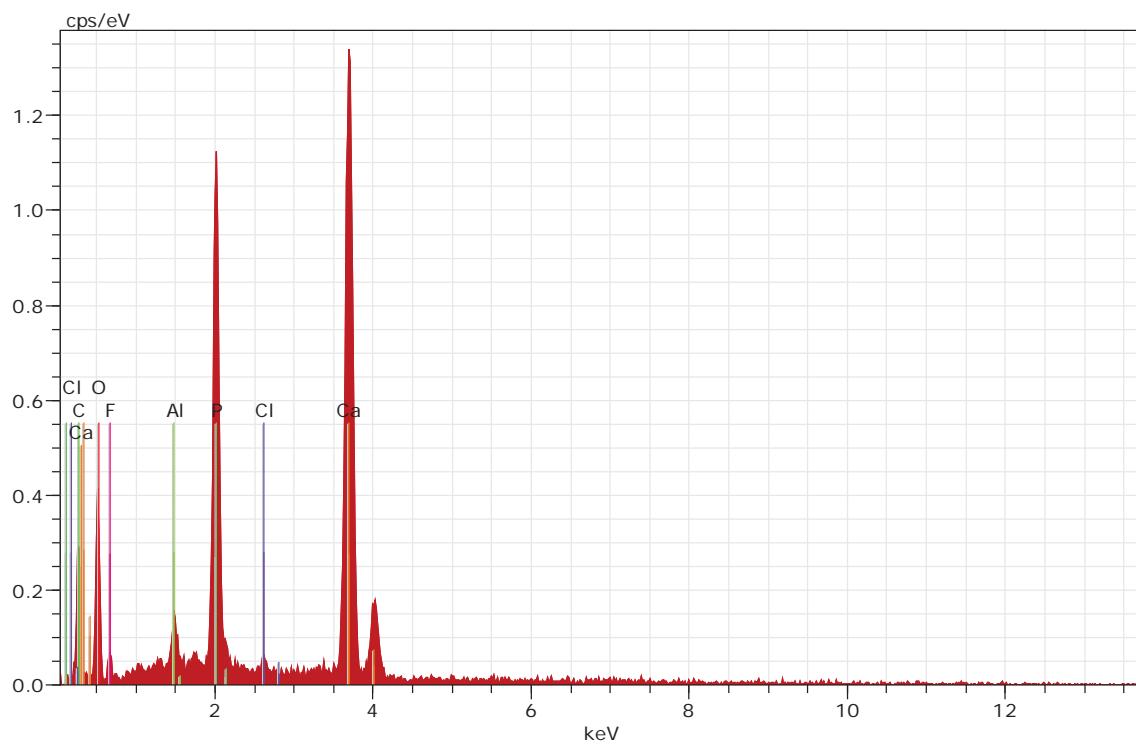
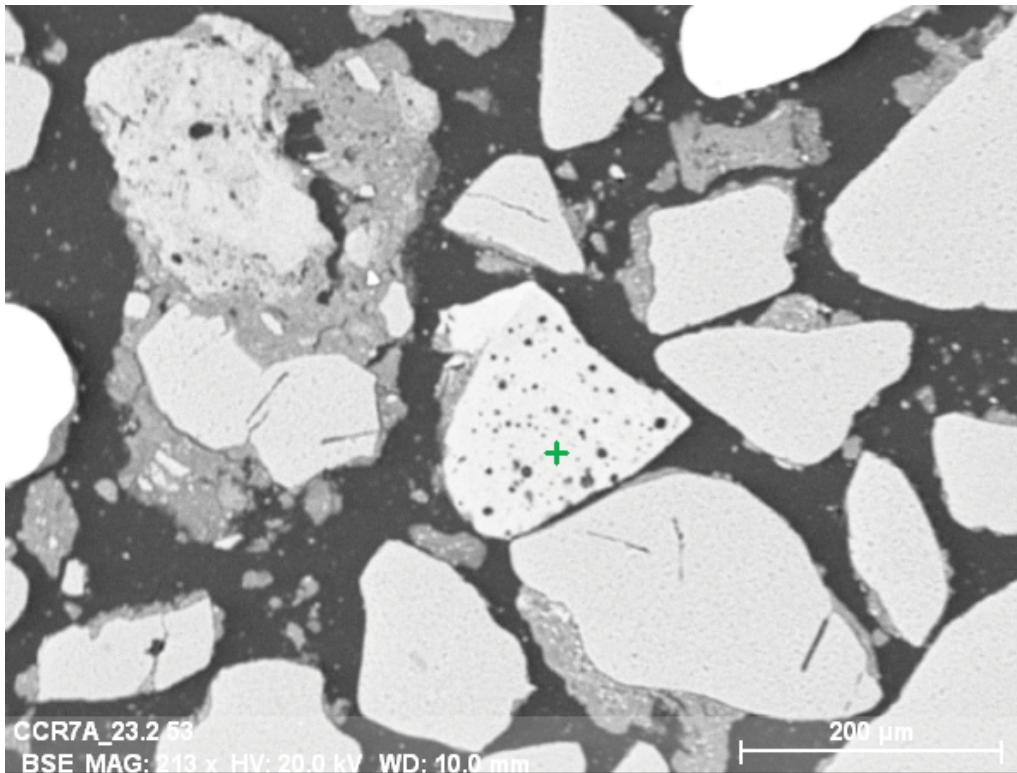
**CCR7A 23.2-23.5:** BSE image (top) and EDS spectrum (bottom) for zircon; green crosshair on BSE image marks analysis location.



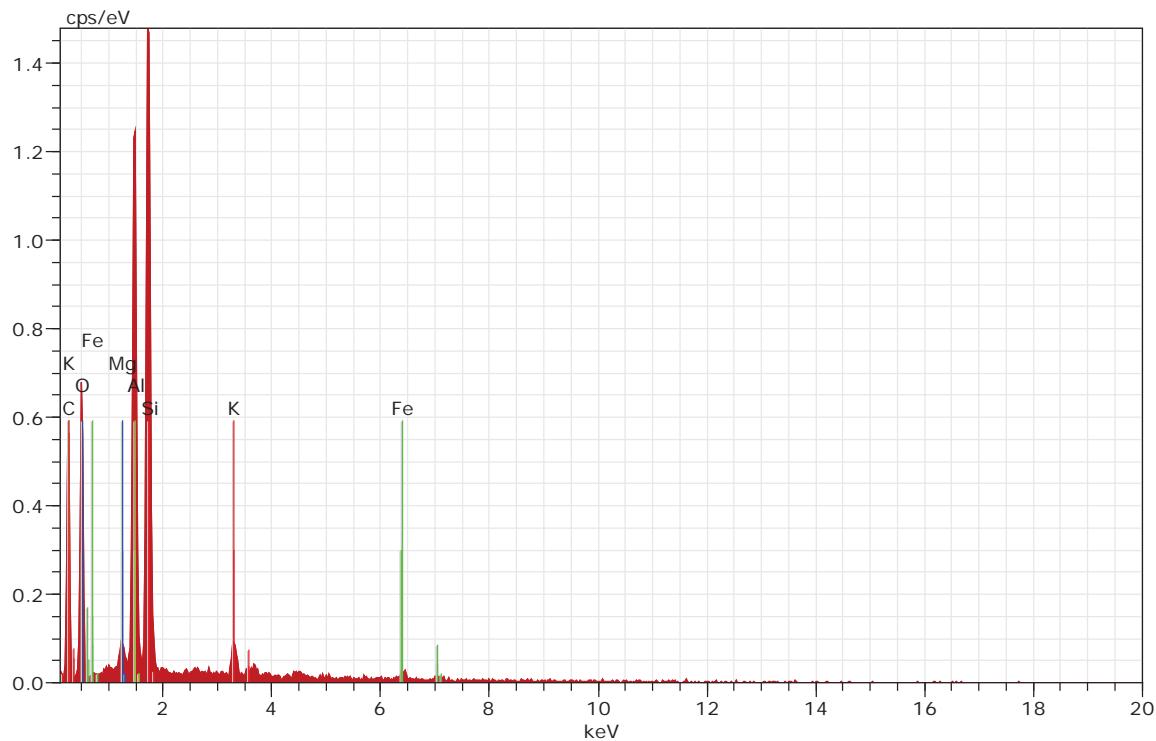
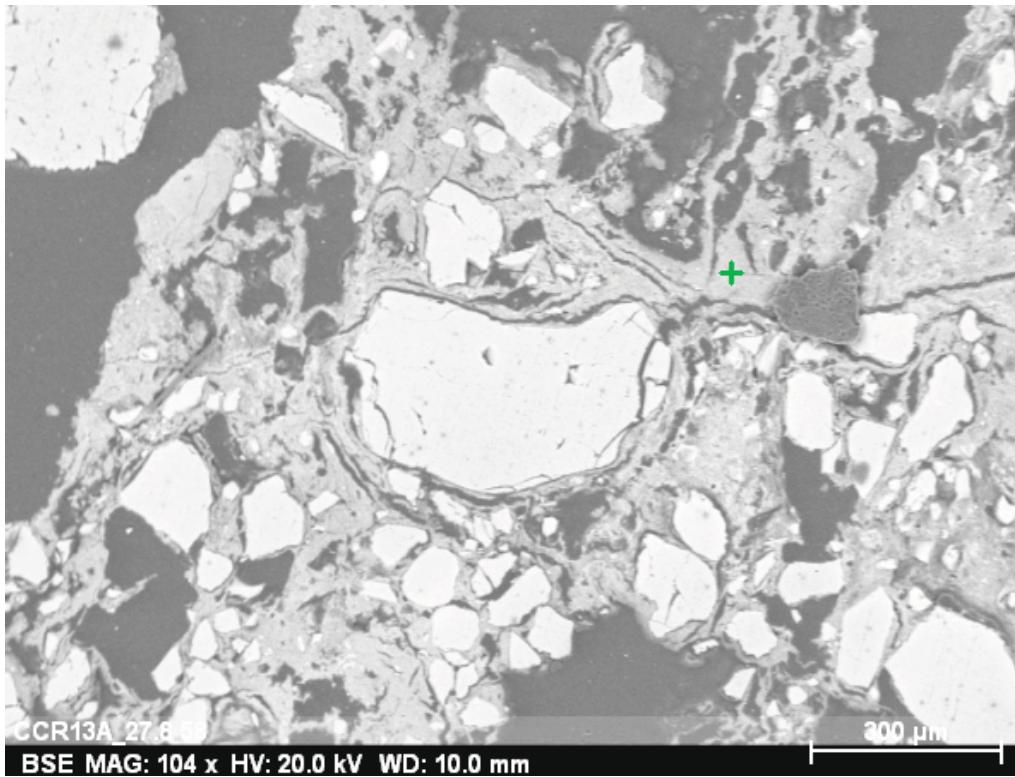
**CCR7A 23.2-23.5:** BSE image (top) and EDS spectrum (bottom) for Ca- and Al-phosphate matrix; green crosshair on BSE image marks analysis location.



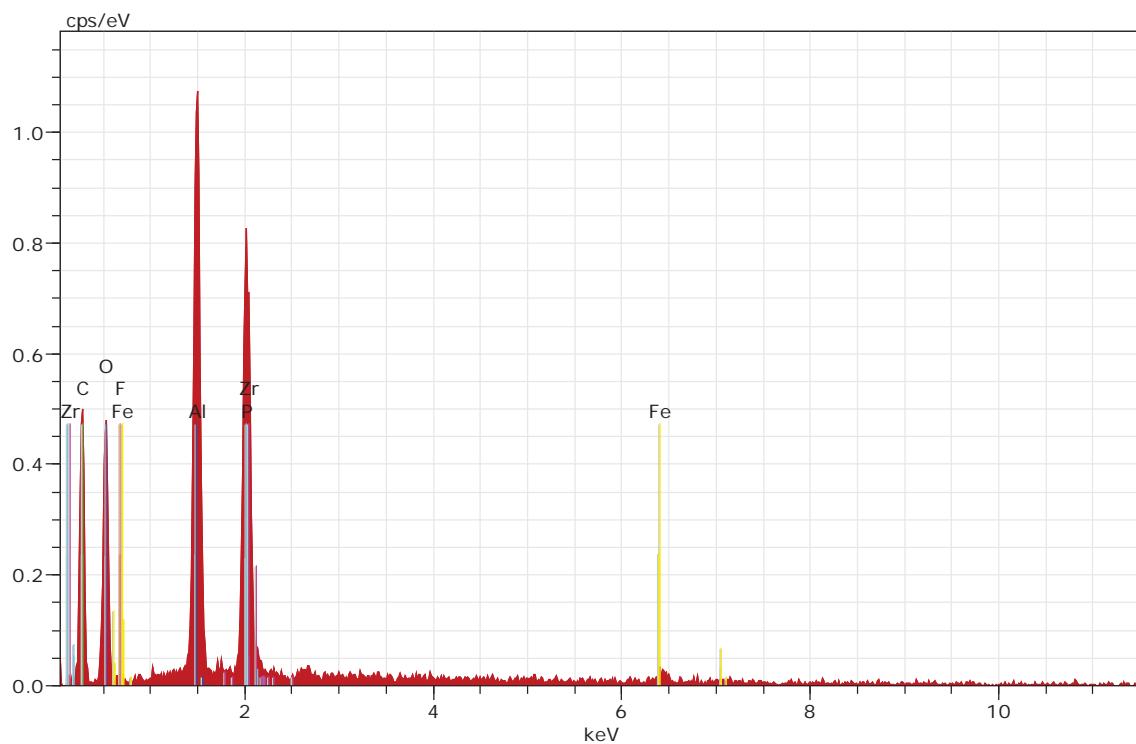
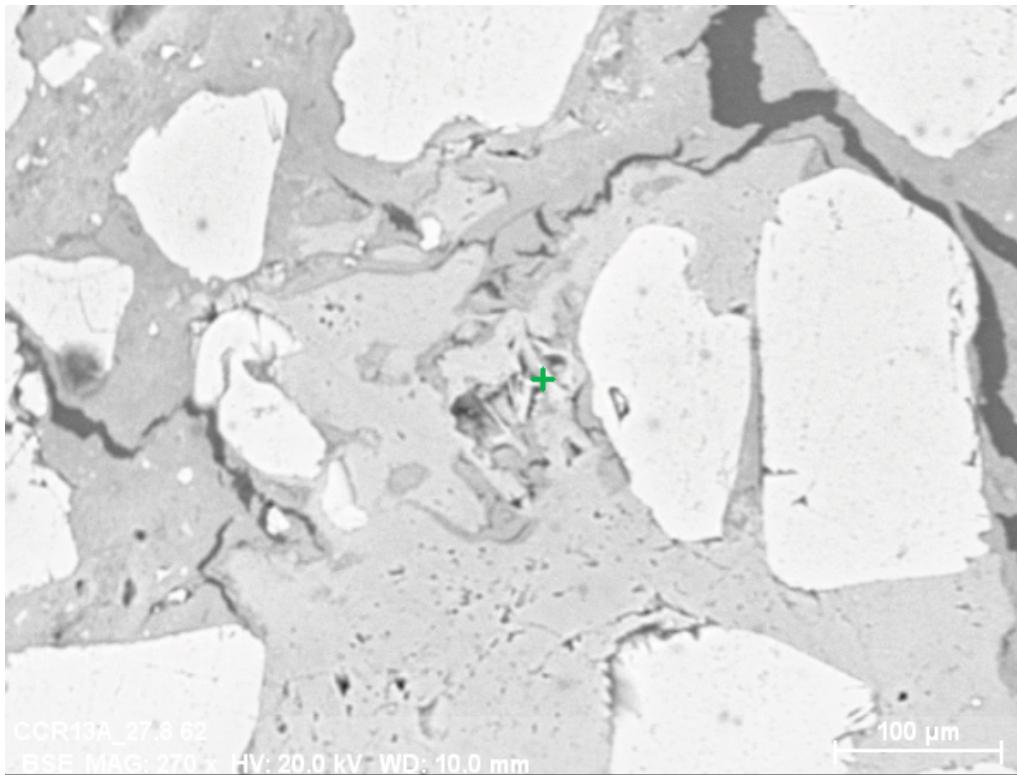
**CCR7A 23.2-23.5:** BSE image (top) and EDS spectrum (bottom) for wavellite and apatite matrix; green crosshair on BSE image marks analysis location.



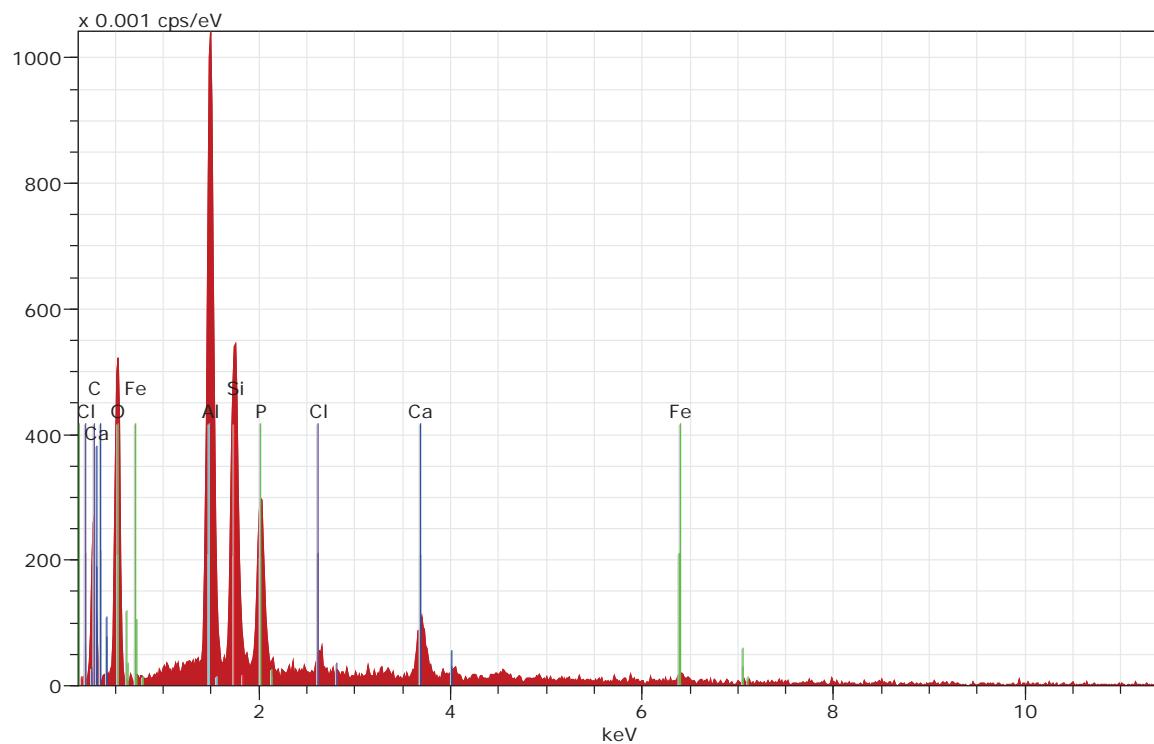
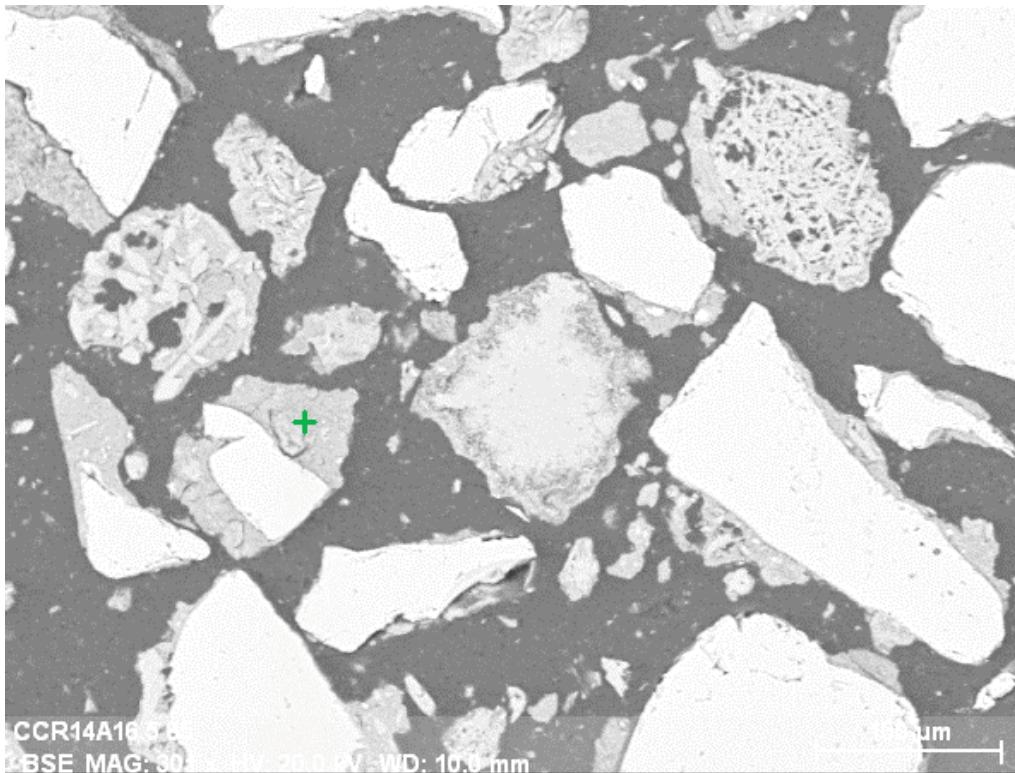
CCR7A 23.2-23.5: BSE image (top) and EDS spectrum (bottom) for apatite matrix; green crosshair on BSE image marks analysis location.



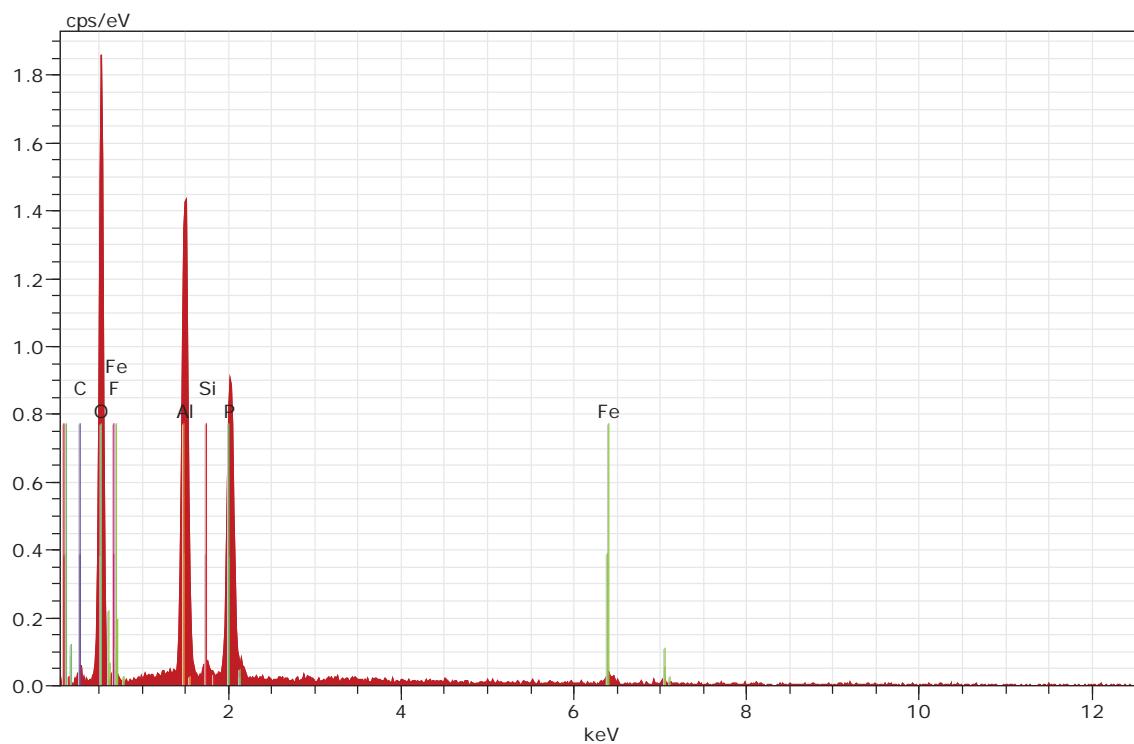
**CCR13A 27.8-28.2:** BSE image (top) and EDS spectrum (bottom) for kaolinite and muscovite matrix; green crosshair on BSE image marks analysis location.



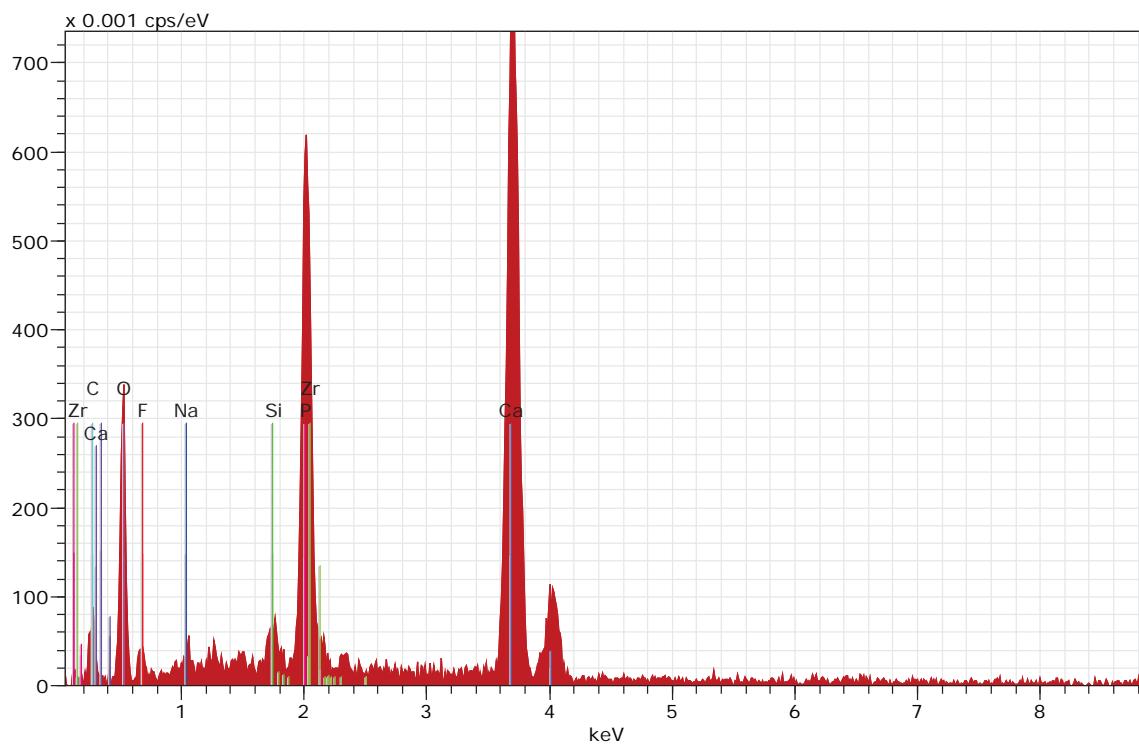
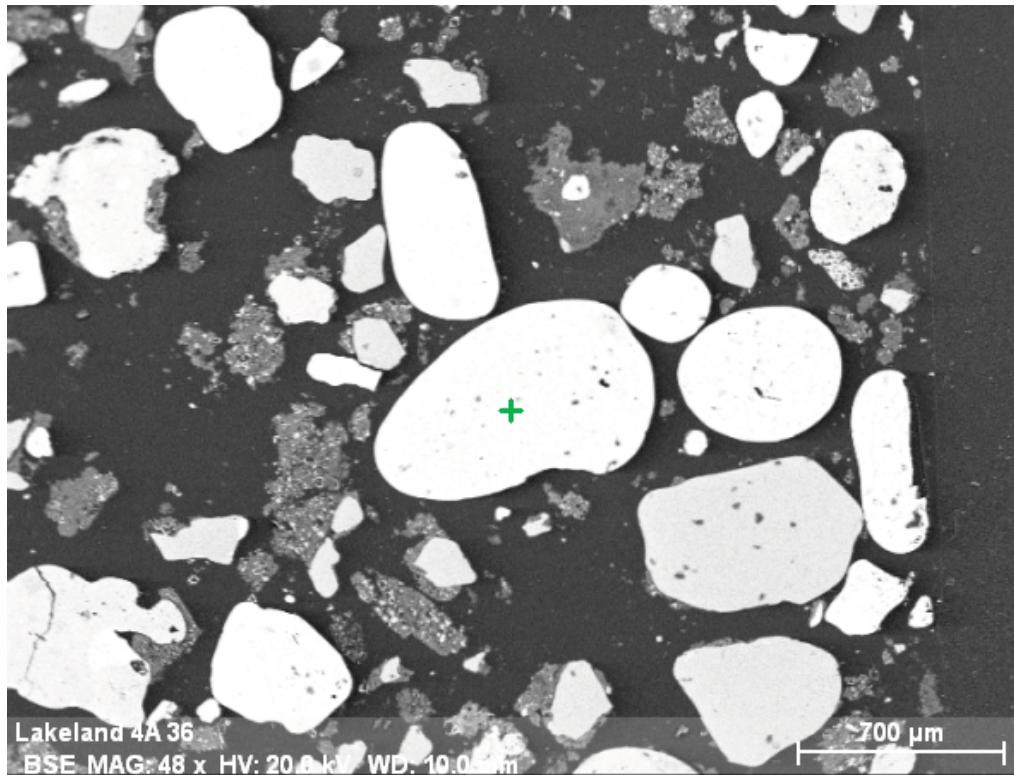
**CCR13A 27.8-28.2:** BSE image (top) and EDS spectrum (bottom) for wavellite; green crosshair on BSE image marks analysis location.



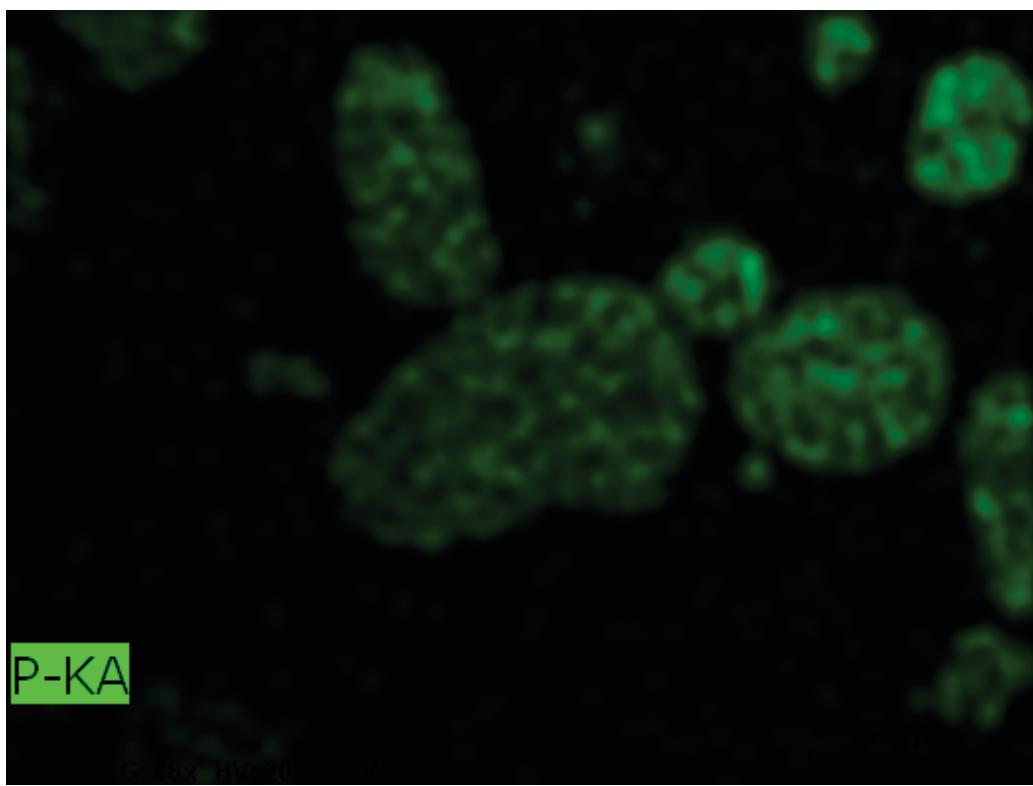
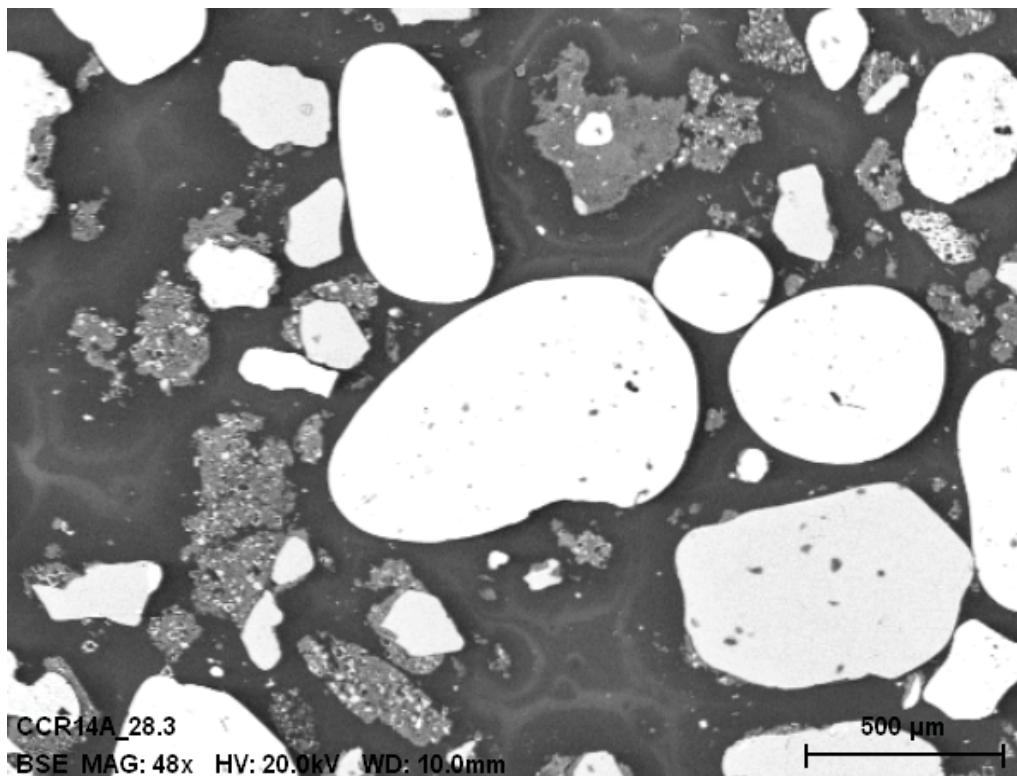
**CCR14A 16.5-18.0:** BSE image (top) and EDS spectrum (bottom) for apatite and wavellite matrix; green crosshair on BSE image marks analysis location.



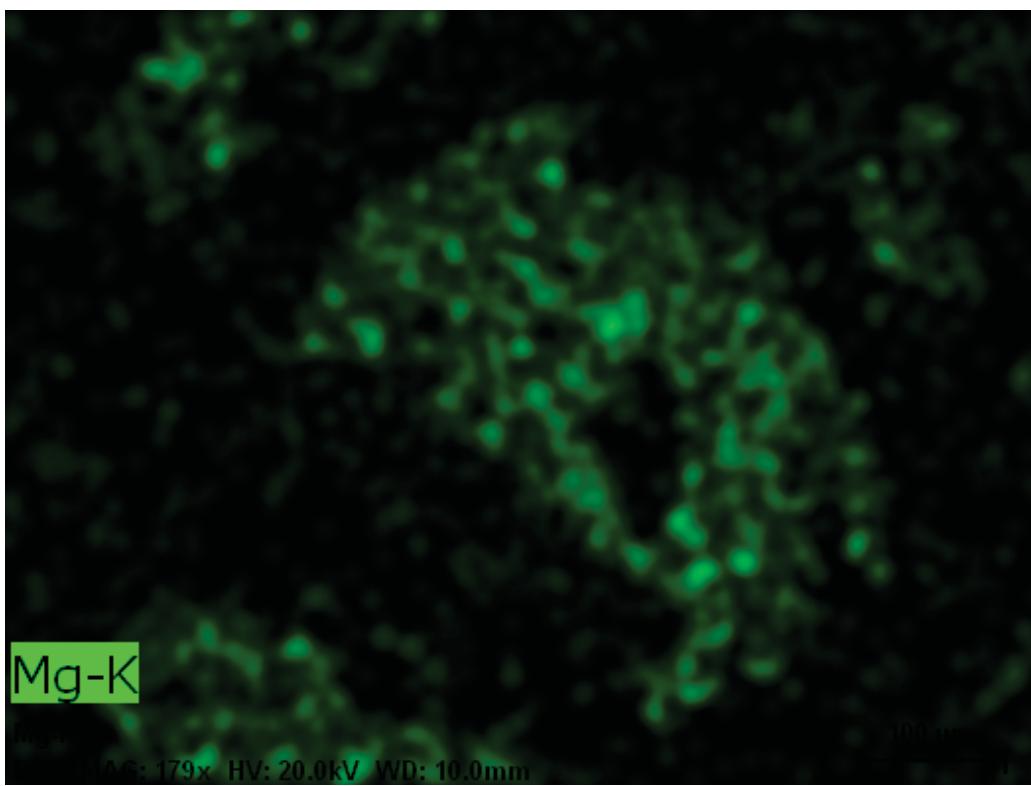
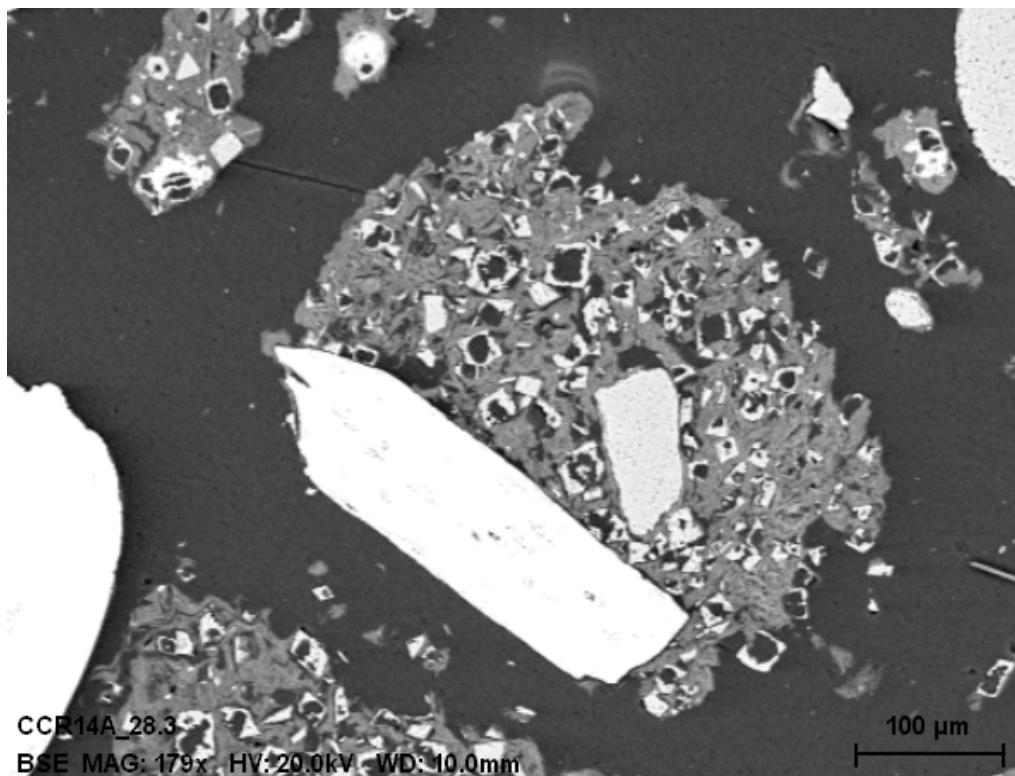
**CCR14A 16.5-18.0:** BSE image (top) and EDS spectrum (bottom) for wavellite; green crosshair on BSE image marks analysis location.



**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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## **APPENDIX B**

# Laboratory Analytical Results

3030 E Lake Parker Dr  
Lakeland, FL 33805

CCR SAMPLING

Month / Year: January 2019  
LAB ANALYSIS REPORT

SampleName	Sample ID	Date/Time Sampled	Date/Time Analyzed	Method	Analyte	Result	Error	Units	Qualifiers	Detection Limit	Reporting Limit	Analyst
CCR-01	9010402-01	1/8/2019 11:13	1/14/2019 12:37	EPA 200.7	Arsenic	0.00586		mg/L	U	0.00586	0.0100	PES
CCR-01	9010402-01	1/8/2019 11:13	1/14/2019 12:37	EPA 200.7	Barium	0.0356		mg/L		0.00200	0.00500	PES
CCR-01	9010402-01	1/8/2019 11:13	1/14/2019 12:37	EPA 200.7	Boron	0.0415		mg/L		0.00300	0.00500	PES
CCR-01	9010402-01	1/8/2019 11:13	1/30/2019 16:02	epa 200.7	Calcium	39.4		mg/L		2.10	5.00	PES
CCR-01	9010402-01	1/8/2019 11:13	1/10/2019 20:02	EPA 300.0	Chloride	2.97		mg/L		0.0380	0.100	CF
CCR-01	9010402-01	1/8/2019 11:13	1/8/2019 11:13-		Color	Clear		[blank]				AB
CCR-01	9010402-01	1/8/2019 11:13	1/8/2019 11:13	EPA 360.2	Dissolved Oxygen	0.58		mg/L		0.10	0.20	AB
CCR-01	9010402-01	1/8/2019 11:13	1/12/2019 11:30	SM18 4500-F C	Fluoride	0.0614		mg/L	I	0.0500	0.200	PES
CCR-01	9010402-01	1/8/2019 11:13	2/5/2019 0:00	EPA 200.7	Lithium	18		ug/L	U	18	100	SGS
CCR-01	9010402-01	1/8/2019 11:13	1/14/2019 12:37	EPA 200.7	Molybdenum	0.00500		mg/L	IV	0.00200	0.0250	PES
CCR-01	9010402-01	1/8/2019 11:13	1/8/2019 11:13	EPA 150.1	pH	5.21		SU		0.05	0.05	AB
CCR-01	9010402-01	1/8/2019 11:13	1/21/2019 9:51	EPA 903.1	Radium 226	4.8	+ 0.4	pCi/L		0.2	---	FRS
CCR-01	9010402-01	1/8/2019 11:13	1/21/2019 9:24	Ra-05	Radium 228	2.0	+ 0.6	pCi/L		0.7	---	FRS
CCR-01	9010402-01	1/8/2019 11:13	1/14/2019 12:37	EPA 200.7	Selenium	0.00558		mg/L	U	0.00558	0.0100	PES
CCR-01	9010402-01	1/8/2019 11:13	1/8/2019 11:13-		Sheen	No Sheen		N/A				AB
CCR-01	9010402-01	1/8/2019 11:13	1/9/2019 15:15	EPA 160.1	Solids, Total Dissolved (TDS)	176		mg/L		10.0	20.0	AB
CCR-01	9010402-01	1/8/2019 11:13	1/8/2019 11:13	EPA 120.1	Specific Conductance	237		uS/cm		1	5	AB
CCR-01	9010402-01	1/8/2019 11:13	1/10/2019 20:02	EPA 300.0	SULFATE as SO4	88.1		mg/L		0.0250	0.100	CF
CCR-01	9010402-01	1/8/2019 11:13	1/8/2019 11:13	EPA 170.1	Temperature	26.4		°C		0.1	0.1	AB
CCR-01	9010402-01	1/8/2019 11:13	1/8/2019 11:13	EPA 180.1	Turbidity	2.50		NTU		0.1	0.5	AB
CCR-01	9010402-01	1/8/2019 11:13	1/8/2019 11:13	DEP-SOP	Water Level	132.70		FT		0.01	---	AB
CCR-02	9010402-02	1/8/2019 12:20	1/14/2019 12:39	EPA 200.7	Arsenic	0.00586		mg/L	U	0.00586	0.0100	PES
CCR-02	9010402-02	1/8/2019 12:20	1/14/2019 12:39	EPA 200.7	Barium	0.0529		mg/L		0.00200	0.00500	PES
CCR-02	9010402-02	1/8/2019 12:20	1/14/2019 12:39	EPA 200.7	Boron	0.0532		mg/L		0.00300	0.00500	PES
CCR-02	9010402-02	1/8/2019 12:20	1/30/2019 16:04	epa 200.7	Calcium	85.4		mg/L		2.10	5.00	PES
CCR-02	9010402-02	1/8/2019 12:20	1/10/2019 15:43	EPA 300.0	Chloride	17.6		mg/L		0.0760	0.200	CF
CCR-02	9010402-02	1/8/2019 12:20	1/8/2019 12:20-		Color	Clear	[blank]					AB
CCR-02	9010402-02	1/8/2019 12:20	1/8/2019 12:20	EPA 360.2	Dissolved Oxygen	2.36		mg/L		0.10	0.20	AB
CCR-02	9010402-02	1/8/2019 12:20	1/12/2019 11:30	SM18 4500-F C	Fluoride	0.144		mg/L	I	0.0500	0.200	PES
CCR-02	9010402-02	1/8/2019 12:20	1/22/2019 0:00	EPA 200.7	Lithium	9.1		ug/L	U	9.1	50	SGS
CCR-02	9010402-02	1/8/2019 12:20	1/14/2019 12:39	EPA 200.7	Molybdenum	0.005		mg/L	IV	0.00200	0.0250	PES
CCR-02	9010402-02	1/8/2019 12:20	1/8/2019 12:20	EPA 150.1	pH	4.84		SU		0.05	0.05	AB
CCR-02	9010402-02	1/8/2019 12:20	1/21/2019 9:51	EPA 903.1	Radium 226	1.7	+ 0.2	pCi/L		0.1	---	FRS
CCR-02	9010402-02	1/8/2019 12:20	1/21/2019 9:24	Ra-05	Radium 228	1.1	+ 0.5	pCi/L		0.7	---	FRS
CCR-02	9010402-02	1/8/2019 12:20	1/14/2019 12:39	EPA 200.7	Selenium	0.00558		mg/L	U	0.00558	0.0100	PES
CCR-02	9010402-02	1/8/2019 12:20	1/8/2019 12:20-		Sheen	No Sheen	N/A					AB
CCR-02	9010402-02	1/8/2019 12:20	1/9/2019 15:17	EPA 160.1	Solids, Total Dissolved (TDS)	404		mg/L		10.0	20.0	AB
CCR-02	9010402-02	1/8/2019 12:20	1/8/2019 12:20	EPA 120.1	Specific Conductance	513		uS/cm		1	5	AB
CCR-02	9010402-02	1/8/2019 12:20	1/10/2019 15:43	EPA 300.0	SULFATE as SO4	219		mg/L	J-8	0.0500	0.200	CF
CCR-02	9010402-02	1/8/2019 12:20	1/8/2019 12:20	EPA 170.1	Temperature	27.1		°C		0.1	0.1	AB
CCR-02	9010402-02	1/8/2019 12:20	1/8/2019 12:20	EPA 180.1	Turbidity	3.90		NTU		0.1	0.5	AB
CCR-02	9010402-02	1/8/2019 12:20	1/8/2019 12:20	DEP-SOP	Water Level	131.72		FT		0.01	---	AB
CCR-03	9010402-03	1/8/2019 13:15	1/14/2019 12:41	EPA 200.7	Arsenic	0.0101		mg/L		0.00586	0.0100	PES
CCR-03	9010402-03	1/8/2019 13:15	1/14/2019 12:41	EPA 200.7	Barium	0.0374		mg/L		0.00200	0.00500	PES
CCR-03	9010402-03	1/8/2019 13:15	1/14/2019 12:41	EPA 200.7	Boron	1.24		mg/L		0.00300	0.00500	PES
CCR-03	9010402-03	1/8/2019 13:15	1/30/2019 16:06	epa 200.7	Calcium	462		mg/L		2.10	5.00	PES
CCR-03	9010402-03	1/8/2019 13:15	1/10/2019 16:35	EPA 300.0	Chloride	48.4		mg/L		0.0380	0.100	CF
CCR-03	9010402-03	1/8/2019 13:15	1/8/2019 13:15-		Color	Clear	[blank]					AB
CCR-03	9010402-03	1/8/2019 13:15	1/8/2019 13:15	EPA 360.2	Dissolved Oxygen	0.22		mg/L		0.10	0.20	AB
CCR-03	9010402-03	1/8/2019 13:15	1/12/2019 11:30	SM18 4500-F C	Fluoride	0.183		mg/L	I	0.0500	0.200	PES
CCR-03	9010402-03	1/8/2019 13:15	1/22/2019 0:00	EPA 200.7	Lithium	9.1		ug/L	U	9.1	50	SGS
CCR-03	9010402-03	1/8/2019 13:15	1/14/2019 12:41	EPA 200.7	Molybdenum	0.002		mg/L	U	0.00200	0.0250	PES
CCR-03	9010402-03	1/8/2019 13:15	1/8/2019 13:15	EPA 150.1	pH	5.56		SU		0.05	0.05	AB
CCR-03	9010402-03	1/8/2019 13:15	1/21/2019 10:53	EPA 903.1	Radium 226	3.9	+ 0.3	pCi/L		0.2	---	FRS
CCR-03	9010402-03	1/8/2019 13:15	1/21/2019 9:24	Ra-05	Radium 228	0.7	+ 0.4	pCi/L	U	0.7	---	FRS
CCR-03	9010402-03	1/8/2019 13:15	1/14/2019 12:41	EPA 200.7	Selenium	0.0192		mg/L	V	0.00558	0.0100	PES
CCR-03	9010402-03	1/8/2019 13:15	1/8/2019 13:15-		Sheen	No Sheen	N/A					AB
CCR-03	9010402-03	1/8/2019 13:15	1/9/2019 15:19	EPA 160.1	Solids, Total Dissolved (TDS)	1680		mg/L	J-7	10.0	20.0	AB
CCR-03	9010402-03	1/8/2019 13:15	1/8/2019 13:15	EPA 120.1	Specific Conductance	2150		uS/cm		1	5	AB
CCR-03	9010402-03	1/8/2019 13:15	1/10/2019 16:09	EPA 300.0	SULFATE as SO4	1130		mg/L	J-7	0.500	2.00	CF
CCR-03	9010402-03	1/8/2019 13:15	1/8/2019 13:15	EPA 170.1	Temperature	26.3		°C		0.1	0.1	AB
CCR-03	9010402-03	1/8/2019 13:15	1/8/2019 13:15	EPA 180.1	Turbidity	1.73		NTU		0.1	0.5	AB
CCR-03	9010402-03	1/8/2019 13:15	1/8/2019 13:15	DEP-SOP	Water Level	132.13		FT		0.01	---	AB
CCR-04	9010402-04	1/8/2019 15:16	1/14/2019 12:44	EPA 200.7	Arsenic	0.00586		mg/L	U	0.00586	0.0100	PES
CCR-04	9010402-04	1/8/2019 15:16	1/14/2019 12:44	EPA 200.7	Barium	0.300		mg/L		0.00200	0.00500	PES
CCR-04	9010402-04	1/8/2019 15:16	1/14/2019 12:44	EPA 200.7	Boron	0.575		mg/L		0.00300	0.00500	PES
CCR-04	9010402-04	1/8/2019 15:16	1/30/2019 16:08	epa 200.7	Calcium	1160		mg/L		2.10	5.00	PES
CCR-04	9010402-04	1/8/2019 15:16	1/10/2019 17:01	EPA 300.0	Chloride	3490		mg/L	J-7	1.52	4.00	CF
CCR-04	9010402-04	1/8/2019 15:16	1/8/2019 15:16-		Color	Clear	[blank]					AB
CCR-04	9010402-04	1/8/2019 15:16	1/8/2019 15:16	EPA 360.2	Dissolved Oxygen	0.55		mg/L		0.10	0.20	AB
CCR-04	9010402-04	1/8/2019 15:16	1/12/2019 11:30	SM18 4500-F C	Fluoride	0.0500		mg/L	U	0.0500	0.200	PES
CCR-04	9010402-04	1/8/2019 15:16	1/22/2019 0:00	EPA 200.7	Lithium	9.1		ug/L	U	9.1	50	SGS
CCR-04	9010402-04	1/8/2019 15:16	1/14/2019 12:44	EPA 200.7	Molybdenum	0.002		mg/L	U	0.00200	0.0250	PES
CCR-04	9010402-04	1/8/2019 15:16	1/8/2019 15:16	EPA 150.1	pH	3.94		SU		0.05	0.05	AB
CCR-04	9010402-04	1/8/2019 15:16	1/21/2019 10:53	EPA 903.1	Radium 226	18.1	+ 0.7	pCi/L		0.2	---	FRS
CCR-04	9010402-04	1/8/2019 15:16	1/21/2019 9:24	Ra-05	Radium 228	20.1	+ 1.3	pCi/L		0.6	---	FRS
CCR-04	9010402-04	1/8/2019 15:16	1/14/2019 12:44	EPA 200.7	Selenium	0.00558		mg/L	U	0.00558	0.0100	PES
CCR-04	9010402-04	1/8/2019 15:16	1/8/2019 15:16-		Sheen	No Sheen	N/A					AB
CCR-04	9010402-04	1/8/2019 15:16	1/9/2019 15:21	EPA 160.1	Solids, Total Dissolved (TDS)	6590		mg/L	J-7	10.0	20.0	AB
CCR-04	9010402-04	1/8/2019 15:16	1/8/2019 15:16	EPA 120.1	Specific Conductance	11490		uS/cm		1	5	AB

## 3030 E Lake Parker Dr

Lakeland, FL 33805

## CCR SAMPLING

Month / Year: January 2019  
LAB ANALYSIS REPORT

SampleName	Sample ID	Date/Time Sampled	Date/Time Analyzed	Method	Analyte	Result	Error	Units	Qualifiers	Detection Limit	Reporting Limit	Analyst
CCR-04	9010402-04	1/8/2019 15:16	1/10/2019 17:01	EPA 300.0	SULFATE as SO <sub>4</sub>	637		mg/L	J-7	1.00	4.00	CF
CCR-04	9010402-04	1/8/2019 15:16	1/8/2019 15:16	EPA 170.1	Temperature	26.3		°C		0.1	0.1	AB
CCR-04	9010402-04	1/8/2019 15:16	1/8/2019 15:16	EPA 180.1	Turbidity	10.8		NTU		0.1	0.5	AB
CCR-04	9010402-04	1/8/2019 15:16	1/8/2019 15:16	DEP-SOP	Water Level	129.53		FT		0.01	---	AB
CCR-05	9010402-05	1/9/2019 8:19	1/14/2019 12:46	EPA 200.7	Arsenic	0.0190		mg/L		0.00586	0.0100	PES
CCR-05	9010402-05	1/9/2019 8:19	1/14/2019 12:46	EPA 200.7	Barium	0.0705		mg/L		0.00200	0.00500	PES
CCR-05	9010402-05	1/9/2019 8:19	1/14/2019 12:46	EPA 200.7	Boron	0.615		mg/L		0.00300	0.00500	PES
CCR-05	9010402-05	1/9/2019 8:19	1/30/2019 16:11	epa 200.7	Calcium	1550		mg/L		2.10	5.00	PES
CCR-05	9010402-05	1/9/2019 8:19	1/10/2019 17:27	EPA 300.0	Chloride	4840		mg/L	J-7	3.80	10.0	CF
CCR-05	9010402-05	1/9/2019 8:19	1/9/2019 8:19	Color	Clear	[blank]						AB
CCR-05	9010402-05	1/9/2019 8:19	1/9/2019 8:19	EPA 360.2	Dissolved Oxygen	0.38		mg/L		0.10	0.20	AB
CCR-05	9010402-05	1/9/2019 8:19	1/12/2019 11:30	SM18 4500-F C	Fluoride	0.0520		mg/L	I	0.0500	0.200	PES
CCR-05	9010402-05	1/9/2019 8:19	1/22/2019 0:00	EPA 200.7	Lithium	4570		ug/L		9.1	50	SGS
CCR-05	9010402-05	1/9/2019 8:19	1/14/2019 12:46	EPA 200.7	Molybdenum	0.0026		mg/L	IV	0.00200	0.0250	PES
CCR-05	9010402-05	1/9/2019 8:19	1/9/2019 8:19	pH	5.29	SU				0.05	0.05	AB
CCR-05	9010402-05	1/9/2019 8:19	1/21/2019 10:53	EPA 903.1	Radium 226	8.0	+ 0.5	pCi/L		0.2	---	FRS
CCR-05	9010402-05	1/9/2019 8:19	1/21/2019 9:24	Ra-05	Radium 228	5.3	+ 0.8	pCi/L		0.7	---	FRS
CCR-05	9010402-05	1/9/2019 8:19	1/14/2019 12:46	EPA 200.7	Selenium	0.00558		mg/L	U	0.00558	0.0100	PES
CCR-05	9010402-05	1/9/2019 8:19	1/9/2019 8:19	Sheen	No Sheen	N/A						AB
CCR-05	9010402-05	1/9/2019 8:19	1/9/2019 15:25	EPA 160.1	Solids, Total Dissolved (TDS)	8610		mg/L	J-7	10.0	20.0	AB
CCR-05	9010402-05	1/9/2019 8:19	1/9/2019 8:19	EPA 120.1	Specific Conductance	14520		uS/cm		1	5	AB
CCR-05	9010402-05	1/9/2019 8:19	1/10/2019 17:27	EPA 300.0	SULFATE as SO <sub>4</sub>	353		mg/L	J-7	2.50	10.0	CF
CCR-05	9010402-05	1/9/2019 8:19	1/9/2019 8:19	EPA 170.1	Temperature	23.5		°C		0.1	0.1	AB
CCR-05	9010402-05	1/9/2019 8:19	1/9/2019 8:19	EPA 180.1	Turbidity	4.82		NTU		0.1	0.5	AB
CCR-05	9010402-05	1/9/2019 8:19	1/9/2019 8:19	DEP-SOP	Water Level	131.67		FT		0.01	---	AB
CCR-06	9010402-06	1/9/2019 9:09	1/14/2019 12:48	EPA 200.7	Arsenic	0.00730		mg/L	I	0.00586	0.0100	PES
CCR-06	9010402-06	1/9/2019 9:09	1/14/2019 12:48	EPA 200.7	Barium	0.0145		mg/L		0.00200	0.00500	PES
CCR-06	9010402-06	1/9/2019 9:09	1/14/2019 12:48	EPA 200.7	Boron	0.302		mg/L		0.00300	0.00500	PES
CCR-06	9010402-06	1/9/2019 9:09	1/30/2019 16:13	epa 200.7	Calcium	280		mg/L		2.10	5.00	PES
CCR-06	9010402-06	1/9/2019 9:09	1/10/2019 18:18	EPA 300.0	Chloride	33.4		mg/L		0.760	2.00	CF
CCR-06	9010402-06	1/9/2019 9:09	1/9/2019 9:09	Color	Clear	[blank]						AB
CCR-06	9010402-06	1/9/2019 9:09	1/9/2019 9:09	EPA 360.2	Dissolved Oxygen	0.25		mg/L		0.10	0.20	AB
CCR-06	9010402-06	1/9/2019 9:09	1/12/2019 11:30	SM18 4500-F C	Fluoride	0.234		mg/L		0.0500	0.200	PES
CCR-06	9010402-06	1/9/2019 9:09	1/22/2019 0:00	EPA 200.7	Lithium	58.5		ug/L		9.1	50	SGS
CCR-06	9010402-06	1/9/2019 9:09	1/14/2019 12:48	EPA 200.7	Molybdenum	0.0055		mg/L	IV	0.00200	0.0250	PES
CCR-06	9010402-06	1/9/2019 9:09	1/9/2019 9:09	pH	6.26	SU			0.05	0.05	AB	
CCR-06	9010402-06	1/9/2019 9:09	1/21/2019 10:53	EPA 903.1	Radium 226	1.6	+ 0.2	pCi/L		0.2	---	FRS
CCR-06	9010402-06	1/9/2019 9:09	1/21/2019 10:26	Ra-05	Radium 228	0.7	+ 0.5	pCi/L	U	0.7	---	FRS
CCR-06	9010402-06	1/9/2019 9:09	1/14/2019 12:48	EPA 200.7	Selenium	0.00558		mg/L	U	0.00558	0.0100	PES
CCR-06	9010402-06	1/9/2019 9:09	1/9/2019 9:09	Sheen	No Sheen	N/A						AB
CCR-06	9010402-06	1/9/2019 9:09	1/9/2019 15:27	EPA 160.1	Solids, Total Dissolved (TDS)	1110		mg/L	J-7	10.0	20.0	AB
CCR-06	9010402-06	1/9/2019 9:09	1/9/2019 9:09	EPA 120.1	Specific Conductance	1286		uS/cm		1	5	AB
CCR-06	9010402-06	1/9/2019 9:09	1/10/2019 18:18	EPA 300.0	SULFATE as SO <sub>4</sub>	629		mg/L	J-7	0.500	2.00	CF
CCR-06	9010402-06	1/9/2019 9:09	1/9/2019 9:09	EPA 170.1	Temperature	24.7		°C		0.1	0.1	AB
CCR-06	9010402-06	1/9/2019 9:09	1/9/2019 9:09	EPA 180.1	Turbidity	1.46		NTU		0.1	0.5	AB
CCR-06	9010402-06	1/9/2019 9:09	1/9/2019 9:09	DEP-SOP	Water Level	133.94		FT		0.01	---	AB
CCR-07	9010402-07	1/9/2019 9:54	1/14/2019 12:51	EPA 200.7	Arsenic	0.00586		mg/L	U	0.00586	0.0100	PES
CCR-07	9010402-07	1/9/2019 9:54	1/14/2019 12:51	EPA 200.7	Barium	0.0321		mg/L		0.00200	0.00500	PES
CCR-07	9010402-07	1/9/2019 9:54	1/14/2019 12:51	EPA 200.7	Boron	0.848		mg/L		0.00300	0.00500	PES
CCR-07	9010402-07	1/9/2019 9:54	1/30/2019 16:37	epa 200.7	Calcium	196		mg/L		2.10	5.00	PES
CCR-07	9010402-07	1/9/2019 9:54	1/10/2019 18:44	EPA 300.0	Chloride	311		mg/L	J-7	0.380	1.00	CF
CCR-07	9010402-07	1/9/2019 9:54	1/9/2019 9:54	Color	Clear	[blank]						AB
CCR-07	9010402-07	1/9/2019 9:54	1/9/2019 9:54	EPA 360.2	Dissolved Oxygen	0.21		mg/L		0.10	0.20	AB
CCR-07	9010402-07	1/9/2019 9:54	1/12/2019 11:30	SM18 4500-F C	Fluoride	0.196		mg/L	I	0.0500	0.200	PES
CCR-07	9010402-07	1/9/2019 9:54	1/22/2019 0:00	EPA 200.7	Lithium	66.5		ug/L		9.1	50	SGS
CCR-07	9010402-07	1/9/2019 9:54	1/14/2019 12:51	EPA 200.7	Molybdenum	0.002		mg/L	U	0.00200	0.0250	PES
CCR-07	9010402-07	1/9/2019 9:54	1/9/2019 9:54	pH	4.78	SU			0.05	0.05	AB	
CCR-07	9010402-07	1/9/2019 9:54	1/21/2019 10:53	EPA 903.1	Radium 226	5.5	+ 0.3	pCi/L		0.1	---	FRS
CCR-07	9010402-07	1/9/2019 9:54	1/21/2019 10:26	Ra-05	Radium 228	1.7	+ 0.6	pCi/L		0.7	---	FRS
CCR-07	9010402-07	1/9/2019 9:54	1/14/2019 12:51	EPA 200.7	Selenium	0.00558		mg/L	U	0.00558	0.0100	PES
CCR-07	9010402-07	1/9/2019 9:54	1/9/2019 9:54	Sheen	No Sheen	N/A						AB
CCR-07	9010402-07	1/9/2019 9:54	1/9/2019 15:29	EPA 160.1	Solids, Total Dissolved (TDS)	1100		mg/L	J-7	10.0	20.0	AB
CCR-07	9010402-07	1/9/2019 9:54	1/9/2019 9:54	EPA 120.1	Specific Conductance	1628		uS/cm		1	5	AB
CCR-07	9010402-07	1/9/2019 9:54	1/10/2019 18:44	EPA 300.0	SULFATE as SO <sub>4</sub>	376		mg/L	J-7	0.250	1.00	CF
CCR-07	9010402-07	1/9/2019 9:54	1/9/2019 9:54	EPA 170.1	Temperature	23.8		°C		0.1	0.1	AB
CCR-07	9010402-07	1/9/2019 9:54	1/9/2019 9:54	EPA 180.1	Turbidity	3.41		NTU		0.1	0.5	AB
CCR-07	9010402-07	1/9/2019 9:54	1/9/2019 9:54	DEP-SOP	Water Level	134.24		FT		0.01	---	AB
CCR-08	9010402-08	1/9/2019 10:38	1/14/2019 12:53	EPA 200.7	Arsenic	0.00586		mg/L	U	0.00586	0.0100	PES
CCR-08	9010402-08	1/9/2019 10:38	1/14/2019 12:53	EPA 200.7	Barium	0.0373		mg/L		0.00200	0.00500	PES
CCR-08	9010402-08	1/9/2019 10:38	1/14/2019 12:53	EPA 200.7	Boron	0.099		mg/L		0.00300	0.00500	PES
CCR-08	9010402-08	1/9/2019 10:38	1/30/2019 16:39	epa 200.7	Calcium	108		mg/L		2.10	5.00	PES
CCR-08	9010402-08	1/9/2019 10:38	1/14/2019 16:08	EPA 300.0	Chloride	6.73		mg/L		0.380	1.00	CF
CCR-08	9010402-08	1/9/2019 10:38	1/9/2019 10:38	Color	Clear	[blank]						AB
CCR-08	9010402-08	1/9/2019 10:38	1/9/2019 10:38	EPA 360.2	Dissolved Oxygen	2.57		mg/L		0.10	0.20	AB
CCR-08	9010402-08	1/9/2019 10:38	1/12/2019 11:30	SM18 4500-F C	Fluoride	0.361		mg/L		0.0500	0.200	PES
CCR-08	9010402-08	1/9/2019 10:38	1/22/2019 0:00	EPA 200.7	Lithium	9.1		ug/L	U	9.1	50	SGS
CCR-08	9010402-08	1/9/2019 10:38	1/14/2019 12:53	EPA 200.7	Molybdenum	0.0184		mg/L	IV	0.00200	0.0250	PES
CCR-08	9010402-08	1/9/2019 10:38	1/9/2019 10:38	pH	6.75	SU			0.05	0.05	AB	
CCR-08	9010402-08	1/9/2019 10:38	1/22/2019 13:01	EPA 903.1	Radium 226	4.1	+ 0.6	pCi/L		0.2	---	FRS
CCR-08	9010402-08	1/9/2019 10:38	1/21/2019 10:26	Ra-05	Radium 228	0.7	+ 0.4	pCi/L	U	0.7	---	FRS

## 3030 E Lake Parker Dr

Lakeland, FL 33805

## CCR SAMPLING

Month / Year: January 2019  
LAB ANALYSIS REPORT

SampleName	Sample ID	Date/Time Sampled	Date/Time Analyzed	Method	Analyte	Result	Error	Units	Qualifiers	Detection Limit	Reporting Limit	Analyst
CCR-08	9010402-08	1/9/2019 10:38	1/14/2019 12:53	EPA 200.7	Selenium	0.00558		mg/L	U	0.00558	0.0100	PES
CCR-08	9010402-08	1/9/2019 10:38	1/9/2019 10:38-	Sheen	No Sheen			N/A				AB
CCR-08	9010402-08	1/9/2019 10:38	1/9/2019 15:31	EPA 160.1	Solids, Total Dissolved (TDS)	380		mg/L	J-7	10.0	20.0	AB
CCR-08	9010402-08	1/9/2019 10:38	1/9/2019 10:38	EPA 120.1	Specific Conductance	572		µS/cm		1	5	AB
CCR-08	9010402-08	1/9/2019 10:38	1/14/2019 16:08	EPA 300.0	SULFATE as SO <sub>4</sub>	139		mg/L		0.250	1.00	CF
CCR-08	9010402-08	1/9/2019 10:38	1/9/2019 10:38	EPA 170.1	Temperature	24.6		°C		0.1	0.1	AB
CCR-08	9010402-08	1/9/2019 10:38	1/9/2019 10:38	EPA 180.1	Turbidity	1.48		NTU		0.1	0.5	AB
CCR-08	9010402-08	1/9/2019 10:38	1/9/2019 10:38	DEP-SOP	Water Level	134.82		FT		0.01	---	AB
CCR-09	9010402-09	1/9/2019 11:45	1/14/2019 12:55	EPA 200.7	Arsenic	0.0173		mg/L		0.00586	0.0100	PES
CCR-09	9010402-09	1/9/2019 11:45	1/14/2019 12:55	EPA 200.7	Barium	0.0836		mg/L		0.00200	0.00500	PES
CCR-09	9010402-09	1/9/2019 11:45	1/14/2019 12:55	EPA 200.7	Boron	0.380		mg/L		0.00300	0.00500	PES
CCR-09	9010402-09	1/9/2019 11:45	1/30/2019 16:42	epa 200.7	Calcium	798		mg/L		2.10	5.00	PES
CCR-09	9010402-09	1/9/2019 11:45	1/14/2019 16:34	EPA 300.0	Chloride	1440		mg/L	J-7	1.52	4.00	CF
CCR-09	9010402-09	1/9/2019 11:45	1/9/2019 11:45-	Color	Cloudy	[blank]						AB
CCR-09	9010402-09	1/9/2019 11:45	1/9/2019 11:45	EPA 360.2	Dissolved Oxygen	0.56		mg/L		0.10	0.20	AB
CCR-09	9010402-09	1/9/2019 11:45	1/12/2019 11:30	SM18 4500-F C	Fluoride	0.221		mg/L		0.0500	0.200	PES
CCR-09	9010402-09	1/9/2019 11:45	1/22/2019 0:00	EPA 200.7	Lithium	84.5		ug/L		9.1	50	SGS
CCR-09	9010402-09	1/9/2019 11:45	1/14/2019 12:55	EPA 200.7	Molybdenum	0.0038		mg/L	IV	0.00200	0.0250	PES
CCR-09	9010402-09	1/9/2019 11:45	1/9/2019 11:45	EPA 150.1	pH	5.14		SU		0.05	0.05	AB
CCR-09	9010402-09	1/9/2019 11:45	1/22/2019 13:01	EPA 903.1	Radium 226	9.5 + 0.9		pCi/L		0.2	---	FRS
CCR-09	9010402-09	1/9/2019 11:45	1/21/2019 10:26	Ra-05	Radium 228	1.6 + 0.6		pCi/L		0.8	---	FRS
CCR-09	9010402-09	1/9/2019 11:45	1/14/2019 12:55	EPA 200.7	Selenium	0.00558		mg/L	U	0.00558	0.0100	PES
CCR-09	9010402-09	1/9/2019 11:45	1/9/2019 11:45-	Sheen	No Sheen	N/A						AB
CCR-09	9010402-09	1/9/2019 11:45	1/9/2019 15:33	EPA 160.1	Solids, Total Dissolved (TDS)	3780		mg/L	J-7	10.0	20.0	AB
CCR-09	9010402-09	1/9/2019 11:45	1/9/2019 11:45	EPA 120.1	Specific Conductance	6060		µS/cm		1	5	AB
CCR-09	9010402-09	1/9/2019 11:45	1/14/2019 16:34	EPA 300.0	SULFATE as SO <sub>4</sub>	1030		mg/L	J-7	1.00	4.00	CF
CCR-09	9010402-09	1/9/2019 11:45	1/9/2019 11:45	EPA 170.1	Temperature	25.6		°C		0.1	0.1	AB
CCR-09	9010402-09	1/9/2019 11:45	1/9/2019 11:45	EPA 180.1	Turbidity	22.1		NTU		0.1	0.5	AB
CCR-09	9010402-09	1/9/2019 11:45	1/9/2019 11:45	DEP-SOP	Water Level	133.07		FT		0.01	---	AB
CCR-10	9010402-10	1/9/2019 13:20	1/14/2019 12:58	EPA 200.7	Arsenic	0.00586		mg/L	U	0.00586	0.0100	PES
CCR-10	9010402-10	1/9/2019 13:20	1/14/2019 12:58	EPA 200.7	Barium	0.0241		mg/L		0.00200	0.00500	PES
CCR-10	9010402-10	1/9/2019 13:20	1/14/2019 12:58	EPA 200.7	Boron	0.231		mg/L		0.00300	0.00500	PES
CCR-10	9010402-10	1/9/2019 13:20	1/30/2019 16:44	epa 200.7	Calcium	108		mg/L		2.10	5.00	PES
CCR-10	9010402-10	1/9/2019 13:20	1/14/2019 16:59	EPA 300.0	Chloride	24.3		mg/L		0.380	1.00	CF
CCR-10	9010402-10	1/9/2019 13:20	1/9/2019 13:20-	Color	Clear	[blank]						AB
CCR-10	9010402-10	1/9/2019 13:20	1/9/2019 13:20	EPA 360.2	Dissolved Oxygen	0.19		mg/L		0.10	0.20	AB
CCR-10	9010402-10	1/9/2019 13:20	1/12/2019 11:30	SM18 4500-F C	Fluoride	0.163		mg/L	I	0.0500	0.200	PES
CCR-10	9010402-10	1/9/2019 13:20	1/22/2019 0:00	EPA 200.7	Lithium	9.1		ug/L	U	9.1	50	SGS
CCR-10	9010402-10	1/9/2019 13:20	1/14/2019 12:58	EPA 200.7	Molybdenum	0.002		mg/L	U	0.00200	0.0250	PES
CCR-10	9010402-10	1/9/2019 13:20	1/9/2019 13:20	EPA 150.1	pH	5.39		SU		0.05	0.05	AB
CCR-10	9010402-10	1/9/2019 13:20	1/22/2019 13:01	EPA 903.1	Radium 226	2.5 + 0.5		pCi/L		0.2	---	FRS
CCR-10	9010402-10	1/9/2019 13:20	1/21/2019 11:28	Ra-05	Radium 228	0.9 + 0.6		pCi/L		0.8	---	FRS
CCR-10	9010402-10	1/9/2019 13:20	1/14/2019 12:58	EPA 200.7	Selenium	0.00558		mg/L	U	0.00558	0.0100	PES
CCR-10	9010402-10	1/9/2019 13:20	1/9/2019 13:20-	Sheen	No Sheen	N/A						AB
CCR-10	9010402-10	1/9/2019 13:20	1/14/2019 12:55	EPA 160.1	Solids, Total Dissolved (TDS)	382		mg/L		10.0	20.0	AB
CCR-10	9010402-10	1/9/2019 13:20	1/9/2019 13:20	EPA 120.1	Specific Conductance	756		µS/cm		1	5	AB
CCR-10	9010402-10	1/9/2019 13:20	1/14/2019 16:59	EPA 300.0	SULFATE as SO <sub>4</sub>	309		mg/L	J-7	0.250	1.00	CF
CCR-10	9010402-10	1/9/2019 13:20	1/9/2019 13:20	EPA 170.1	Temperature	24.6		°C		0.1	0.1	AB
CCR-10	9010402-10	1/9/2019 13:20	1/9/2019 13:20	EPA 180.1	Turbidity	6.86		NTU		0.1	0.5	AB
CCR-10	9010402-10	1/9/2019 13:20	1/9/2019 13:20	DEP-SOP	Water Level	132.96		FT		0.01	---	AB
CCR-11	9010402-11	1/9/2019 14:40	1/14/2019 13:16	EPA 200.7	Arsenic	0.140		mg/L		0.00586	0.0100	PES
CCR-11	9010402-11	1/9/2019 14:40	1/14/2019 13:16	EPA 200.7	Barium	0.0605		mg/L		0.00200	0.00500	PES
CCR-11	9010402-11	1/9/2019 14:40	1/14/2019 13:16	EPA 200.7	Boron	0.438		mg/L		0.00300	0.00500	PES
CCR-11	9010402-11	1/9/2019 14:40	1/30/2019 15:20	epa 200.7	Calcium	520		mg/L		2.10	5.00	PES
CCR-11	9010402-11	1/9/2019 14:40	1/14/2019 17:25	EPA 300.0	Chloride	552		mg/L	J-7	0.760	2.00	CF
CCR-11	9010402-11	1/9/2019 14:40	1/9/2019 14:40	Color	Cloudy	[blank]						AB
CCR-11	9010402-11	1/9/2019 14:40	1/9/2019 14:40	EPA 360.2	Dissolved Oxygen	0.63		mg/L		0.10	0.20	AB
CCR-11	9010402-11	1/9/2019 14:40	1/12/2019 11:30	SM18 4500-F C	Fluoride	0.600		mg/L		0.0500	0.200	PES
CCR-11	9010402-11	1/9/2019 14:40	1/21/2019 0:00	EPA 200.7	Lithium	31.9		ug/L	I	9.1	50	SGS
CCR-11	9010402-11	1/9/2019 14:40	1/14/2019 13:16	EPA 200.7	Molybdenum	0.007		mg/L	IV	0.00200	0.0250	PES
CCR-11	9010402-11	1/9/2019 14:40	1/9/2019 14:40	EPA 150.1	pH	4.84		SU		0.05	0.05	AB
CCR-11	9010402-11	1/9/2019 14:40	1/22/2019 13:01	EPA 903.1	Radium 226	1.5 + 0.4		pCi/L		0.2	---	FRS
CCR-11	9010402-11	1/9/2019 14:40	1/21/2019 11:28	Ra-05	Radium 228	3.3 + 0.7		pCi/L		0.8	---	FRS
CCR-11	9010402-11	1/9/2019 14:40	1/14/2019 13:16	EPA 200.7	Selenium	0.00830		mg/L	IV	0.00558	0.0100	PES
CCR-11	9010402-11	1/9/2019 14:40	1/9/2019 14:40	Sheen	No Sheen	N/A						AB
CCR-11	9010402-11	1/9/2019 14:40	1/14/2019 12:59	EPA 160.1	Solids, Total Dissolved (TDS)	2750		mg/L	J-7	10.0	20.0	AB
CCR-11	9010402-11	1/9/2019 14:40	1/9/2019 14:40	EPA 120.1	Specific Conductance	4640		µS/cm		1	5	AB
CCR-11	9010402-11	1/9/2019 14:40	1/14/2019 17:25	EPA 300.0	SULFATE as SO <sub>4</sub>	1640		mg/L	J-7	0.500	2.00	CF
CCR-11	9010402-11	1/9/2019 14:40	1/9/2019 14:40	EPA 170.1	Temperature	24.6		°C		0.1	0.1	AB
CCR-11	9010402-11	1/9/2019 14:40	1/9/2019 14:40	EPA 180.1	Turbidity	19.4		NTU		0.1	0.5	AB
CCR-11	9010402-11	1/9/2019 14:40	1/9/2019 14:40	DEP-SOP	Water Level	133.32		FT		0.01	---	AB
CCR-12	9010402-12	1/10/2019 9:20	1/14/2019 13:18	EPA 200.7	Arsenic	0.0411		mg/L		0.00586	0.0100	PES
CCR-12	9010402-12	1/10/2019 9:20	1/14/2019 13:18	EPA 200.7	Barium	0.0240		mg/L		0.00200	0.00500	PES
CCR-12	9010402-12	1/10/2019 9:20	1/14/2019 13:18	EPA 200.7	Boron	0.501		mg/L		0.00300	0.00500	PES
CCR-12	9010402-12	1/10/2019 9:20	1/30/2019 15:22	epa 200.7	Calcium	606		mg/L		2.10	5.00	PES
CCR-12	9010402-12	1/10/2019 9:20	1/14/2019 17:51	EPA 300.0	Chloride	23.3		mg/L		0.760	2.00	CF
CCR-12	9010402-12	1/10/2019 9:20	1/10/2019 9:20-	Color	Clear	[blank]						AB
CCR-12	9010402-12	1/10/2019 9:20	1/10/2019 9:20	EPA 360.2	Dissolved Oxygen	0.19		mg/L		0.10	0.20	AB
CCR-12	9010402-12	1/10/2019 9:20	1/12/2019 11:30	SM18 4500-F C	Fluoride	0.712		mg/L	I	0.0500	0.200	PES
CCR-12	9010402-12	1/10/2019 9:20	1/21/2019 0:00	EPA 200.7	Lithium	17.2		ug/L	I	9.1	50	SGS

3030 E Lake Parker Dr  
Lakeland, FL 33805

CCR SAMPLING

Month / Year: January 2019  
LAB ANALYSIS REPORT

SampleName	Sample ID	Date/Time Sampled	Date/Time Analyzed	Method	Analyte	Result	Error	Units	Qualifiers	Detection Limit	Reporting Limit	Analyst
CCR-12	9010402-12	1/10/2019 9:20	1/14/2019 13:18	EPA 200.7	Molybdenum	0.0143		mg/L	IV	0.00200	0.0250	PES
CCR-12	9010402-12	1/10/2019 9:20	1/10/2019 9:20	EPA 150.1	pH	6.72		SU		0.05	0.05	AB
CCR-12	9010402-12	1/10/2019 9:20	1/22/2019 13:01	EPA 903.1	Radium 226	4.1 <sup>±</sup> 0.6		pCi/L		0.1	---	FRS
CCR-12	9010402-12	1/10/2019 9:20	1/21/2019 11:28	Ra-05	Radium 228	0.7 <sup>±</sup> 0.5		pCi/L	U	0.7	---	FRS
CCR-12	9010402-12	1/10/2019 9:20	1/14/2019 13:18	EPA 200.7	Selenium	0.00558		mg/L	U	0.00558	0.0100	PES
CCR-12	9010402-12	1/10/2019 9:20	1/10/2019 9:20	No Sheen		N/A						AB
CCR-12	9010402-12	1/10/2019 9:20	1/14/2019 13:01	EPA 160.1	Solids, Total Dissolved (TDS)	2370		mg/L	J-7	10.0	20.0	AB
CCR-12	9010402-12	1/10/2019 9:20	1/10/2019 9:20	EPA 120.1	Specific Conductance	2650		uS/cm		1	5	AB
CCR-12	9010402-12	1/10/2019 9:20	1/14/2019 17:51	EPA 300.0	SULFATE as SO <sub>4</sub>	1350		mg/L	J-7	0.500	2.00	CF
CCR-12	9010402-12	1/10/2019 9:20	1/10/2019 9:20	EPA 170.1	Temperature	19.6		°C		0.1	0.1	AB
CCR-12	9010402-12	1/10/2019 9:20	1/10/2019 9:20	EPA 180.1	Turbidity	10.7		NTU		0.1	0.5	AB
CCR-12	9010402-12	1/10/2019 9:20	1/10/2019 9:20	DEP-SOP	Water Level	133.33		FT		0.01	---	AB
CCR-13	9010402-13	1/10/2019 10:07	1/14/2019 13:20	EPA 200.7	Arsenic	0.0105		mg/L		0.00586	0.0100	PES
CCR-13	9010402-13	1/10/2019 10:07	1/14/2019 13:20	EPA 200.7	Barium	0.0491		mg/L		0.00200	0.00500	PES
CCR-13	9010402-13	1/10/2019 10:07	1/14/2019 13:20	EPA 200.7	Boron	0.242		mg/L		0.00300	0.00500	PES
CCR-13	9010402-13	1/10/2019 10:07	1/30/2019 15:24	epa 200.7	Calcium	512		mg/L		2.10	5.00	PES
CCR-13	9010402-13	1/10/2019 10:07	1/14/2019 18:17	EPA 300.0	Chloride	381		mg/L	J-7	0.760	2.00	CF
CCR-13	9010402-13	1/10/2019 10:07	1/10/2019 10:07	No Sheen	Color	Clear		[blank]				AB
CCR-13	9010402-13	1/10/2019 10:07	1/10/2019 10:07	EPA 360.2	Dissolved Oxygen	0.17		mg/L		0.10	0.20	AB
CCR-13	9010402-13	1/10/2019 10:07	1/12/2019 11:30	SM18 4500-F C	Fluoride	1.20		mg/L		0.0500	0.200	PES
CCR-13	9010402-13	1/10/2019 10:07	1/21/2019 0:00	EPA 200.7	Lithium	249		ug/L		9.1	50	SGS
CCR-13	9010402-13	1/10/2019 10:07	1/14/2019 13:20	EPA 200.7	Molybdenum	0.002		mg/L	U	0.00200	0.0250	PES
CCR-13	9010402-13	1/10/2019 10:07	1/10/2019 10:07	EPA 150.1	pH	4.25		SU		0.05	0.05	AB
CCR-13	9010402-13	1/10/2019 10:07	1/22/2019 14:05	EPA 903.1	Radium 226	62.9 <sup>±</sup> 2.2		pCi/L		0.2	---	FRS
CCR-13	9010402-13	1/10/2019 10:07	1/21/2019 11:28	Ra-05	Radium 228	6.4 <sup>±</sup> 0.9		pCi/L		0.8	---	FRS
CCR-13	9010402-13	1/10/2019 10:07	1/14/2019 13:20	EPA 200.7	Selenium	0.0135		mg/L	V	0.00558	0.0100	PES
CCR-13	9010402-13	1/10/2019 10:07	1/10/2019 10:07	No Sheen		N/A						AB
CCR-13	9010402-13	1/10/2019 10:07	1/14/2019 13:03	EPA 160.1	Solids, Total Dissolved (TDS)	2330		mg/L	J-7	10.0	20.0	AB
CCR-13	9010402-13	1/10/2019 10:07	1/10/2019 10:07	EPA 120.1	Specific Conductance	3670		uS/cm		1	5	AB
CCR-13	9010402-13	1/10/2019 10:07	1/14/2019 18:17	EPA 300.0	SULFATE as SO <sub>4</sub>	1380		mg/L	J-7	0.500	2.00	CF
CCR-13	9010402-13	1/10/2019 10:07	1/10/2019 10:07	EPA 170.1	Temperature	19.6		°C		0.1	0.1	AB
CCR-13	9010402-13	1/10/2019 10:07	1/10/2019 10:07	EPA 180.1	Turbidity	2.54		NTU		0.1	0.5	AB
CCR-13	9010402-13	1/10/2019 10:07	1/10/2019 10:07	DEP-SOP	Water Level	133.34		FT		0.01	---	AB
CCR-14	9010402-14	1/10/2019 10:50	1/14/2019 13:23	EPA 200.7	Arsenic	0.00586		mg/L	U	0.00586	0.0100	PES
CCR-14	9010402-14	1/10/2019 10:50	1/14/2019 13:23	EPA 200.7	Barium	0.0283		mg/L		0.00200	0.00500	PES
CCR-14	9010402-14	1/10/2019 10:50	1/14/2019 13:27	EPA 200.7	Boron	1.03		mg/L		0.00300	0.00500	PES
CCR-14	9010402-14	1/10/2019 10:50	1/30/2019 15:27	epa 200.7	Calcium	481		mg/L		2.10	5.00	PES
CCR-14	9010402-14	1/10/2019 10:50	1/14/2019 18:43	EPA 300.0	Chloride	83.9		mg/L		0.760	2.00	CF
CCR-14	9010402-14	1/10/2019 10:56	1/10/2019 10:56	No Sheen	Color	Clear		[blank]				AB
CCR-14	9010402-14	1/10/2019 10:50	1/10/2019 10:50	EPA 360.2	Dissolved Oxygen	0.17		mg/L		0.10	0.20	AB
CCR-14	9010402-14	1/10/2019 10:50	1/12/2019 11:30	SM18 4500-F C	Fluoride	0.571		mg/L		0.0500	0.200	PES
CCR-14	9010402-14	1/10/2019 10:50	1/21/2019 0:00	EPA 200.7	Lithium	16.7		ug/L	I	9.1	50	SGS
CCR-14	9010402-14	1/10/2019 10:50	1/14/2019 13:23	EPA 200.7	Molybdenum	0.0051		mg/L	IV	0.00200	0.0250	PES
CCR-14	9010402-14	1/10/2019 10:50	1/10/2019 10:50	EPA 150.1	pH	5.29		SU		0.05	0.05	AB
CCR-14	9010402-14	1/10/2019 10:50	1/22/2019 14:05	EPA 903.1	Radium 226	22.3 <sup>±</sup> 1.3		pCi/L		0.2	---	FRS
CCR-14	9010402-14	1/10/2019 10:50	1/21/2019 11:28	Ra-05	Radium 228	0.7 <sup>±</sup> 0.5		pCi/L		0.7	---	FRS
CCR-14	9010402-14	1/10/2019 10:50	1/14/2019 13:23	EPA 200.7	Selenium	0.00558		mg/L	U	0.00558	0.0100	PES
CCR-14	9010402-14	1/10/2019 10:50	1/10/2019 10:56	No Sheen		N/A						AB
CCR-14	9010402-14	1/10/2019 10:50	1/14/2019 13:05	EPA 160.1	Solids, Total Dissolved (TDS)	1850		mg/L	J-7	10.0	20.0	AB
CCR-14	9010402-14	1/10/2019 10:50	1/10/2019 10:56	EPA 120.1	Specific Conductance	2430		uS/cm		1	5	AB
CCR-14	9010402-14	1/10/2019 10:50	1/14/2019 18:43	EPA 300.0	SULFATE as SO <sub>4</sub>	1290		mg/L	J-7	0.500	2.00	CF
CCR-14	9010402-14	1/10/2019 10:50	1/10/2019 10:56	EPA 170.1	Temperature	22.5		°C		0.1	0.1	AB
CCR-14	9010402-14	1/10/2019 10:50	1/10/2019 10:56	EPA 180.1	Turbidity	3.61		NTU		0.1	0.5	AB
CCR-14	9010402-14	1/10/2019 10:50	1/10/2019 10:56	DEP-SOP	Water Level	132.20		FT		0.01	---	AB
Equipment Blank	9010402-15	1/10/2019 11:41	1/14/2019 13:25	EPA 200.7	Arsenic	0.00586		mg/L	U	0.00586	0.0100	PES
Equipment Blank	9010402-15	1/10/2019 11:41	1/14/2019 13:25	EPA 200.7	Barium	0.00740		mg/L		0.00200	0.00500	PES
Equipment Blank	9010402-15	1/10/2019 11:41	1/14/2019 13:25	EPA 200.7	Boron	0.00300		mg/L	U	0.00300	0.00500	PES
Equipment Blank	9010402-15	1/10/2019 11:41	1/30/2019 15:29	epa 200.7	Calcium	3.77		mg/L		0.0210	0.0500	PES
Equipment Blank	9010402-15	1/10/2019 11:41	1/14/2019 20:00	EPA 300.0	Chloride	0.0380		mg/L	U	0.0380	0.100	CF
Equipment Blank	9010402-15	1/10/2019 11:41	1/10/2019 11:38	No Sheen	Color	Clear		[blank]				AB
Equipment Blank	9010402-15	1/10/2019 11:41	1/10/2019 11:41	EPA 360.2	Dissolved Oxygen	0.84		mg/L		0.10	0.20	AB
Equipment Blank	9010402-15	1/10/2019 11:41	1/12/2019 0:00	SM18 4500-F C	Fluoride	0.0500		mg/L	U	0.0500	0.200	PES
Equipment Blank	9010402-15	1/10/2019 11:41	1/21/2019 0:00	EPA 200.7	Lithium	9.1		ug/L	U	9.1	50	SGS
Equipment Blank	9010402-15	1/10/2019 11:41	1/14/2019 13:25	EPA 200.7	Molybdenum	0.002		mg/L	U	0.00200	0.0250	PES
Equipment Blank	9010402-15	1/10/2019 11:41	1/10/2019 11:41	EPA 150.1	pH	6.92		SU		0.05	0.05	AB
Equipment Blank	9010402-15	1/10/2019 11:41	1/22/2019 14:05	EPA 903.1	Radium 226	0.2 <sup>±</sup> 0.1		pCi/L	U	0.2	---	FRS
Equipment Blank	9010402-15	1/10/2019 11:41	1/21/2019 11:28	Ra-05	Radium 228	0.7 <sup>±</sup> 0.4		pCi/L	U	0.7	---	FRS
Equipment Blank	9010402-15	1/10/2019 11:41	1/14/2019 13:25	EPA 200.7	Selenium	0.00558		mg/L	U	0.00558	0.0100	PES
Equipment Blank	9010402-15	1/10/2019 11:41	1/10/2019 11:38	No Sheen		N/A						AB
Equipment Blank	9010402-15	1/10/2019 11:41	1/14/2019 13:07	EPA 160.1	Solids, Total Dissolved (TDS)	21.0		mg/L	J-7, V	10.0	20.0	AB
Equipment Blank	9010402-15	1/10/2019 11:41	1/10/2019 11:38	EPA 120.1	Specific Conductance	8.10		uS/cm		1	5	AB
Equipment Blank	9010402-15	1/10/2019 11:41	1/14/2019 20:00	EPA 300.0	SULFATE as SO <sub>4</sub>	0.0250		mg/L	U	0.0250	0.100	CF
Equipment Blank	9010402-15	1/10/2019 11:41	1/10/2019 11:38	EPA 170.1	Temperature	20.9		°C		0.1	0.1	AB
Equipment Blank	9010402-15	1/10/2019 11:41	1/10/2019 11:38	EPA 180.1	Turbidity	1.28		NTU		0.1	0.5	AB
Equipment Blank	9010402-15	1/10/2019 11:41	1/10/2019 11:38	DEP-SOP	Water Level	---		FT		0.01	---	AB

J = Estimated value. Quality control does not meet criteria.

I = The reported value is between the laboratory MDL and the laboratory PQL.

J-6 = Estimated value. Result does not meet the quality control criteria for duplicates.

J-7 = Result exceeds the regulatory MCL.

3030 E Lake Parker Dr

Lakeland, FL 33805

CCR SAMPLING

Month / Year: January 2019

LAB ANALYSIS REPORT

SampleName	Sample ID	Date/Time Sampled	Date/Time Analyzed	Method	Analyte	Result	Error	Units	Qualifiers	Detection Limit	Reporting Limit	Analyst
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J-8 = Estimated value. Reported concentration is outside the standard calibration/calibration verification range.

U = Compound was analyzed for but not detected.

V = The analyte was detected at or above the method detection limit in both the sample and the associated method blank.

PES = Subcontracted analysis conducted Phoslab Environmental Services, Inc. (TNI Certificate No. E84925).

SGS = Subcontracted analysis conducted SGS Dayton NJ (TNI Certificate No. E87482).

FRS = Subcontracted analysis conducted Florida Radiochemistry Services, Inc. (TNI Certificate No. E83033).

The results detailed within this report apply only to those samples submitted for analysis and for which results are reported here.

Unless otherwise indicated, these test results meet all requirements of the TNI standards.

**3030 E Lake Parker Dr  
Lakeland, FL 33805**  
**CCR SAMPLING**

**Month / Year: March 2019**  
**LAB ANALYSIS REPORT**

SampleName	Sample ID	Date/Time Sampled	Date/Time Analyzed	Method	Analyte	Result	Error	Units	Qualifiers	Detection Limit	Reporting Limit	Analyst
CCR-15	9030504-01	3/7/2019 14:17	3/18/2019 12:09	EPA 350.1	Ammonia- Un-ionized (NH3)	1.48		mg/L		0.00400	0.0222	PES
CCR-15	9030504-01	3/7/2019 14:17	3/18/2019 12:15	EPA 200.7	Arsenic	5.86		ug/L	U	5.86	10.0	PES
CCR-15	9030504-01	3/7/2019 14:17	3/11/2019 15:25	EPA 300.0 (Chloride)	Chloride	950		mg/L		0.760	2.00	CF
CCR-15	9030504-01	3/7/2019 14:17	3/7/2019 14:17	By Observation	Color	Clear		[blank]	U	---	---	ND
CCR-15	9030504-01	3/7/2019 14:17	3/7/2019 14:17	EPA 360.2	Dissolved Oxygen	0.20		mg/L		0.10	0.20	ND
CCR-15	9030504-01	3/7/2019 14:17	3/19/2019 9:20	EPA 200.7	Iron	2440		ug/L		30.7	100	CF
CCR-15	9030504-01	3/7/2019 14:17	3/19/2019 9:20	EPA 200.7	Manganese	77.9		ug/L		2.30	10.0	CF
CCR-15	9030504-01	3/7/2019 14:17	3/12/2019 17:57	EPA 353.2 (Nitrate-Nitrite (N))	Nitrate-Nitrite (N)	0.0720		mg/L	I	0.0300	0.250	PES
CCR-15	9030504-01	3/7/2019 14:17	3/7/2019 14:17	SM18 2580 B	ORP	-120		mV	U	1	1	ND
CCR-15	9030504-01	3/7/2019 14:17	3/7/2019 14:17	SM18 4500-B B	pH	4.17		SU		0.05	0.05	ND
CCR-15	9030504-01	3/7/2019 14:17	3/18/2019 9:39	EPA 365.1 (Phosphorus -Total)	Phosphorus- Elemental	0.139		mg/L		0.00300	0.0133	PES
CCR-15	9030504-01	3/7/2019 14:17	3/18/2019 13:27	EPA 200.7	Potassium	108		mg/L		0.375	1.25	PES
CCR-15	9030504-01	3/7/2019 14:17	3/21/2019 13:06	EPA 903.1	Radium 226	19.2	1.3	pCi/L		0.2	---	FRS
CCR-15	9030504-01	3/7/2019 14:17	3/20/2019 8:04	Ra-05	Radium 228	5.9	0.9	pCi/L		0.8	---	FRS
CCR-15	9030504-01	3/7/2019 14:17	3/12/2019 10:30	SM18 2540 C	Residues- Filterable (TDS)	2100		mg/L		40.0	80.0	CF
CCR-15	9030504-01	3/7/2019 14:17	3/7/2019 14:17	By Observation	Sheen	No Sheen		N/A	U	---	---	ND
CCR-15	9030504-01	3/7/2019 14:17	3/7/2019 14:17	EPA 120.1	Specific Conductance	3200		umhos/cm		1	5	ND
CCR-15	9030504-01	3/7/2019 14:17	3/11/2019 15:25	EPA 300.0 (Sulfate)	Sulfate	236		mg/L		0.500	2.00	CF
CCR-15	9030504-01	3/7/2019 14:17	3/7/2019 14:17	EPA 170.1	Temperature	24.6		deg C		0.1	0.1	ND
CCR-15	9030504-01	3/7/2019 14:17	3/7/2019 14:17	EPA 180.1	Turbidity	21.2		NTU		0.1	0.5	ND
CCR-15	9030504-01	3/7/2019 14:17	3/7/2019 14:17	FDEP DEP-SOP	Water Level	---		FT		0.1	0.5	ND
CCR-15	9030504-01	3/7/2019 14:17	3/29/2019 9:44	EPA 200.7	Magnesium	28.0		mg/L		0.911	2.00	CF
CCR-15	9030504-01	3/7/2019 14:17	3/29/2019 9:44	EPA 200.7	Sodium	181		mg/L		4.72	10.0	CF
CCR-15	9030504-01	3/7/2019 14:17	3/29/2019 11:04	EPA 200.7	Calcium	457		mg/L		29.8	100	CF
CCR-16	9030504-02	3/6/2019 11:20	3/18/2019 12:11	EPA 350.1	Ammonia- Un-ionized (NH3)	1.65		mg/L		0.00400	0.0222	PES
CCR-16	9030504-02	3/6/2019 11:20	3/6/2019 17:52	EPA 300.0 (Chloride)	Chloride	1670		mg/L		0.0380	0.100	CF
CCR-16	9030504-02	3/6/2019 11:20	3/8/2019 11:20	By Observation	Color	Clear		[blank]	U	---	---	DB
CCR-16	9030504-02	3/6/2019 11:20	3/8/2019 11:20	EPA 360.2	Dissolved Oxygen	0.41		mg/L		0.10	0.20	DB
CCR-16	9030504-02	3/6/2019 11:20	3/19/2019 9:24	EPA 200.7	Iron	331		ug/L		30.7	100	CF
CCR-16	9030504-02	3/6/2019 11:20	3/19/2019 0:00	EPA 200.7	Lithium	38.4		ug/L	I	9.1	50	SGS
CCR-16	9030504-02	3/6/2019 11:20	3/19/2019 9:24	EPA 200.7	Manganese	136		ug/L		2.30	10.0	CF
CCR-16	9030504-02	3/6/2019 11:20	3/12/2019 17:58	EPA 353.2 (Nitrate-Nitrite (N))	Nitrate-Nitrite (N)	0.0300		mg/L	U	0.0300	0.250	PES
CCR-16	9030504-02	3/6/2019 11:20	3/8/2019 11:20	SM18 2580 B	ORP	-58		mV	U	1	1	DB
CCR-16	9030504-02	3/6/2019 11:20	3/8/2019 11:20	SM18 4500-B B	pH	4.22		SU		0.05	0.05	DB
CCR-16	9030504-02	3/6/2019 11:20	3/18/2019 9:40	EPA 365.1 (Phosphorus -Total)	Phosphorus- Elemental	0.055		mg/L		0.00300	0.0133	PES
CCR-16	9030504-02	3/6/2019 11:20	3/18/2019 13:30	EPA 200.7	Potassium	385		mg/L		0.375	1.25	PES
CCR-16	9030504-02	3/6/2019 11:20	3/21/2019 13:06	EPA 903.1	Radium 226	23.3	1.4	pCi/L		0.2	---	FRS
CCR-16	9030504-02	3/6/2019 11:20	3/20/2019 8:04	Ra-05	Radium 228	19.4	1.3	pCi/L		0.7	---	FRS
CCR-16	9030504-02	3/6/2019 11:20	3/7/2019 13:00	SM18 2540 C	Residues- Filterable (TDS)	4420		mg/L		40.0	80.0	CF
CCR-16	9030504-02	3/6/2019 11:20	3/8/2019 11:20	By Observation	Sheen	No Sheen		N/A	U	---	---	DB
CCR-16	9030504-02	3/6/2019 11:20	3/8/2019 11:20	EPA 120.1	Specific Conductance	66.7		umhos/cm		1	5	DB
CCR-16	9030504-02	3/6/2019 11:20	3/8/2019 11:20	EPA 170.1	Temperature	23.0		deg C		0.1	0.1	DB
CCR-16	9030504-02	3/6/2019 11:20	3/8/2019 11:20	EPA 180.1	Turbidity	8.13		NTU		0.1	0.5	DB
CCR-16	9030504-02	3/6/2019 11:20	3/8/2019 11:20	FDEP DEP-SOP	Water Level	---		FT		0.1	0.5	DB
CCR-16	9030504-02	3/6/2019 11:20	3/7/2019 12:21	EPA 300.0 (Chloride)	Chloride	1720		mg/L		0.760	2.00	CF
CCR-16	9030504-02	3/6/2019 11:20	3/29/2019 9:49	EPA 200.7	Magnesium	33.3		mg/L		0.911	2.00	CF
CCR-16	9030504-02	3/6/2019 11:20	3/7/2019 12:21	EPA 300.0 (Sulfate)	Sulfate	976		mg/L		0.500	2.00	CF
CCR-16	9030504-02	3/6/2019 11:20	3/29/2019 11:09	EPA 200.7	Calcium	762		mg/L		29.8	100	CF
CCR-16	9030504-02	3/6/2019 11:20	3/29/2019 11:09	EPA 200.7	Sodium	344		mg/L		9.44	20.0	CF
CCR-17	9030504-03	3/6/2019 13:26	3/18/2019 12:12	EPA 350.1	Ammonia- Un-ionized (NH3)	0.292		mg/L		0.00400	0.0222	PES
CCR-17	9030504-03	3/6/2019 13:26	3/6/2019 13:26	By Observation	Color	Clear		[blank]	U	---	---	DB
CCR-17	9030504-03	3/6/2019 13:26	3/6/2019 13:26	EPA 360.2	Dissolved Oxygen	0.32		mg/L		0.10	0.20	DB
CCR-17	9030504-03	3/6/2019 13:26	3/19/2019 9:29	EPA 200.7	Iron	807		ug/L		30.7	100	CF
CCR-17	9030504-03	3/6/2019 13:26	3/19/2019 0:00	EPA 200.7	Lithium	16.2		ug/L	I	9.1	50	SGS
CCR-17	9030504-03	3/6/2019 13:26	3/19/2019 9:29	EPA 200.7	Manganese	71.0		ug/L		2.30	10.0	CF
CCR-17	9030504-03	3/6/2019 13:26	3/12/2019 17:59	EPA 353.2 (Nitrate-Nitrite (N))	Nitrate-Nitrite (N)	0.0300		mg/L	U	0.0300	0.250	PES
CCR-17	9030504-03	3/6/2019 13:26	3/6/2019 13:26	SM18 2580 B	ORP	-123		mV	U	1	1	DB
CCR-17	9030504-03	3/6/2019 13:26	3/6/2019 13:26	SM18 4500-B B	pH	6.30		SU		0.05	0.05	DB
CCR-17	9030504-03	3/6/2019 13:26	3/18/2019 9:41	EPA 365.1 (Phosphorus -Total)	Phosphorus- Elemental	0.076		mg/L		0.00300	0.0133	PES
CCR-17	9030504-03	3/6/2019 13:26	3/18/2019 12:19	EPA 200.7	Potassium	11		mg/L		0.0150	0.0500	PES
CCR-17	9030504-03	3/6/2019 13:26	3/7/2019 13:02	SM18 2540 C	Residues- Filterable (TDS)	632		mg/L		10.0	20.0	CF
CCR-17	9030504-03	3/6/2019 13:26	3/6/2019 13:26	By Observation	Sheen	No Sheen		N/A	U	---	---	DB
CCR-17	9030504-03	3/6/2019 13:26	3/6/2019 13:26	EPA 120.1	Specific Conductance	8.71		umhos/cm		1	5	DB
CCR-17	9030504-03	3/6/2019 13:26	3/7/2019 12:47	EPA 300.0 (Sulfate)	Sulfate	236		mg/L		0.500	2.00	CF
CCR-17	9030504-03	3/6/2019 13:26	3/6/2019 13:26	EPA 170.1	Temperature	24.1		deg C		0.1	0.1	DB
CCR-17	9030504-03	3/6/2019 13:26	3/6/2019 13:26	EPA 180.1	Turbidity	20.7		NTU		0.1	0.5	DB
CCR-17	9030504-03	3/6/2019 13:26	3/6/2019 13:26	FDEP DEP-SOP	Water Level	---		FT		0.1	0.5	DB
CCR-17	9030504-03	3/6/2019 13:26	3/29/2019 9:53	EPA 200.7	Calcium	141		mg/L		7.45	25.0	CF
CCR-17	9030504-03	3/6/2019 13:26	3/11/2019 15:51	EPA 300.0 (Chloride)	Chloride	22.0		mg/L		0.152	0.400	CF
CCR-17	9030504-03	3/6/2019 13:26	3/29/2019 9:53	EPA 200.7	Magnesium	13.3		mg/L		0.456	1.00	CF
CCR-17	9030504-03	3/6/2019 13:26	3/29/2019 9:53	EPA 200.7	Sodium	4.97		mg/L	I	2.36	5.00	CF
CCR-18	9030504-04	3/6/2019 14:07	3/6/2019 14:07	EPA 350.1	Ammonia- Un-ionized (NH3)	0.464		mg/L		0.00400	0.0222	PES
CCR-18	9030504-04	3/6/2019 14:07	3/6/2019 14:07	By Observation	Color	Clear		[blank]	U	---	---	DB
CCR-18	9030504-04	3/6/2019 14:07	3/6/2019 14:07	EPA 360.2	Dissolved Oxygen	1.53		mg/L		0.10	0.20	DB
CCR-18	9030504-04	3/6/2019 14:07	3/19/2019 9:33	EPA 200.7	Iron	227		ug/L		30.7	100	CF
CCR-18	9030504-04	3/6/2019 14:07	3/19/2019 9:33	EPA 200.7	Manganese	11.3		ug/L		2.30	10.0	CF
CCR-18	9030504-04	3/6/2019 14:07	3/12/2019 18:00	EPA 353.2 (Nitrate-Nitrite (N))	Nitrate-Nitrite (N)	0.0300		mg/L	U	0.0300	0.250	PES
CCR-18	9030504-04	3/6/2019 14:07	3/6/2019 14:07	SM18 2580 B	ORP	-169		mV	U	1	1	DB
CCR-18	9030504-04	3/6/2019 14:07	3/6/2019 14:07	SM18 4500-B B	pH	6.31		SU		0.05	0.05	DB
CCR-18	9030504-04	3/6/2019 14:07	3/18/2019 9:42	EPA 365.1 (Phosphorus -Total)	Phosphorus- Elemental	0.397		mg/L		0.00300	0.0133	PES
CCR-18	9030504-04	3/6/2019 14:07	3/18/2019 12:21	EPA 200.7	Potassium	4.32						

**3030 E Lake Parker Dr  
Lakeland, FL 33805**  
**CCR SAMPLING**

**Month / Year: March 2019**  
**LAB ANALYSIS REPORT**

SampleName	Sample ID	Date/Time Sampled	Date/Time Analyzed	Method	Analyte	Result	Error	Units	Qualifiers	Detection Limit	Reporting Limit	Analyst
CCR-18	9030504-04	3/6/2019 14:07	3/6/2019 14:07	By Observation	Sheen	No Sheen		N/A	U	---	---	DB
CCR-18	9030504-04	3/6/2019 14:07	3/19/2019 9:33	EPA 200.7	Sodium	1.66		mg/L		0.0472	0.100	CF
CCR-18	9030504-04	3/6/2019 14:07	3/6/2019 14:07	EPA 120.1	Specific Conductance	355		umhos/cm		1	5	DB
CCR-18	9030504-04	3/6/2019 14:07	3/6/2019 14:07	EPA 170.1	Temperature	23.7		deg C		0.1	0.1	DB
CCR-18	9030504-04	3/6/2019 14:07	3/6/2019 14:07	EPA 180.1	Turbidity	15.5		NTU		0.1	0.5	DB
CCR-18	9030504-04	3/6/2019 14:07	3/6/2019 14:07	FDEP DEP-SOP	Water Level	---		FT		0.1	0.5	DB
CCR-18	9030504-04	3/6/2019 14:07	3/29/2019 9:58	EPA 200.7	Calcium	63.7		mg/L		7.45	25.0	CF
CCR-18	9030504-04	3/6/2019 14:07	3/29/2019 9:58	EPA 200.7	Magnesium	3.79		mg/L		0.456	1.00	CF
CCR-18	9030504-04	3/6/2019 14:07	3/11/2019 16:43	EPA 300.0 (Chloride)	Chloride	2.70		mg/L		0.0380	0.100	CF
CCR-18	9030504-04	3/6/2019 14:07	3/11/2019 16:43	EPA 300.0 (Sulfate)	Sulfate	29.3		mg/L		0.0250	0.100	CF
CCR-19	9030504-05	3/6/2019 14:55	3/18/2019 13:39	EPA 350.1	Ammonia- Un-ionized (NH3)	14.1		mg/L		0.0800	0.444	PES
CCR-19	9030504-05	3/6/2019 14:55	3/7/2019 13:39	EPA 300.0 (Chloride)	Chloride	1330		mg/L		0.760	2.00	CF
CCR-19	9030504-05	3/6/2019 14:55	3/6/2019 14:55	By Observation	Color	Clear	[blank]	U		---	---	DB
CCR-19	9030504-05	3/6/2019 14:55	3/6/2019 14:55	EPA 360.2	Dissolved Oxygen	0.22		mg/L		0.10	0.20	DB
CCR-19	9030504-05	3/6/2019 14:55	3/19/2019 9:38	EPA 200.7	Iron	853		ug/L		30.7	100	CF
CCR-19	9030504-05	3/6/2019 14:55	3/19/2019 0:00	EPA 200.7	Lithium	30.0		ug/L	I	9.1	50	SGS
CCR-19	9030504-05	3/6/2019 14:55	3/19/2019 9:38	EPA 200.7	Manganese	69.7		ug/L		2.30	10.0	CF
CCR-19	9030504-05	3/6/2019 14:55	3/12/2019 14:20	EPA 353.2 (Nitrate-Nitrite (N))	Nitrate-Nitrite (N)	0.0300		mg/L	U	0.0300	0.250	PES
CCR-19	9030504-05	3/6/2019 14:55	3/6/2019 14:55	SM18 2580 B	ORP	-228		mV	U	1	1	DB
CCR-19	9030504-05	3/6/2019 14:55	3/6/2019 14:55	SM18 4500-B B	pH	4.83		SU		0.05	0.05	DB
CCR-19	9030504-05	3/6/2019 14:55	3/18/2019 10:24	EPA 365.1 (Phosphorus -Total)	Phosphorus- Elemental	0.168		mg/L		0.00300	0.0133	PES
CCR-19	9030504-05	3/6/2019 14:55	3/18/2019 13:32	EPA 200.7	Potassium	252		mg/L		0.375	1.25	PES
CCR-19	9030504-05	3/6/2019 14:55	3/7/2019 13:06	SM18 2540 C	Residues- Filterable (TDS)	4330		mg/L		20.0	40.0	CF
CCR-19	9030504-05	3/6/2019 14:55	3/6/2019 14:55	By Observation	Sheen	No Sheen	N/A	U		---	---	DB
CCR-19	9030504-05	3/6/2019 14:55	3/6/2019 14:55	EPA 120.1	Specific Conductance	6060		umhos/cm		1	5	DB
CCR-19	9030504-05	3/6/2019 14:55	3/7/2019 13:39	EPA 300.0 (Sulfate)	Sulfate	1400		mg/L		0.500	2.00	CF
CCR-19	9030504-05	3/6/2019 14:55	3/6/2019 14:55	EPA 170.1	Temperature	22.2		deg C		0.1	0.1	DB
CCR-19	9030504-05	3/6/2019 14:55	3/6/2019 14:55	EPA 180.1	Turbidity	23.1		NTU		0.1	0.5	DB
CCR-19	9030504-05	3/6/2019 14:55	3/6/2019 14:55	FDEP DEP-SOP	Water Level	---		FT		0.1	0.5	DB
CCR-19	9030504-05	3/6/2019 14:55	3/29/2019 10:03	EPA 200.7	Magnesium	45.2		mg/L		0.911	2.00	CF
CCR-19	9030504-05	3/6/2019 14:55	3/29/2019 10:03	EPA 200.7	Sodium	253		mg/L		4.72	10.0	CF
CCR-19	9030504-05	3/6/2019 14:55	3/29/2019 11:14	EPA 200.7	Calcium	759		mg/L		29.8	100	CF
CCR-20	9030504-06	3/7/2019 10:13	3/18/2019 13:40	EPA 350.1	Ammonia- Un-ionized (NH3)	16.4		mg/L		0.0800	0.444	PES
CCR-20	9030504-06	3/7/2019 10:13	3/18/2019 12:26	EPA 200.7	Arsenic	28.2		ug/L	J-7	5.86	10.0	PES
CCR-20	9030504-06	3/7/2019 10:13	3/7/2019 14:05	EPA 300.0 (Chloride)	Chloride	336		mg/L		0.760	2.00	CF
CCR-20	9030504-06	3/7/2019 10:13	3/7/2019 10:13	By Observation	Color	Clear	[blank]	U		---	---	DB
CCR-20	9030504-06	3/7/2019 10:13	3/7/2019 10:13	EPA 360.2	Dissolved Oxygen	0.53		mg/L		0.10	0.20	DB
CCR-20	9030504-06	3/7/2019 10:13	3/19/2019 9:42	EPA 200.7	Iron	804		ug/L		30.7	100	CF
CCR-20	9030504-06	3/7/2019 10:13	3/19/2019 9:42	EPA 200.7	Manganese	69.0		ug/L		2.30	10.0	CF
CCR-20	9030504-06	3/7/2019 10:13	3/12/2019 14:22	EPA 353.2 (Nitrate-Nitrite (N))	Nitrate-Nitrite (N)	0.0300		mg/L	U	0.0300	0.250	PES
CCR-20	9030504-06	3/7/2019 10:13	3/7/2019 10:13	SM18 2580 B	ORP	-276		mV	U	1	1	DB
CCR-20	9030504-06	3/7/2019 10:13	3/7/2019 10:13	SM18 4500-B B	pH	5.24		SU		0.05	0.05	DB
CCR-20	9030504-06	3/7/2019 10:13	3/18/2019 10:25	EPA 365.1 (Phosphorus -Total)	Phosphorus- Elemental	0.108		mg/L		0.00300	0.0133	PES
CCR-20	9030504-06	3/7/2019 10:13	3/18/2019 13:34	EPA 200.7	Potassium	240		mg/L		0.375	1.25	PES
CCR-20	9030504-06	3/7/2019 10:13	3/12/2019 10:34	SM18 2540 C	Residues- Filterable (TDS)	2810		mg/L		20.0	40.0	CF
CCR-20	9030504-06	3/7/2019 10:13	3/7/2019 10:13	By Observation	Sheen	No Sheen	N/A	U		---	---	DB
CCR-20	9030504-06	3/7/2019 10:13	3/7/2019 10:13	EPA 120.1	Specific Conductance	3820		umhos/cm		1	5	DB
CCR-20	9030504-06	3/7/2019 10:13	3/7/2019 14:05	EPA 300.0 (Sulfate)	Sulfate	1470		mg/L		0.500	2.00	CF
CCR-20	9030504-06	3/7/2019 10:13	3/7/2019 10:13	EPA 170.1	Temperature	22.1		deg C		0.1	0.1	DB
CCR-20	9030504-06	3/7/2019 10:13	3/7/2019 10:13	EPA 180.1	Turbidity	14.1		NTU		0.1	0.5	DB
CCR-20	9030504-06	3/7/2019 10:13	3/7/2019 10:13	FDEP DEP-SOP	Water Level	---		FT		0.1	0.5	DB
CCR-20	9030504-06	3/7/2019 10:13	3/29/2019 10:07	EPA 200.7	Magnesium	17.0		mg/L		0.911	2.00	CF
CCR-20	9030504-06	3/7/2019 10:13	3/29/2019 10:07	EPA 200.7	Sodium	148		mg/L		4.72	10.0	CF
CCR-20	9030504-06	3/7/2019 10:13	3/29/2019 11:18	EPA 200.7	Calcium	496		mg/L		29.8	100	CF
CCR-21	9030504-07	3/7/2019 10:42	3/13/2019 8:53	EPA 350.1	Ammonia- Un-ionized (NH3)	0.583		mg/L		0.00400	0.0222	PES
CCR-21	9030504-07	3/7/2019 10:42	3/18/2019 12:33	EPA 200.7	Arsenic	5.86		ug/L	U	5.86	10.0	PES
CCR-21	9030504-07	3/7/2019 10:42	3/7/2019 14:31	EPA 300.0 (Chloride)	Chloride	14.2		mg/L		0.760	2.00	CF
CCR-21	9030504-07	3/7/2019 10:42	3/7/2019 10:42	By Observation	Color	Clear	[blank]	U		---	---	DB
CCR-21	9030504-07	3/7/2019 10:42	3/7/2019 10:42	EPA 360.2	Dissolved Oxygen	0.18		mg/L	I	0.10	0.20	DB
CCR-21	9030504-07	3/7/2019 10:42	3/19/2019 9:46	EPA 200.7	Manganese	79.2		ug/L		2.30	10.0	CF
CCR-21	9030504-07	3/7/2019 10:42	3/12/2019 14:24	EPA 353.2 (Nitrate-Nitrite (N))	Nitrate-Nitrite (N)	0.0300		mg/L	U	0.0300	0.250	PES
CCR-21	9030504-07	3/7/2019 10:42	3/7/2019 10:42	SM18 2580 B	ORP	-144		mV	U	1	1	DB
CCR-21	9030504-07	3/7/2019 10:42	3/7/2019 10:42	SM18 4500-B B	pH	6.37		SU		0.05	0.05	DB
CCR-21	9030504-07	3/7/2019 10:42	3/18/2019 10:26	EPA 365.1 (Phosphorus -Total)	Phosphorus- Elemental	0.054		mg/L		0.00300	0.0133	PES
CCR-21	9030504-07	3/7/2019 10:42	3/18/2019 12:33	EPA 200.7	Potassium	19.7		mg/L		0.0150	0.0500	PES
CCR-21	9030504-07	3/7/2019 10:42	3/12/2019 10:36	SM18 2540 C	Residues- Filterable (TDS)	1310		mg/L		20.0	40.0	CF
CCR-21	9030504-07	3/7/2019 10:42	3/7/2019 10:42	By Observation	Sheen	No Sheen	N/A	U		---	---	DB
CCR-21	9030504-07	3/7/2019 10:42	3/7/2019 10:42	EPA 120.1	Specific Conductance	1646		umhos/cm		1	5	DB
CCR-21	9030504-07	3/7/2019 10:42	3/19/2019 11:18	EPA 300.0 (Sulfate)	Sulfate	629		mg/L		0.500	2.00	CF
CCR-21	9030504-07	3/7/2019 10:42	3/7/2019 10:42	EPA 170.1	Temperature	22.4		deg C		0.1	0.1	DB
CCR-21	9030504-07	3/7/2019 10:42	3/7/2019 10:42	EPA 180.1	Turbidity	6.26		NTU		0.1	0.5	DB
CCR-21	9030504-07	3/7/2019 10:42	3/7/2019 10:42	FDEP DEP-SOP	Water Level	---		FT		0.1	0.5	DB
CCR-21	9030504-07	3/7/2019 10:42	3/29/2019 10:12	EPA 200.7	Iron	3510		ug/L	I	3070	10000	CF
CCR-21	9030504-07	3/7/2019 10:42	3/29/2019 10:12	EPA 200.7	Magnesium	14.4		mg/L		0.911	2.00	CF
CCR-21	9030504-07	3/7/2019 10:42	3/29/2019 10:12	EPA 200.7	Sodium	5.06		mg/L	I	4.72	10.0	CF
CCR-21	9030504-07	3/7/2019 10:42	3/29/2019 10:12	EPA 200.7	Calcium	328		mg/L	J-8	14.9	50.0	CF
CCR-22	9030504-08	3/7/2019 11:23	3/13/2019 8:55	EPA 350.1	Ammonia- Un-ionized (NH3)	1.1		mg/L		0.00400	0.0222	PES
CCR-22	9030504-08	3/7/2019 11:23	3/7/2019 14:57	EPA 300.0 (Chloride)	Chloride	107		mg/L		0.760	2.00	CF
CCR-22	9030504-08	3/7/2019 11:23	3/7/2019 11:23	By Observation	Color	Clear	[blank]	U		---	---	DB
CCR-22	9030504-08	3/7/2019 11:23	3/7/2019 11:23	EPA 360.2	Dissolved Oxygen	0.22		mg/L		0.10	0.20	DB
CCR-22	9030504-08	3/7/2019 11:23	3/19/2019 0:00	EPA 200.7	Lithium	129		ug/L		9.1	50	SGS

## 3030 E Lake Parker Dr

Lakeland, FL 33805

## CCR SAMPLING

Month / Year: March 2019  
LAB ANALYSIS REPORT

SampleName	Sample ID	Date/Time Sampled	Date/Time Analyzed	Method	Analyte	Result	Error	Units	Qualifiers	Detection Limit	Reporting Limit	Analyst
CCR-22	9030504-08	3/7/2019 11:23	3/7/2019 11:23	SM18 4500-B-B	pH	4.82		SU		0.05	0.05	DB
CCR-22	9030504-08	3/7/2019 11:23	3/18/2019 10:27	EPA 365.1 (Phosphorus-Total)	Phosphorus- Elemental	0.921		mg/L		0.00300	0.0133	PES
CCR-22	9030504-08	3/7/2019 11:23	3/18/2019 13:36	EPA 200.7	Potassium	188		mg/L		0.375	1.25	PES
CCR-22	9030504-08	3/7/2019 11:23	3/21/2019 13:06	EPA 903.1	Radium 226	26.3	1.5	pCi/L		0.1	---	FRS
CCR-22	9030504-08	3/7/2019 11:23	3/20/2019 8:04	Ra-05	Radium 228	1.4	0.6	pCi/L		0.7	---	FRS
CCR-22	9030504-08	3/7/2019 11:23	3/12/2019 10:38	SM18 2540 C	Residues- Filterable (TDS)	1730		mg/L		20.0	40.0	CF
CCR-22	9030504-08	3/7/2019 11:23	3/7/2019 11:23	By Observation	Sheen	No Sheen		N/A	U	---	---	DB
CCR-22	9030504-08	3/7/2019 11:23	3/7/2019 11:23	EPA 120.1	Specific Conductance	2300		umhos/cm		1	5	DB
CCR-22	9030504-08	3/7/2019 11:23	3/7/2019 14:57	EPA 300.0 (Sulfate)	Sulfate	989		mg/L		0.500	2.00	CF
CCR-22	9030504-08	3/7/2019 11:23	3/7/2019 11:23	EPA 170.1	Temperature	23.5		deg C		0.1	0.1	DB
CCR-22	9030504-08	3/7/2019 11:23	3/7/2019 11:23	EPA 180.1	Turbidity	18.4		NTU		0.1	0.5	DB
CCR-22	9030504-08	3/7/2019 11:23	3/7/2019 11:23	FDEP DEP-SOP	Water Level	---		FT		0.1	0.5	DB
CCR-22	9030504-08	3/7/2019 11:23	3/29/2019 10:17	EPA 200.7	Calcium	303		mg/L		14.9	50.0	CF
CCR-22	9030504-08	3/7/2019 11:23	3/29/2019 10:17	EPA 200.7	Iron	4030		ug/L	I	3070	10000	CF
CCR-22	9030504-08	3/7/2019 11:23	3/29/2019 10:17	EPA 200.7	Magnesium	13.6		mg/L		0.911	2.00	CF
CCR-22	9030504-08	3/7/2019 11:23	3/29/2019 10:17	EPA 200.7	Sodium	33.4		mg/L		4.72	10.0	CF
CCR-23	9030504-09	3/7/2019 13:26	3/13/2019 8:56	EPA 350.1	Ammonia- Un-ionized (NH3)	1.02		mg/L		0.00400	0.0222	PES
CCR-23	9030504-09	3/7/2019 13:26	3/11/2019 16:17	EPA 300.0 (Chloride)	Chloride	133		mg/L		0.760	2.00	CF
CCR-23	9030504-09	3/7/2019 13:26	3/7/2019 13:26	By Observation	Color	Clear		[blank]	U	---	---	ND
CCR-23	9030504-09	3/7/2019 13:26	3/7/2019 13:26	EPA 360.2	Dissolved Oxygen	0.23		mg/L		0.10	0.20	ND
CCR-23	9030504-09	3/7/2019 13:26	3/19/2019 9:55	EPA 200.7	Manganese	175		ug/L		2.30	10.0	CF
CCR-23	9030504-09	3/7/2019 13:26	3/12/2019 14:27	EPA 353.2 (Nitrate-Nitrite (N))	Nitrate-Nitrite (N)	0.0400		mg/L	I	0.0300	0.250	PES
CCR-23	9030504-09	3/7/2019 13:26	3/12/2019 13:26	SM18 2580 B	ORP	-6.20		mV	U	1	1	ND
CCR-23	9030504-09	3/7/2019 13:26	3/7/2019 13:26	SM18 4500-B-B	pH	5.09		SU		0.05	0.05	ND
CCR-23	9030504-09	3/7/2019 13:26	3/18/2019 10:59	EPA 365.1 (Phosphorus -Total)	Phosphorus- Elemental	2.7		mg/L		0.0150	0.0665	PES
CCR-23	9030504-09	3/7/2019 13:26	3/18/2019 12:37	EPA 200.7	Potassium	4.59		mg/L		0.0150	0.0500	PES
CCR-23	9030504-09	3/7/2019 13:26	3/21/2019 13:06	EPA 903.1	Radium 226	6.5	0.7	pCi/L		0.1	---	FRS
CCR-23	9030504-09	3/7/2019 13:26	3/20/2019 8:04	Ra-05	Radium 228	0.8	0.5	pCi/L		0.7	---	FRS
CCR-23	9030504-09	3/7/2019 13:26	3/12/2019 10:40	SM18 2540 C	Residues- Filterable (TDS)	1320		mg/L		20.0	40.0	CF
CCR-23	9030504-09	3/7/2019 13:26	3/7/2019 13:26	By Observation	Sheen	No Sheen		N/A	U	---	---	ND
CCR-23	9030504-09	3/7/2019 13:26	3/7/2019 13:26	EPA 120.1	Specific Conductance	1727		umhos/cm		1	5	ND
CCR-23	9030504-09	3/7/2019 13:26	3/11/2019 16:17	EPA 300.0 (Sulfate)	Sulfate	748		mg/L		0.500	2.00	CF
CCR-23	9030504-09	3/7/2019 13:26	3/7/2019 13:26	EPA 170.1	Temperature	25.3		deg C		0.1	0.1	ND
CCR-23	9030504-09	3/7/2019 13:26	3/7/2019 13:26	EPA 180.1	Turbidity	25.0		NTU		0.1	0.5	ND
CCR-23	9030504-09	3/7/2019 13:26	3/7/2019 13:26	FDEP DEP-SOP	Water Level	---		FT		0.1	0.5	ND
CCR-23	9030504-09	3/7/2019 13:26	3/29/2019 10:22	EPA 200.7	Calcium	255		mg/L		14.9	50.0	CF
CCR-23	9030504-09	3/7/2019 13:26	3/29/2019 10:22	EPA 200.7	Iron	20800		ug/L		3070	10000	CF
CCR-23	9030504-09	3/7/2019 13:26	3/29/2019 10:22	EPA 200.7	Magnesium	37.1		mg/L		0.911	2.00	CF
CCR-23	9030504-09	3/7/2019 13:26	3/29/2019 10:22	EPA 200.7	Sodium	35.2		mg/L		4.72	10.0	CF
MW-24S	9030504-10	3/5/2019 13:29	3/13/2019 8:58	EPA 350.1	Ammonia- Un-ionized (NH3)	0.62		mg/L		0.00400	0.0222	PES
MW-24S	9030504-10	3/5/2019 13:29	3/6/2019 18:18	EPA 300.0 (Chloride)	Chloride	8.56		mg/L		0.0380	0.100	CF
MW-24S	9030504-10	3/5/2019 13:29	3/5/2019 13:29	By Observation	Color	Clear		[blank]	U	---	---	DB
MW-24S	9030504-10	3/5/2019 13:29	3/5/2019 13:29	EPA 360.2	Dissolved Oxygen	0.67		mg/L		0.10	0.20	DB
MW-24S	9030504-10	3/5/2019 13:29	3/19/2019 9:59	EPA 200.7	Iron	682		ug/L		30.7	100	CF
MW-24S	9030504-10	3/5/2019 13:29	3/19/2019 0:00	EPA 200.7	Lithium	16.3		ug/L	I	9.1	50	SGS
MW-24S	9030504-10	3/5/2019 13:29	3/19/2019 9:59	EPA 200.7	Manganese	14.9		ug/L		2.30	10.0	CF
MW-24S	9030504-10	3/5/2019 13:29	3/12/2019 14:29	EPA 353.2 (Nitrate-Nitrite (N))	Nitrate-Nitrite (N)	0.0970		mg/L	I	0.0300	0.250	PES
MW-24S	9030504-10	3/5/2019 13:29	3/5/2019 13:29	SM18 2580 B	ORP	-46		mV	U	1	1	DB
MW-24S	9030504-10	3/5/2019 13:29	3/5/2019 13:29	EPA 300.0 (Sulfate)	pH	5.57		SU		0.05	0.05	DB
MW-24S	9030504-10	3/5/2019 13:29	3/18/2019 10:29	EPA 365.1 (Phosphorus -Total)	Phosphorus- Elemental	0.152		mg/L		0.00300	0.0133	PES
MW-24S	9030504-10	3/5/2019 13:29	3/18/2019 12:40	EPA 200.7	Potassium	1.95		mg/L		0.0150	0.0500	PES
MW-24S	9030504-10	3/5/2019 13:29	3/7/2019 13:08	SM18 2540 C	Residues- Filterable (TDS)	214		mg/L		10.0	20.0	CF
MW-24S	9030504-10	3/5/2019 13:29	3/5/2019 13:29	By Observation	Sheen	No Sheen		N/A	U	---	---	DB
MW-24S	9030504-10	3/5/2019 13:29	3/5/2019 13:29	EPA 120.1	Specific Conductance	291		umhos/cm		1	5	DB
MW-24S	9030504-10	3/5/2019 13:29	3/6/2019 18:18	EPA 300.0 (Sulfate)	Sulfate	29.7		mg/L		0.0250	0.100	CF
MW-24S	9030504-10	3/5/2019 13:29	3/5/2019 13:29	EPA 170.1	Temperature	22.1		deg C		0.1	0.1	DB
MW-24S	9030504-10	3/5/2019 13:29	3/5/2019 13:29	EPA 180.1	Turbidity	6.25		NTU		0.1	0.5	DB
MW-24S	9030504-10	3/5/2019 13:29	3/5/2019 13:29	FDEP DEP-SOP	Water Level	133.89		FT		0.1	0.5	DB
MW-24S	9030504-10	3/5/2019 13:29	3/29/2019 10:26	EPA 200.7	Calcium	35.0		mg/L		2.98	10.0	CF
MW-24S	9030504-10	3/5/2019 13:29	3/29/2019 10:26	EPA 200.7	Magnesium	12.9		mg/L		0.182	0.400	CF
MW-24S	9030504-10	3/5/2019 13:29	3/29/2019 10:26	EPA 200.7	Sodium	4.15		mg/L		0.944	2.00	CF
MW-25S	9030504-11	3/6/2019 10:27	3/13/2019 9:03	EPA 350.1	Ammonia- Un-ionized (NH3)	0.67		mg/L		0.00400	0.0222	PES
MW-25S	9030504-11	3/6/2019 10:27	3/6/2019 18:44	EPA 300.0 (Chloride)	Chloride	16.2		mg/L		0.0380	0.100	CF
MW-25S	9030504-11	3/6/2019 10:27	3/6/2019 10:27	By Observation	Color	Clear		[blank]	U	---	---	DB
MW-25S	9030504-11	3/6/2019 10:27	3/6/2019 10:27	EPA 360.2	Dissolved Oxygen	1.57		mg/L		0.10	0.20	DB
MW-25S	9030504-11	3/6/2019 10:27	3/6/2019 10:58	EPA 200.7	Iron	30.7		ug/L	U	30.7	100	CF
MW-25S	9030504-11	3/6/2019 10:27	3/19/2019 0:00	EPA 200.7	Lithium	11.8		ug/L	I	9.1	50	SGS
MW-25S	9030504-11	3/6/2019 10:27	3/19/2019 10:58	EPA 200.7	Manganese	2.30		ug/L	U	2.30	10.0	CF
MW-25S	9030504-11	3/6/2019 10:27	3/12/2019 14:31	EPA 353.2 (Nitrate-Nitrite (N))	Nitrate-Nitrite (N)	4.94		mg/L		0.0300	0.250	PES
MW-25S	9030504-11	3/6/2019 10:27	3/6/2019 10:27	SM18 2580 B	ORP	278		mV		1	1	DB
MW-25S	9030504-11	3/6/2019 10:27	3/6/2019 10:27	SM18 4500-B-B	pH	6.10		SU		0.05	0.05	DB
MW-25S	9030504-11	3/6/2019 10:27	3/18/2019 10:59	EPA 365.1 (Phosphorus -Total)	Phosphorus- Elemental	0.06		mg/L		0.00300	0.0133	PES
MW-25S	9030504-11	3/6/2019 10:27	3/18/2019 12:56	EPA 200.7	Potassium	2.96		mg/L	V	0.0150	0.0500	PES
MW-25S	9030504-11	3/6/2019 10:27	3/21/2019 14:09	EPA 903.1	Radium 226	0.5	0.2	pCi/L		0.2	---	FRS
MW-25S	9030504-11	3/6/2019 10:27	3/20/2019 8:04	Ra-05	Radium 228	0.7	0.4	pCi/L	U	0.7	---	FRS
MW-25S	9030504-11	3/6/2019 10:27	3/7/2019 13:10	SM18 2540 C	Residues- Filterable (TDS)	377		mg/L		10.0	20.0	CF
MW-25S	9030504-11	3/6/2019 10:27	3/6/2019 10:27	By Observation	Sheen	No Sheen		N/A	U	---	---	DB
MW-25S	9030504-11	3/6/2019 10:27	3/6/2019 10:27	EPA 120.1	Specific Conductance	560		umhos/cm		1	5	DB
MW-25S	9030504-11	3/6/2019 10:27	3/6/2019 10:27	EPA 300.0 (Sulfate)	Sulfate	112		mg/L		0.0250	0.100	CF
MW-25S	9030504-11	3/6/2019 10:27	3/6/2019 10:27	EPA 170.1	Temperature	22.4		deg C		0.1	0.1	DB
MW-25S	9030504-11	3										

**3030 E Lake Parker Dr  
Lakeland, FL 33805  
CCR SAMPLING**

**Month / Year: March 2019  
LAB ANALYSIS REPORT**

<b>SampleName</b>	<b>Sample ID</b>	<b>Date/Time Sampled</b>	<b>Date/Time Analyzed</b>	<b>Method</b>	<b>Analyte</b>	<b>Result</b>	<b>Error</b>	<b>Units</b>	<b>Qualifiers</b>	<b>Detection Limit</b>	<b>Reporting Limit</b>	<b>Analyst</b>
MW-25S	9030504-11	3/6/2019 10:27	3/29/2019 11:23	EPA 200.7	Sodium	2.39		mg/L	I	2.36	5.00	CF
MW-26S	9030504-12	3/5/2019 14:43	3/13/2019 9:05	EPA 350.1	Ammonia- Un-ionized (NH3)	0.992		mg/L		0.00400	0.0222	PES
MW-26S	9030504-12	3/5/2019 14:43	3/18/2019 12:58	EPA 200.7	Arsenic	5.86		ug/L	U	5.86	10.0	PES
MW-26S	9030504-12	3/5/2019 14:43	3/6/2019 19:10	EPA 300.0 (Chloride)	Chloride	3.05		mg/L		0.0380	0.100	CF
MW-26S	9030504-12	3/5/2019 14:43	3/5/2019 14:43	By Observation	Color	Clear		[blank]	U	---	---	DB
MW-26S	9030504-12	3/5/2019 14:43	3/5/2019 14:43	EPA 360.2	Dissolved Oxygen	3.49		mg/L		0.10	0.20	DB
MW-26S	9030504-12	3/5/2019 14:43	3/19/2019 11:02	EPA 200.7	Iron	254		ug/L	V	30.7	100	CF
MW-26S	9030504-12	3/5/2019 14:43	3/19/2019 11:02	EPA 200.7	Magnesium	1.40		mg/L		0.00911	0.0200	CF
MW-26S	9030504-12	3/5/2019 14:43	3/19/2019 11:02	EPA 200.7	Manganese	2.30		ug/L	U	2.30	10.0	CF
MW-26S	9030504-12	3/5/2019 14:43	3/12/2019 14:32	EPA 353.2 (Nitrate-Nitrite (N))	Nitrate-Nitrite (N)	7.26		mg/L		0.0300	0.250	PES
MW-26S	9030504-12	3/5/2019 14:43	3/5/2019 14:43	SM18 2580 B	ORP	154		mV		1	1	DB
MW-26S	9030504-12	3/5/2019 14:43	3/5/2019 14:43	SM18 4500-B	pH	6.04		SU		0.05	0.05	DB
MW-26S	9030504-12	3/5/2019 14:43	3/18/2019 11:00	EPA 365.1 (Phosphorus -Total)	Phosphorus- Elemental	0.144		mg/L		0.00300	0.0133	PES
MW-26S	9030504-12	3/5/2019 14:43	3/18/2019 12:58	EPA 200.7	Potassium	2.11		mg/L	V	0.0150	0.0500	PES
MW-26S	9030504-12	3/5/2019 14:43	3/21/2019 14:09	EPA 903.1	Radium 226	0.5	0.2	pCi/L		0.2	---	FRS
MW-26S	9030504-12	3/5/2019 14:43	3/20/2019 8:04	Ra-05	Radium 228	0.6	0.4	pCi/L	U	0.6	---	FRS
MW-26S	9030504-12	3/5/2019 14:43	3/7/2019 13:12	SM18 2540 C	Residues- Filterable (TDS)	256		mg/L		10.0	20.0	CF
MW-26S	9030504-12	3/5/2019 14:43	3/5/2019 14:43	By Observation	Sheen	No Sheen		N/A	U	---	---	DB
MW-26S	9030504-12	3/5/2019 14:43	3/19/2019 11:02	EPA 200.7	Sodium	0.899		mg/L		0.0472	0.100	CF
MW-26S	9030504-12	3/5/2019 14:43	3/5/2019 14:43	EPA 120.1	Specific Conductance	384		umhos/cm		1	5	DB
MW-26S	9030504-12	3/5/2019 14:43	3/6/2019 19:10	EPA 300.0 (Sulfate)	Sulfate	90.4		mg/L		0.0250	0.100	CF
MW-26S	9030504-12	3/5/2019 14:43	3/5/2019 14:43	EPA 170.1	Temperature	22.3		deg C		0.1	0.1	DB
MW-26S	9030504-12	3/5/2019 14:43	3/5/2019 14:43	EPA 180.1	Turbidity	5.10		NTU		0.1	0.5	DB
MW-26S	9030504-12	3/5/2019 14:43	3/5/2019 14:43	FDEP DEP-SOP	Water Level	132.00		FT		0.1	0.5	DB
MW-26S	9030504-12	3/5/2019 14:43	3/29/2019 11:28	EPA 200.7	Calcium	70.2		mg/L		7.45	25.0	CF
MW-26S	9030504-12	3/5/2019 14:43	3/29/2019 11:28	EPA 200.7	Magnesium	1.53		mg/L		0.456	1.00	CF
Fish Lake	9030504-13	3/11/2019 13:20	3/13/2019 9:06	EPA 350.1	Ammonia- Un-ionized (NH3)	0.246		mg/L		0.00400	0.0222	PES
Fish Lake	9030504-13	3/11/2019 13:20	3/18/2019 13:00	EPA 200.7	Arsenic	5.86		ug/L	U	5.86	10.0	PES
Fish Lake	9030504-13	3/11/2019 13:20	3/11/2019 17:09	EPA 300.0 (Chloride)	Chloride	36.6		mg/L		0.0380	0.100	CF
Fish Lake	9030504-13	3/11/2019 13:20	3/11/2019 13:20	EPA 360.2	Dissolved Oxygen	3.78		mg/L		0.10	0.20	AB
Fish Lake	9030504-13	3/11/2019 13:20	3/19/2019 11:07	EPA 200.7	Iron	329		ug/L	V	30.7	100	CF
Fish Lake	9030504-13	3/11/2019 13:20	3/19/2019 0:00	EPA 200.7	Lithium	22.2		ug/L	I	9.1	50	SGS
Fish Lake	9030504-13	3/11/2019 13:20	3/19/2019 11:07	EPA 200.7	Manganese	90.3		ug/L		2.30	10.0	CF
Fish Lake	9030504-13	3/11/2019 13:20	3/12/2019 14:34	EPA 353.2 (Nitrate-Nitrite (N))	Nitrate-Nitrite (N)	0.0300		mg/L	U	0.0300	0.250	PES
Fish Lake	9030504-13	3/11/2019 13:20	3/11/2019 13:20	SM18 2580 B	ORP	56		mV		1	1	AB
Fish Lake	9030504-13	3/11/2019 13:20	3/11/2019 13:20	SM18 4500-B	pH	6.92		SU		0.05	0.05	AB
Fish Lake	9030504-13	3/11/2019 13:20	3/18/2019 10:32	EPA 365.1 (Phosphorus -Total)	Phosphorus- Elemental	0.153		mg/L		0.00300	0.0133	PES
Fish Lake	9030504-13	3/11/2019 13:20	3/18/2019 13:00	EPA 200.7	Potassium	21.4		mg/L	V	0.0150	0.0500	PES
Fish Lake	9030504-13	3/11/2019 13:20	3/21/2019 14:09	EPA 903.1	Radium 226	0.7	0.2	pCi/L		0.1	---	FRS
Fish Lake	9030504-13	3/11/2019 13:20	3/20/2019 8:04	Ra-05	Radium 228	0.7	0.5	pCi/L	U	0.7	---	FRS
Fish Lake	9030504-13	3/11/2019 13:20	3/12/2019 10:42	SM18 2540 C	Residues- Filterable (TDS)	315		mg/L		10.0	20.0	CF
Fish Lake	9030504-13	3/11/2019 13:20	3/11/2019 13:20	EPA 120.1	Specific Conductance	517		umhos/cm		1	5	AB
Fish Lake	9030504-13	3/11/2019 13:20	3/11/2019 17:09	EPA 300.0 (Sulfate)	Sulfate	100		mg/L		0.0250	0.100	CF
Fish Lake	9030504-13	3/11/2019 13:20	3/11/2019 13:20	EPA 170.1	Temperature	27.6		deg C		0.1	0.1	AB
Fish Lake	9030504-13	3/11/2019 13:20	3/29/2019 11:32	EPA 200.7	Calcium	77.3		mg/L		7.45	25.0	CF
Fish Lake	9030504-13	3/11/2019 13:20	3/29/2019 11:32	EPA 200.7	Magnesium	4.53		mg/L		0.456	1.00	CF
Fish Lake	9030504-13	3/11/2019 13:20	3/29/2019 11:32	EPA 200.7	Sodium	13.9		mg/L		2.36	5.00	CF
Lake B	9030504-14	3/11/2019 13:00	3/13/2019 9:08	EPA 350.1	Ammonia- Un-ionized (NH3)	0.164		mg/L		0.00400	0.0222	PES
Lake B	9030504-14	3/11/2019 13:00	3/11/2019 17:34	EPA 300.0 (Chloride)	Chloride	65.0		mg/L		0.0380	0.100	CF
Lake B	9030504-14	3/11/2019 13:00	3/11/2019 13:00	EPA 360.2	Dissolved Oxygen	7.85		mg/L		0.10	0.20	AB
Lake B	9030504-14	3/11/2019 13:00	3/19/2019 11:11	EPA 200.7	Iron	463		ug/L	V	30.7	100	CF
Lake B	9030504-14	3/11/2019 13:00	3/19/2019 0:00	EPA 200.7	Lithium	13.9		ug/L	I	9.1	50	SGS
Lake B	9030504-14	3/11/2019 13:00	3/19/2019 11:11	EPA 200.7	Manganese	27.8		ug/L		2.30	10.0	CF
Lake B	9030504-14	3/11/2019 13:00	3/12/2019 14:39	EPA 353.2 (Nitrate-Nitrite (N))	Nitrate-Nitrite (N)	0.0300		mg/L	U	0.0300	0.250	PES
Lake B	9030504-14	3/11/2019 13:00	3/11/2019 13:00	SM18 2580 B	ORP	16		mV		1	1	AB
Lake B	9030504-14	3/11/2019 13:00	3/11/2019 13:00	SM18 4500-B	pH	7.79		SU		0.05	0.05	AB
Lake B	9030504-14	3/11/2019 13:00	3/18/2019 11:01	EPA 365.1 (Phosphorus -Total)	Phosphorus- Elemental	2.02		mg/L		0.0150	0.0665	PES
Lake B	9030504-14	3/11/2019 13:00	3/18/2019 13:02	EPA 200.7	Potassium	1.33		mg/L	V	0.0150	0.0500	PES
Lake B	9030504-14	3/11/2019 13:00	3/21/2019 14:09	EPA 903.1	Radium 226	1.6	0.4	pCi/L		0.1	---	FRS
Lake B	9030504-14	3/11/2019 13:00	3/20/2019 9:06	Ra-05	Radium 228	0.8	0.5	pCi/L	U	0.8	---	FRS
Lake B	9030504-14	3/11/2019 13:00	3/12/2019 10:44	SM18 2540 C	Residues- Filterable (TDS)	540		mg/L		10.0	20.0	CF
Lake B	9030504-14	3/11/2019 13:00	3/11/2019 13:00	EPA 120.1	Specific Conductance	2480		umhos/cm		1	5	AB
Lake B	9030504-14	3/11/2019 13:00	3/11/2019 17:34	EPA 300.0 (Sulfate)	Sulfate	85.9		mg/L		0.0250	0.100	CF
Lake B	9030504-14	3/11/2019 13:00	3/11/2019 13:00	EPA 170.1	Temperature	31.6		deg C		0.1	0.1	AB
Lake B	9030504-14	3/11/2019 13:00	3/29/2019 11:37	EPA 200.7	Calcium	147		mg/L		14.9	50.0	CF
Lake B	9030504-14	3/11/2019 13:00	3/29/2019 11:37	EPA 200.7	Magnesium	12.7		mg/L		0.911	2.00	CF
Lake B	9030504-14	3/11/2019 13:00	3/29/2019 11:37	EPA 200.7	Sodium	9.23		mg/L	I	4.72	10.0	CF
Lake C	9030504-15	3/13/2019 13:45	3/18/2019 12:40	EPA 350.1	Ammonia- Un-ionized (NH3)	0.166		mg/L		0.00400	0.0222	PES
Lake C	9030504-15	3/13/2019 13:45	3/20/2019 18:04	EPA 300.0 (Chloride)	Chloride	53.2		mg/L		0.0380	0.100	CF
Lake C	9030504-15	3/13/2019 13:45	3/13/2019 13:45	EPA 360.2	Dissolved Oxygen	5.56		mg/L		0.10	0.20	AB
Lake C	9030504-15	3/13/2019 13:45	3/19/2019 11:15	EPA 200.7	Iron	520		ug/L	V	30.7	100	CF
Lake C	9030504-15	3/13/2019 13:45	3/22/2019 0:00	EPA 200.7	Lithium	9.1		ug/L	U	9.1	50	SGS
Lake C	9030504-15	3/13/2019 13:45	3/19/2019 11:15	EPA 200.7	Manganese	12.7		ug/L		2.30	10.0	CF
Lake C	9030504-15	3/13/2019 13:45	3/14/2019 9:36	EPA 353.2 (Nitrate-Nitrite (N))	Nitrate-Nitrite (N)	0.0300		mg/L	U	0.0300	0.250	PES
Lake C	9030504-15	3/13/2019 13:45	3/13/2019 13:45	SM18 2580 B	ORP	49		mV		1	1	AB
Lake C	9030504-15	3/13/2019 13:45	3/13/2019 13:45	SM18 4500-B	pH	6.45		SU		0.05	0.05	AB
Lake C	9030504-15	3/13/2019 13:45	3/20/2019 13:25	EPA 365.1 (Phosphorus -Total)	Phosphorus- Elemental	1.22		mg/L		0.0150	0.0665	PES
Lake C	9030504-15	3/13/2019 13:45	3/18/2019 13:18	EPA 200.7	Potassium	4.16		mg/L	V	0.0150	0.0500	PES
Lake C	9030504-15	3/13/2019 13:45	3/29/2019 9:51	EPA 903.1	Radium 226	1.5	0.3	pCi/L		0.1</td		

**3030 E Lake Parker Dr  
Lakeland, FL 33805  
CCR SAMPLING**  
**Month / Year: March 2019**  
**LAB ANALYSIS REPORT**

SampleName	Sample ID	Date/Time Sampled	Date/Time Analyzed	Method	Analyte	Result	Error	Units	Qualifiers	Detection Limit	Reporting Limit	Analyst
Lake C	9030504-15	3/13/2019 13:45	3/29/2019 11:46	EPA 200.7	Calcium	32.7		mg/L		2.98	10.0	CF
Lake C	9030504-15	3/13/2019 13:45	3/29/2019 11:46	EPA 200.7	Magnesium	8.65		mg/L		0.182	0.400	CF
Lake C	9030504-15	3/13/2019 13:45	3/29/2019 11:46	EPA 200.7	Sodium	9.23		mg/L		0.944	2.00	CF
Lake D	9030504-16	3/13/2019 13:30	3/18/2019 12:42	EPA 350.1	Ammonia- Un-ionized (NH3)	0.67		mg/L		0.00400	0.0222	PES
Lake D	9030504-16	3/13/2019 13:30	3/20/2019 17:38	EPA 300.0 (Chloride)	Chloride	492		mg/L		0.190	0.500	CF
Lake D	9030504-16	3/13/2019 13:30	3/13/2019 13:30	EPA 360.2	Dissolved Oxygen	25.9		mg/L		0.10	0.20	AB
Lake D	9030504-16	3/13/2019 13:30	3/19/2019 11:20	EPA 200.7	Iron	198		ug/L	V	30.7	100	CF
Lake D	9030504-16	3/13/2019 13:30	3/22/2019 0:00	EPA 200.7	Lithium	23.5		ug/L	I	9.1	50	SGS
Lake D	9030504-16	3/13/2019 13:30	3/19/2019 11:20	EPA 200.7	Manganese	44.9		ug/L		2.30	10.0	CF
Lake D	9030504-16	3/13/2019 13:30	3/14/2019 9:37	EPA 353.2 (Nitrate-Nitrite (N))	Nitrate-Nitrite (N)	0.0300		mg/L	U	0.0300	0.250	PES
Lake D	9030504-16	3/13/2019 13:30	3/13/2019 13:30	SM18 2580 B	ORP	-187		mV	U	1	1	AB
Lake D	9030504-16	3/13/2019 13:30	3/13/2019 13:30	SM18 4500-B	pH	5.50		SU		0.05	0.05	AB
Lake D	9030504-16	3/13/2019 13:30	3/20/2019 13:26	EPA 365.1 (Phosphorus -Total)	Phosphorus- Elemental	0.585		mg/L		0.0150	0.0665	PES
Lake D	9030504-16	3/13/2019 13:30	3/18/2019 13:39	EPA 200.7	Potassium	74.1		mg/L	V	0.375	1.25	PES
Lake D	9030504-16	3/13/2019 13:30	3/29/2019 9:51	EPA 903.1	Radium 226	4.0	0.5	pCi/L		0.2	---	FRS
Lake D	9030504-16	3/13/2019 13:30	3/27/2019 10:26	Ra-05	Radium 228	1.3	0.5	pCi/L		0.7	---	FRS
Lake D	9030504-16	3/13/2019 13:30	3/19/2019 12:27	SM18 2540 C	Residues- Filterable (TDS)	1240		mg/L		10.0	20.0	CF
Lake D	9030504-16	3/13/2019 13:30	3/13/2019 13:30	EPA 120.1	Specific Conductance	190		umhos/cm		1	5	AB
Lake D	9030504-16	3/13/2019 13:30	3/20/2019 17:38	EPA 300.0 (Sulfate)	Sulfate	211		mg/L		0.125	0.500	CF
Lake D	9030504-16	3/13/2019 13:30	3/13/2019 13:30	EPA 170.1	Temperature	23.0		deg C		0.1	0.1	AB
Lake D	9030504-16	3/13/2019 13:30	3/29/2019 11:41	EPA 200.7	Calcium	224		mg/L		14.9	50.0	CF
Lake D	9030504-16	3/13/2019 13:30	3/29/2019 11:41	EPA 200.7	Magnesium	20.9		mg/L		0.911	2.00	CF
Lake D	9030504-16	3/13/2019 13:30	3/29/2019 11:41	EPA 200.7	Sodium	88.8		mg/L		4.72	10.0	CF
Equipment Blank	9030504-17	3/7/2019 15:00	3/13/2019 9:10	EPA 350.1	Ammonia- Un-ionized (NH3)	0.479		mg/L		0.00400	0.0222	PES
Equipment Blank	9030504-17	3/7/2019 15:00	3/18/2019 13:05	EPA 200.7	Arsenic	5.86		ug/L	U	5.86	10.0	PES
Equipment Blank	9030504-17	3/7/2019 15:00	3/19/2019 10:53	EPA 200.7	Calcium	0.149		mg/L	U	0.149	0.500	CF
Equipment Blank	9030504-17	3/7/2019 15:00	3/11/2019 14:59	EPA 300.0 (Chloride)	Chloride	0.0380		mg/L	U	0.0380	0.100	CF
Equipment Blank	9030504-17	3/7/2019 15:00	3/7/2019 15:00	By Observation	Color	Clear		[blank]	U	---	---	DB
Equipment Blank	9030504-17	3/7/2019 15:00	3/7/2019 15:00	EPA 360.2	Dissolved Oxygen	1.64		mg/L		0.10	0.20	DB
Equipment Blank	9030504-17	3/7/2019 15:00	3/19/2019 10:53	EPA 200.7	Iron	36.2		ug/L	IV	30.7	100	CF
Equipment Blank	9030504-17	3/7/2019 15:00	3/19/2019 0:00	EPA 200.7	Lithium	10.8		ug/L	I	9.1	50	SGS
Equipment Blank	9030504-17	3/7/2019 15:00	3/19/2019 10:53	EPA 200.7	Magnesium	0.0114		mg/L	I	0.00911	0.0200	CF
Equipment Blank	9030504-17	3/7/2019 15:00	3/19/2019 10:53	EPA 200.7	Manganese	2.30		ug/L	U	2.30	10.0	CF
Equipment Blank	9030504-17	3/7/2019 15:00	3/12/2019 14:41	EPA 353.2 (Nitrate-Nitrite (N))	Nitrate-Nitrite (N)	0.0300		mg/L	U	0.0300	0.250	PES
Equipment Blank	9030504-17	3/7/2019 15:00	3/7/2019 15:00	SM18 2580 B	ORP	176		mV		1	1	DB
Equipment Blank	9030504-17	3/7/2019 15:00	3/7/2019 15:00	SM18 4500-B	pH	5.07		SU		0.05	0.05	DB
Equipment Blank	9030504-17	3/7/2019 15:00	3/18/2019 9:39	EPA 365.1 (Phosphorus -Total)	Phosphorus- Elemental	0.003		mg/L	U	0.00300	0.0133	PES
Equipment Blank	9030504-17	3/7/2019 15:00	3/18/2019 13:05	EPA 200.7	Potassium	0.0992		mg/L	V	0.0150	0.0500	PES
Equipment Blank	9030504-17	3/7/2019 15:00	3/21/2019 14:09	EPA 903.1	Radium 226	0.3	0.2	pCi/L		0.1	---	FRS
Equipment Blank	9030504-17	3/7/2019 15:00	3/20/2019 9:06	Ra-05	Radium 228	0.7	0.4	pCi/L	U	0.7	---	FRS
Equipment Blank	9030504-17	3/7/2019 15:00	3/12/2019 10:46	SM18 2540 C	Residues- Filterable (TDS)	10.0		mg/L	U	10.0	20.0	CF
Equipment Blank	9030504-17	3/7/2019 15:00	3/7/2019 15:00	By Observation	Sheen	No Sheen		N/A	U	---	---	DB
Equipment Blank	9030504-17	3/7/2019 15:00	3/19/2019 10:53	EPA 200.7	Sodium	0.0472		mg/L	U	0.0472	0.100	CF
Equipment Blank	9030504-17	3/7/2019 15:00	3/7/2019 15:00	EPA 120.1	Specific Conductance	1.68		umhos/cm	I	1	5	DB
Equipment Blank	9030504-17	3/7/2019 15:00	3/11/2019 14:59	EPA 300.0 (Sulfate)	Sulfate	0.0496		mg/L	I	0.0250	0.100	CF
Equipment Blank	9030504-17	3/7/2019 15:00	3/7/2019 15:00	EPA 170.1	Temperature	21.4		deg C		0.1	0.1	DB
Equipment Blank	9030504-17	3/7/2019 15:00	3/7/2019 15:00	EPA 180.1	Turbidity	0.9		NTU		0.1	0.5	DB

J = Estimated value. Quality control does not meet criteria.

I = The reported value is between the laboratory MDL and the laboratory PQL.

J-6 = Estimated value. Result does not meet the quality control criteria for duplicates.

J-7 = Result exceeds the regulatory MCL.

J-8 = Estimated value. Reported concentration is outside the standard calibration/calibration verification range.

U = Compound was analyzed for but not detected.

V = The analyte was detected at or above the method detection limit in both the sample and the associated method blank.

PES = Subcontracted analysis conducted Phoslab Environmental Services, Inc. (TNI Certificate No. E84925).

SGS = Subcontracted analysis conducted SGS Dayton NJ (TNI Certificate No. E87482).

FRS = Subcontracted analysis conducted Florida Radiochemistry Services, Inc. (TNI Certificate No. E83033).

The results detailed within this report apply only to those samples submitted for analysis and for which results are reported here.

Unless otherwise indicated, these test results meet all requirements of the TNI standards.

**3030 E Lake Parker Dr**  
**Lakeland, FL 33805**  
**CCR SAMPLING**  
**Month / Year: April 2019**  
**LAB ANALYSIS REPORT**

SampleName	Sample ID	Date/Time Sampled	Date/Time Analyzed	Method	Analyte	Result	Error	Units	Qualifiers	Detection Limit	Reporting Limit	Analyst
CCR-01	9040906-01	4/16/2019 12:53	6/20/2019 13:46	EPA 200.7	Antimony	4.70		ug/L	IV	2.50	5.00	PES
CCR-01	9040906-01	4/16/2019 12:53	4/23/2019 14:35	EPA 200.7	Arsenic	8.60		ug/L	I	5.86	10.0	PES
CCR-01	9040906-01	4/16/2019 12:53	4/26/2019 12:00	EPA 200.7	Barium	29.1		ug/L		5.03	20.0	CF
CCR-01	9040906-01	4/16/2019 12:53	6/20/2019 13:46	EPA 200.7	Beryllium	2.00		ug/L	U	2.00	5.00	PES
CCR-01	9040906-01	4/16/2019 12:53	6/20/2019 13:46	EPA 200.7	Boron	42.9		ug/L		3.00	5.00	PES
CCR-01	9040906-01	4/16/2019 12:53	6/20/2019 13:46	EPA 200.7	Cadmium	2.00		ug/L	U	2.00	5.00	PES
CCR-01	9040906-01	4/16/2019 12:53	6/20/2019 14:24	EPA 200.7	Calcium	38.2		mg/L		0.525	1.25	PES
CCR-01	9040906-01	4/16/2019 12:53	6/20/2019 13:46	EPA 200.7	Chromium	1.00		ug/L	U	1.00	5.00	PES
CCR-01	9040906-01	4/16/2019 12:53	6/20/2019 13:46	EPA 200.7	Cobalt	2.00		ug/L	U	2.00	25.0	PES
CCR-01	9040906-01	4/16/2019 12:53	4/16/2019 12:53	By Observation	Color	Clear		[blank]	U			DB
CCR-01	9040906-01	4/16/2019 12:53	4/16/2019 12:53	EPA 360.2	Dissolved Oxygen	1.18		mg/L		0.10	0.20	DB
CCR-01	9040906-01	4/16/2019 12:53	4/30/2019 8:25	SM18 4500-F C	Fluoride	0.0500		mg/L	I	0.0500	0.200	PES
CCR-01	9040906-01	4/16/2019 12:53	6/20/2019 13:46	EPA 200.7	Lead	2.50		ug/L	U	2.50	5.00	PES
CCR-01	9040906-01	4/16/2019 12:53	4/26/2019 0:00	EPA 200.7	Lithium	9.1		ug/L	U	9.1	50	SGS
CCR-01	9040906-01	4/16/2019 12:53	4/26/2019 12:00	EPA 200.7	Molybdenum	6.31		ug/L	U	6.31	10.0	CF
CCR-01	9040906-01	4/16/2019 12:53	4/16/2019 12:53	SM18 4500-B B	pH	4.73		SU		0.05	0.05	DB
CCR-01	9040906-01	4/16/2019 12:53	5/7/2019 12:58	EPA 903.1	Radium-226	6.1	0.7	pCi/L		0.2	0.6	FRS
CCR-01	9040906-01	4/16/2019 12:53	5/6/2019 10:47	EPA Ra-05	Radium-228	2.0	0.6	pCi/L		0.7	2.1	FRS
CCR-01	9040906-01	4/16/2019 12:53	4/23/2019 14:35	EPA 200.7	Selenium	5.58		ug/L	U	5.58	10.0	PES
CCR-01	9040906-01	4/16/2019 12:53	4/16/2019 12:53	By Observation	Sheen	No Sheen		N/A	U			DB
CCR-01	9040906-01	4/16/2019 12:53	4/16/2019 12:53	EPA 120.1	Specific Conductance	241		umhos/cm		1	5	DB
CCR-01	9040906-01	4/16/2019 12:53	4/16/2019 12:53	EPA 170.1	Temperature	26.1		deg C		0.1	0.1	DB
CCR-01	9040906-01	4/16/2019 12:53	6/20/2019 13:46	EPA 200.7	Thallium	3.40		ug/L	U	3.40	5.00	PES
CCR-01	9040906-01	4/16/2019 12:53	4/16/2019 12:53	EPA 180.1	Turbidity	1.26		NTU		0.1	0.5	DB
CCR-01	9040906-01	4/16/2019 12:53	4/16/2019 12:53	FDEP DEP-SOP	Water Level	131.62		FT		0.1	0.5	DB
CCR-02	9040906-02	4/16/2019 13:37	6/20/2019 13:49	EPA 200.7	Antimony	2.80		ug/L	IV	2.50	5.00	PES
CCR-02	9040906-02	4/16/2019 13:37	4/23/2019 14:38	EPA 200.7	Arsenic	9.90		ug/L	I	5.86	10.0	PES
CCR-02	9040906-02	4/16/2019 13:37	4/26/2019 12:05	EPA 200.7	Barium	45.6		ug/L		5.03	20.0	CF
CCR-02	9040906-02	4/16/2019 13:37	6/20/2019 13:49	EPA 200.7	Beryllium	2.00		ug/L	U	2.00	5.00	PES
CCR-02	9040906-02	4/16/2019 13:37	6/20/2019 13:49	EPA 200.7	Boron	63.9		ug/L		3.00	5.00	PES
CCR-02	9040906-02	4/16/2019 13:37	6/20/2019 13:49	EPA 200.7	Cadmium	2.00		ug/L	U	2.00	5.00	PES
CCR-02	9040906-02	4/16/2019 13:37	6/20/2019 14:27	EPA 200.7	Calcium	93.7		mg/L		0.525	1.25	PES
CCR-02	9040906-02	4/16/2019 13:37	6/20/2019 13:49	EPA 200.7	Chromium	1.00		ug/L	U	1.00	5.00	PES
CCR-02	9040906-02	4/16/2019 13:37	6/20/2019 13:49	EPA 200.7	Cobalt	2.00		ug/L	U	2.00	25.0	PES
CCR-02	9040906-02	4/16/2019 13:37	6/5/2019 14:12	By Observation	Color	Clear		[blank]	U			DB
CCR-02	9040906-02	4/16/2019 13:37	4/16/2019 13:37	EPA 360.2	Dissolved Oxygen	0.84		mg/L		0.10	0.20	DB
CCR-02	9040906-02	4/16/2019 13:37	4/30/2019 8:25	SM18 4500-F C	Fluoride	0.112		mg/L	I	0.0500	0.200	PES
CCR-02	9040906-02	4/16/2019 13:37	6/20/2019 13:49	EPA 200.7	Lead	2.50		ug/L	U	2.50	5.00	PES
CCR-02	9040906-02	4/16/2019 13:37	4/26/2019 0:00	EPA 200.7	Lithium	9.1		ug/L	U	9.1	50	SGS
CCR-02	9040906-02	4/16/2019 13:37	4/26/2019 12:05	EPA 200.7	Molybdenum	6.31		ug/L	U	6.31	10.0	CF
CCR-02	9040906-02	4/16/2019 13:37	4/16/2019 13:37	SM18 4500-B B	pH	4.31		SU		0.05	0.05	DB
CCR-02	9040906-02	4/16/2019 13:37	5/7/2019 12:58	EPA 903.1	Radium-226	2.5	0.5	pCi/L		0.2	0.6	FRS
CCR-02	9040906-02	4/16/2019 13:37	5/6/2019 10:47	EPA Ra-05	Radium-228	2.0	0.6	pCi/L		0.8	2.4	FRS
CCR-02	9040906-02	4/16/2019 13:37	4/23/2019 14:38	EPA 200.7	Selenium	8.10		ug/L	I	5.58	10.0	PES
CCR-02	9040906-02	4/16/2019 13:37	4/16/2019 13:37	By Observation	Sheen	No Sheen		N/A	U			DB
CCR-02	9040906-02	4/16/2019 13:37	4/16/2019 13:37	EPA 120.1	Specific Conductance	568		umhos/cm		1	5	DB
CCR-02	9040906-02	4/16/2019 13:37	4/16/2019 13:37	EPA 170.1	Temperature	26.7		deg C		0.1	0.1	DB
CCR-02	9040906-02	4/16/2019 13:37	6/20/2019 13:49	EPA 200.7	Thallium	3.40		ug/L	U	3.40	5.00	PES
CCR-02	9040906-02	4/16/2019 13:37	4/16/2019 13:37	EPA 180.1	Turbidity	4.48		NTU		0.1	0.5	DB
CCR-02	9040906-02	4/16/2019 13:37	4/16/2019 13:37	FDEP DEP-SOP	Water Level	131.02		FT		0.1	0.5	DB
CCR-03	9040906-03	4/16/2019 14:23	6/20/2019 13:52	EPA 200.7	Antimony	2.50		ug/L	U	2.50	5.00	PES
CCR-03	9040906-03	4/16/2019 14:23	4/23/2019 14:40	EPA 200.7	Arsenic	5.86		ug/L	U	5.86	10.0	PES
CCR-03	9040906-03	4/16/2019 14:23	4/26/2019 12:09	EPA 200.7	Barium	33.5		ug/L		5.03	20.0	CF
CCR-03	9040906-03	4/16/2019 14:23	6/20/2019 13:52	EPA 200.7	Beryllium	2.00		ug/L	U	2.00	5.00	PES
CCR-03	9040906-03	4/16/2019 14:23	6/20/2019 13:52	EPA 200.7	Boron	1150		ug/L		3.00	5.00	PES
CCR-03	9040906-03	4/16/2019 14:23	6/20/2019 13:52	EPA 200.7	Cadmium	2.00		ug/L	U	2.00	5.00	PES
CCR-03	9040906-03	4/16/2019 14:23	6/20/2019 14:30	EPA 200.7	Calcium	551		mg/L		2.10	5.00	PES
CCR-03	9040906-03	4/16/2019 14:23	6/20/2019 13:52	EPA 200.7	Chromium	1.00		ug/L	U	1.00	5.00	PES
CCR-03	9040906-03	4/16/2019 14:23	6/20/2019 13:52	EPA 200.7	Cobalt	2.00		ug/L	U	2.00	25.0	PES
CCR-03	9040906-03	4/16/2019 14:23	4/16/2019 14:23	EPA 360.2	Color	Clear		[blank]	U			DB
CCR-03	9040906-03	4/16/2019 14:23	4/16/2019 14:23	EPA 360.2	Dissolved Oxygen	0.31		mg/L		0.10	0.20	DB
CCR-03	9040906-03	4/16/2019 14:23	4/30/2019 8:25	SM18 4500-F C	Fluoride	0.201		mg/L		0.0500	0.200	PES
CCR-03	9040906-03	4/16/2019 14:23	6/20/2019 13:52	EPA 200.7	Lead	2.50		ug/L	U	2.50	5.00	PES
CCR-03	9040906-03	4/16/2019 14:23	4/26/2019 0:00	EPA 200.7	Lithium	9.1		ug/L	U	9.1	50	SGS
CCR-03	9040906-03	4/16/2019 14:23	4/26/2019 12:09	EPA 200.7	Molybdenum	6.31		ug/L	U	6.31	10.0	CF
CCR-03	9040906-03	4/16/2019 14:23	4/16/2019 14:23	SM18 4500-B B	pH	5.49		SU		0.05	0.05	DB
CCR-03	9040906-03	4/16/2019 14:23	5/7/2019 12:58	EPA 903.1	Radium-226	3.2	0.5	pCi/L		0.2	0.6	FRS
CCR-03	9040906-03	4/16/2019 14:23	5/6/2019 11:52	EPA Ra-05	Radium-228	0.9	0.6	pCi/L	U	0.9	2.7	FRS
CCR-03	9040906-03	4/16/2019 14:23	4/23/2019 14:40	EPA 200.7	Selenium	5.58		ug/L	U	5.58	10.0	PES
CCR-03	9040906-03	4/16/2019 14:23	4/16/2019 14:23	By Observation	Sheen	No Sheen		N/A	U			DB
CCR-03	9040906-03	4/16/2019 14:23	4/16/2019 14:23	EPA 120.1	Specific Conductance	2260		umhos/cm		1	5	DB
CCR-03	9040906-03	4/16/2019 14:23	4/16/2019 14:23	EPA 170.1	Temperature	26.7		deg C		0.1	0.1	DB
CCR-03	9040906-03	4/16/2019 14:23	6/20/2019 13:52	EPA 200.7	Thallium	3.40		ug/L	U	3.40	5.00	PES
CCR-03	9040906-03	4/16/2019 14:23	4/16/2019 14:23	EPA 180.1	Turbidity	9.39		NTU		0.1	0.5	DB
CCR-03	9040906-03	4/16/2019 14:23	4/16/2019 14:23	FDEP DEP-SOP	Water Level	131.03		FT		0.1	0.5	DB
CCR-04	9040906-04	4/16/2019 15:11	6/20/2019 13:55	EPA 200.7	Antimony	2.50		ug/L	U	2.50	5.00	PES

## 3030 E Lake Parker Dr

Lakeland, FL 33805

## CCR SAMPLING

Month / Year: April 2019  
LAB ANALYSIS REPORT

SampleName	Sample ID	Date/Time Sampled	Date/Time Analyzed	Method	Analyte	Result	Error	Units	Qualifiers	Detection Limit	Reporting Limit	Analyst
CCR-04	9040906-04	4/16/2019 15:11	4/23/2019 14:42	EPA 200.7	Arsenic	5.86		ug/L	U	5.86	10.0	PES
CCR-04	9040906-04	4/16/2019 15:11	4/26/2019 12:14	EPA 200.7	Barium	309		ug/L		5.03	20.0	CF
CCR-04	9040906-04	4/16/2019 15:11	6/20/2019 13:55	EPA 200.7	Beryllium	2.00		ug/L	U	2.00	5.00	PES
CCR-04	9040906-04	4/16/2019 15:11	6/20/2019 13:55	EPA 200.7	Boron	489		ug/L		3.00	5.00	PES
CCR-04	9040906-04	4/16/2019 15:11	6/20/2019 13:55	EPA 200.7	Cadmium	12.4		ug/L		2.00	5.00	PES
CCR-04	9040906-04	4/16/2019 15:11	6/20/2019 14:33	EPA 200.7	Calcium	1360		mg/L		2.10	5.00	PES
CCR-04	9040906-04	4/16/2019 15:11	6/20/2019 13:55	EPA 200.7	Chromium	1.00		ug/L	U	1.00	5.00	PES
CCR-04	9040906-04	4/16/2019 15:11	6/20/2019 13:55	EPA 200.7	Cobalt	5.20		ug/L	I	2.00	25.0	PES
CCR-04	9040906-04	4/16/2019 15:11	4/16/2019 15:11	By Observation	Color	Clear		[blank]	U			DB
CCR-04	9040906-04	4/16/2019 15:11	4/16/2019 15:11	EPA 360.2	Dissolved Oxygen	0.64		mg/L		0.10	0.20	DB
CCR-04	9040906-04	4/16/2019 15:11	4/30/2019 8:25	SM18 4500-F C	Fluoride	0.263		mg/L		0.0500	0.200	PES
CCR-04	9040906-04	4/16/2019 15:11	6/20/2019 13:55	EPA 200.7	Lead	3.20		ug/L	I	2.50	5.00	PES
CCR-04	9040906-04	4/16/2019 15:11	4/26/2019 0:00	EPA 200.7	Lithium	9.1		ug/L	U	9.1	50	SGS
CCR-04	9040906-04	4/16/2019 15:11	4/26/2019 12:14	EPA 200.7	Molybdenum	6.31		ug/L	U	6.31	10.0	CF
CCR-04	9040906-04	4/16/2019 15:11	4/16/2019 15:11	SM18 4500-B B	pH	4.12		SU		0.05	0.05	DB
CCR-04	9040906-04	4/16/2019 15:11	5/7/2019 12:58	EPA 903.1	Radium-226	48.3		2 pCi/L		0.1	0.3	FRS
CCR-04	9040906-04	4/16/2019 15:11	5/6/2019 11:52	EPA Ra-05	Radium-228	26.8	1.7	pCi/L		0.8	2.4	FRS
CCR-04	9040906-04	4/16/2019 15:11	4/23/2019 14:42	EPA 200.7	Selenium	5.58		ug/L	U	5.58	10.0	PES
CCR-04	9040906-04	4/16/2019 15:11	4/16/2019 15:11	By Observation	Sheen	No Sheen		N/A	U			DB
CCR-04	9040906-04	4/16/2019 15:11	4/16/2019 15:11	EPA 120.1	Specific Conductance	12040		umhos/cm		1	5	DB
CCR-04	9040906-04	4/16/2019 15:11	4/16/2019 15:11	EPA 170.1	Temperature	26.2		deg C		0.1	0.1	DB
CCR-04	9040906-04	4/16/2019 15:11	6/20/2019 13:55	EPA 200.7	Thallium	5.10		ug/L		3.40	5.00	PES
CCR-04	9040906-04	4/16/2019 15:11	4/16/2019 15:11	EPA 180.1	Turbidity	4.35		NTU		0.1	0.5	DB
CCR-04	9040906-04	4/16/2019 15:11	4/16/2019 15:11	FDEP DEP-SOP	Water Level	129.02		FT		0.1	0.5	DB
CCR-05	9040906-05	4/17/2019 11:03	6/20/2019 13:58	EPA 200.7	Antimony	2.50		ug/L	U	2.50	5.00	PES
CCR-05	9040906-05	4/17/2019 11:03	4/23/2019 14:45	EPA 200.7	Arsenic	10.6		ug/L		5.86	10.0	PES
CCR-05	9040906-05	4/17/2019 11:03	4/26/2019 12:18	EPA 200.7	Barium	72.8		ug/L		5.03	20.0	CF
CCR-05	9040906-05	4/17/2019 11:03	6/20/2019 13:58	EPA 200.7	Beryllium	2.00		ug/L	U	2.00	5.00	PES
CCR-05	9040906-05	4/17/2019 11:03	6/20/2019 13:58	EPA 200.7	Boron	588		ug/L		3.00	5.00	PES
CCR-05	9040906-05	4/17/2019 11:03	6/20/2019 13:58	EPA 200.7	Cadmium	2.00		ug/L	U	2.00	5.00	PES
CCR-05	9040906-05	4/17/2019 11:03	6/20/2019 14:36	EPA 200.7	Calcium	1830		mg/L		2.10	5.00	PES
CCR-05	9040906-05	4/17/2019 11:03	6/20/2019 13:58	EPA 200.7	Chromium	1.00		ug/L	U	1.00	5.00	PES
CCR-05	9040906-05	4/17/2019 11:03	6/20/2019 13:58	EPA 200.7	Cobalt	3.20		ug/L	I	2.00	25.0	PES
CCR-05	9040906-05	4/17/2019 11:03	4/17/2019 11:03	By Observation	Color	Yellow		[blank]	U			DB
CCR-05	9040906-05	4/17/2019 11:03	4/17/2019 11:03	EPA 360.2	Dissolved Oxygen	0.41		mg/L		0.10	0.20	DB
CCR-05	9040906-05	4/17/2019 11:03	4/30/2019 8:25	SM18 4500-F C	Fluoride	0.0584		mg/L	I	0.0500	0.200	PES
CCR-05	9040906-05	4/17/2019 11:03	6/20/2019 13:58	EPA 200.7	Lead	2.50		ug/L	U	2.50	5.00	PES
CCR-05	9040906-05	4/17/2019 11:03	4/26/2019 0:00	EPA 200.7	Lithium	5350		ug/L		9.1	50	SGS
CCR-05	9040906-05	4/17/2019 11:03	4/26/2019 12:18	EPA 200.7	Molybdenum	6.31		ug/L	U	6.31	10.0	CF
CCR-05	9040906-05	4/17/2019 11:03	4/17/2019 11:03	SM18 4500-B B	pH	5.42		SU		0.05	0.05	DB
CCR-05	9040906-05	4/17/2019 11:03	5/7/2019 12:58	EPA 903.1	Radium-226	14.9	1.1	pCi/L		0.1	0.3	FRS
CCR-05	9040906-05	4/17/2019 11:03	5/6/2019 11:52	EPA Ra-05	Radium-228	8.4	1	pCi/L		0.8	2.4	FRS
CCR-05	9040906-05	4/17/2019 11:03	4/23/2019 14:45	EPA 200.7	Selenium	31.2		ug/L		5.58	10.0	PES
CCR-05	9040906-05	4/17/2019 11:03	4/17/2019 11:03	By Observation	Sheen	No Sheen		N/A	U			DB
CCR-05	9040906-05	4/17/2019 11:03	4/17/2019 11:03	EPA 120.1	Specific Conductance	15530		umhos/cm		1	5	DB
CCR-05	9040906-05	4/17/2019 11:03	4/17/2019 11:03	EPA 170.1	Temperature	26.1		deg C		0.1	0.1	DB
CCR-05	9040906-05	4/17/2019 11:03	6/20/2019 13:58	EPA 200.7	Thallium	5.60		ug/L		3.40	5.00	PES
CCR-05	9040906-05	4/17/2019 11:03	4/17/2019 11:03	EPA 180.1	Turbidity	3.34		NTU		0.1	0.5	DB
CCR-05	9040906-05	4/17/2019 11:03	4/17/2019 11:03	FDEP DEP-SOP	Water Level	130.98		FT		0.1	0.5	DB
CCR-06	9040906-06	4/17/2019 11:46	6/20/2019 14:01	EPA 200.7	Antimony	2.50		ug/L	U	2.50	5.00	PES
CCR-06	9040906-06	4/17/2019 11:46	4/23/2019 14:47	EPA 200.7	Arsenic	6.70		ug/L	I	5.86	10.0	PES
CCR-06	9040906-06	4/17/2019 11:46	4/26/2019 13:02	EPA 200.7	Barium	16.2		ug/L	I	5.03	20.0	CF
CCR-06	9040906-06	4/17/2019 11:46	6/20/2019 14:01	EPA 200.7	Beryllium	2.00		ug/L	U	2.00	5.00	PES
CCR-06	9040906-06	4/17/2019 11:46	6/20/2019 14:01	EPA 200.7	Boron	411		ug/L		3.00	5.00	PES
CCR-06	9040906-06	4/17/2019 11:46	6/20/2019 14:01	EPA 200.7	Cadmium	2.00		ug/L	U	2.00	5.00	PES
CCR-06	9040906-06	4/17/2019 11:46	6/20/2019 14:38	EPA 200.7	Calcium	465		mg/L		2.10	5.00	PES
CCR-06	9040906-06	4/17/2019 11:46	6/20/2019 14:01	EPA 200.7	Chromium	1.00		ug/L	U	1.00	5.00	PES
CCR-06	9040906-06	4/17/2019 11:46	6/20/2019 14:01	EPA 200.7	Cobalt	2.00		ug/L	U	2.00	25.0	PES
CCR-06	9040906-06	4/17/2019 11:46	4/17/2019 11:46	By Observation	Color	Yellow		[blank]	U			DB
CCR-06	9040906-06	4/17/2019 11:46	4/17/2019 11:46	EPA 360.2	Dissolved Oxygen	0.32		mg/L		0.10	0.20	DB
CCR-06	9040906-06	4/17/2019 11:46	4/30/2019 8:25	SM18 4500-F C	Fluoride	0.204		mg/L		0.0500	0.200	PES
CCR-06	9040906-06	4/17/2019 11:46	6/20/2019 14:01	EPA 200.7	Lead	2.50		ug/L	U	2.50	5.00	PES
CCR-06	9040906-06	4/17/2019 11:46	4/27/2019 0:00	EPA 200.7	Lithium	167		ug/L		9.1	50	SGS
CCR-06	9040906-06	4/17/2019 11:46	4/26/2019 13:02	EPA 200.7	Molybdenum	6.31		ug/L	U	6.31	10.0	CF
CCR-06	9040906-06	4/17/2019 11:46	4/17/2019 11:46	SM18 4500-B B	pH	6.04		SU		0.05	0.05	DB
CCR-06	9040906-06	4/17/2019 11:46	5/7/2019 14:02	EPA 903.1	Radium-226	2.4	0.4	pCi/L		0.1	0.3	FRS
CCR-06	9040906-06	4/17/2019 11:46	5/6/2019 11:52	EPA Ra-05	Radium-228	0.8	0.5	pCi/L	U	0.8	2.4	FRS
CCR-06	9040906-06	4/17/2019 11:46	4/23/2019 14:47	EPA 200.7	Selenium	5.58		ug/L	U	5.58	10.0	PES
CCR-06	9040906-06	4/17/2019 11:46	4/17/2019 11:46	By Observation	Sheen	No Sheen		N/A	U			DB
CCR-06	9040906-06	4/17/2019 11:46	4/17/2019 11:46	EPA 120.1	Specific Conductance	2630		umhos/cm		1	5	DB
CCR-06	9040906-06	4/17/2019 11:46	4/17/2019 11:46	EPA 170.1	Temperature	25.3		deg C		0.1	0.1	DB
CCR-06	9040906-06	4/17/2019 11:46	6/20/2019 14:01	EPA 200.7	Thallium	3.40		ug/L	U	3.40	5.00	PES
CCR-06	9040906-06	4/17/2019 11:46	4/17/2019 11:46	EPA 180.1	Turbidity	2.40		NTU		0.1	0.5	DB
CCR-06	9040906-06	4/17/2019 11:46	4/17/2019 11:46	FDEP DEP-SOP	Water Level	132.86		FT		0.1	0.5	DB
CCR-07	9040906-07	4/17/2019 13:30	6/20/2019 14:10	EPA 200.7	Antimony	17.8		ug/L	V	2.50	5.00	PES
CCR-07	9040906-07	4/17/2019 13:30	4/23/2019 14:54	EPA 200.7	Arsenic	16.9		ug/L		5.86	10.0	PES

**3030 E Lake Parker Dr**  
**Lakeland, FL 33805**  
**CCR SAMPLING**  
**Month / Year: April 2019**  
**LAB ANALYSIS REPORT**

SampleName	Sample ID	Date/Time Sampled	Date/Time Analyzed	Method	Analyte	Result	Error	Units	Qualifiers	Detection Limit	Reporting Limit	Analyst
CCR-07	9040906-07	4/17/2019 13:30	4/26/2019 13:06	EPA 200.7	Barium	39.6		ug/L		5.03	20.0	CF
CCR-07	9040906-07	4/17/2019 13:30	6/20/2019 14:10	EPA 200.7	Beryllium	2.00		ug/L	U	2.00	5.00	PES
CCR-07	9040906-07	4/17/2019 13:30	6/20/2019 14:10	EPA 200.7	Boron	1680		ug/L		3.00	5.00	PES
CCR-07	9040906-07	4/17/2019 13:30	6/20/2019 14:10	EPA 200.7	Cadmium	2.00		ug/L	U	2.00	5.00	PES
CCR-07	9040906-07	4/17/2019 13:30	6/20/2019 14:51	EPA 200.7	Calcium	325		mg/L		0.525	1.25	PES
CCR-07	9040906-07	4/17/2019 13:30	6/20/2019 14:10	EPA 200.7	Chromium	1.00		ug/L	U	1.00	5.00	PES
CCR-07	9040906-07	4/17/2019 13:30	6/20/2019 14:10	EPA 200.7	Cobalt	2.00		ug/L	U	2.00	25.0	PES
CCR-07	9040906-07	4/17/2019 13:30	4/17/2019 13:30	By Observation	Color	Yellow		[blank]	U			DB
CCR-07	9040906-07	4/17/2019 13:30	4/17/2019 13:30	EPA 360.2	Dissolved Oxygen	0.48		mg/L		0.10	0.20	DB
CCR-07	9040906-07	4/17/2019 13:30	4/30/2019 8:25	SM18 4500-F C	Fluoride	0.292		mg/L		0.0500	0.200	PES
CCR-07	9040906-07	4/17/2019 13:30	6/20/2019 14:10	EPA 200.7	Lead	2.50		ug/L	U	2.50	5.00	PES
CCR-07	9040906-07	4/17/2019 13:30	4/27/2019 0:00	EPA 200.7	Lithium	238		ug/L		9.1	50	SGS
CCR-07	9040906-07	4/17/2019 13:30	4/26/2019 13:06	EPA 200.7	Molybdenum	6.31		ug/L	U	6.31	10.0	CF
CCR-07	9040906-07	4/17/2019 13:30	4/17/2019 13:30	SM18 4500-B B	pH	4.84		SU		0.05	0.05	DB
CCR-07	9040906-07	4/17/2019 13:30	5/7/2019 14:02	EPA 903.1	Radium-226	6.6	0.7	pCi/L		0.2	0.6	FRS
CCR-07	9040906-07	4/17/2019 13:30	5/6/2019 11:52	EPA Ra-05	Radium-228	2.6	0.7	pCi/L		0.8	2.4	FRS
CCR-07	9040906-07	4/17/2019 13:30	4/23/2019 14:54	EPA 200.7	Selenium	5.58		ug/L	U	5.58	10.0	PES
CCR-07	9040906-07	4/17/2019 13:30	4/17/2019 13:30	By Observation	Sheen	No Sheen		N/A	U			DB
CCR-07	9040906-07	4/17/2019 13:30	4/17/2019 13:30	EPA 120.1	Specific Conductance	2470		umhos/cm		1	5	DB
CCR-07	9040906-07	4/17/2019 13:30	4/17/2019 13:30	EPA 170.1	Temperature	25.7		deg C		0.1	0.1	DB
CCR-07	9040906-07	4/17/2019 13:30	6/20/2019 14:10	EPA 200.7	Thallium	3.40		ug/L	U	3.40	5.00	PES
CCR-07	9040906-07	4/17/2019 13:30	4/17/2019 13:30	EPA 180.1	Turbidity	2.21		NTU		0.1	0.5	DB
CCR-07	9040906-07	4/17/2019 13:30	4/17/2019 13:30	FDEP DEP-SOP	Water Level	133.14		FT		0.1	0.5	DB
CCR-08	9040906-08	4/17/2019 14:21	6/20/2019 14:13	EPA 200.7	Antimony	5.80		ug/L	V	2.50	5.00	PES
CCR-08	9040906-08	4/17/2019 14:21	4/23/2019 14:56	EPA 200.7	Arsenic	13.5		ug/L		5.86	10.0	PES
CCR-08	9040906-08	4/17/2019 14:21	4/26/2019 13:10	EPA 200.7	Barium	41.3		ug/L		5.03	20.0	CF
CCR-08	9040906-08	4/17/2019 14:21	6/20/2019 14:13	EPA 200.7	Beryllium	2.00		ug/L	U	2.00	5.00	PES
CCR-08	9040906-08	4/17/2019 14:21	6/20/2019 14:13	EPA 200.7	Boron	126		ug/L		3.00	5.00	PES
CCR-08	9040906-08	4/17/2019 14:21	6/20/2019 14:13	EPA 200.7	Cadmium	2.00		ug/L	U	2.00	5.00	PES
CCR-08	9040906-08	4/17/2019 14:21	6/20/2019 14:54	EPA 200.7	Calcium	169		mg/L		0.525	1.25	PES
CCR-08	9040906-08	4/17/2019 14:21	6/20/2019 14:13	EPA 200.7	Chromium	1.00		ug/L	U	1.00	5.00	PES
CCR-08	9040906-08	4/17/2019 14:21	6/20/2019 14:13	EPA 200.7	Cobalt	2.00		ug/L	U	2.00	25.0	PES
CCR-08	9040906-08	4/17/2019 14:21	4/17/2019 14:21	By Observation	Color	Brown		[blank]	U			DB
CCR-08	9040906-08	4/17/2019 14:21	4/17/2019 14:21	EPA 360.2	Dissolved Oxygen	5.06		mg/L		0.10	0.20	DB
CCR-08	9040906-08	4/17/2019 14:21	4/30/2019 8:25	SM18 4500-F C	Fluoride	0.363		mg/L		0.0500	0.200	PES
CCR-08	9040906-08	4/17/2019 14:21	6/20/2019 14:13	EPA 200.7	Lead	2.50		ug/L	U	2.50	5.00	PES
CCR-08	9040906-08	4/17/2019 14:21	4/27/2019 0:00	EPA 200.7	Lithium	9.1		ug/L	U	9.1	50	SGS
CCR-08	9040906-08	4/17/2019 14:21	4/26/2019 13:10	EPA 200.7	Molybdenum	18.1		ug/L		6.31	10.0	CF
CCR-08	9040906-08	4/17/2019 14:21	4/17/2019 14:21	SM18 4500-B B	pH	6.55		SU		0.05	0.05	DB
CCR-08	9040906-08	4/17/2019 14:21	5/7/2019 14:02	EPA 903.1	Radium-226	6.2	0.7	pCi/L		0.2	0.6	FRS
CCR-08	9040906-08	4/17/2019 14:21	5/6/2019 11:52	EPA Ra-05	Radium-228	0.7	0.5	pCi/L		0.7	2.1	FRS
CCR-08	9040906-08	4/17/2019 14:21	4/23/2019 14:56	EPA 200.7	Selenium	24.6		ug/L		5.58	10.0	PES
CCR-08	9040906-08	4/17/2019 14:21	4/17/2019 14:21	By Observation	Sheen	No Sheen		N/A	U			DB
CCR-08	9040906-08	4/17/2019 14:21	4/17/2019 14:21	EPA 120.1	Specific Conductance	834		umhos/cm		1	5	DB
CCR-08	9040906-08	4/17/2019 14:21	4/17/2019 14:21	EPA 170.1	Temperature	25.5		deg C		0.1	0.1	DB
CCR-08	9040906-08	4/17/2019 14:21	6/20/2019 14:13	EPA 200.7	Thallium	3.40		ug/L	U	3.40	5.00	PES
CCR-08	9040906-08	4/17/2019 14:21	4/17/2019 14:21	EPA 180.1	Turbidity	5.60		NTU		0.1	0.5	DB
CCR-08	9040906-08	4/17/2019 14:21	4/17/2019 14:21	FDEP DEP-SOP	Water Level	133.48		FT		0.1	0.5	DB
CCR-09	9040906-09	4/17/2019 15:08	6/20/2019 12:28	EPA 200.7	Antimony	2.50		ug/L	U	2.50	5.00	PES
CCR-09	9040906-09	4/17/2019 15:08	4/23/2019 14:59	EPA 200.7	Arsenic	11.6		ug/L		5.86	10.0	PES
CCR-09	9040906-09	4/17/2019 15:08	4/26/2019 13:14	EPA 200.7	Barium	72.4		ug/L		5.03	20.0	CF
CCR-09	9040906-09	4/17/2019 15:08	6/20/2019 12:28	EPA 200.7	Beryllium	2.00		ug/L	U	2.00	5.00	PES
CCR-09	9040906-09	4/17/2019 15:08	6/20/2019 12:28	EPA 200.7	Boron	377		ug/L		3.00	5.00	PES
CCR-09	9040906-09	4/17/2019 15:08	6/20/2019 12:28	EPA 200.7	Cadmium	2.00		ug/L	U	2.00	5.00	PES
CCR-09	9040906-09	4/17/2019 15:08	6/20/2019 13:06	EPA 200.7	Calcium	821		mg/L	V	2.10	5.00	PES
CCR-09	9040906-09	4/17/2019 15:08	6/20/2019 12:28	EPA 200.7	Chromium	1.00		ug/L	U	1.00	5.00	PES
CCR-09	9040906-09	4/17/2019 15:08	6/20/2019 12:28	EPA 200.7	Cobalt	2.00		ug/L	U	2.00	25.0	PES
CCR-09	9040906-09	4/17/2019 15:08	4/17/2019 15:08	By Observation	Color	Milky		[blank]	U			DB
CCR-09	9040906-09	4/17/2019 15:08	4/17/2019 15:08	EPA 360.2	Dissolved Oxygen	0.55		mg/L		0.10	0.20	DB
CCR-09	9040906-09	4/17/2019 15:08	4/30/2019 8:25	SM18 4500-F C	Fluoride	0.241		mg/L		0.0500	0.200	PES
CCR-09	9040906-09	4/17/2019 15:08	6/20/2019 12:28	EPA 200.7	Lead	2.50		ug/L	U	2.50	5.00	PES
CCR-09	9040906-09	4/17/2019 15:08	4/27/2019 0:00	EPA 200.7	Lithium	104		ug/L		9.1	50	SGS
CCR-09	9040906-09	4/17/2019 15:08	4/26/2019 13:14	EPA 200.7	Molybdenum	6.31		ug/L	U	6.31	10.0	CF
CCR-09	9040906-09	4/17/2019 15:08	4/17/2019 15:08	SM18 4500-B B	pH	5.21		SU		0.05	0.05	DB
CCR-09	9040906-09	4/17/2019 15:08	5/7/2019 14:02	EPA 903.1	Radium-226	0.5	0.2	pCi/L		0.1	0.3	FRS
CCR-09	9040906-09	4/17/2019 15:08	5/6/2019 11:52	EPA Ra-05	Radium-228	0.8	0.5	pCi/L	U	0.8	2.4	FRS
CCR-09	9040906-09	4/17/2019 15:08	4/23/2019 14:59	EPA 200.7	Selenium	5.58		ug/L	U	5.58	10.0	PES
CCR-09	9040906-09	4/17/2019 15:08	4/17/2019 15:08	By Observation	Sheen	No Sheen		N/A	U			DB
CCR-09	9040906-09	4/17/2019 15:08	4/17/2019 15:08	EPA 120.1	Specific Conductance	6110		umhos/cm		1	5	DB
CCR-09	9040906-09	4/17/2019 15:08	4/17/2019 15:08	EPA 170.1	Temperature	26.3		deg C		0.1	0.1	DB
CCR-09	9040906-09	4/17/2019 15:08	6/20/2019 12:28	EPA 200.7	Thallium	4.80		ug/L	I	3.40	5.00	PES
CCR-09	9040906-09	4/17/2019 15:08	4/17/2019 15:08	EPA 180.1	Turbidity	24.0		NTU		0.1	0.5	DB
CCR-09	9040906-09	4/17/2019 15:08	4/17/2019 15:08	FDEP DEP-SOP	Water Level	132.46		FT		0.1	0.5	DB
CCR-10	9040906-10	4/18/2019 14:21	6/20/2019 12:31	EPA 200.7	Antimony	2.50		ug/L	U	2.50	5.00	PES
CCR-10	9040906-10	4/18/2019 14:21	4/23/2019 15:01	EPA 200.7	Arsenic	5.86		ug/L	U	5.86	10.0	PES
CCR-10	9040906-10	4/18/2019 14:21	4/26/2019 13:19	EPA 200.7	Barium	18.9		ug/L	I	5.03	20.0	CF

**3030 E Lake Parker Dr**  
**Lakeland, FL 33805**  
**CCR SAMPLING**  
**Month / Year: April 2019**  
**LAB ANALYSIS REPORT**

SampleName	Sample ID	Date/Time Sampled	Date/Time Analyzed	Method	Analyte	Result	Error	Units	Qualifiers	Detection Limit	Reporting Limit	Analyst
CCR-10	9040906-10	4/18/2019 14:21	6/20/2019 12:31	EPA 200.7	Beryllium	2.00		ug/L	U	2.00	5.00	PES
CCR-10	9040906-10	4/18/2019 14:21	6/20/2019 12:31	EPA 200.7	Boron	220		ug/L		3.00	5.00	PES
CCR-10	9040906-10	4/18/2019 14:21	6/20/2019 12:31	EPA 200.7	Cadmium	2.00		ug/L	U	2.00	5.00	PES
CCR-10	9040906-10	4/18/2019 14:21	6/20/2019 13:09	EPA 200.7	Calcium	156		mg/L	V	2.10	5.00	PES
CCR-10	9040906-10	4/18/2019 14:21	6/20/2019 12:31	EPA 200.7	Chromium	1.00		ug/L	U	1.00	5.00	PES
CCR-10	9040906-10	4/18/2019 14:21	6/20/2019 12:31	EPA 200.7	Cobalt	2.00		ug/L	U	2.00	25.0	PES
CCR-10	9040906-10	4/18/2019 14:21	4/18/2019 14:21	By Observation	Color	Clear		[blank]	U			ND
CCR-10	9040906-10	4/18/2019 14:21	4/18/2019 14:21	EPA 360.2	Dissolved Oxygen	0.23		mg/L		0.10	0.20	ND
CCR-10	9040906-10	4/18/2019 14:21	4/30/2019 8:25	SM18 4500-F C	Fluoride	0.183		mg/L	I	0.0500	0.200	PES
CCR-10	9040906-10	4/18/2019 14:21	6/20/2019 12:31	EPA 200.7	Lead	2.50		ug/L	U	2.50	5.00	PES
CCR-10	9040906-10	4/18/2019 14:21	4/26/2019 0:00	EPA 200.7	Lithium	18		ug/L	U	18	100	SGS
CCR-10	9040906-10	4/18/2019 14:21	4/26/2019 13:19	EPA 200.7	Molybdenum	6.31		ug/L	U	6.31	10.0	CF
CCR-10	9040906-10	4/18/2019 14:21	4/18/2019 14:21	SM18 4500-B B	pH	5.25		SU		0.05	0.05	ND
CCR-10	9040906-10	4/18/2019 14:21	5/7/2019 14:02	EPA 903.1	Radium-226	5.4	0.7	pCi/L		0.1	0.3	FRS
CCR-10	9040906-10	4/18/2019 14:21	5/6/2019 11:52	EPA Ra-05	Radium-228	1.1	0.6	pCi/L		0.8	2.4	FRS
CCR-10	9040906-10	4/18/2019 14:21	4/23/2019 15:01	EPA 200.7	Selenium	11.9		ug/L		5.58	10.0	PES
CCR-10	9040906-10	4/18/2019 14:21	4/18/2019 14:21	By Observation	Sheen	No Sheen		N/A	U			ND
CCR-10	9040906-10	4/18/2019 14:21	4/18/2019 14:21	EPA 120.1	Specific Conductance	967.8		umhos/cm		1	5	ND
CCR-10	9040906-10	4/18/2019 14:21	4/18/2019 14:21	EPA 170.1	Temperature	22.9		deg C		0.1	0.1	ND
CCR-10	9040906-10	4/18/2019 14:21	6/20/2019 12:31	EPA 200.7	Thallium	3.40		ug/L	U	3.40	5.00	PES
CCR-10	9040906-10	4/18/2019 14:21	4/18/2019 14:21	EPA 180.1	Turbidity	16.2		NTU		0.1	0.5	ND
CCR-10	9040906-10	4/18/2019 14:21	4/18/2019 14:21	FDEP DEP-SOP	Water Level	132.19		FT		0.1	0.5	ND
CCR-11	9040906-11	4/18/2019 13:46	6/20/2019 12:34	EPA 200.7	Antimony	2.50		ug/L	U	2.50	5.00	PES
CCR-11	9040906-11	4/18/2019 13:46	4/29/2019 10:31	EPA 200.7	Arsenic	91.1		ug/L		5.86	10.0	PES
CCR-11	9040906-11	4/18/2019 13:46	4/26/2019 13:23	EPA 200.7	Barium	45.1		ug/L		5.03	20.0	CF
CCR-11	9040906-11	4/18/2019 13:46	6/20/2019 12:34	EPA 200.7	Beryllium	2.00		ug/L	U	2.00	5.00	PES
CCR-11	9040906-11	4/18/2019 13:46	6/20/2019 12:34	EPA 200.7	Boron	409		ug/L		3.00	5.00	PES
CCR-11	9040906-11	4/18/2019 13:46	6/20/2019 12:34	EPA 200.7	Cadmium	2.00		ug/L	U	2.00	5.00	PES
CCR-11	9040906-11	4/18/2019 13:46	6/20/2019 13:12	EPA 200.7	Calcium	567		mg/L	V	2.10	5.00	PES
CCR-11	9040906-11	4/18/2019 13:46	6/20/2019 12:34	EPA 200.7	Chromium	1.00		ug/L	U	1.00	5.00	PES
CCR-11	9040906-11	4/18/2019 13:46	6/20/2019 12:34	EPA 200.7	Cobalt	2.00		ug/L	U	2.00	25.0	PES
CCR-11	9040906-11	4/18/2019 13:46	4/18/2019 13:46	By Observation	Color	Clear		[blank]	U			ND
CCR-11	9040906-11	4/18/2019 13:46	4/18/2019 13:46	EPA 360.2	Dissolved Oxygen	0.63		mg/L		0.10	0.20	ND
CCR-11	9040906-11	4/18/2019 13:46	4/30/2019 8:25	SM18 4500-F C	Fluoride	0.658		mg/L		0.0500	0.200	PES
CCR-11	9040906-11	4/18/2019 13:46	6/20/2019 12:34	EPA 200.7	Lead	2.50		ug/L	U	2.50	5.00	PES
CCR-11	9040906-11	4/18/2019 13:46	4/26/2019 0:00	EPA 200.7	Lithium	25.5		ug/L	I	9.1	50	SGS
CCR-11	9040906-11	4/18/2019 13:46	4/26/2019 13:23	EPA 200.7	Molybdenum	6.31		ug/L	U	6.31	10.0	CF
CCR-11	9040906-11	4/18/2019 13:46	4/18/2019 13:46	SM18 4500-B B	pH	4.93		SU		0.05	0.05	ND
CCR-11	9040906-11	4/18/2019 13:46	5/7/2019 15:10	EPA 903.1	Radium-226	0.3	0.2	pCi/L		0.1	0.3	FRS
CCR-11	9040906-11	4/18/2019 13:46	5/6/2019 9:45	EPA Ra-05	Radium-228	0.7	0.4	pCi/L	U	0.7	2.1	FRS
CCR-11	9040906-11	4/18/2019 13:46	4/29/2019 10:31	EPA 200.7	Selenium	8.50		ug/L	I	5.58	10.0	PES
CCR-11	9040906-11	4/18/2019 13:46	4/18/2019 13:46	By Observation	Sheen	No Sheen		N/A	U			ND
CCR-11	9040906-11	4/18/2019 13:46	4/18/2019 13:46	EPA 120.1	Specific Conductance	2420		umhos/cm		1	5	ND
CCR-11	9040906-11	4/18/2019 13:46	4/18/2019 13:46	EPA 170.1	Temperature	26.2		deg C		0.1	0.1	ND
CCR-11	9040906-11	4/18/2019 13:46	6/20/2019 12:34	EPA 200.7	Thallium	3.40		ug/L	U	3.40	5.00	PES
CCR-11	9040906-11	4/18/2019 13:46	4/18/2019 13:46	EPA 180.1	Turbidity	11.8		NTU		0.1	0.5	ND
CCR-11	9040906-11	4/18/2019 13:46	4/18/2019 13:46	FDEP DEP-SOP	Water Level	132.45		FT		0.1	0.5	ND
CCR-12	9040906-12	4/18/2019 10:44	6/20/2019 12:37	EPA 200.7	Antimony	2.50		ug/L	U	2.50	5.00	PES
CCR-12	9040906-12	4/18/2019 10:44	4/29/2019 10:34	EPA 200.7	Arsenic	49.6		ug/L		5.86	10.0	PES
CCR-12	9040906-12	4/18/2019 10:44	4/26/2019 13:28	EPA 200.7	Barium	16.8		ug/L	I	5.03	20.0	CF
CCR-12	9040906-12	4/18/2019 10:44	6/20/2019 12:37	EPA 200.7	Beryllium	2.00		ug/L	U	2.00	5.00	PES
CCR-12	9040906-12	4/18/2019 10:44	6/20/2019 12:37	EPA 200.7	Boron	440		ug/L		3.00	5.00	PES
CCR-12	9040906-12	4/18/2019 10:44	6/20/2019 12:37	EPA 200.7	Cadmium	2.00		ug/L	U	2.00	5.00	PES
CCR-12	9040906-12	4/18/2019 10:44	6/20/2019 13:14	EPA 200.7	Calcium	648		mg/L	V	2.10	5.00	PES
CCR-12	9040906-12	4/18/2019 10:44	6/20/2019 12:37	EPA 200.7	Chromium	1.00		ug/L	U	1.00	5.00	PES
CCR-12	9040906-12	4/18/2019 10:44	6/20/2019 12:37	EPA 200.7	Cobalt	2.00		ug/L	U	2.00	25.0	PES
CCR-12	9040906-12	4/18/2019 10:44	4/18/2019 10:44	By Observation	Color	Brown		[blank]	U			DB
CCR-12	9040906-12	4/18/2019 10:44	4/18/2019 10:44	EPA 360.2	Dissolved Oxygen	0.21		mg/L		0.10	0.20	DB
CCR-12	9040906-12	4/18/2019 10:44	4/30/2019 8:25	SM18 4500-F C	Fluoride	0.578		mg/L		0.0500	0.200	PES
CCR-12	9040906-12	4/18/2019 10:44	6/20/2019 12:37	EPA 200.7	Lead	2.50		ug/L	U	2.50	5.00	PES
CCR-12	9040906-12	4/18/2019 10:44	4/26/2019 0:00	EPA 200.7	Lithium	13.9		ug/L	I	9.1	50	SGS
CCR-12	9040906-12	4/18/2019 10:44	4/26/2019 13:28	EPA 200.7	Molybdenum	7.71		ug/L	I	6.31	10.0	CF
CCR-12	9040906-12	4/18/2019 10:44	4/18/2019 10:44	SM18 4500-B B	pH	6.56		SU		0.05	0.05	DB
CCR-12	9040906-12	4/18/2019 10:44	5/6/2019 9:56	EPA 903.1	Radium-226	3.5	0.3	pCi/L		0.2	0.6	FRS
CCR-12	9040906-12	4/18/2019 10:44	5/6/2019 9:45	EPA Ra-05	Radium-228	0.9	0.5	pCi/L		0.6	1.8	FRS
CCR-12	9040906-12	4/18/2019 10:44	4/29/2019 10:34	EPA 200.7	Selenium	15.1		ug/L		5.58	10.0	PES
CCR-12	9040906-12	4/18/2019 10:44	4/18/2019 10:44	By Observation	Sheen	No Sheen		N/A	U			DB
CCR-12	9040906-12	4/18/2019 10:44	4/18/2019 10:44	EPA 120.1	Specific Conductance	2690		umhos/cm		1	5	DB
CCR-12	9040906-12	4/18/2019 10:44	4/18/2019 10:44	EPA 170.1	Temperature	24.7		deg C		0.1	0.1	DB
CCR-12	9040906-12	4/18/2019 10:44	6/20/2019 12:37	EPA 200.7	Thallium	4.10		ug/L	I	3.40	5.00	PES
CCR-12	9040906-12	4/18/2019 10:44	4/18/2019 10:44	EPA 180.1	Turbidity	6.08		NTU		0.1	0.5	DB
CCR-12	9040906-12	4/18/2019 10:44	4/18/2019 10:44	FDEP DEP-SOP	Water Level	132.33		FT		0.1	0.5	DB
CCR-13	9040906-13	4/18/2019 11:22	6/20/2019 12:39	EPA 200.7	Antimony	2.50		ug/L	U	2.50	5.00	PES
CCR-13	9040906-13	4/18/2019 11:22	4/29/2019 10:36	EPA 200.7	Arsenic	19.6		ug/L		5.86	10.0	PES
CCR-13	9040906-13	4/18/2019 11:22	4/26/2019 13:33	EPA 200.7	Barium	47.3		ug/L		5.03	20.0	CF
CCR-13	9040906-13	4/18/2019 11:22	6/20/2019 12:39	EPA 200.7	Beryllium	2.00		ug/L	U	2.00	5.00	PES

**3030 E Lake Parker Dr**  
**Lakeland, FL 33805**  
**CCR SAMPLING**  
**Month / Year: April 2019**  
**LAB ANALYSIS REPORT**

SampleName	Sample ID	Date/Time Sampled	Date/Time Analyzed	Method	Analyte	Result	Error	Units	Qualifiers	Detection Limit	Reporting Limit	Analyst	
CCR-13	9040906-13	4/18/2019 11:22	6/20/2019 12:39	EPA 200.7	Boron	158		ug/L		3.00	5.00	PES	
CCR-13	9040906-13	4/18/2019 11:22	6/20/2019 12:39	EPA 200.7	Cadmium	2.00		ug/L	U	2.00	5.00	PES	
CCR-13	9040906-13	4/18/2019 11:22	6/20/2019 13:17	EPA 200.7	Calcium	507		mg/L	V	2.10	5.00	PES	
CCR-13	9040906-13	4/18/2019 11:22	6/20/2019 12:39	EPA 200.7	Chromium	1.00		ug/L	I	1.00	5.00	PES	
CCR-13	9040906-13	4/18/2019 11:22	6/20/2019 12:39	EPA 200.7	Cobalt	3.10		ug/L	I	2.00	25.0	PES	
CCR-13	9040906-13	4/18/2019 11:22	4/18/2019 11:22	By Observation	Color	Clear		[blank]	U			DB	
CCR-13	9040906-13	4/18/2019 11:22	4/18/2019 11:22	EPA 360.2	Dissolved Oxygen	0.23		mg/L		0.10	0.20	DB	
CCR-13	9040906-13	4/18/2019 11:22	4/30/2019 8:25	SM18 4500-F C	Fluoride	1.18		mg/L		0.0500	0.200	PES	
CCR-13	9040906-13	4/18/2019 11:22	6/20/2019 12:39	EPA 200.7	Lead	2.50		ug/L	U	2.50	5.00	PES	
CCR-13	9040906-13	4/18/2019 11:22	4/26/2019 0:00	EPA 200.7	Lithium	293		ug/L		18	100	SGS	
CCR-13	9040906-13	4/18/2019 11:22	4/26/2019 13:33	EPA 200.7	Molybdenum	6.31		ug/L	U	6.31	10.0	CF	
CCR-13	9040906-13	4/18/2019 11:22	4/18/2019 11:22	SM18 4500-B B	pH	4.31		SU		0.05	0.05	DB	
CCR-13	9040906-13	4/18/2019 11:22	5/6/2019 9:56	EPA 903.1	Radium-226	41.8	1.1	pCi/L		0.2	0.6	FRS	
CCR-13	9040906-13	4/18/2019 11:22	5/6/2019 9:45	EPA Ra-05	Radium-228	5.6	0.8	pCi/L		0.6	1.8	FRS	
CCR-13	9040906-13	4/18/2019 11:22	4/29/2019 10:36	EPA 200.7	Selenium	5.58		ug/L	U	5.58	10.0	PES	
CCR-13	9040906-13	4/18/2019 11:22	4/18/2019 11:22	By Observation	Sheen	No Sheen		N/A	U			DB	
CCR-13	9040906-13	4/18/2019 11:22	4/18/2019 11:22	EPA 120.1	Specific Conductance	3760		umhos/cm		1	5	DB	
CCR-13	9040906-13	4/18/2019 11:22	4/18/2019 11:22	EPA 170.1	Temperature	25.0		deg C		0.1	0.1	DB	
CCR-13	9040906-13	4/18/2019 11:22	6/20/2019 12:39	EPA 200.7	Thallium	3.40		ug/L	U	3.40	5.00	PES	
CCR-13	9040906-13	4/18/2019 11:22	4/18/2019 11:22	EPA 180.1	Turbidity	3.28		NTU		0.1	0.5	DB	
CCR-13	9040906-13	4/18/2019 11:22	4/18/2019 11:22	FDEP DEP-SOP	Water Level	132.06		FT		0.1	0.5	DB	
CCR-14	9040906-14	4/18/2019 13:18	6/20/2019 12:42	EPA 200.7	Antimony	2.50		ug/L	U	2.50	5.00	PES	
CCR-14	9040906-14	4/18/2019 13:18	4/29/2019 10:38	EPA 200.7	Arsenic	5.86		ug/L	U	5.86	10.0	PES	
CCR-14	9040906-14	4/18/2019 13:18	4/26/2019 13:37	EPA 200.7	Barium	25.4		ug/L		5.03	20.0	CF	
CCR-14	9040906-14	4/18/2019 13:18	6/20/2019 12:42	EPA 200.7	Beryllium	2.00		ug/L	U	2.00	5.00	PES	
CCR-14	9040906-14	4/18/2019 13:18	6/20/2019 12:42	EPA 200.7	Boron	1020		ug/L		3.00	5.00	PES	
CCR-14	9040906-14	4/18/2019 13:18	6/20/2019 12:42	EPA 200.7	Cadmium	2.00		ug/L	U	2.00	5.00	PES	
CCR-14	9040906-14	4/18/2019 13:18	6/20/2019 13:20	EPA 200.7	Calcium	530		mg/L	V	2.10	5.00	PES	
CCR-14	9040906-14	4/18/2019 13:18	6/20/2019 12:42	EPA 200.7	Chromium	1.30		ug/L	I	1.00	5.00	PES	
CCR-14	9040906-14	4/18/2019 13:18	6/20/2019 12:42	EPA 200.7	Cobalt	2.00		ug/L	U	2.00	25.0	PES	
CCR-14	9040906-14	4/18/2019 13:18	4/18/2019 13:18	By Observation	Color	Clear		[blank]	U			ND	
CCR-14	9040906-14	4/18/2019 13:18	4/18/2019 13:18	EPA 360.2	Dissolved Oxygen	0.21		mg/L		0.10	0.20	ND	
CCR-14	9040906-14	4/18/2019 13:18	4/30/2019 8:25	SM18 4500-F C	Fluoride	0.514		mg/L		0.0500	0.200	PES	
CCR-14	9040906-14	4/18/2019 13:18	6/20/2019 12:42	EPA 200.7	Lead	2.50		ug/L	U	2.50	5.00	PES	
CCR-14	9040906-14	4/18/2019 13:18	4/26/2019 0:00	EPA 200.7	Lithium	15.7		ug/L	I	9.1	50	SGS	
CCR-14	9040906-14	4/18/2019 13:18	4/26/2019 13:37	EPA 200.7	Molybdenum	6.31		ug/L	U	6.31	10.0	CF	
CCR-14	9040906-14	4/18/2019 13:18	4/18/2019 13:18	SM18 4500-B B	pH	5.28		SU		0.05	0.05	ND	
CCR-14	9040906-14	4/18/2019 13:18	5/6/2019 9:56	EPA 903.1	Radium-226	24.2	0.8	pCi/L		0.2	0.6	FRS	
CCR-14	9040906-14	4/18/2019 13:18	5/6/2019 9:45	EPA Ra-05	Radium-228	0.7	0.4	pCi/L		0.6	1.8	FRS	
CCR-14	9040906-14	4/18/2019 13:18	4/29/2019 10:38	EPA 200.7	Selenium	5.58		ug/L	U	5.58	10.0	PES	
CCR-14	9040906-14	4/18/2019 13:18	4/18/2019 13:18	By Observation	Sheen	No Sheen		N/A	U			ND	
CCR-14	9040906-14	4/18/2019 13:18	4/18/2019 13:18	EPA 120.1	Specific Conductance	2350		umhos/cm		1	5	ND	
CCR-14	9040906-14	4/18/2019 13:18	4/18/2019 13:18	EPA 170.1	Temperature	26.1		deg C		0.1	0.1	ND	
CCR-14	9040906-14	4/18/2019 13:18	6/20/2019 12:42	EPA 200.7	Thallium	3.40		ug/L	U	3.40	5.00	PES	
CCR-14	9040906-14	4/18/2019 13:18	4/18/2019 13:18	EPA 180.1	Turbidity	10.3		NTU		0.1	0.5	ND	
CCR-14	9040906-14	4/18/2019 13:18	4/18/2019 13:18	FDEP DEP-SOP	Water Level	131.37		FT		0.1	0.5	ND	
Equipment Blank	9040906-15	4/18/2019 15:05	6/20/2019 14:16	EPA 200.7	Antimony	2.50		ug/L	U	2.50	5.00	PES	
Equipment Blank	9040906-15	4/18/2019 15:05	4/29/2019 10:41	EPA 200.7	Arsenic	10.2		ug/L		5.86	10.0	PES	
Equipment Blank	9040906-15	4/18/2019 15:05	4/26/2019 12:57	EPA 200.7	Barium	5.03		ug/L	U	5.03	20.0	CF	
Equipment Blank	9040906-15	4/18/2019 15:05	6/20/2019 14:16	EPA 200.7	Beryllium	2.00		ug/L	U	2.00	5.00	PES	
Equipment Blank	9040906-15	4/18/2019 15:05	6/20/2019 14:16	EPA 200.7	Boron	3.00		ug/L	U	3.00	5.00	PES	
Equipment Blank	9040906-15	4/18/2019 15:05	6/20/2019 14:16	EPA 200.7	Cadmium	2.00		ug/L	U	2.00	5.00	PES	
Equipment Blank	9040906-15	4/18/2019 15:05	6/20/2019 14:16	EPA 200.7	Calcium	0.0683		mg/L		0.0210	0.0500	PES	
Equipment Blank	9040906-15	4/18/2019 15:05	6/20/2019 14:16	EPA 200.7	Chromium	1.20		ug/L	I	1.00	5.00	PES	
Equipment Blank	9040906-15	4/18/2019 15:05	6/20/2019 14:16	EPA 200.7	Cobalt	2.00		ug/L	U	2.00	25.0	PES	
Equipment Blank	9040906-15	4/18/2019 15:05	4/18/2019 15:05	By Observation	Color	Clear		[blank]	U			DB	
Equipment Blank	9040906-15	4/18/2019 15:05	4/18/2019 15:05	EPA 360.2	Dissolved Oxygen	1.33		mg/L		0.10	0.20	DB	
Equipment Blank	9040906-15	4/18/2019 15:05	4/30/2019 8:25	SM18 4500-F C	Fluoride	0.0500		mg/L	U	0.0500	0.200	PES	
Equipment Blank	9040906-15	4/18/2019 15:05	6/20/2019 14:16	EPA 200.7	Lead	2.50		ug/L	U	2.50	5.00	PES	
Equipment Blank	9040906-15	4/18/2019 15:05	4/26/2019 0:00	EPA 200.7	Lithium	9.1		ug/L	U	9.1	50	SGS	
Equipment Blank	9040906-15	4/18/2019 15:05	4/26/2019 12:57	EPA 200.7	Molybdenum	6.31		ug/L	U	6.31	10.0	CF	
Equipment Blank	9040906-15	4/18/2019 15:05	4/18/2019 15:05	EPA 15:05	SM18 4500-B B	ph	6.85		SU		0.05	0.05	DB
Equipment Blank	9040906-15	4/18/2019 15:05	5/6/2019 9:56	EPA 903.1	Radium-226	0.2	0.1	pCi/L		0.2	0.6	FRS	
Equipment Blank	9040906-15	4/18/2019 15:05	5/6/2019 9:45	EPA Ra-05	Radium-228	0.4	0.4	pCi/L		0.6	1.8	FRS	
Equipment Blank	9040906-15	4/18/2019 15:05	4/29/2019 10:41	EPA 200.7	Selenium	5.58		ug/L	U	5.58	10.0	PES	
Equipment Blank	9040906-15	4/18/2019 15:05	4/18/2019 15:05	By Observation	Sheen	No Sheen		N/A	U			DB	
Equipment Blank	9040906-15	4/18/2019 15:05	4/18/2019 15:05	EPA 120.1	Specific Conductance	1.08		umhos/cm	I	1	5	DB	
Equipment Blank	9040906-15	4/18/2019 15:05	4/18/2019 15:05	EPA 170.1	Temperature	20.8		deg C		0.1	0.1	DB	
Equipment Blank	9040906-15	4/18/2019 15:05	6/20/2019 14:16	EPA 200.7	Thallium	3.40		ug/L	U	3.40	5.00	PES	
Equipment Blank	9040906-15	4/18/2019 15:05	4/18/2019 15:05	EPA 180.1	Turbidity	0.81		NTU		0.1	0.5	DB	

J = Estimated value. Quality control does not meet criteria.

I = The reported value is between the laboratory MDL and the laboratory PQL.

J-6 = Estimated value. Result does not meet the quality control criteria for duplicates.

J-7 = Result exceeds the regulatory MCL.

J-8 = Estimated value. Reported concentration is outside the standard calibration/calibration verification range.

**3030 E Lake Parker Dr**  
**Lakeland, FL 33805**  
**CCR SAMPLING**  
**Month / Year: April 2019**  
**LAB ANALYSIS REPORT**

SampleName	Sample ID	Date/Time Sampled	Date/Time Analyzed	Method	Analyte	Result	Error	Units	Qualifiers	Detection Limit	Reporting Limit	Analyst
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U = Compound was analyzed for but not detected.

V = The analyte was detected at or above the method detection limit in both the sample and the associated method blank.

PES = Subcontracted analysis conducted Phoslab Environmental Services, Inc. (TNI Certificate No. E84925).

SGS = Subcontracted analysis conducted SGS Dayton NJ (TNI Certificate No. E87482).

FRS = Subcontracted analysis conducted Florida Radiochemistry Services, Inc. (TNI Certificate No. E83033).

The results detailed within this report apply only to those samples submitted for analysis and for which results are reported here.

Unless otherwise indicated, these test results meet all requirements of the TNI standards.

**3030 E Lake Parker Dr  
Lakeland, FL 33805  
CCR SAMPLING**

**Month / Year: July 2019  
LAB ANALYSIS REPORT**

SampleName	Sample ID	Date/Time Sampled	Date/Time Analyzed	Method	Analyte	Result	Error	Units	Qualifiers	Detection Limit	Reporting Limit	Analyst
CCR-01	9062705-01	7/17/2019 11:13	8/1/2019 14:54	EPA 200.7	Antimony	4.91	ug/L	U		4.91	15.0	FSES
CCR-01	9062705-01	7/17/2019 11:13	8/1/2019 14:54	EPA 200.7	Arsenic	2.89	ug/L	U		2.89	10.0	FSES
CCR-01	9062705-01	7/17/2019 11:13	8/1/2019 14:54	EPA 200.7	Barium	29.2	ug/L			0.0785	1.00	FSES
CCR-01	9062705-01	7/17/2019 11:13	8/1/2019 14:54	EPA 200.7	Boron	37.6	ug/L			2.36	10.0	FSES
CCR-01	9062705-01	7/17/2019 11:13	8/1/2019 14:54	EPA 200.7	Cadmium	0.320	ug/L	U		0.320	1.00	FSES
CCR-01	9062705-01	7/17/2019 11:13	8/1/2019 14:54	EPA 200.7	Calcium	32.7	mg/L			0.00900	0.0500	FSES
CCR-01	9062705-01	7/17/2019 11:13	8/5/2019 17:57	EPA 300.0 (Chloride)	Chloride	2.75	mg/L			0.0380	0.100	CF
CCR-01	9062705-01	7/17/2019 11:13	8/1/2019 14:54	EPA 200.7	Chromium	1.10	ug/L	I		0.736	5.00	FSES
CCR-01	9062705-01	7/17/2019 11:13	8/1/2019 14:54	EPA 200.7	Cobalt	0.382	ug/L	U		0.382	1.00	FSES
CCR-01	9062705-01	7/17/2019 11:13	7/17/2019 11:13	By Observation	Color	Clear	[blank]	U			DB	
CCR-01	9062705-01	7/17/2019 11:13	7/17/2019 11:13	EPA 360.2	Dissolved Oxygen	0.23	mg/L			0.10	0.20	DB
CCR-01	9062705-01	7/17/2019 11:13	8/1/2019 15:01	EPA 300.0	Fluoride	0.0330	mg/L	I		0.0168	0.0504	FSES
CCR-01	9062705-01	7/17/2019 11:13	8/1/2019 14:54	EPA 200.7	Lead	1.43	ug/L	U		1.43	10.0	FSES
CCR-01	9062705-01	7/17/2019 11:13	8/2/2019 15:13	EPA 200.7	Lithium	3.33	ug/L	U		3.33	25.0	FSES
CCR-01	9062705-01	7/17/2019 11:13	8/1/2019 16:21	EPA 245.1	Mercury	0.152	ug/L	U		0.152	0.456	FSES
CCR-01	9062705-01	7/17/2019 11:13	8/1/2019 14:54	EPA 200.7	Molybdenum	2.76	ug/L	U		2.76	10.0	FSES
CCR-01	9062705-01	7/17/2019 11:13	7/17/2019 11:13	SM18 4500-B	pH	4.81	SU			0.05	0.05	DB
CCR-01	9062705-01	7/17/2019 11:13	9/14/2019 11:15	EPA 903.1	Radium-226	6.1	0.7 pCi/L			0.200	0.600	FRS
CCR-01	9062705-01	7/17/2019 11:13	8/13/2019 11:16	EPA Ra-05	Radium-228	2.5	0.6 pCi/L			0.700	2.10	FRS
CCR-01	9062705-01	7/17/2019 11:13	7/22/2019 11:15	SM18 2540 C	Residues- Filterable (TDS)	166	mg/L			10.0	20.0	ND
CCR-01	9062705-01	7/17/2019 11:13	8/1/2019 14:54	EPA 200.7	Selenium	3.09	ug/L	U		3.09	15.0	FSES
CCR-01	9062705-01	7/17/2019 11:13	7/17/2019 11:13	By Observation	Sheen	No Sheen	N/A	U			DB	
CCR-01	9062705-01	7/17/2019 11:13	7/17/2019 11:13	EPA 120.1	Specific Conductance	235.1	umhos/cm			1	5	DB
CCR-01	9062705-01	7/17/2019 11:13	8/5/2019 17:57	EPA 300.0 (Sulfate)	Sulfate	81.8	mg/L			0.0250	0.100	CF
CCR-01	9062705-01	7/17/2019 11:13	7/17/2019 11:13	EPA 170.1	Temperature	25.7	deg C			0.1	0.1	DB
CCR-01	9062705-01	7/17/2019 11:13	8/1/2019 14:54	EPA 200.7	Thallium	0.925	ug/L	U		0.925	4.00	FSES
CCR-01	9062705-01	7/17/2019 11:13	7/17/2019 11:13	EPA 180.1	Turbidity	3.02	NTU			0.1	0.5	DB
CCR-01	9062705-01	7/17/2019 11:13	7/17/2019 11:13	FDEP DEP-SOP	Water Level	131.96	FT			0.1	0.5	DB
CCR-02	9062705-02	7/17/2019 12:00	8/1/2019 14:56	EPA 200.7	Antimony	4.91	ug/L	U		4.91	15.0	FSES
CCR-02	9062705-02	7/17/2019 12:00	8/1/2019 14:56	EPA 200.7	Arsenic	2.89	ug/L	U		2.89	10.0	FSES
CCR-02	9062705-02	7/17/2019 12:00	8/1/2019 14:56	EPA 200.7	Barium	25.0	ug/L			0.0785	1.00	FSES
CCR-02	9062705-02	7/17/2019 12:00	8/1/2019 14:56	EPA 200.7	Boron	45.4	ug/L			2.36	10.0	FSES
CCR-02	9062705-02	7/17/2019 12:00	8/1/2019 14:56	EPA 200.7	Cadmium	0.320	ug/L	U		0.320	1.00	FSES
CCR-02	9062705-02	7/17/2019 12:00	8/1/2019 14:56	EPA 200.7	Calcium	64.8	mg/L			0.00900	0.0500	FSES
CCR-02	9062705-02	7/17/2019 12:00	8/5/2019 14:04	EPA 300.0 (Chloride)	Chloride	11.0	mg/L			0.152	0.400	CF
CCR-02	9062705-02	7/17/2019 12:00	8/1/2019 14:56	EPA 200.7	Chromium	0.736	ug/L	U		0.736	5.00	FSES
CCR-02	9062705-02	7/17/2019 12:00	8/1/2019 14:56	EPA 200.7	Cobalt	0.382	ug/L	U		0.382	1.00	FSES
CCR-02	9062705-02	7/17/2019 12:00	7/17/2019 12:00	By Observation	Color	Clear	[blank]	U			DB	
CCR-02	9062705-02	7/17/2019 12:00	7/17/2019 12:00	EPA 360.2	Dissolved Oxygen	0.75	mg/L			0.10	0.20	DB
CCR-02	9062705-02	7/17/2019 12:00	8/1/2019 15:50	EPA 300.0	Fluoride	0.161	mg/L			0.0168	0.0504	FSES
CCR-02	9062705-02	7/17/2019 12:00	8/1/2019 14:56	EPA 200.7	Lead	1.43	ug/L	U		1.43	10.0	FSES
CCR-02	9062705-02	7/17/2019 12:00	8/2/2019 15:16	EPA 200.7	Lithium	3.33	ug/L	U		3.33	25.0	FSES
CCR-02	9062705-02	7/17/2019 12:00	8/1/2019 16:23	EPA 245.1	Mercury	0.152	ug/L	U		0.152	0.456	FSES
CCR-02	9062705-02	7/17/2019 12:00	8/1/2019 14:56	EPA 200.7	Molybdenum	2.76	ug/L	U		2.76	10.0	FSES
CCR-02	9062705-02	7/17/2019 12:00	7/17/2019 12:00	SM18 4500-B	pH	4.96	SU			0.05	0.05	DB
CCR-02	9062705-02	7/17/2019 12:00	9/14/2019 11:15	EPA 903.1	Radium-226	1.7	0.4 pCi/L			0.200	0.600	FRS
CCR-02	9062705-02	7/17/2019 12:00	8/13/2019 11:16	EPA Ra-05	Radium-228	1.0	0.5 pCi/L			0.700	2.10	FRS
CCR-02	9062705-02	7/17/2019 12:00	7/22/2019 11:19	SM18 2540 C	Residues- Filterable (TDS)	320	mg/L			10.0	20.0	ND
CCR-02	9062705-02	7/17/2019 12:00	8/1/2019 14:56	EPA 200.7	Selenium	3.09	ug/L	U		3.09	15.0	FSES
CCR-02	9062705-02	7/17/2019 12:00	7/17/2019 12:00	By Observation	Sheen	No Sheen	N/A	U			DB	
CCR-02	9062705-02	7/17/2019 12:00	7/17/2019 12:00	EPA 120.1	Specific Conductance	415	umhos/cm			1	5	DB
CCR-02	9062705-02	7/17/2019 12:00	8/5/2019 14:04	EPA 300.0 (Sulfate)	Sulfate	159	mg/L			0.100	0.400	CF
CCR-02	9062705-02	7/17/2019 12:00	7/17/2019 12:00	EPA 170.1	Temperature	27.3	deg C			0.1	0.1	DB
CCR-02	9062705-02	7/17/2019 12:00	8/1/2019 14:56	EPA 200.7	Thallium	0.925	ug/L	U		0.925	4.00	FSES
CCR-02	9062705-02	7/17/2019 12:00	7/17/2019 12:00	EPA 180.1	Turbidity	3.42	NTU			0.1	0.5	DB
CCR-02	9062705-02	7/17/2019 12:00	7/17/2019 12:00	FDEP DEP-SOP	Water Level	131.50	FT			0.1	0.5	DB
CCR-03	9062705-03	7/17/2019 14:00	8/1/2019 14:59	EPA 200.7	Antimony	4.91	ug/L	U		4.91	15.0	FSES
CCR-03	9062705-03	7/17/2019 14:00	8/1/2019 14:59	EPA 200.7	Arsenic	2.89	ug/L	U		2.89	10.0	FSES
CCR-03	9062705-03	7/17/2019 14:00	8/1/2019 14:59	EPA 200.7	Barium	28.3	ug/L			0.0785	1.00	FSES
CCR-03	9062705-03	7/17/2019 14:00	8/1/2019 14:59	EPA 200.7	Boron	1200	ug/L			2.36	10.0	FSES
CCR-03	9062705-03	7/17/2019 14:00	8/1/2019 14:59	EPA 200.7	Cadmium	0.320	ug/L	U		0.320	1.00	FSES
CCR-03	9062705-03	7/17/2019 14:00	8/1/2019 16:59	EPA 200.7	Calcium	516	mg/L			0.225	1.25	FSES
CCR-03	9062705-03	7/17/2019 14:00	8/5/2019 14:56	EPA 300.0 (Chloride)	Chloride	25.6	mg/L			0.0380	0.100	CF
CCR-03	9062705-03	7/17/2019 14:00	8/1/2019 14:59	EPA 200.7	Chromium	0.736	ug/L	U		0.736	5.00	FSES
CCR-03	9062705-03	7/17/2019 14:00	8/1/2019 14:59	EPA 200.7	Cobalt	0.382	ug/L	U		0.382	1.00	FSES
CCR-03	9062705-03	7/17/2019 14:00	9/16/2019 12:42	By Observation	Color	Clear	[blank]	U			DB	
CCR-03	9062705-03	7/17/2019 14:00	7/17/2019 14:00	EPA 360.2	Dissolved Oxygen	0.21	mg/L			0.10	0.20	DB
CCR-03	9062705-03	7/17/2019 14:00	8/1/2019 16:06	EPA 300.0	Fluoride	0.218	mg/L			0.0336	0.101	FSES
CCR-03	9062705-03	7/17/2019 14:00	8/1/2019 14:59	EPA 200.7	Lead	1.43	ug/L	U		1.43	10.0	FSES
CCR-03	9062705-03	7/17/2019 14:00	8/2/2019 15:19	EPA 200.7	Lithium	3.33	ug/L	U		3.33	25.0	FSES
CCR-03	9062705-03	7/17/2019 14:00	8/1/2019 16:26	EPA 245.1	Mercury	0.152	ug/L	U		0.152	0.456	FSES
CCR-03	9062705-03	7/17/2019 14:00	8/1/2019 14:59	EPA 200.7	Molybdenum	2.76	ug/L	U		2.76	10.0	FSES
CCR-03	9062705-03	7/17/2019 14:00	7/17/2019 14:00	SM18 4500-B	pH	5.27	SU			0.05	0.05	DB
CCR-03	9062705-03	7/17/2019 14:00	9/14/2019 11:15	EPA 903.1	Radium-226	49.1	2.1 pCi/L			0.100	0.300	FRS
CCR-03	9062705-03	7/17/2019 14:00	8/13/2019 11:16	EPA Ra-05	Radium-228	34.8	1.9 pCi/L			0.800	2.40	FRS
CCR-03	9062705-03	7/17/2019 14:00	7/22/2019 11:21	SM18 2540 C	Residues- Filterable (TDS)	1970	mg/L			10.0	20.0	ND
CCR-03	9062705-03	7/17/2019 14:00	8/1/2019 14:59	EPA 200.7	Selenium	3.09	ug/L	U		3.09	15.0	FSES
CCR-03	9062705-03	7/17/2019 14:00	7/17/2019 14:00	By Observation	Sheen	No Sheen	N/A	U			DB	
CCR-03	9062705-03	7/17/2019 14:00	7/17/2019 14:00	EPA 120.1	Specific Conductance	2110	umhos/cm			1	5	DB
CCR-03	9062705-03	7/17/2019 14:00	8/5/2019 14:30	EPA 300.0 (Sulfate)	Sulfate	1220	mg/L			0		

**3030 E Lake Parker Dr**  
**Lakeland, FL 33805**  
**CCR SAMPLING**  
**Month / Year: July 2019**  
**LAB ANALYSIS REPORT**

SampleName	Sample ID	Date/Time Sampled	Date/Time Analyzed	Method	Analyte	Result	Error	Units	Qualifiers	Detection Limit	Reporting Limit	Analyst
CCR-03	9062705-03	7/17/2019 14:00	7/17/2019 14:00	EPA 170.1	Temperature	27.0	deg C			0.1	0.1	DB
CCR-03	9062705-03	7/17/2019 14:00	8/1/2019 14:59	EPA 200.7	Thallium	0.925	ug/L	U		0.925	4.00	FSES
CCR-03	9062705-03	7/17/2019 14:00	7/17/2019 14:00	EPA 180.1	Turbidity	2.76	NTU			0.1	0.5	DB
CCR-03	9062705-03	7/17/2019 14:00	7/17/2019 14:00	FDEP DEP-SOP	Water Level	131.18	FT			0.1	0.5	DB
CCR-04	9062705-04	7/17/2019 14:58	8/1/2019 15:02	EPA 200.7	Antimony	4.91	ug/L	U		4.91	15.0	FSES
CCR-04	9062705-04	7/17/2019 14:58	8/1/2019 15:02	EPA 200.7	Arsenic	2.89	ug/L	U		2.89	10.0	FSES
CCR-04	9062705-04	7/17/2019 14:58	8/1/2019 15:02	EPA 200.7	Barium	335	ug/L			0.0785	1.00	FSES
CCR-04	9062705-04	7/17/2019 14:58	8/1/2019 15:02	EPA 200.7	Boron	735	ug/L			2.36	10.0	FSES
CCR-04	9062705-04	7/17/2019 14:58	8/1/2019 15:02	EPA 200.7	Cadmium	18.7	ug/L			0.320	1.00	FSES
CCR-04	9062705-04	7/17/2019 14:58	8/1/2019 15:02	EPA 200.7	Calcium	1350	mg/L			0.450	2.50	FSES
CCR-04	9062705-04	7/17/2019 14:58	8/5/2019 15:22	EPA 300.0 (Chloride)	Chloride	3670	mg/L			1.52	4.00	CF
CCR-04	9062705-04	7/17/2019 14:58	8/1/2019 15:02	EPA 200.7	Chromium	1.50	ug/L	I		0.736	5.00	FSES
CCR-04	9062705-04	7/17/2019 14:58	8/1/2019 15:02	EPA 200.7	Cobalt	0.382	ug/L	U		0.382	1.00	FSES
CCR-04	9062705-04	7/17/2019 14:58	7/17/2019 14:58	By Observation	Color	Clear	[blank]	U			DB	
CCR-04	9062705-04	7/17/2019 14:58	7/17/2019 14:58	EPA 360.2	Dissolved Oxygen	0.59	mg/L			0.10	0.20	DB
CCR-04	9062705-04	7/17/2019 14:58	8/1/2019 16:23	EPA 300.0	Fluoride	0.390	mg/L			0.0840	0.252	FSES
CCR-04	9062705-04	7/17/2019 14:58	8/1/2019 15:02	EPA 200.7	Lead	1.43	ug/L	U		1.43	10.0	FSES
CCR-04	9062705-04	7/17/2019 14:58	8/2/2019 15:21	EPA 200.7	Lithium	3.33	ug/L	U		3.33	25.0	FSES
CCR-04	9062705-04	7/17/2019 14:58	8/1/2019 16:28	EPA 245.1	Mercury	0.152	ug/L	U		0.152	0.456	FSES
CCR-04	9062705-04	7/17/2019 14:58	8/1/2019 15:02	EPA 200.7	Molybdenum	2.76	ug/L	U		2.76	10.0	FSES
CCR-04	9062705-04	7/17/2019 14:58	7/17/2019 14:58	SM18 4500-B B	pH	3.63	SU			0.05	0.05	DB
CCR-04	9062705-04	7/17/2019 14:58	9/14/2019 12:21	EPA 903.1	Radium-226	3.2	0.5 pCi/L			0.200	0.600	FRS
CCR-04	9062705-04	7/17/2019 14:58	8/13/2019 12:19	EPA Ra-05	Radium-228	0.7	0.5 pCi/L	U		0.700	2.10	FRS
CCR-04	9062705-04	7/17/2019 14:58	7/22/2019 11:23	SM18 2540 C	Residues- Filterable (TDS)	7240	mg/L			10.0	20.0	ND
CCR-04	9062705-04	7/17/2019 14:58	8/1/2019 15:02	EPA 200.7	Selenium	3.09	ug/L	U		3.09	15.0	FSES
CCR-04	9062705-04	7/17/2019 14:58	7/17/2019 14:58	By Observation	Sheen	No Sheen	N/A	U			DB	
CCR-04	9062705-04	7/17/2019 14:58	7/17/2019 14:58	EPA 120.1	Specific Conductance	12224	umhos/cm			1	5	DB
CCR-04	9062705-04	7/17/2019 14:58	8/5/2019 15:22	EPA 300.0 (Sulfate)	Sulfate	677	mg/L			1.00	4.00	CF
CCR-04	9062705-04	7/17/2019 14:58	7/17/2019 14:58	EPA 170.1	Temperature	26.5	deg C			0.1	0.1	DB
CCR-04	9062705-04	7/17/2019 14:58	8/1/2019 15:02	EPA 200.7	Thallium	0.925	ug/L	U		0.925	4.00	FSES
CCR-04	9062705-04	7/17/2019 14:58	7/17/2019 14:58	EPA 180.1	Turbidity	8.45	NTU			0.1	0.5	DB
CCR-04	9062705-04	7/17/2019 14:58	7/17/2019 14:58	FDEP DEP-SOP	Water Level	129.35	FT			0.1	0.5	DB
CCR-05	9062705-05	7/23/2019 11:12	8/1/2019 15:05	EPA 200.7	Antimony	4.91	ug/L	U		4.91	15.0	FSES
CCR-05	9062705-05	7/23/2019 11:12	8/1/2019 15:05	EPA 200.7	Arsenic	2.89	ug/L	U		2.89	10.0	FSES
CCR-05	9062705-05	7/23/2019 11:12	8/1/2019 15:05	EPA 200.7	Barium	72.3	ug/L			0.0785	1.00	FSES
CCR-05	9062705-05	7/23/2019 11:12	8/1/2019 15:05	EPA 200.7	Boron	611	ug/L			2.36	10.0	FSES
CCR-05	9062705-05	7/23/2019 11:12	8/1/2019 15:05	EPA 200.7	Cadmium	0.320	ug/L	U		0.320	1.00	FSES
CCR-05	9062705-05	7/23/2019 11:12	8/1/2019 17:05	EPA 200.7	Calcium	1810	mg/L			0.450	2.50	FSES
CCR-05	9062705-05	7/23/2019 11:12	8/5/2019 15:48	EPA 300.0 (Chloride)	Chloride	5230	mg/L			1.90	5.00	CF
CCR-05	9062705-05	7/23/2019 11:12	8/1/2019 11:12	EPA 200.7	Chromium	0.736	ug/L	U		0.736	5.00	FSES
CCR-05	9062705-05	7/23/2019 11:12	8/1/2019 15:05	EPA 200.7	Cobalt	0.382	ug/L	U		0.382	1.00	FSES
CCR-05	9062705-05	7/23/2019 11:12	7/23/2019 11:12	By Observation	Color	Clear	[blank]	U			AB	
CCR-05	9062705-05	7/23/2019 11:12	7/23/2019 11:12	EPA 360.2	Dissolved Oxygen	0.40	mg/L			0.10	0.20	AB
CCR-05	9062705-05	7/23/2019 11:12	8/1/2019 16:39	EPA 300.0	Fluoride	0.110	mg/L	I		0.0840	0.252	FSES
CCR-05	9062705-05	7/23/2019 11:12	8/1/2019 15:05	EPA 200.7	Lead	1.43	ug/L	U		1.43	10.0	FSES
CCR-05	9062705-05	7/23/2019 11:12	8/2/2019 15:24	EPA 200.7	Lithium	3100	ug/L			3.33	25.0	FSES
CCR-05	9062705-05	7/23/2019 11:12	8/1/2019 16:31	EPA 245.1	Mercury	0.152	ug/L	U		0.152	0.456	FSES
CCR-05	9062705-05	7/23/2019 11:12	8/1/2019 15:05	EPA 200.7	Molybdenum	2.76	ug/L	U		2.76	10.0	FSES
CCR-05	9062705-05	7/23/2019 11:12	7/23/2019 11:12	SM18 4500-B B	pH	5.05	SU			0.05	0.05	AB
CCR-05	9062705-05	7/23/2019 11:12	9/14/2019 12:21	EPA 903.1	Radium-226	15.4	1.1 pCi/L			0.200	0.600	FRS
CCR-05	9062705-05	7/23/2019 11:12	8/13/2019 12:19	EPA Ra-05	Radium-228	6.8	0.9 pCi/L			0.700	2.10	FRS
CCR-05	9062705-05	7/23/2019 11:12	7/24/2019 15:58	SM18 2540 C	Residues- Filterable (TDS)	9530	mg/L			10.0	20.0	AB
CCR-05	9062705-05	7/23/2019 11:12	8/1/2019 15:05	EPA 200.7	Selenium	3.09	ug/L	U		3.09	15.0	FSES
CCR-05	9062705-05	7/23/2019 11:12	7/23/2019 11:12	By Observation	Sheen	No Sheen	N/A	U			AB	
CCR-05	9062705-05	7/23/2019 11:12	7/23/2019 11:12	EPA 120.1	Specific Conductance	16158	umhos/cm			1	5	AB
CCR-05	9062705-05	7/23/2019 11:12	8/5/2019 16:14	EPA 300.0 (Sulfate)	Sulfate	349	mg/L			0.100	0.400	CF
CCR-05	9062705-05	7/23/2019 11:12	7/23/2019 11:12	EPA 170.1	Temperature	25.6	deg C			0.1	0.1	AB
CCR-05	9062705-05	7/23/2019 11:12	8/1/2019 15:05	EPA 200.7	Thallium	3.60	ug/L	I		0.925	4.00	FSES
CCR-05	9062705-05	7/23/2019 11:12	7/23/2019 11:12	EPA 180.1	Turbidity	10.7	NTU			0.1	0.5	AB
CCR-05	9062705-05	7/23/2019 11:12	7/23/2019 11:12	FDEP DEP-SOP	Water Level	131.21	FT			0.1	0.5	AB
CCR-06	9062705-06	7/23/2019 12:03	8/1/2019 15:08	EPA 200.7	Antimony	4.91	ug/L	U		4.91	15.0	FSES
CCR-06	9062705-06	7/23/2019 12:03	8/1/2019 15:08	EPA 200.7	Arsenic	2.89	ug/L	U		2.89	10.0	FSES
CCR-06	9062705-06	7/23/2019 12:03	8/1/2019 15:08	EPA 200.7	Barium	17.8	ug/L			0.0785	1.00	FSES
CCR-06	9062705-06	7/23/2019 12:03	8/1/2019 15:08	EPA 200.7	Boron	449	ug/L			2.36	10.0	FSES
CCR-06	9062705-06	7/23/2019 12:03	8/1/2019 15:08	EPA 200.7	Cadmium	0.320	ug/L	U		0.320	1.00	FSES
CCR-06	9062705-06	7/23/2019 12:03	8/1/2019 17:08	EPA 200.7	Calcium	582	mg/L			0.180	1.00	FSES
CCR-06	9062705-06	7/23/2019 12:03	8/5/2019 16:39	EPA 300.0 (Chloride)	Chloride	315	mg/L			0.760	2.00	CF
CCR-06	9062705-06	7/23/2019 12:03	8/1/2019 15:08	EPA 200.7	Chromium	0.736	ug/L	U		0.736	5.00	FSES
CCR-06	9062705-06	7/23/2019 12:03	8/1/2019 15:08	EPA 200.7	Cobalt	0.382	ug/L	U		0.382	1.00	FSES
CCR-06	9062705-06	7/23/2019 12:03	7/23/2019 12:03	By Observation	Color	Clear	[blank]	U			AB	
CCR-06	9062705-06	7/23/2019 12:03	7/23/2019 12:03	EPA 360.2	Dissolved Oxygen	0.20	mg/L			0.10	0.20	AB
CCR-06	9062705-06	7/23/2019 12:03	8/1/2019 16:56	EPA 300.0	Fluoride	0.206	mg/L			0.0336	0.101	FSES
CCR-06	9062705-06	7/23/2019 12:03	8/1/2019 15:08	EPA 200.7	Lead	1.43	ug/L	U		1.43	10.0	FSES
CCR-06	9062705-06	7/23/2019 12:03	8/2/2019 15:27	EPA 200.7	Lithium	140	ug/L			3.33	25.0	FSES
CCR-06	9062705-06	7/23/2019 12:03	8/1/2019 16:33	EPA 245.1	Mercury	0.152	ug/L	U		0.152	0.456	FSES
CCR-06	9062705-06	7/23/2019 12:03	8/1/2019 15:08	EPA 200.7	Molybdenum	8.80	ug/L	I		2.76	10.0	FSES
CCR-06	9062705-06	7/23/2019 12:03	7/23/2019 12:03	SM18 4500-B B	pH	6.07	SU			0.05	0.05	AB
CCR-06	9062705-06	7/23/2019 12:03	9/14/2019 12:21	EPA 903.1	Radium-226	2.9	0.5 pCi/L			0.200	0.600	FRS
CCR-06	9062705-06	7/23/2019 12:03	8/1/2019 12:19	EPA Ra-05	Radium-228	0.7	0.5 pCi/L			0.700	2.10	FRS
CCR-06	9062705-06	7/23/2019 12:03	7/24/2019 16:00	SM18 2540 C	Residues- Filterable (TDS)	2370	mg/L			10.0	20.0	AB

**3030 E Lake Parker Dr**  
**Lakeland, FL 33805**  
**CCR SAMPLING**  
**Month / Year: July 2019**  
**LAB ANALYSIS REPORT**

SampleName	Sample ID	Date/Time Sampled	Date/Time Analyzed	Method	Analyte	Result	Error	Units	Qualifiers	Detection Limit	Reporting Limit	Analyst
CCR-06	9062705-06	7/23/2019 12:03	8/1/2019 15:08	EPA 200.7	Selenium	3.09	ug/L	U		3.09	15.0	FSES
CCR-06	9062705-06	7/23/2019 12:03	7/23/2019 12:03	By Observation	Sheen	No Sheen	N/A	U				AB
CCR-06	9062705-06	7/23/2019 12:03	7/23/2019 12:03	EPA 120.1	Specific Conductance	2921	umhos/cm		1		5	AB
CCR-06	9062705-06	7/23/2019 12:03	8/5/2019 16:39	EPA 300.0 (Sulfate)	Sulfate	1110	mg/L			0.500	2.00	CF
CCR-06	9062705-06	7/23/2019 12:03	7/23/2019 12:03	EPA 170.1	Temperature	26.0	deg C			0.1	0.1	AB
CCR-06	9062705-06	7/23/2019 12:03	8/1/2019 15:08	EPA 200.7	Thallium	0.925	ug/L	U		0.925	4.00	FSES
CCR-06	9062705-06	7/23/2019 12:03	7/23/2019 12:03	EPA 180.1	Turbidity	4.58	NTU			0.1	0.5	AB
CCR-06	9062705-06	7/23/2019 12:03	7/23/2019 12:03	FDEP DEP-SOP	Water Level	133.25	FT			0.1	0.5	AB
CCR-07	9062705-07	7/23/2019 12:51	8/1/2019 15:11	EPA 200.7	Antimony	4.91	ug/L	U		4.91	15.0	FSES
CCR-07	9062705-07	7/23/2019 12:51	8/1/2019 15:11	EPA 200.7	Arsenic	2.89	ug/L	U		2.89	10.0	FSES
CCR-07	9062705-07	7/23/2019 12:51	8/1/2019 15:11	EPA 200.7	Barium	28.4	ug/L			0.0785	1.00	FSES
CCR-07	9062705-07	7/23/2019 12:51	8/1/2019 15:11	EPA 200.7	Boron	1300	ug/L			2.36	10.0	FSES
CCR-07	9062705-07	7/23/2019 12:51	8/1/2019 15:11	EPA 200.7	Cadmium	0.320	ug/L	U		0.320	1.00	FSES
CCR-07	9062705-07	7/23/2019 12:51	8/1/2019 15:11	EPA 200.7	Calcium	227	mg/L			0.00900	0.0500	FSES
CCR-07	9062705-07	7/23/2019 12:51	8/6/2019 1:43	EPA 300.0 (Chloride)	Chloride	325	mg/L			0.380	1.00	CF
CCR-07	9062705-07	7/23/2019 12:51	8/1/2019 15:11	EPA 200.7	Chromium	0.736	ug/L	U		0.736	5.00	FSES
CCR-07	9062705-07	7/23/2019 12:51	8/1/2019 15:11	EPA 200.7	Cobalt	0.382	ug/L	U		0.382	1.00	FSES
CCR-07	9062705-07	7/23/2019 12:51	7/23/2019 12:51	By Observation	Color	Clear	[blank]	U				AB
CCR-07	9062705-07	7/23/2019 12:51	7/23/2019 12:51	EPA 360.2	Dissolved Oxygen	0.19	mg/L	I		0.10	0.20	AB
CCR-07	9062705-07	7/23/2019 12:51	8/1/2019 17:12	EPA 300.0	Fluoride	0.270	mg/L			0.0336	0.101	FSES
CCR-07	9062705-07	7/23/2019 12:51	8/1/2019 15:11	EPA 200.7	Lead	1.43	ug/L	U		1.43	10.0	FSES
CCR-07	9062705-07	7/23/2019 12:51	8/2/2019 15:29	EPA 200.7	Lithium	134	ug/L			3.33	25.0	FSES
CCR-07	9062705-07	7/23/2019 12:51	8/1/2019 16:36	EPA 245.1	Mercury	0.152	ug/L	U		0.152	0.456	FSES
CCR-07	9062705-07	7/23/2019 12:51	8/1/2019 15:11	EPA 200.7	Molybdenum	2.76	ug/L	U		2.76	10.0	FSES
CCR-07	9062705-07	7/23/2019 12:51	7/23/2019 12:51	SM18 4500-B-B	pH	4.65	SU			0.05	0.05	AB
CCR-07	9062705-07	7/23/2019 12:51	9/14/2019 12:21	EPA 903.1	Radium-226	4.5	0.6 pCi/L			0.200	0.600	FRS
CCR-07	9062705-07	7/23/2019 12:51	8/13/2019 12:19	EPA Ra-05	Radium-228	2.4	0.6 pCi/L			0.700	2.10	FRS
CCR-07	9062705-07	7/23/2019 12:51	7/24/2019 16:02	SM18 2540 C	Residues- Filterable (TDS)	1150	mg/L			10.0	20.0	AB
CCR-07	9062705-07	7/23/2019 12:51	8/1/2019 15:11	EPA 200.7	Selenium	3.09	ug/L	U		3.09	15.0	FSES
CCR-07	9062705-07	7/23/2019 12:51	7/23/2019 12:51	By Observation	Sheen	No Sheen	N/A	U				AB
CCR-07	9062705-07	7/23/2019 12:51	7/23/2019 12:51	EPA 120.1	Specific Conductance	2032	umhos/cm		1		5	AB
CCR-07	9062705-07	7/23/2019 12:51	8/6/2019 1:43	EPA 300.0 (Sulfate)	Sulfate	544	mg/L			0.250	1.00	CF
CCR-07	9062705-07	7/23/2019 12:51	7/23/2019 12:51	EPA 170.1	Temperature	25.8	deg C			0.1	0.1	AB
CCR-07	9062705-07	7/23/2019 12:51	8/1/2019 15:11	EPA 200.7	Thallium	0.925	ug/L	U		0.925	4.00	FSES
CCR-07	9062705-07	7/23/2019 12:51	7/23/2019 12:51	EPA 180.1	Turbidity	4.80	NTU			0.1	0.5	AB
CCR-07	9062705-07	7/23/2019 12:51	7/23/2019 12:51	FDEP DEP-SOP	Water Level	133.92	FT			0.1	0.5	AB
CCR-08	9062705-08	7/23/2019 13:41	8/1/2019 15:14	EPA 200.7	Antimony	4.91	ug/L	U		4.91	15.0	FSES
CCR-08	9062705-08	7/23/2019 13:41	8/1/2019 15:14	EPA 200.7	Arsenic	2.89	ug/L	U		2.89	10.0	FSES
CCR-08	9062705-08	7/23/2019 13:41	8/1/2019 15:14	EPA 200.7	Barium	44.3	ug/L			0.0785	1.00	FSES
CCR-08	9062705-08	7/23/2019 13:41	8/1/2019 15:14	EPA 200.7	Boron	126	ug/L			2.36	10.0	FSES
CCR-08	9062705-08	7/23/2019 13:41	8/1/2019 15:14	EPA 200.7	Cadmium	0.320	ug/L	U		0.320	1.00	FSES
CCR-08	9062705-08	7/23/2019 13:41	8/1/2019 15:14	EPA 200.7	Calcium	142	mg/L			0.00900	0.0500	FSES
CCR-08	9062705-08	7/23/2019 13:41	8/5/2019 17:31	EPA 300.0 (Chloride)	Chloride	4.7	mg/L			0.0380	0.100	CF
CCR-08	9062705-08	7/23/2019 13:41	8/1/2019 15:14	EPA 200.7	Chromium	0.736	ug/L	U		0.736	5.00	FSES
CCR-08	9062705-08	7/23/2019 13:41	8/1/2019 15:14	EPA 200.7	Cobalt	0.382	ug/L	U		0.382	1.00	FSES
CCR-08	9062705-08	7/23/2019 13:41	7/23/2019 13:41	By Observation	Color	Clear	[blank]	U				AB
CCR-08	9062705-08	7/23/2019 13:41	7/23/2019 13:41	EPA 360.2	Dissolved Oxygen	0.96	mg/L			0.10	0.20	AB
CCR-08	9062705-08	7/23/2019 13:41	7/23/2019 17:29	EPA 300.0	Fluoride	0.328	mg/L			0.0168	0.0504	FSES
CCR-08	9062705-08	7/23/2019 13:41	8/1/2019 15:14	EPA 200.7	Lead	1.43	ug/L	U		1.43	10.0	FSES
CCR-08	9062705-08	7/23/2019 13:41	8/2/2019 15:32	EPA 200.7	Lithium	3.33	ug/L	U		3.33	25.0	FSES
CCR-08	9062705-08	7/23/2019 13:41	8/1/2019 16:39	EPA 245.1	Mercury	0.152	ug/L	U		0.152	0.456	FSES
CCR-08	9062705-08	7/23/2019 13:41	8/1/2019 15:14	EPA 200.7	Molybdenum	21.6	ug/L			2.76	10.0	FSES
CCR-08	9062705-08	7/23/2019 13:41	7/23/2019 13:41	SM18 4500-B B	pH	6.52	SU			0.05	0.05	AB
CCR-08	9062705-08	7/23/2019 13:41	9/14/2019 12:21	EPA 903.1	Radium-226	4.8	0.7 pCi/L			0.100	0.300	FRS
CCR-08	9062705-08	7/23/2019 13:41	8/13/2019 13:21	EPA Ra-05	Radium-228	0.8	0.5 pCi/L	U		0.800	2.40	FRS
CCR-08	9062705-08	7/23/2019 13:41	7/24/2019 16:04	SM18 2540 C	Residues- Filterable (TDS)	488	mg/L			10.0	20.0	AB
CCR-08	9062705-08	7/23/2019 13:41	8/1/2019 15:14	EPA 200.7	Selenium	3.09	ug/L	U		3.09	15.0	FSES
CCR-08	9062705-08	7/23/2019 13:41	7/23/2019 13:41	By Observation	Sheen	No Sheen	N/A	U				AB
CCR-08	9062705-08	7/23/2019 13:41	7/23/2019 13:41	EPA 120.1	Specific Conductance	729	umhos/cm		1		5	AB
CCR-08	9062705-08	7/23/2019 13:41	8/5/2019 17:05	EPA 300.0 (Sulfate)	Sulfate	245	mg/L			0.250	1.00	CF
CCR-08	9062705-08	7/23/2019 13:41	7/23/2019 13:41	EPA 170.1	Temperature	25.3	deg C			0.1	0.1	AB
CCR-08	9062705-08	7/23/2019 13:41	8/1/2019 15:14	EPA 200.7	Thallium	0.925	ug/L	U		0.925	4.00	FSES
CCR-08	9062705-08	7/23/2019 13:41	7/23/2019 13:41	EPA 180.1	Turbidity	4.68	NTU			0.1	0.5	AB
CCR-08	9062705-08	7/23/2019 13:41	7/23/2019 13:41	FDEP DEP-SOP	Water Level	134.03	FT			0.1	0.5	AB
CCR-09	9062705-09	7/29/2019 11:16	8/1/2019 15:17	EPA 200.7	Antimony	4.91	ug/L	U		4.91	15.0	FSES
CCR-09	9062705-09	7/29/2019 11:16	8/1/2019 15:17	EPA 200.7	Arsenic	10.0	ug/L			2.89	10.0	FSES
CCR-09	9062705-09	7/29/2019 11:16	8/1/2019 15:17	EPA 200.7	Barium	71.6	ug/L			0.0785	1.00	FSES
CCR-09	9062705-09	7/29/2019 11:16	8/1/2019 15:17	EPA 200.7	Boron	463	ug/L			2.36	10.0	FSES
CCR-09	9062705-09	7/29/2019 11:16	8/1/2019 15:17	EPA 200.7	Cadmium	0.320	ug/L	U		0.320	1.00	FSES
CCR-09	9062705-09	7/29/2019 11:16	8/1/2019 15:17	EPA 200.7	Calcium	821	mg/L			0.225	1.25	FSES
CCR-09	9062705-09	7/29/2019 11:16	8/5/2019 21:24	EPA 300.0 (Chloride)	Chloride	1280	mg/L			1.52	4.00	CF
CCR-09	9062705-09	7/29/2019 11:16	8/1/2019 15:17	EPA 200.7	Chromium	0.736	ug/L	U		0.736	5.00	FSES
CCR-09	9062705-09	7/29/2019 11:16	8/1/2019 15:17	EPA 200.7	Cobalt	0.382	ug/L	U		0.382	1.00	FSES
CCR-09	9062705-09	7/29/2019 11:16	7/29/2019 11:16	By Observation	Color	Milky	[blank]	U				DB
CCR-09	9062705-09	7/29/2019 11:16	7/29/2019 11:16	EPA 360.2	Dissolved Oxygen	4.01	mg/L			0.10	0.20	DB
CCR-09	9062705-09	7/29/2019 11:16	8/1/2019 17:45	EPA 300.0	Fluoride	0.362	mg/L			0.0336	0.101	FSES
CCR-09	9062705-09	7/29/2019 11:16	8/1/2019 15:17	EPA 200.7	Lead	1.43	ug/L	U		1.43	10.0	FSES
CCR-09	9062705-09	7/29/2019 11:16	8/2/2019 15:35	EPA 200.7	Lithium	95.4	ug/L			3.33	25.0	FSES
CCR-09	9062705-09	7/29/2019 11:16	8/1/2019 16:41	EPA 245.1	Mercury	0.152	ug/L	U		0.152	0.456	FSES
CCR-09	9062705-09	7/29/2019 11:16	8/1/2019 15:17	EPA 200.7	Molybdenum	2.76	ug/L	U		2.76	10.0	FSES

**3030 E Lake Parker Dr  
Lakeland, FL 33805  
CCR SAMPLING**

**Month / Year: July 2019  
LAB ANALYSIS REPORT**

SampleName	Sample ID	Date/Time Sampled	Date/Time Analyzed	Method	Analyte	Result	Error	Units	Qualifiers	Detection Limit	Reporting Limit	Analyst
CCR-09	9062705-09	7/29/2019 11:16	7/29/2019 11:16	SM18 4500-B B	pH	5.36	SU			0.05	0.05	DB
CCR-09	9062705-09	7/29/2019 11:16	9/14/2019 13:27	EPA 903.1	Radium-226	9.3	0.9	pCi/L		0.200	0.600	FRS
CCR-09	9062705-09	7/29/2019 11:16	8/13/2019 13:21	EPA Ra-05	Radium-228	1.4	0.6	pCi/L		0.700	2.10	FRS
CCR-09	9062705-09	7/29/2019 11:16	7/31/2019 10:48	SM18 2540 C	Residues- Filterable (TDS)	3740		mg/L		10.0	20.0	ND
CCR-09	9062705-09	7/29/2019 11:16	8/1/2019 15:43	EPA 200.7	Selenium	3.09		ug/L	U	3.09	15.0	FSES
CCR-09	9062705-09	7/29/2019 11:16	7/29/2019 11:16	By Observation	Sheen	No Sheen	N/A	U				DB
CCR-09	9062705-09	7/29/2019 11:16	7/29/2019 11:16	EPA 120.1	Specific Conductance	5012		umhos/cm		1	5	DB
CCR-09	9062705-09	7/29/2019 11:16	8/5/2019 21:24	EPA 300.0 (Sulfate)	Sulfate	1070		mg/L		1.00	4.00	CF
CCR-09	9062705-09	7/29/2019 11:16	7/29/2019 11:16	EPA 170.1	Temperature	28.1		deg C		0.1	0.1	DB
CCR-09	9062705-09	7/29/2019 11:16	8/1/2019 15:17	EPA 200.7	Thallium	0.925		ug/L	U	0.925	4.00	FSES
CCR-09	9062705-09	7/29/2019 11:16	7/29/2019 11:16	EPA 180.1	Turbidity	10.3		NTU		0.1	0.5	DB
CCR-09	9062705-09	7/29/2019 11:16	7/29/2019 11:16	FDEP DEP-SOP	Water Level	133.51		FT		0.1	0.5	DB
CCR-10	9062705-10	7/29/2019 13:13	8/1/2019 15:20	EPA 200.7	Antimony	4.91		ug/L	U	4.91	15.0	FSES
CCR-10	9062705-10	7/29/2019 13:13	8/1/2019 15:20	EPA 200.7	Arsenic	2.89		ug/L	U	2.89	10.0	FSES
CCR-10	9062705-10	7/29/2019 13:13	8/1/2019 15:20	EPA 200.7	Barium	16.5		ug/L		0.0785	1.00	FSES
CCR-10	9062705-10	7/29/2019 13:13	8/1/2019 15:20	EPA 200.7	Boron	272		ug/L		2.36	10.0	FSES
CCR-10	9062705-10	7/29/2019 13:13	8/1/2019 15:20	EPA 200.7	Cadmium	0.320		ug/L	U	0.320	1.00	FSES
CCR-10	9062705-10	7/29/2019 13:13	8/1/2019 15:20	EPA 200.7	Calcium	135		mg/L		0.00900	0.0500	FSES
CCR-10	9062705-10	7/29/2019 13:13	8/5/2019 21:50	EPA 300.0 (Chloride)	Chloride	27.4		mg/L		0.380	1.00	CF
CCR-10	9062705-10	7/29/2019 13:13	8/1/2019 15:20	EPA 200.7	Chromium	0.736		ug/L	U	0.736	5.00	FSES
CCR-10	9062705-10	7/29/2019 13:13	8/1/2019 15:20	EPA 200.7	Cobalt	0.382		ug/L	U	0.382	1.00	FSES
CCR-10	9062705-10	7/29/2019 13:13	7/29/2019 13:13	By Observation	Color	Clear	[blank]	U				DB
CCR-10	9062705-10	7/29/2019 13:13	7/29/2019 13:13	EPA 360.2	Dissolved Oxygen	3.60		mg/L		0.10	0.20	DB
CCR-10	9062705-10	7/29/2019 13:13	8/1/2019 18:35	EPA 300.0	Fluoride	0.207		mg/L		0.0168	0.0504	FSES
CCR-10	9062705-10	7/29/2019 13:13	8/1/2019 15:20	EPA 200.7	Lead	1.43		ug/L	U	1.43	10.0	FSES
CCR-10	9062705-10	7/29/2019 13:13	8/2/2019 15:37	EPA 200.7	Lithium	3.33		ug/L	U	3.33	25.0	FSES
CCR-10	9062705-10	7/29/2019 13:13	8/1/2019 16:44	EPA 245.1	Mercury	0.152		ug/L	U	0.152	0.456	FSES
CCR-10	9062705-10	7/29/2019 13:13	8/1/2019 15:20	EPA 200.7	Molybdenum	2.76		ug/L	U	2.76	10.0	FSES
CCR-10	9062705-10	7/29/2019 13:13	7/29/2019 13:13	SM18 4500-B B	pH	5.31		SU		0.05	0.05	DB
CCR-10	9062705-10	7/29/2019 13:13	9/14/2019 13:27	EPA 903.1	Radium-226	3.1	0.6	pCi/L		0.200	0.600	FRS
CCR-10	9062705-10	7/29/2019 13:13	8/13/2019 13:21	EPA Ra-05	Radium-228	1.0	0.5	pCi/L		0.700	2.10	FRS
CCR-10	9062705-10	7/29/2019 13:13	7/31/2019 10:50	SM18 2540 C	Residues- Filterable (TDS)	694		mg/L		10.0	20.0	ND
CCR-10	9062705-10	7/29/2019 13:13	8/1/2019 15:20	EPA 200.7	Selenium	3.09		ug/L	U	3.09	15.0	FSES
CCR-10	9062705-10	7/29/2019 13:13	7/29/2019 13:13	By Observation	Sheen	No Sheen	N/A	U				DB
CCR-10	9062705-10	7/29/2019 13:13	7/29/2019 13:13	EPA 120.1	Specific Conductance	917		umhos/cm		1	5	DB
CCR-10	9062705-10	7/29/2019 13:13	8/5/2019 21:50	EPA 300.0 (Sulfate)	Sulfate	408		mg/L		0.250	1.00	CF
CCR-10	9062705-10	7/29/2019 13:13	7/29/2019 13:13	EPA 170.1	Temperature	25.5		deg C		0.1	0.1	DB
CCR-10	9062705-10	7/29/2019 13:13	8/1/2019 15:20	EPA 200.7	Thallium	0.925		ug/L	U	0.925	4.00	FSES
CCR-10	9062705-10	7/29/2019 13:13	7/29/2019 13:13	EPA 180.1	Turbidity	193		NTU		0.1	0.5	DB
CCR-10	9062705-10	7/29/2019 13:13	7/29/2019 13:13	FDEP DEP-SOP	Water Level	132.78		FT		0.1	0.5	DB
CCR-11	9062705-11	7/29/2019 14:02	8/1/2019 15:40	EPA 200.7	Antimony	4.91		ug/L	U	4.91	15.0	FSES
CCR-11	9062705-11	7/29/2019 14:02	8/1/2019 15:40	EPA 200.7	Arsenic	64.7		ug/L		2.89	10.0	FSES
CCR-11	9062705-11	7/29/2019 14:02	8/1/2019 15:40	EPA 200.7	Barium	25.0		ug/L		0.0785	1.00	FSES
CCR-11	9062705-11	7/29/2019 14:02	8/1/2019 15:40	EPA 200.7	Boron	303		ug/L		2.36	10.0	FSES
CCR-11	9062705-11	7/29/2019 14:02	8/1/2019 15:40	EPA 200.7	Cadmium	0.320		ug/L	U	0.320	1.00	FSES
CCR-11	9062705-11	7/29/2019 14:02	8/1/2019 17:22	EPA 200.7	Calcium	524		mg/L		0.180	1.00	FSES
CCR-11	9062705-11	7/29/2019 14:02	8/5/2019 22:16	EPA 300.0 (Chloride)	Chloride	798		mg/L		0.760	2.00	CF
CCR-11	9062705-11	7/29/2019 14:02	8/1/2019 15:40	EPA 200.7	Chromium	0.736		ug/L	U	0.736	5.00	FSES
CCR-11	9062705-11	7/29/2019 14:02	8/1/2019 15:40	EPA 200.7	Cobalt	0.382		ug/L	U	0.382	1.00	FSES
CCR-11	9062705-11	7/29/2019 14:02	7/19/2019 14:02	By Observation	Color	Clear	[blank]	U				DB
CCR-11	9062705-11	7/29/2019 14:02	7/19/2019 14:02	EPA 360.2	Dissolved Oxygen	4.52		mg/L		0.10	0.20	DB
CCR-11	9062705-11	7/29/2019 14:02	7/29/2019 14:02	EPA 300.0	Fluoride	0.668		mg/L		0.0336	0.101	FSES
CCR-11	9062705-11	7/29/2019 14:02	8/1/2019 15:40	EPA 200.7	Lead	1.43		ug/L	U	1.43	10.0	FSES
CCR-11	9062705-11	7/29/2019 14:02	8/2/2019 16:34	EPA 200.7	Lithium	3.33		ug/L	U	3.33	25.0	FSES
CCR-11	9062705-11	7/29/2019 14:02	8/1/2019 16:58	EPA 245.1	Mercury	0.152		ug/L	U	0.152	0.456	FSES
CCR-11	9062705-11	7/29/2019 14:02	8/1/2019 15:40	EPA 200.7	Molybdenum	2.76		ug/L		2.76	10.0	FSES
CCR-11	9062705-11	7/29/2019 14:02	7/19/2019 14:02	SM18 4500-B B	pH	4.12		SU		0.05	0.05	DB
CCR-11	9062705-11	7/29/2019 14:02	9/14/2019 13:27	EPA 903.1	Radium-226	0.7	0.3	pCi/L		0.200	0.600	FRS
CCR-11	9062705-11	7/29/2019 14:02	8/13/2019 13:21	EPA Ra-05	Radium-228	0.7	0.4	pCi/L	U	0.700	2.10	FRS
CCR-11	9062705-11	7/29/2019 14:02	7/31/2019 10:52	SM18 2540 C	Residues- Filterable (TDS)	3710		mg/L		10.0	20.0	ND
CCR-11	9062705-11	7/29/2019 14:02	8/1/2019 15:40	EPA 200.7	Selenium	3.09		ug/L	U	3.09	15.0	FSES
CCR-11	9062705-11	7/29/2019 14:02	7/19/2019 14:02	By Observation	Sheen	No Sheen	N/A	U				DB
CCR-11	9062705-11	7/29/2019 14:02	7/19/2019 14:02	EPA 120.1	Specific Conductance	4633		umhos/cm		1	5	DB
CCR-11	9062705-11	7/29/2019 14:02	8/5/2019 22:16	EPA 300.0 (Sulfate)	Sulfate	1450		mg/L		0.500	2.00	CF
CCR-11	9062705-11	7/29/2019 14:02	7/19/2019 14:02	EPA 170.1	Temperature	28.1		deg C		0.1	0.1	DB
CCR-11	9062705-11	7/29/2019 14:02	8/1/2019 15:40	EPA 200.7	Thallium	0.925		ug/L	U	0.925	4.00	FSES
CCR-11	9062705-11	7/29/2019 14:02	7/19/2019 14:02	EPA 180.1	Turbidity	14.2		NTU		0.1	0.5	DB
CCR-11	9062705-11	7/29/2019 14:02	7/19/2019 14:02	FDEP DEP-SOP	Water Level	132.83		FT		0.1	0.5	DB
CCR-12	9062705-12	7/30/2019 10:36	8/1/2019 15:43	EPA 200.7	Antimony	4.91		ug/L	U	4.91	15.0	FSES
CCR-12	9062705-12	7/30/2019 10:36	8/1/2019 15:43	EPA 200.7	Arsenic	54.4		ug/L		2.89	10.0	FSES
CCR-12	9062705-12	7/30/2019 10:36	8/1/2019 15:43	EPA 200.7	Barium	15.5		ug/L		0.0785	1.00	FSES
CCR-12	9062705-12	7/30/2019 10:36	8/1/2019 15:43	EPA 200.7	Boron	520		ug/L		2.36	10.0	FSES
CCR-12	9062705-12	7/30/2019 10:36	8/1/2019 15:43	EPA 200.7	Cadmium	0.320		ug/L	U	0.320	1.00	FSES
CCR-12	9062705-12	7/30/2019 10:36	8/2/2019 7:18	EPA 200.7	Calcium	606		mg/L		0.180	1.00	FSES
CCR-12	9062705-12	7/30/2019 10:36	8/5/2019 23:08	EPA 300.0 (Chloride)	Chloride	23.7		mg/L		0.0380	0.100	CF
CCR-12	9062705-12	7/30/2019 10:36	8/1/2019 15:43	EPA 200.7	Chromium	0.736		ug/L	U	0.736	5.00	FSES
CCR-12	9062705-12	7/30/2019 10:36	8/1/2019 15:43	EPA 200.7	Cobalt	0.382		ug/L	U	0.382	1.00	FSES
CCR-12	9062705-12	7/30/2019 10:26	7/19/2019 10:26	By Observation	Color	Yellow	[blank]	U				AB
CCR-12	9062705-12	7/30/2019 10:26	7/19/2019 10:26	EPA 360.2	Dissolved Oxygen	4.76		mg/L		0.10	0.20	AB
CCR-12	9062705-12	7/30/2019 10:36	8/1/2019 19:08	EPA 300.0	Fluoride	0.612		mg/L		0.0336	0.101	FSES

## 3030 E Lake Parker Dr

Lakeland, FL 33805

## CCR SAMPLING

Month / Year: July 2019  
LAB ANALYSIS REPORT

SampleName	Sample ID	Date/Time Sampled	Date/Time Analyzed	Method	Analyte	Result	Error	Units	Qualifiers	Detection Limit	Reporting Limit	Analyst
CCR-12	9062705-12	7/30/2019 10:36	8/1/2019 15:43	EPA 200.7	Lead	1.43	ug/L	U		1.43	10.0	FSES
CCR-12	9062705-12	7/30/2019 10:36	8/2/2019 16:37	EPA 200.7	Lithium	3.33	ug/L	U		3.33	25.0	FSES
CCR-12	9062705-12	7/30/2019 10:36	8/1/2019 17:00	EPA 245.1	Mercury	0.152	ug/L	U		0.152	0.456	FSES
CCR-12	9062705-12	7/30/2019 10:36	8/1/2019 15:43	EPA 200.7	Molybdenum	17.7	ug/L			2.76	10.0	FSES
CCR-12	9062705-12	7/30/2019 10:26	7/19/2019 10:26	SM18 4500-B B	pH	6.57	SU			0.05	0.05	AB
CCR-12	9062705-12	7/30/2019 10:36	9/14/2019 13:27	EPA 903.1	Radium-226	2.9	0.5 pCi/L			0.200	0.600	FRS
CCR-12	9062705-12	7/30/2019 10:36	8/13/2019 13:21	EPA Ra-05	Radium-228	0.7	0.4 pCi/L	U		0.700	2.10	FRS
CCR-12	9062705-12	7/30/2019 10:26	7/31/2019 10:54	SM18 2540 C	Residues- Filterable (TDS)	2390	mg/L			10.0	20.0	ND
CCR-12	9062705-12	7/30/2019 10:36	8/1/2019 15:43	EPA 200.7	Selenium	3.09	ug/L	U		3.09	15.0	FSES
CCR-12	9062705-12	7/30/2019 10:26	7/19/2019 10:26	By Observation	Sheen	No Sheen	N/A	U				AB
CCR-12	9062705-12	7/30/2019 10:26	7/19/2019 10:26	EPA 120.1	Specific Conductance	2542	umhos/cm			1	5	AB
CCR-12	9062705-12	7/30/2019 10:26	8/5/2019 22:42	EPA 300.0 (Sulfate)	Sulfate	1310	mg/L			0.500	2.00	CF
CCR-12	9062705-12	7/30/2019 10:26	7/19/2019 10:26	EPA 170.1	Temperature	25.9	deg C			0.1	0.1	AB
CCR-12	9062705-12	7/30/2019 10:36	8/1/2019 15:43	EPA 200.7	Thallium	0.925	ug/L	U		0.925	4.00	FSES
CCR-12	9062705-12	7/30/2019 10:26	7/19/2019 10:26	EPA 180.1	Turbidity	0.96	NTU			0.1	0.5	AB
CCR-12	9062705-12	7/30/2019 10:26	7/19/2019 10:26	FDEP DEP-SOP	Water Level	131.83	FT			0.1	0.5	AB
CCR-13	9062705-13	7/30/2019 9:30	8/1/2019 15:46	EPA 200.7	Antimony	4.91	ug/L	U		4.91	15.0	FSES
CCR-13	9062705-13	7/30/2019 9:30	8/1/2019 15:46	EPA 200.7	Arsenic	2.89	ug/L	U		2.89	10.0	FSES
CCR-13	9062705-13	7/30/2019 9:30	8/1/2019 15:46	EPA 200.7	Barium	37.3	ug/L			0.0785	1.00	FSES
CCR-13	9062705-13	7/30/2019 9:30	8/1/2019 15:46	EPA 200.7	Boron	355	ug/L			2.36	10.0	FSES
CCR-13	9062705-13	7/30/2019 9:30	8/1/2019 15:46	EPA 200.7	Cadmium	0.320	ug/L	U		0.320	1.00	FSES
CCR-13	9062705-13	7/30/2019 9:30	8/2/2019 7:21	EPA 200.7	Calcium	466	mg/L			0.180	1.00	FSES
CCR-13	9062705-13	7/30/2019 9:28	8/5/2019 23:33	EPA 300.0 (Chloride)	Chloride	232	mg/L			0.760	2.00	CF
CCR-13	9062705-13	7/30/2019 9:30	8/1/2019 15:46	EPA 200.7	Chromium	1.30	ug/L	I		0.736	5.00	FSES
CCR-13	9062705-13	7/30/2019 9:30	8/1/2019 15:46	EPA 200.7	Cobalt	0.382	ug/L	U		0.382	1.00	FSES
CCR-13	9062705-13	7/30/2019 9:28	7/30/2019 9:28	By Observation	Color	Clear	[blank]	U				AB
CCR-13	9062705-13	7/30/2019 9:28	7/30/2019 9:28	EPA 360.2	Dissolved Oxygen	4.58	mg/L			0.10	0.20	AB
CCR-13	9062705-13	7/30/2019 9:30	8/1/2019 19:24	EPA 300.0	Fluoride	1.03	mg/L			0.0336	0.101	FSES
CCR-13	9062705-13	7/30/2019 9:30	8/1/2019 15:46	EPA 200.7	Lead	1.43	ug/L	U		1.43	10.0	FSES
CCR-13	9062705-13	7/30/2019 9:30	8/2/2019 16:39	EPA 200.7	Lithium	182	ug/L			3.33	25.0	FSES
CCR-13	9062705-13	7/30/2019 9:30	8/1/2019 17:03	EPA 245.1	Mercury	0.152	ug/L	U		0.152	0.456	FSES
CCR-13	9062705-13	7/30/2019 9:30	8/1/2019 15:46	EPA 200.7	Molybdenum	2.76	ug/L	U		2.76	10.0	FSES
CCR-13	9062705-13	7/30/2019 9:28	7/30/2019 9:28	SM18 4500-B B	pH	4.28	SU			0.05	0.05	AB
CCR-13	9062705-13	7/30/2019 9:30	9/14/2019 13:27	EPA 903.1	Radium-226	46.8	2.0 pCi/L			0.100	0.300	FRS
CCR-13	9062705-13	7/30/2019 9:30	8/13/2019 13:21	EPA Ra-05	Radium-228	4.4	0.7 pCi/L			0.700	2.10	FRS
CCR-13	9062705-13	7/30/2019 9:28	7/31/2019 10:56	SM18 2540 C	Residues- Filterable (TDS)	2540	mg/L			10.0	20.0	ND
CCR-13	9062705-13	7/30/2019 9:30	8/1/2019 15:46	EPA 200.7	Selenium	3.09	ug/L	U		3.09	15.0	FSES
CCR-13	9062705-13	7/30/2019 9:28	7/30/2019 9:28	By Observation	Sheen	No Sheen	N/A	U				AB
CCR-13	9062705-13	7/30/2019 9:28	7/30/2019 9:28	EPA 120.1	Specific Conductance	3080	umhos/cm			1	5	AB
CCR-13	9062705-13	7/30/2019 9:28	8/5/2019 23:33	EPA 300.0 (Sulfate)	Sulfate	1390	mg/L			0.500	2.00	CF
CCR-13	9062705-13	7/30/2019 9:28	7/30/2019 9:28	EPA 170.1	Temperature	25.2	deg C			0.1	0.1	AB
CCR-13	9062705-13	7/30/2019 9:30	8/1/2019 15:46	EPA 200.7	Thallium	0.925	ug/L	U		0.925	4.00	FSES
CCR-13	9062705-13	7/30/2019 9:28	7/30/2019 9:28	EPA 180.1	Turbidity	1.19	NTU			0.1	0.5	AB
CCR-13	9062705-13	7/30/2019 9:28	7/30/2019 9:28	FDEP DEP-SOP	Water Level	132.67	FT			0.1	0.5	AB
CCR-14	9062705-14	7/30/2019 8:22	8/1/2019 15:49	EPA 200.7	Antimony	4.91	ug/L	U		4.91	15.0	FSES
CCR-14	9062705-14	7/30/2019 8:22	8/1/2019 15:49	EPA 200.7	Arsenic	2.89	ug/L	U		2.89	10.0	FSES
CCR-14	9062705-14	7/30/2019 8:22	8/1/2019 15:49	EPA 200.7	Barium	19.8	ug/L			0.0785	1.00	FSES
CCR-14	9062705-14	7/30/2019 8:22	8/1/2019 15:49	EPA 200.7	Boron	1170	ug/L			2.36	10.0	FSES
CCR-14	9062705-14	7/30/2019 8:22	8/1/2019 15:49	EPA 200.7	Cadmium	0.320	ug/L	U		0.320	1.00	FSES
CCR-14	9062705-14	7/30/2019 8:22	8/2/2019 7:24	EPA 200.7	Calcium	449	mg/L			0.180	1.00	FSES
CCR-14	9062705-14	7/30/2019 8:22	8/6/2019 0:25	EPA 300.0 (Chloride)	Chloride	87.5	mg/L			0.0760	0.200	CF
CCR-14	9062705-14	7/30/2019 8:22	8/1/2019 15:49	EPA 200.7	Chromium	1.30	ug/L	I		0.736	5.00	FSES
CCR-14	9062705-14	7/30/2019 8:22	8/1/2019 15:49	EPA 200.7	Cobalt	0.382	ug/L	U		0.382	1.00	FSES
CCR-14	9062705-14	7/30/2019 8:22	7/30/2019 8:22	By Observation	Color	Clear	[blank]	U				AB
CCR-14	9062705-14	7/30/2019 8:22	7/30/2019 8:22	EPA 360.2	Dissolved Oxygen	5.40	mg/L			0.10	0.20	AB
CCR-14	9062705-14	7/30/2019 8:22	8/1/2019 19:40	EPA 300.0	Fluoride	0.662	mg/L			0.0336	0.101	FSES
CCR-14	9062705-14	7/30/2019 8:22	8/1/2019 15:49	EPA 200.7	Lead	1.43	ug/L	U		1.43	10.0	FSES
CCR-14	9062705-14	7/30/2019 8:22	8/2/2019 16:42	EPA 200.7	Lithium	3.33	ug/L	U		3.33	25.0	FSES
CCR-14	9062705-14	7/30/2019 8:22	8/1/2019 17:06	EPA 245.1	Mercury	0.152	ug/L	U		0.152	0.456	FSES
CCR-14	9062705-14	7/30/2019 8:22	8/1/2019 15:49	EPA 200.7	Molybdenum	2.76	ug/L	U		2.76	10.0	FSES
CCR-14	9062705-14	7/30/2019 8:22	7/30/2019 8:22	SM18 4500-B B	pH	5.91	SU			0.05	0.05	AB
CCR-14	9062705-14	7/30/2019 8:22	8/12/2019 9:50	EPA 903.1	Radium-226	3.4	0.3 pCi/L			0.200	0.600	FRS
CCR-14	9062705-14	7/30/2019 8:22	8/12/2019 9:30	EPA Ra-05	Radium-228	0.9	0.5 pCi/L			0.800	2.40	FRS
CCR-14	9062705-14	7/30/2019 8:22	7/31/2019 10:58	SM18 2540 C	Residues- Filterable (TDS)	1940	mg/L			10.0	20.0	ND
CCR-14	9062705-14	7/30/2019 8:22	8/1/2019 15:49	EPA 200.7	Selenium	3.09	ug/L	U		3.09	15.0	FSES
CCR-14	9062705-14	7/30/2019 8:22	7/30/2019 8:22	By Observation	Sheen	No Sheen	N/A	U				AB
CCR-14	9062705-14	7/30/2019 8:22	7/30/2019 8:22	EPA 120.1	Specific Conductance	1560	umhos/cm			1	5	AB
CCR-14	9062705-14	7/30/2019 8:22	8/5/2019 23:59	EPA 300.0 (Sulfate)	Sulfate	1200	mg/L			0.500	2.00	CF
CCR-14	9062705-14	7/30/2019 8:22	7/30/2019 8:22	EPA 170.1	Temperature	25.6	deg C			0.1	0.1	AB
CCR-14	9062705-14	7/30/2019 8:22	8/1/2019 15:49	EPA 200.7	Thallium	0.925	ug/L	U		0.925	4.00	FSES
CCR-14	9062705-14	7/30/2019 8:22	7/30/2019 8:22	EPA 180.1	Turbidity	5.38	NTU			0.1	0.5	AB
CCR-14	9062705-14	7/30/2019 8:22	7/30/2019 8:22	FDEP DEP-SOP	Water Level	132.92	FT			0.1	0.5	AB
CCR-16	9062705-16	7/30/2019 11:50	7/30/2019 11:50	By Observation	Color	Clear	[blank]	U				AB
CCR-16	9062705-16	7/30/2019 11:50	7/30/2019 11:50	EPA 360.2	Dissolved Oxygen	6.52	mg/L			0.10	0.20	AB
CCR-16	9062705-16	7/30/2019 11:50	8/2/2019 16:44	EPA 200.7	Lithium	3.33	ug/L	U		3.33	25.0	FSES
CCR-16	9062705-16	7/30/2019 11:50	7/30/2019 11:50	SM18 4500-B B	pH	4.05	SU			0.05	0.05	AB
CCR-16	9062705-16	7/30/2019 11:50	7/30/2019 11:50	By Observation	Sheen	No Sheen	N/A	U				AB
CCR-16	9062705-16	7/30/2019 11:50	7/30/2019 11:50	EPA 120.1	Specific Conductance	812	umhos/cm			1	5	AB
CCR-16	9062705-16	7/30/2019 11:50	7/30/2019 11:50	EPA 170.1	Temperature	28.4	deg C			0.1	0.1	AB
CCR-16	9062705-16	7/30/2019 11:50	7/30/2019 11:50	EPA 180.1	Turbidity	2.32	NTU			0.1	0.5	AB

**3030 E Lake Parker Dr**  
**Lakeland, FL 33805**  
**CCR SAMPLING**  
**Month / Year: July 2019**  
**LAB ANALYSIS REPORT**

SampleName	Sample ID	Date/Time Sampled	Date/Time Analyzed	Method	Analyte	Result	Error	Units	Qualifiers	Detection Limit	Reporting Limit	Analyst
CCR-16	9062705-16	7/30/2019 11:50	7/30/2019 11:50	FDEP DEP-SOP	Water Level	130.52	FT			0.1	0.5	AB
CCR-17	9062705-17	7/30/2019 12:36	7/30/2019 12:36	By Observation	Color	Clear	[blank]	U				AB
CCR-17	9062705-17	7/30/2019 12:36	7/30/2019 12:36	EPA 360.2	Dissolved Oxygen	0.19	mg/L	I		0.10	0.20	AB
CCR-17	9062705-17	7/30/2019 12:36	8/2/2019 16:47	EPA 200.7	Lithium	3.33	ug/L	U		3.33	25.0	FSES
CCR-17	9062705-17	7/30/2019 12:36	7/30/2019 12:36	SM18 4500-B B	pH	6.32	SU			0.05	0.05	AB
CCR-17	9062705-17	7/30/2019 12:36	7/30/2019 12:36	By Observation	Sheen	No Sheen	N/A	U				AB
CCR-17	9062705-17	7/30/2019 12:36	7/30/2019 12:36	EPA 120.1	Specific Conductance	1287	umhos/cm			1	5	AB
CCR-17	9062705-17	7/30/2019 12:36	7/30/2019 12:36	EPA 170.1	Temperature	27.0	deg C			0.1	0.1	AB
CCR-17	9062705-17	7/30/2019 12:36	7/30/2019 12:36	EPA 180.1	Turbidity	1.32	NTU			0.1	0.5	AB
CCR-17	9062705-17	7/30/2019 12:36	7/30/2019 12:36	FDEP DEP-SOP	Water Level	134.22	FT			0.1	0.5	AB
CCR-19	9062705-19	7/30/2019 13:18	7/30/2019 13:18	By Observation	Color	Clear	[blank]	U				AB
CCR-19	9062705-19	7/30/2019 13:18	7/30/2019 13:18	EPA 360.2	Dissolved Oxygen	0.16	mg/L	I		0.10	0.20	AB
CCR-19	9062705-19	7/30/2019 13:18	8/2/2019 16:50	EPA 200.7	Lithium	3.33	ug/L	U		3.33	25.0	FSES
CCR-19	9062705-19	7/30/2019 13:18	7/30/2019 13:18	SM18 4500-B B	pH	4.34	SU			0.05	0.05	AB
CCR-19	9062705-19	7/30/2019 13:18	7/30/2019 13:18	By Observation	Sheen	No Sheen	N/A	U				AB
CCR-19	9062705-19	7/30/2019 13:18	7/30/2019 13:18	EPA 120.1	Specific Conductance	6580	umhos/cm			1	5	AB
CCR-19	9062705-19	7/30/2019 13:18	7/30/2019 13:18	EPA 170.1	Temperature	25.1	deg C			0.1	0.1	AB
CCR-19	9062705-19	7/30/2019 13:18	7/30/2019 13:18	EPA 180.1	Turbidity	1.44	NTU			0.1	0.5	AB
CCR-19	9062705-19	7/30/2019 13:18	7/30/2019 13:18	FDEP DEP-SOP	Water Level	132.91	FT			0.1	0.5	AB
CCR-20	9062705-20	7/30/2019 14:01	8/1/2019 16:01	EPA 200.7	Arsenic	46.3	ug/L			2.89	10.0	FSES
CCR-20	9062705-20	7/30/2019 14:02	7/30/2019 14:02	By Observation	Color	Clear	[blank]	U				AB
CCR-20	9062705-20	7/30/2019 14:02	7/30/2019 14:02	EPA 360.2	Dissolved Oxygen	0.35	mg/L			0.10	0.20	AB
CCR-20	9062705-20	7/30/2019 14:02	7/30/2019 14:02	SM18 4500-B B	pH	4.81	SU			0.05	0.05	AB
CCR-20	9062705-20	7/30/2019 14:02	7/30/2019 14:02	By Observation	Sheen	No Sheen	N/A	U				AB
CCR-20	9062705-20	7/30/2019 14:02	7/30/2019 14:02	EPA 120.1	Specific Conductance	4016	umhos/cm			1	5	AB
CCR-20	9062705-20	7/30/2019 14:02	7/30/2019 14:02	EPA 170.1	Temperature	24.6	deg C			0.1	0.1	AB
CCR-20	9062705-20	7/30/2019 14:02	7/30/2019 14:02	EPA 180.1	Turbidity	4.96	NTU			0.1	0.5	AB
CCR-20	9062705-20	7/30/2019 14:02	7/30/2019 14:02	FDEP DEP-SOP	Water Level	132.06	FT			0.1	0.5	AB
CCR-22	9062705-22	7/30/2019 14:39	7/30/2019 14:39	By Observation	Color	Clear	[blank]	U				AB
CCR-22	9062705-22	7/30/2019 14:39	7/30/2019 14:39	EPA 360.2	Dissolved Oxygen	0.10	mg/L	U		0.10	0.20	AB
CCR-22	9062705-22	7/30/2019 14:39	8/2/2019 16:55	EPA 200.7	Lithium	97.8	ug/L			3.33	25.0	FSES
CCR-22	9062705-22	7/30/2019 14:39	7/30/2019 14:39	SM18 4500-B B	pH	4.45	SU			0.05	0.05	AB
CCR-22	9062705-22	7/30/2019 14:39	7/30/2019 14:39	By Observation	Sheen	No Sheen	N/A	U				AB
CCR-22	9062705-22	7/30/2019 14:39	7/30/2019 14:39	EPA 120.1	Specific Conductance	2019	umhos/cm			1	5	AB
CCR-22	9062705-22	7/30/2019 14:39	7/30/2019 14:39	EPA 170.1	Temperature	24.6	deg C			0.1	0.1	AB
CCR-22	9062705-22	7/30/2019 14:39	7/30/2019 14:39	EPA 180.1	Turbidity	1.61	NTU			0.1	0.5	AB
CCR-22	9062705-22	7/30/2019 14:39	7/30/2019 14:39	FDEP DEP-SOP	Water Level	132.50	FT			0.1	0.5	AB
CCR-24 Equipment	9062705-24	7/23/2019 6:38	8/1/2019 16:06	EPA 200.7	Antimony	4.91	ug/L	U		4.91	15.0	FSES
CCR-24 Equipment	9062705-24	7/23/2019 6:38	8/1/2019 16:06	EPA 200.7	Arsenic	2.89	ug/L	U		2.89	10.0	FSES
CCR-24 Equipment	9062705-24	7/23/2019 6:38	8/1/2019 16:06	EPA 200.7	Barium	0.0785	ug/L	U		0.0785	1.00	FSES
CCR-24 Equipment	9062705-24	7/23/2019 6:38	8/1/2019 16:06	EPA 200.7	Boron	2.36	ug/L	U		2.36	10.0	FSES
CCR-24 Equipment	9062705-24	7/23/2019 6:38	8/1/2019 16:06	EPA 200.7	Cadmium	0.320	ug/L	U		0.320	1.00	FSES
CCR-24 Equipment	9062705-24	7/23/2019 6:38	8/1/2019 16:06	EPA 200.7	Calcium	0.00900	mg/L	U		0.00900	0.0500	FSES
CCR-24 Equipment	9062705-24	7/23/2019 6:38	8/6/2019 0:51	EPA 300.0 (Chloride)	Chloride	0.0491	mg/L	I		0.0380	0.100	CF
CCR-24 Equipment	9062705-24	7/23/2019 6:38	8/1/2019 16:06	EPA 200.7	Chromium	0.736	ug/L	U		0.736	5.00	FSES
CCR-24 Equipment	9062705-24	7/23/2019 6:38	8/1/2019 16:06	EPA 200.7	Cobalt	0.382	ug/L	U		0.382	1.00	FSES
CCR-24 Equipment	9062705-24	7/23/2019 6:38	7/23/2019 8:38	By Observation	Color	Clear	[blank]	U				AB
CCR-24 Equipment	9062705-24	7/23/2019 6:38	7/23/2019 8:38	EPA 360.2	Dissolved Oxygen	0.96	mg/L			0.10	0.20	AB
CCR-24 Equipment	9062705-24	7/23/2019 6:38	8/1/2019 19:57	EPA 300.0	Fluoride	0.0168	mg/L	U		0.0168	0.0504	FSES
CCR-24 Equipment	9062705-24	7/23/2019 6:38	8/1/2019 16:06	EPA 200.7	Lead	1.43	ug/L	U		1.43	10.0	FSES
CCR-24 Equipment	9062705-24	7/23/2019 6:38	8/2/2019 16:58	EPA 200.7	Lithium	3.33	ug/L	U		3.33	25.0	FSES
CCR-24 Equipment	9062705-24	7/23/2019 6:38	8/1/2019 17:21	EPA 245.1	Mercury	0.152	ug/L	U		0.152	0.456	FSES
CCR-24 Equipment	9062705-24	7/23/2019 6:38	8/1/2019 16:06	EPA 200.7	Molybdenum	2.76	ug/L	U		2.76	10.0	FSES
CCR-24 Equipment	9062705-24	7/23/2019 6:38	7/23/2019 8:38	SM18 4500-B B	pH	8.08	SU			0.05	0.05	AB
CCR-24 Equipment	9062705-24	7/23/2019 6:38	9/12/2019 9:50	EPA 903.1	Radium-226	0.2	0.1 pCi/L	U		0.200	0.600	FRS
CCR-24 Equipment	9062705-24	7/23/2019 6:38	8/12/2019 9:30	EPA Ra-05	Radium-228	0.8	0.5 pCi/L	U		0.800	2.40	FRS
CCR-24 Equipment	9062705-24	7/23/2019 6:38	7/24/2019 16:06	SM18 2540 C	Residues- Filterable (TDS)	10.0	mg/L	U		10.0	20.0	AB
CCR-24 Equipment	9062705-24	7/23/2019 6:38	8/1/2019 16:06	EPA 200.7	Selenium	3.09	ug/L	U		3.09	15.0	FSES
CCR-24 Equipment	9062705-24	7/23/2019 6:38	7/23/2019 8:38	By Observation	Sheen	No Sheen	N/A	U				AB
CCR-24 Equipment	9062705-24	7/23/2019 6:38	7/23/2019 8:38	EPA 120.1	Specific Conductance	1	umhos/cm	U		1	5	AB
CCR-24 Equipment	9062705-24	7/23/2019 6:38	8/6/2019 0:51	EPA 300.0 (Sulfate)	Sulfate	0.738	mg/L			0.0250	0.100	CF
CCR-24 Equipment	9062705-24	7/23/2019 6:38	7/23/2019 8:38	EPA 170.1	Temperature	20.8	deg C			0.1	0.1	AB
CCR-24 Equipment	9062705-24	7/23/2019 6:38	8/1/2019 16:06	EPA 200.7	Thallium	0.925	ug/L	U		0.925	4.00	FSES
CCR-24 Equipment	9062705-24	7/23/2019 6:38	7/23/2019 8:38	EPA 180.1	Turbidity	0.18	NTU	I		0.1	0.5	AB

J = Estimated value. Quality control does not meet criteria.

I = The reported value is between the laboratory MDL and the laboratory PQL.

J-6 = Estimated value. Result does not meet the quality control criteria for duplicates.

J-7 = Result exceeds the regulatory MCL.

J-8 = Estimated value. Reported concentration is outside the standard calibration/calibration verification range.

U = Compound was analyzed for but not detected.

V = The analyte was detected at or above the method detection limit in both the sample and the associated method blank.

FSES = Subcontracted analysis conducted by Florida-Spectrum Environmental Services, Inc. (TNI Certificate No. E86006).

FRS = Subcontracted analysis conducted by Florida Radiochemistry Services, Inc. (TNI Certificate No. E83033).

The results detailed within this report apply only to those samples submitted for analysis and for which results are reported here.

Unless otherwise indicated, these test results meet all requirements of the TNI standards.



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