



2018 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT

Byproduct Storage Area

C.D. McIntosh Power Plant

Lakeland, Florida

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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) Rule¹ §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

¹ 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. The SSI evaluation is summarized below:

Appendix III Constituent	Background Limit	Monitoring Wells with Verified SSIs
Boron	62 µg/L	CCR-3 to CCR-14
Calcium	32 mg/L	CCR-3 to CCR-14
Chloride	13 mg/L	CCR-3 to CCR-7, CCR-9, CCR-11, CCR-12 to CCR-14
Fluoride	PQL/RL (0.1 mg/L)	CCR-4, CCR-6, CCR-8, CCR-9, CCR-11, CCR-12, CCR-13, CCR-14
pH	4.63 / 5.25 S.U.	CCR-3, CCR-4, CCR-6, CCR-8, CCR-10 to CCR-14
Sulfate	76.4 mg/L	CCR-3 to CCR-9, CCR-11 to CCR-14
Total Dissolved Solids	228 mg/L	CCR-3 to CCR-14

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. The damaged well was subsequently abandoned and the replacement well, CCR-10R, was installed on March 13, 2018 (Golder 2018c).

2.2 Groundwater Sampling Activities

The groundwater sampling activities related to the CCR groundwater monitoring program for BSA that occurred during 2018 are described in the sections below.

2.2.1 Assessment Monitoring

The 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 a subsequent semi-annual assessment monitoring event was conducted on July 17 to 19, 2018. Assessment monitoring laboratory analytical data is summarized in Tables A-1 to A-2 in **Appendix A**.

During the initial 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 in accordance with §257.95(a). During the subsequent semi-annual assessment monitoring event in July 2018, 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 annual monitoring event (i.e. arsenic, barium, fluoride, lithium, molybdenum, radium 226+228, and selenium).

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 initial detection monitoring event in July 2018. Consistent with past observations (Golder 2005), groundwater flow is inferred to flow radially under the BSA, as shown on **Figure 3** 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)). Antimony, beryllium, cadmium, chromium, cobalt, lead, mercury and thallium were not detected in the initial annual assessment event. The following GWPS have been established for the BSA:

Parameter	BSA GWPS	Basis
Arsenic	0.010 mg/L	MCL
Barium	2 mg/L	MCL
Fluoride	4 mg/L	MCL
Lithium	0.040 mg/L	CCR Rule GWPS
Molybdenum	0.100 mg/L	CCR Rule GWPS
Selenium	0.050 mg/L	MCL
Radium 226+228	7.94 pCi/L	Background Tolerance Limit

3.3 Assessment Monitoring Statistical Analysis (June 2018)

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 concentration² 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.

Assessment monitoring laboratory analytical data are summarized in Tables A-1 to A-2 in **Appendix A**. Appendix IV groundwater data collected during the background monitoring period was presented in the 2017 annual groundwater report (Golder 2018b). Statistical analysis worksheets are provided in **Appendix B**.

3.3.1 Arsenic

Arsenic had a mean detected concentration above the GWPS in the groundwater samples collected from CCR-11 and CCR-12. The Arsenic mean detected concentration from CCR-3 through CCR-10, CCR-13, and CCR-14 was less than the GWPS, therefore, a statistical evaluation of the assessment monitoring data is unwarranted for those wells. There is no SSL above the GWPS for arsenic at CCR-3, CCR-4, CCR-5, CCR-6, CCR-7, CCR-8, CCR-9, CCR-10, CCR-13 and CCR-14.

Arsenic at CCR-11

Arsenic was detected in the groundwater samples collected from CCR-11. The CCR-11 arsenic dataset has a normal distribution. There was no outlier and no trend identified in the CCR-11 arsenic dataset. The LCL for arsenic at CCR-11 is summarized below:

Well/Parameter: CCR-11 - Arsenic	
Mean:	0.104 mg/L
Standard Deviation:	0.0269 mg/L
Distribution:	Normal
95% LCL:	0.092 mg/L

Arsenic is at an SSL above the GWPS of 0.010 mg/L at CCR-11 based on the calculated LCL.

² 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.

Arsenic at CCR-12

Arsenic was detected in the groundwater samples collected from CCR-12. The CCR-12 arsenic dataset has a normal distribution. There was no outlier and no trend identified in the CCR-12 arsenic dataset. The LCL for arsenic at CCR-12 is summarized below:

Well/Parameter: CCR-12 - Arsenic	
Mean:	0.0385 mg/L
Standard Deviation:	0.0203 mg/L
Distribution:	Normal
95% LCL:	0.029 mg/L

Arsenic is at an SSL above the GWPS of 0.010 mg/L at CCR-12 based on the calculated LCL.

3.3.2 Barium

Barium was not detected above the GWPS in the groundwater samples collected from CCR-3 through CCR-14, therefore, a statistical evaluation of the assessment monitoring data is unwarranted at those wells (mean detected concentration less than GWPS). There is no SSL above the GWPS for barium at CCR-3 through CCR-14.

3.3.3 Fluoride

Fluoride was not detected above the GWPS in the groundwater samples collected from CCR-3 through CCR-14, therefore, a statistical evaluation of the assessment monitoring data is unwarranted at those wells (mean detected concentration less than GWPS). There is no SSL above the GWPS for fluoride at CCR-3 through CCR-14.

3.3.4 Lithium

The mean detected lithium concentration was above the GWPS in groundwater samples collected from CCR-4, CCR-5, CCR-6, CCR-7, CCR-9, and CCR-13. The mean detected lithium concentration was not above the GWPS at CCR-3, CCR-8, CCR-10, CCR-11, CCR-12, and CCR-14; therefore, a statistical evaluation of the assessment monitoring data is unwarranted for those wells. There is no SSL above the GWPS for lithium at CCR-3, CCR-8, CCR-10, CCR-11, CCR-12, and CCR-14.

Lithium at CCR-4

Lithium was detected in 93% of the groundwater samples collected from CCR-4. The simple substitution method (using the method detection limit for non-detect data) was used to process the non-detect data to estimate³ the mean and standard deviation of the dataset in accordance with the Statistical Analysis Plan (Golder 2017c). There was one upper outlier (0.34 mg/L) identified in the lithium CCR-4 dataset, however, there was no further justification for its removal. The CCR-4 lithium dataset has an increasing trend. The residuals around the trend line were not normally distributed, therefore, the LCL was determined from the non-parametric lower confidence band around the Theil-Sen trend line for the most recent sampling date. The LCL for lithium at CCR-4 is summarized below:

³ The estimated mean and standard deviation based the processing of non-detect data are referred to as the adjusted mean and standard deviation.

Well/Parameter: CCR-4 - Lithium	
Adjusted Mean:	0.0663 mg/L
Adjusted Standard Deviation:	0.0948 mg/L
Trend (Theil-Sen Slope):	Increasing (0.0003)
95% LCL (lower confidence band):	0.025 mg/L (estimated)

There is no SSL above the GWPS of 0.040 mg/L for lithium at CCR-4 based the calculated LCL.

Lithium at CCR-5

Lithium was detected in the groundwater samples collected from CCR-5. There was one upper outlier (5.24 mg/L) identified in the lithium CCR-5 dataset; however, there was no further justification for its removal. The CCR-5 lithium dataset has an increasing trend. The residuals around the trend line have a normal distribution, therefore, the LCL will be determined from the parametric lower confidence band around the linear regression trend line for the latest sampling date. The LCL for lithium at CCR-5 is summarized below:

Well/Parameter: CCR-5 - Lithium	
Mean:	2.81 mg/L
Standard Deviation:	0.851 mg/L
Trend (Linear regression slope):	Increasing (0.026 mg/L/week)
95% LCL (lower confidence band):	3.85 mg/L

Lithium is at an SSL above the GWPS of 0.040 mg/L at CCR-5 based on the calculated LCL.

Lithium at CCR-6

Lithium was detected in the groundwater samples collected from CCR-6. The CCR-6 lithium dataset has a normal distribution. There were no outliers and no trends identified in the CCR-6 lithium dataset. The LCL for lithium at CCR-6 is summarized below:

Well/Parameter: CCR-6 - Lithium	
Mean:	0.213 mg/L
Standard Deviation:	0.125 mg/L
Distribution:	Normal
95% LCL:	0.156 mg/L

Lithium is at an SSL above the GWPS of 0.040 mg/L at CCR-6 based on the calculated LCL.

Lithium at CCR-7

Lithium was not detected in approximately 20% of the groundwater samples collected from CCR-7; therefore, the robust regression on order statistic (ROS) method (also referred to as lognormal ROS) was used to estimate the mean and standard deviation. The dataset had a lognormal distribution using ROS imputed data. There was one upper outlier (0.34 mg/L) identified in the CCR-7 lithium dataset, however, there was no further justification for its removal from the dataset. There was insufficient evidence of a trend in the CCR-7 lithium dataset. The LCL for lithium at CCR-7 is summarized below:

Well/Parameter: CCR-7 - Lithium	
Adjusted Mean (log-mean):	0.0399 (-4.187) mg/L
Adjusted Standard Deviation (log-standard deviation):	0.084 (1.382) mg/L
Distribution:	Lognormal
95% LCL:	0.020 µg/L

There is no SSL above the GWPS of 0.040 mg/L for lithium at CCR-7 based the calculated LCL.

Lithium at CCR-9

Lithium was detected in the groundwater samples collected from CCR-9. The CCR-9 lithium dataset has an increasing trend. The residuals around the trend line have a normal distribution, therefore, the LCL will be determined from the parametric lower confidence band around the linear regression trend line for the latest sampling date. The LCL for lithium at CCR-9 is summarized below:

Well/Parameter: CCR-9 - Lithium	
Mean:	2.81 mg/L
Standard Deviation:	0.851 mg/L
Trend (Linear regression slope):	Increasing (0.0009 mg/L/week)
95% LCL (lower confidence band):	0.13 mg/L

Lithium is at an SSL above the GWPS of 0.040 mg/L for lithium at CCR-9 based the calculated LCL.

Lithium at CCR-13

Lithium was not detected in approximately 7% of the groundwater samples collected from CCR-13; therefore, the simple substitution method (MDL) was used to process non-detect data. There was no statistically significant trend and no outliers identified in the CCR-13 lithium dataset. The lithium dataset for CCR-13 did not have a normal or log-normal distribution, therefore, the non-parametric method was used to calculate the LCL. The LCL for lithium at CCR-13 is summarized below:

Well/Parameter: CCR-13 - Lithium	
Adjusted Mean:	0.199 mg/L
Adjusted Standard Deviation:	0.119 mg/L
Distribution:	Non-normal
Median:	0.25 mg/L
LCL (4th order statistic with 97% confidence):	0.097 mg/L

Lithium is at an SSL above the GWPS of 0.040 mg/L at CCR-13 based on the calculated LCL.

Lithium has not been detected above the GWPS in the groundwater samples collected from CCR-4, CCR-5, CCR-6 and CCR-7; therefore, a statistical evaluation of the assessment monitoring data is unwarranted for those wells. There is no SSL above the GWPS for lithium at CCR-4, CCR-5, CCR-6 and CCR-7.

3.3.5 Molybdenum

Molybdenum was not detected above the GWPS in the groundwater samples collected from CCR-3 through CCR-14; therefore, a statistical evaluation of the assessment monitoring data is unwarranted for those wells (mean detected concentration less than GWPS). There is no SSL above the GWPS for molybdenum at CCR-3 through CCR-14.

3.3.6 Radium 226+228

Mean (detected) radium 226+228 concentrations in the groundwater samples collected from CCR-4, CCR-5, CCR-7, CCR-9, CCR-11, CCR-13, and CCR-14 were greater than the GWPS of 7.94 pCi/L. Mean (detected) radium 226+228 concentrations in the groundwater samples collected from at CCR-3, CCR-10 and CCR-12 were less than the GWPS, therefore, a statistical evaluation of the assessment monitoring data is unwarranted for those wells. There is no SSL above the GWPS for radium 226+228 at CCR-3, CCR-10 and CCR-12.

Radium 226+228 at CCR-4

Radium 226+228 was detected in the groundwater samples collected from CCR-4. There were no outliers and no trends identified in the CCR-4 radium dataset and the dataset has a normal distribution. The LCL for radium 226+228 at CCR-4 is summarized below:

Well/Parameter: CCR-4 – Radium 226+228	
Mean:	59.44 pCi/L
Standard Deviation:	13.32 pCi/L
Distribution:	Normal
95% LCL:	53.25 pCi/L

Radium 226+228 is at an SSL above the GWPS of 7.94 pCi/L at CCR-4 based on the calculated LCL.

Radium 226+228 at CCR-5

Radium 226+228 was detected in the groundwater samples collected from CCR-5. There were no outliers and no trends identified in the CCR-5 radium dataset and the dataset has a normal distribution. The LCL for radium 226+228 at CCR-5 is summarized below:

Well/Parameter: CCR-5 – Radium 226+228	
Mean:	17.51 pCi/L
Standard Deviation:	1.856 pCi/L
Distribution:	Normal
95% LCL:	16.67 pCi/L

Radium 226+228 is at an SSL above the GWPS of 7.94 pCi/L at CCR-4 based on the calculated LCL.

Radium 226+228 at CCR-7

Radium 226+228 was detected in the groundwater samples collected from CCR-7. There were no outliers and no trends identified in the CCR-7 radium dataset and the dataset has a normal distribution. The LCL for radium 226+228 at CCR-7 is summarized below:

Well/Parameter: CCR-7 – Radium 226+228	
Mean:	12.35 pCi/L
Standard Deviation:	5.622 pCi/L
Distribution:	Normal
95% LCL:	9.79 pCi/L

Radium 226+228 is at an SSL above the GWPS of 7.94 pCi/L at CCR-4 based on the calculated LCL.

Radium 226+228 at CCR-9

Radium 226+228 was detected in the groundwater samples collected from CCR-9 and there were no outliers identified in the dataset. The CCR-9 radium dataset has a decreasing trend. The residuals around the trend line were not normally distributed; therefore, the LCL was determined from the non-parametric lower confidence band around the Theil-Sen trend line for the most recent sampling date. The LCL for radium 226+228 at CCR-9 is summarized below:

Well/Parameter: CCR-9 – Radium 226+228	
Mean:	15.3 pCi/L
Standard Deviation:	6.435 pCi/L
Trend (Theil-Sen Slope):	Decreasing (-0.1286 mg/L/week)
95% LCL (lower confidence band):	< 0 pCi/L

There is no SSL above the GWPS of 7.94 pCi/L for radium 226+228 at CCR-9 based the calculated LCL.

Radium 226+228 at CCR-11

Radium 226+228 was detected in the samples from CCR-11. The CCR-11 radium dataset has an increasing trend. The residuals around the trend line have a normal distribution, therefore, the LCL will be determined from the parametric lower confidence band around the linear regression trend line for the latest sampling date. The LCL for radium 226+228 at CCR-11 is summarized below:

Well/Parameter: CCR-11 – Radium 226+228	
Mean:	8.31 pCi/L
Standard Deviation:	2.558 pCi/L
Trend (Linear regression slope):	Decreasing (-0.064 mg/L/week)
95% LCL (lower confidence band):	1.23 pCi/L

There is no SSL above the GWPS of 7.94 pCi/L for radium 226+228 at CCR-11 based the calculated LCL.

Radium 226+228 at CCR-13

Radium 226+228 was detected in groundwater samples collected from CCR-13. There were no outliers and no trends identified in the CCR-13 radium dataset and the dataset has a normal distribution. The LCL for radium 226+228 at CCR-13 is summarized below:

Well/Parameter: CCR-13 – Radium 226+228	
Mean:	47.01 pCi/L
Standard Deviation:	28 pCi/L
Distribution:	Normal
95% LCL:	34.28 pCi/L

Radium 226+228 is at an SSL above the GWPS of 7.94 pCi/L at CCR-13 based on the calculated LCL.

Radium 226+228 at CCR-14

Radium 226+228 was detected in groundwater samples collected from CCR-14. There were no outliers and no trends identified in the CCR-14 radium dataset and the dataset has a normal distribution. The LCL for radium 226+228 at CCR-14 is summarized below:

Well/Parameter: CCR-14 – Radium 226+228	
Mean:	30.6 pCi/L
Standard Deviation:	6.858 pCi/L
Distribution:	Normal
95% LCL:	27.48 pCi/L

Radium 226+228 is at an SSL above the GWPS of 7.94 pCi/L at CCR-14 based on the calculated LCL.

3.3.7 Selenium

Selenium was not detected above the GWPS in groundwater samples collected from CCR-3 through CCR-14; therefore, a statistical evaluation of the assessment monitoring data is unwarranted for those wells (mean detected concentration less than GWPS). There is no SSL above the GWPS for selenium at CCR-3 through CCR-14.

4.0 CONCLUSIONS AND RECOMMENDATIONS

Based on the October 15, 2018 SSL evaluation (Golder 2018d and as summarized in Section 3.3, above), assessment of corrective measures will be initiated no later than January 13, 2019, in accordance with §257.96. Pursuant to §257.95(g)(1), a characterization of the nature and extent of the release is required and will be performed in 2019. Assessment of corrective measures will be completed by April 13, 2019 unless an extension up to 60 days is warranted in accordance with §257.96(a).

Assessment monitoring will continue during assessment of corrective measures in accordance with §257.96(b). The second semi-annual assessment monitoring event (year 1) will be performed in January 2019. The second annual assessment monitoring event will be performed in April 2019. The subsequent semi-annual assessment monitoring events will be performed in July 2019 and January 2020.

5.0 REFERENCES

- Golder. 2005. Phase 2 Contamination Assessment Report, C.D. McIntosh, Jr. Power Plant, Lakeland, Florida, Volume I, II, and III, dated January 24, 2005
- Golder. 2016. Monitoring Well Installation Report, CCR Rule Compliance Support, Byproduct Storage Area, Lakeland Electric, C.D. McIntosh Power Plant, Lakeland, Florida, dated September 1, 2016.
- Golder. 2017a. Technical Memorandum, Groundwater Sampling Methodology and Analytical Procedures, CCR Groundwater Monitoring, Byproduct Storage Area – C.D. McIntosh Power Plant, dated April 5, 2017.
- Golder. 2017b. CCR Groundwater Monitoring Network Documentation, C.D. McIntosh Power Plant, Byproduct Storage Area, Lakeland Electric, Lakeland, Florida, dated October 2017.
- Golder. 2017c. Statistical Analysis Plan, CCR Groundwater Monitoring, Lakeland Electric, C.D. McIntosh Power Plant, dated October 2017.
- Golder. 2018a. Statistically Significant Increase Evaluation, Byproduct Storage Area, C.D. McIntosh Power Plant, Lakeland, Florida, dated January 15.
- Golder. 2018b. 2017 Annual Groundwater Monitoring and Corrective Action Report, Byproduct Storage Area, C.D. McIntosh Power Plant, Lakeland, Florida, dated January 30.
- Golder. 2018c. Abandonment and Replacement of Monitoring Well CCR-10, Lakeland Electric, C.D. McIntosh Power Plant, Lakeland, Florida, dated April 25.
- Golder. 2018d. Statistically Significant Level Evaluation, CCR Rule Groundwater Monitoring - Byproduct Storage Area, Lakeland Electric C.D. McIntosh Power Plant, dated October 15.
- USEPA, 2009. Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities, Unified Guidance. EPA 350/R-09-007, dated March 2009.

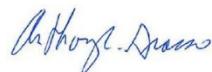
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This Annual Report has been prepared to meet the requirements of §257.90(e).

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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	1362405.16	681287.15	138.34	141.30	2.96	25.7	15.7 - 25.2
CCR-2	6/23/2016	1362203.90	681787.58	137.61	140.57	2.97	25.8	15.7 - 25.2
CCR-3	6/23/2016	1362334.65	682451.34	137.52	137.04	-0.48	25.8	15.9 - 25.3
CCR-4	6/24/2016	1362450.01	683042.68	140.25	143.13	2.88	25.7	15.6 - 25.1
CCR-5	6/22/2016	1362715.99	683376.86	138.60	141.07	2.47	26.2	16.2 - 25.7
CCR-6	6/22/2016	1363168.38	683578.57	138.48	141.34	2.86	25.7	15.7 - 25.2
CCR-7	6/22/2016	1363631.86	683772.21	139.11	142.10	2.98	25.8	15.7 - 25.2
CCR-8	6/22/2016	1363917.60	683411.55	139.41	142.12	2.71	26.0	15.9 - 25.4
CCR-9	6/21/2016	1364085.18	683045.25	138.59	141.67	3.08	25.6	15.5 - 25.0
CCR-10*	6/20/2016	1364309.40	682722.17	135.91	138.54	2.62	24.5	14.4 - 23.9
CCR-10R	3/13/2018	1364262.11	682706.30	133.80	133.56	-0.24	24.7	14.6 - 24.1
CCR-11	6/20/2016	1363835.45	682577.20	134.33	137.12	2.79	25.6	15.6 - 25.1
CCR-12	6/20/2016	1363353.12	682430.55	134.10	136.99	2.89	25.8	15.7 - 25.2
CCR-13	6/21/2016	1362936.56	682164.10	134.98	137.95	2.97	25.7	15.6 - 25.1
CCR-14	6/21/2016	1362771.09	681761.16	135.75	138.70	2.95	25.5	15.4 - 24.9

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**

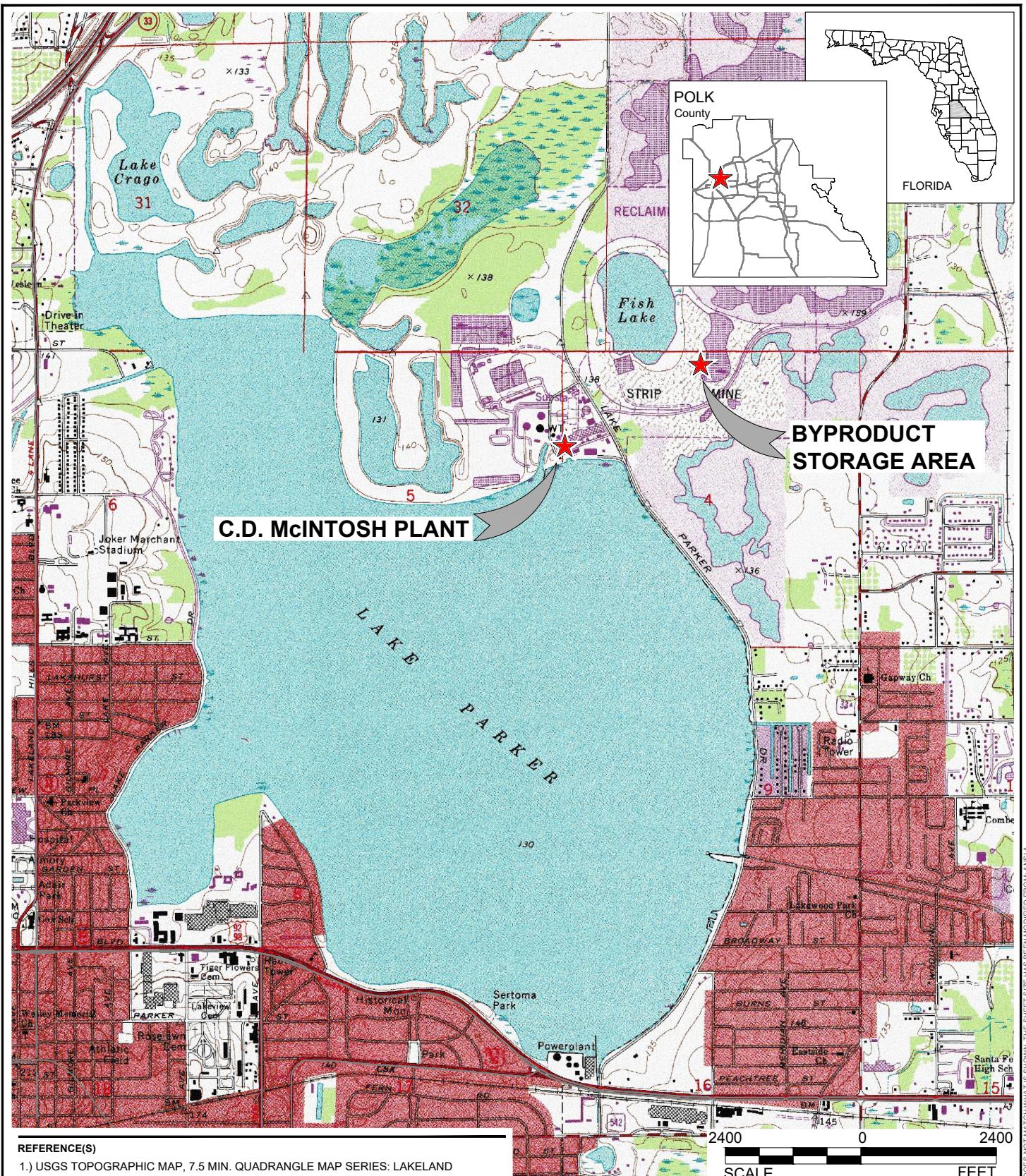
Well ID	Top of Casing Elevation (ft NAVD88)	4/10/2018		7/16/2018	
		Depth to Water (ft TOC)	Groundwater Elevation (ft NAVD88)	Depth to Water (ft TOC)	Groundwater Elevation (ft NAVD88))
CCR-1	141.30	11.13	130.17	8.12	133.18
CCR-2	140.57	10.84	129.73	8.28	132.29
CCR-3	137.04	7.49	129.55	4.09	132.95
CCR-4	143.13	14.38	128.75	13.21	129.92
CCR-5	141.07	10.71	130.36	9.08	131.99
CCR-6	141.34	9.28	132.06	7.38	133.96
CCR-7	142.10	9.83	132.27	7.80	134.30
CCR-8	142.12	9.29	132.83	7.43	134.69
CCR-9	141.67	10.10	131.57	8.66	133.01
CCR-10R	133.56	2.52	131.04	1.28	132.28
CCR-11	137.12	5.94	131.18	4.46	132.66
CCR-12	136.99	5.84	131.15	5.26	131.73
CCR-13	137.95	7.12	130.83	5.36	132.59
CCR-14	138.70	8.53	130.17	6.33	132.37

Notes:

ft TOC - feet below top of casing

NAVD88 - Vertical Control: North American Vertical Datum of 1988

FIGURES



CLIENT
LAKELAND ELECTRIC

CONSULTANT



YYYY-MM-DD 2019-01-21

DESIGNED SFS

PREPARED BCL

REVIEWED SFS

APPROVED ALG

PROJECT
BSA CCR GROUNDWATER MONITORING
C.D. McINTOSH POWER PLANT
LAKELAND, POLK COUNTY, FLORIDA

TITLE
SITE LOCATION MAP

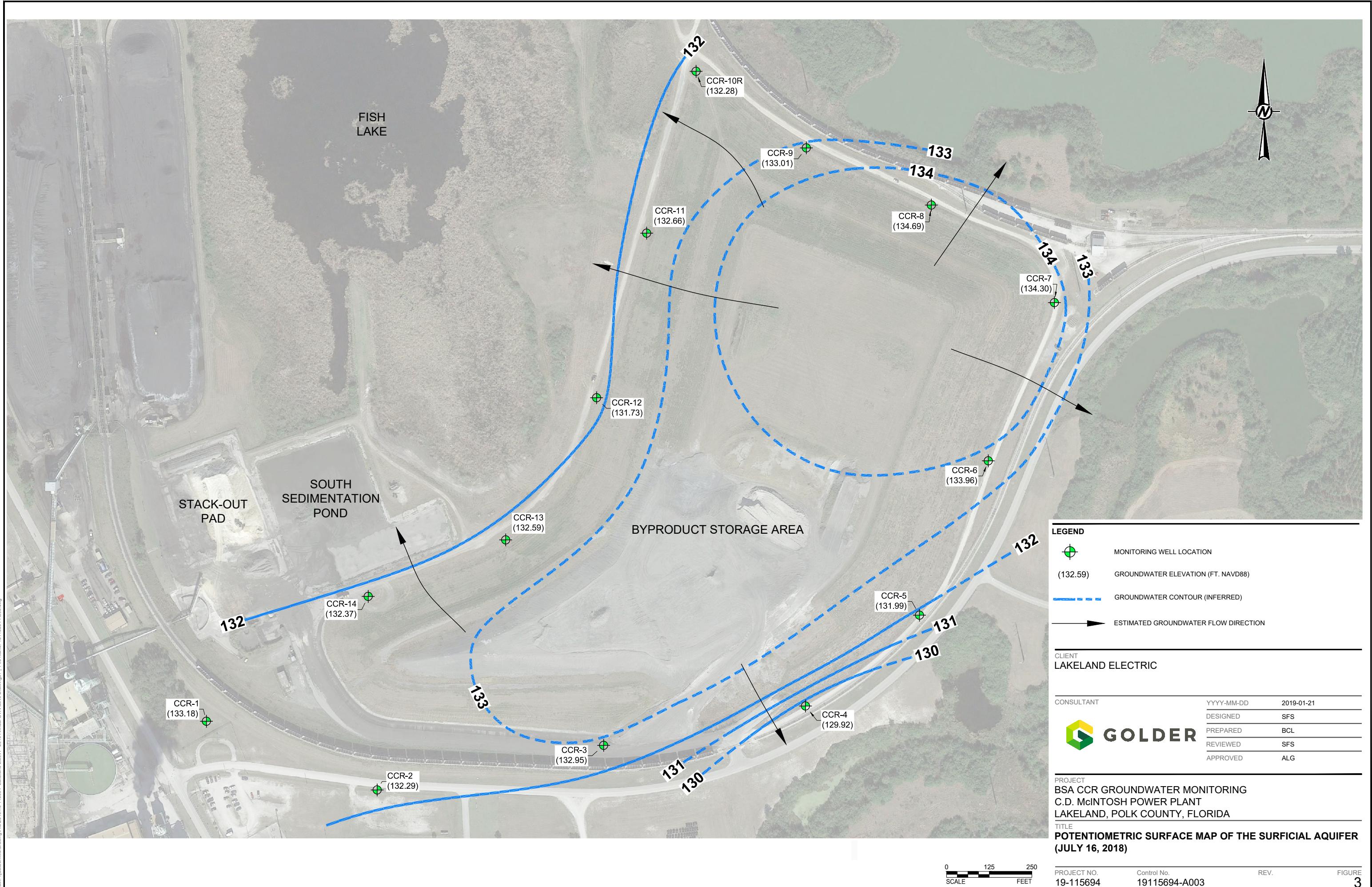
PROJECT NO. Control No.
19-115694 19115694-A001

REV.

FIGURE

1





APPENDIX A

Laboratory Analytical Results

Table A-1
CCR SAMPLING

LAB ANALYSIS REPORT											
SampleName	Sample ID	Date/Time Sampled	Date/Time Analyzed	Method	Analyte	Result	Qualifiers	Detection Limit	Reporting Limit	Units	Analyst
CCR-01	8041008-01	4/11/2018 10:32	4/26/2018 12:14	EPA 200.7	Antimony	12.3	U	12.3	100	ug/L	CF
CCR-01	8041008-01	4/11/2018 10:32	4/17/2018 0:00	EPA 200.7	Arsenic	0.00586	U	0.00586	0.01	mg/L	PES
CCR-01	8041008-01	4/11/2018 10:32	4/26/2018 12:14	EPA 200.7	Barium	23.6		4.66	20	ug/L	CF
CCR-01	8041008-01	4/11/2018 10:32	4/26/2018 12:14	EPA 200.7	Beryllium	2.59	U	2.59	20	ug/L	CF
CCR-01	8041008-01	4/11/2018 10:32	4/26/2018 12:14	EPA 200.7	Cadmium	3.9	U	3.9	20	ug/L	CF
CCR-01	8041008-01	4/11/2018 10:32	4/26/2018 12:14	EPA 200.7	Chromium	5.13	U	5.13	20	ug/L	CF
CCR-01	8041008-01	4/11/2018 10:32	4/17/2018 0:00	EPA 200.7	Cobalt	0.002	U	0.002	0.005	mg/L	PES
CCR-01	8041008-01	4/11/2018 10:32	4/11/2018 10:32	-	Color	Clear			[blank]	AB	
CCR-01	8041008-01	4/11/2018 10:32	4/11/2018 10:32	EPA 360.2	Dissolved Oxygen	0.56		0.1	0.2	mg/L	AB
CCR-01	8041008-01	4/11/2018 10:32	4/17/2018 0:00	SM 4500 F-C	Fluoride	0.05	U	0.05	0.2	mg/L	PES
CCR-01	8041008-01	4/11/2018 10:32	4/26/2018 12:14	EPA 200.7	Lead	7.62	U	7.62	100	ug/L	CF
CCR-01	8041008-01	4/11/2018 10:32	4/20/2018 0:00	EPA 200.7	Lithium	11	U	50	11	ug/L	SGS
CCR-01	8041008-01	4/11/2018 10:32	4/18/2018 0:00	EPA 245.1	Mercury	0.03	U	0.03	0.1	ug/L	PES
CCR-01	8041008-01	4/11/2018 10:32	4/26/2018 12:14	EPA 200.7	Molybdenum	3.92	U	3.92	20	ug/L	CF
CCR-01	8041008-01	4/11/2018 10:32	4/11/2018 10:32	EPA 150.1	pH	4.52		0.05	0.05	SU	AB
CCR-01	8041008-01	4/11/2018 10:32	4/26/2018 12:14	EPA 200.7	Selenium	27	U	27	100	ug/L	CF
CCR-01	8041008-01	4/11/2018 10:32	4/11/2018 10:32	-	Sheen	No Sheen			N/A	AB	
CCR-01	8041008-01	4/11/2018 10:32	4/11/2018 10:32	EPA 120.1	Specific Conductance	2.36		1	5	uS/cm	AB
CCR-01	8041008-01	4/11/2018 10:32	4/11/2018 10:32	EPA 170.1	Temperature	25.2		0.1	0.1	°C	AB
CCR-01	8041008-01	4/11/2018 10:32	4/17/2018 0:00	EPA 200.7	Thallium	0.0017	U	0.0017	0.005	mg/L	PES
CCR-01	8041008-01	4/11/2018 10:32	4/11/2018 10:32	EPA 180.1	Turbidity	2.19		0.1	0.5	NTU	AB
CCR-01	8041008-01	4/11/2018 10:32	4/11/2018 10:32	DEP-SOP	Water Level	130.17		0.1	0.5	FT	AB
CCR-02	8041008-02	4/11/2018 11:11	4/26/2018 11:46	EPA 200.7	Antimony	12.3	U	12.3	100	ug/L	CF
CCR-02	8041008-02	4/11/2018 11:11	4/17/2018 0:00	EPA 200.7	Arsenic	0.00586	U	0.00586	0.01	mg/L	PES
CCR-02	8041008-02	4/11/2018 11:11	4/26/2018 11:46	EPA 200.7	Barium	69.2		4.66	20	ug/L	CF
CCR-02	8041008-02	4/11/2018 11:11	4/26/2018 11:46	EPA 200.7	Beryllium	2.59	U	2.59	20	ug/L	CF
CCR-02	8041008-02	4/11/2018 11:11	4/26/2018 11:46	EPA 200.7	Cadmium	3.9	U	3.9	20	ug/L	CF
CCR-02	8041008-02	4/11/2018 11:11	4/26/2018 11:46	EPA 200.7	Chromium	5.13	U	5.13	20	ug/L	CF
CCR-02	8041008-02	4/11/2018 11:11	4/17/2018 0:00	EPA 200.7	Cobalt	0.002	U	0.002	0.005	mg/L	PES
CCR-02	8041008-02	4/11/2018 11:11	4/11/2018 11:11	-	Color	Brown			[blank]	AB	
CCR-02	8041008-02	4/11/2018 11:11	4/11/2018 11:11	EPA 360.2	Dissolved Oxygen	0.59		0.1	0.2	mg/L	AB
CCR-02	8041008-02	4/11/2018 11:11	4/17/2018 0:00	SM 4500 F-C	Fluoride	0.184	I	0.05	0.2	mg/L	PES
CCR-02	8041008-02	4/11/2018 11:11	4/26/2018 11:46	EPA 200.7	Lead	7.62	U	7.62	100	ug/L	CF
CCR-02	8041008-02	4/11/2018 11:11	4/20/2018 0:00	EPA 200.7	Lithium	11	U	50	11	ug/L	SGS
CCR-02	8041008-02	4/11/2018 11:11	4/18/2018 0:00	EPA 245.1	Mercury	0.03	U	0.03	0.1	ug/L	PES
CCR-02	8041008-02	4/11/2018 11:11	4/26/2018 11:46	EPA 200.7	Molybdenum	3.92	U	3.92	20	ug/L	CF
CCR-02	8041008-02	4/11/2018 11:11	4/11/2018 11:11	EPA 150.1	pH	4.47		0.05	0.05	SU	AB
CCR-02	8041008-02	4/11/2018 11:11	4/26/2018 11:46	EPA 200.7	Selenium	27.5	I	27	100	ug/L	CF
CCR-02	8041008-02	4/11/2018 11:11	4/11/2018 11:11	-	Sheen	No Sheen			N/A	AB	
CCR-02	8041008-02	4/11/2018 11:11	4/11/2018 11:11	EPA 120.1	Specific Conductance	518		1	5	uS/cm	AB
CCR-02	8041008-02	4/11/2018 11:11	4/11/2018 11:11	EPA 170.1	Temperature	26		0.1	0.1	°C	AB
CCR-02	8041008-02	4/11/2018 11:11	4/17/2018 0:00	EPA 200.7	Thallium	0.0017	U	0.0017	0.005	mg/L	PES
CCR-02	8041008-02	4/11/2018 11:11	4/11/2018 11:11	EPA 180.1	Turbidity	16.3		0.1	0.5	NTU	AB
CCR-02	8041008-02	4/11/2018 11:11	4/11/2018 11:11	DEP-SOP	Water Level	129.73		0.1	0.5	FT	AB
CCR-03	8041008-03	4/11/2018 11:52	4/26/2018 11:50	EPA 200.7	Antimony	12.3	U	12.3	100	ug/L	CF
CCR-03	8041008-03	4/11/2018 11:52	4/17/2018 0:00	EPA 200.7	Arsenic	0.00586	U	0.00586	0.01	mg/L	PES
CCR-03	8041008-03	4/11/2018 11:52	4/26/2018 11:50	EPA 200.7	Barium	28.1		4.66	20	ug/L	CF
CCR-03	8041008-03	4/11/2018 11:52	4/26/2018 11:50	EPA 200.7	Beryllium	2.59	U	2.59	20	ug/L	CF
CCR-03	8041008-03	4/11/2018 11:52	4/26/2018 11:50	EPA 200.7	Cadmium	3.9	U	3.9	20	ug/L	CF
CCR-03	8041008-03	4/11/2018 11:52	4/26/2018 11:50	EPA 200.7	Chromium	5.13	U	5.13	20	ug/L	CF
CCR-03	8041008-03	4/11/2018 11:52	4/17/2018 0:00	EPA 200.7	Cobalt	0.002	U	0.002	0.005	mg/L	PES
CCR-03	8041008-03	4/11/2018 11:52	4/11/2018 11:52	-	Color	Clear			[blank]	AB	
CCR-03	8041008-03	4/11/2018 11:52	4/11/2018 11:52	EPA 360.2	Dissolved Oxygen	0.24		0.1	0.2	mg/L	AB
CCR-03	8041008-03	4/11/2018 11:52	4/17/2018 0:00	SM 4500 F-C	Fluoride	0.21		0.05	0.2	mg/L	PES
CCR-03	8041008-03	4/11/2018 11:52	4/26/2018 11:50	EPA 200.7	Lead	7.62	U	7.62	100	ug/L	CF
CCR-03	8041008-03	4/11/2018 11:52	4/20/2018 0:00	EPA 200.7	Lithium	11	U	50	11	ug/L	SGS
CCR-03	8041008-03	4/11/2018 11:52	4/18/2018 0:00	EPA 245.1	Mercury	0.03	U	0.03	0.1	ug/L	PES
CCR-03	8041008-03	4/11/2018 11:52	4/26/2018 11:50	EPA 200.7	Molybdenum	4.18	I	3.92	20	ug/L	CF
CCR-03	8041008-03	4/11/2018 11:52	4/11/2018 11:52	EPA 150.1	pH	5.28		0.05	0.05	SU	AB
CCR-03	8041008-03	4/11/2018 11:52	4/26/2018 11:50	EPA 200.7	Selenium	27	U	27	100	ug/L	CF
CCR-03	8041008-03	4/11/2018 11:52	4/11/2018 11:52	-	Sheen	No Sheen			N/A	AB	
CCR-03	8041008-03	4/11/2018 11:52	4/11/2018 11:52	EPA 120.1	Specific Conductance	2240		1	5	uS/cm	AB
CCR-03	8041008-03	4/11/2018 11:52	4/11/2018 11:52	EPA 170.1	Temperature	25.1		0.1	0.1	°C	AB
CCR-03	8041008-03	4/11/2018 11:52	4/17/2018 0:00	EPA 200.7	Thallium	0.0017	U	0.0017	0.005	mg/L	PES
CCR-03	8041008-03	4/11/2018 11:52	4/11/2018 11:52	EPA 180.1	Turbidity	4.13		0.1	0.5	NTU	AB
CCR-03	8041008-03	4/11/2018 11:52	4/11/2018 11:52	DEP-SOP	Water Level	129.55		0.1	0.5	FT	AB
CCR-04	8041008-04	4/11/2018 12:37	4/26/2018 11:54	EPA 200.7	Antimony	12.3	U	12.3	100	ug/L	CF
CCR-04	8041008-04	4/11/2018 12:37	4/17/2018 0:00	EPA 200.7	Arsenic	0.0136		0.00586	0.01	mg/L	PES
CCR-04	8041008-04	4/11/2018 12:37	4/26/2018 11:54	EPA 200.7	Barium	240		4.66	20	ug/L	CF
CCR-04	8041008-04	4/11/2018 12:37	4/26/2018 11:54	EPA 200.7	Beryllium	2.59	U	2.59	20	ug/L	CF
CCR-04	8041008-04	4/11/2018 12:37	4/26/2018 11:54	EPA 200.7	Cadmium	3.9	U	3.9	20	ug/L	CF
CCR-04	8041008-04	4/11/2018 12:37	4/26/2018 11:54	EPA 200.7	Chromium	5.13	U	5.13	20	ug/L	CF
CCR-04	8041008-04	4/11/2018 12:37	4/17/2018 0:00	EPA 200.7	Cobalt	0.002	U	0.002	0.005	mg/L	PES
CCR-04	8041008-04	4/11/2018 12:37	4/11/2018 12:37	-	Color	Clear			[blank]	AB	
CCR-04	8041008-04	4/11/2018 12:37	4/11/2018 12:37	EPA 360.2	Dissolved Oxygen	0.62		0.1	0.2	mg/L	AB
CCR-04	8041008-04	4/11/2018 12:37	4/17/2018 0:00	SM 4500 F-C	Fluoride	0.504		0.05	0.2	mg/L	PES
CCR-04	8041008-04	4/11/2018 12:37	4/26/2018 11:54	EPA 200.7	Lead	7.62	U	7.62	100	ug/L	CF

Table A-1
CCR SAMPLING
Month / Year: April 2018
LAB ANALYSIS REPORT

SampleName	Sample ID	Date/Time Sampled	Date/Time Analyzed	Method	Analyte	Result	Qualifiers	Detection Limit	Reporting Limit	Units	Analyst
CCR-04	8041008-04	4/11/2018 12:37	4/20/2018 0:00	EPA 200.7	Lithium	22	U	100	22	ug/L	SGS
CCR-04	8041008-04	4/11/2018 12:37	4/18/2018 0:00	EPA 245.1	Mercury	0.03	U	0.03	0.1	ug/L	PES
CCR-04	8041008-04	4/11/2018 12:37	4/26/2018 11:54	EPA 200.7	Molybdenum	3.92	U	3.92	20	ug/L	CF
CCR-04	8041008-04	4/11/2018 12:37	4/11/2018 12:37	EPA 150.1	pH	3.68		0.05	0.05	SU	AB
CCR-04	8041008-04	4/11/2018 12:37	4/26/2018 11:54	EPA 200.7	Selenium	27	U	27	100	ug/L	CF
CCR-04	8041008-04	4/11/2018 12:37	4/11/2018 12:37	-	Sheen	No Sheen				N/A	AB
CCR-04	8041008-04	4/11/2018 12:37	4/11/2018 12:37	EPA 120.1	Specific Conductance	10360		1	5	uS/cm	AB
CCR-04	8041008-04	4/11/2018 12:37	4/11/2018 12:37	EPA 170.1	Temperature	26.1		0.1	0.1	°C	AB
CCR-04	8041008-04	4/11/2018 12:37	4/17/2018 0:00	EPA 200.7	Thallium	0.0017	U	0.0017	0.005	mg/L	PES
CCR-04	8041008-04	4/11/2018 12:37	4/11/2018 12:37	EPA 180.1	Turbidity	3.42		0.1	0.5	NTU	AB
CCR-04	8041008-04	4/11/2018 12:37	4/11/2018 12:37	DEP-SOP	Water Level	128.75		0.1	0.5	FT	AB
CCR-05	8041008-05	4/11/2018 13:35	4/26/2018 11:58	EPA 200.7	Antimony	12.3	U	12.3	100	ug/L	CF
CCR-05	8041008-05	4/11/2018 13:35	4/17/2018 0:00	EPA 200.7	Arsenic	0.00875	I	0.00586	0.01	mg/L	PES
CCR-05	8041008-05	4/11/2018 13:35	4/26/2018 11:58	EPA 200.7	Barium	65.4		4.66	20	ug/L	CF
CCR-05	8041008-05	4/11/2018 13:35	4/26/2018 11:58	EPA 200.7	Beryllium	2.59	U	2.59	20	ug/L	CF
CCR-05	8041008-05	4/11/2018 13:35	4/26/2018 11:58	EPA 200.7	Cadmium	3.9	U	3.9	20	ug/L	CF
CCR-05	8041008-05	4/11/2018 13:35	4/26/2018 11:58	EPA 200.7	Chromium	5.13	U	5.13	20	ug/L	CF
CCR-05	8041008-05	4/11/2018 13:35	4/17/2018 0:00	EPA 200.7	Cobalt	0.002	U	0.002	0.005	mg/L	PES
CCR-05	8041008-05	4/11/2018 13:35	4/11/2018 13:35	-	Color	Brown			[blank]	AB	
CCR-05	8041008-05	4/11/2018 13:35	4/11/2018 13:35	EPA 360.2	Dissolved Oxygen	0.27		0.1	0.2	mg/L	AB
CCR-05	8041008-05	4/11/2018 13:35	4/17/2018 0:00	SM 4500 F-C	Fluoride	0.0738	I	0.05	0.2	mg/L	PES
CCR-05	8041008-05	4/11/2018 13:35	4/26/2018 11:58	EPA 200.7	Lead	7.62	U	7.62	100	ug/L	CF
CCR-05	8041008-05	4/11/2018 13:35	4/20/2018 0:00	EPA 200.7	Lithium	4210		50	11	ug/L	SGS
CCR-05	8041008-05	4/11/2018 13:35	4/18/2018 0:00	EPA 245.1	Mercury	0.03	U	0.03	0.1	ug/L	PES
CCR-05	8041008-05	4/11/2018 13:35	4/26/2018 11:58	EPA 200.7	Molybdenum	3.92	U	3.92	20	ug/L	CF
CCR-05	8041008-05	4/11/2018 13:35	4/11/2018 13:35	EPA 150.1	pH	5.01		0.05	0.05	SU	AB
CCR-05	8041008-05	4/11/2018 13:35	4/26/2018 11:58	EPA 200.7	Selenium	27	U	27	100	ug/L	CF
CCR-05	8041008-05	4/11/2018 13:35	4/11/2018 13:35	-	Sheen	No Sheen			N/A	AB	
CCR-05	8041008-05	4/11/2018 13:35	4/11/2018 13:35	EPA 120.1	Specific Conductance	13510		1	5	uS/cm	AB
CCR-05	8041008-05	4/11/2018 13:35	4/11/2018 13:35	EPA 170.1	Temperature	25.7		0.1	0.1	°C	AB
CCR-05	8041008-05	4/11/2018 13:35	4/17/2018 0:00	EPA 200.7	Thallium	0.0017	U	0.0017	0.005	mg/L	PES
CCR-05	8041008-05	4/11/2018 13:35	4/11/2018 13:35	EPA 180.1	Turbidity	51.1		0.1	0.5	NTU	AB
CCR-05	8041008-05	4/11/2018 13:35	4/11/2018 13:35	DEP-SOP	Water Level	130.36		0.1	0.5	FT	AB
CCR-06	8041008-06	4/11/2018 14:20	4/26/2018 12:02	EPA 200.7	Antimony	12.3	U	12.3	100	ug/L	CF
CCR-06	8041008-06	4/11/2018 14:20	4/17/2018 0:00	EPA 200.7	Arsenic	0.00586	UI	0.00586	0.01	mg/L	PES
CCR-06	8041008-06	4/11/2018 14:20	4/26/2018 12:02	EPA 200.7	Barium	16.9	I	4.66	20	ug/L	CF
CCR-06	8041008-06	4/11/2018 14:20	4/26/2018 12:02	EPA 200.7	Beryllium	2.59	U	2.59	20	ug/L	CF
CCR-06	8041008-06	4/11/2018 14:20	4/26/2018 12:02	EPA 200.7	Cadmium	3.9	U	3.9	20	ug/L	CF
CCR-06	8041008-06	4/11/2018 14:20	4/26/2018 12:02	EPA 200.7	Chromium	5.13	U	5.13	20	ug/L	CF
CCR-06	8041008-06	4/11/2018 14:20	4/17/2018 0:00	EPA 200.7	Cobalt	0.002	U	0.002	0.005	mg/L	PES
CCR-06	8041008-06	4/11/2018 14:20	4/11/2018 14:20	-	Color	Clear			[blank]	AB	
CCR-06	8041008-06	4/11/2018 14:20	4/11/2018 14:20	EPA 360.2	Dissolved Oxygen	0.31		0.1	0.2	mg/L	AB
CCR-06	8041008-06	4/11/2018 14:20	4/17/2018 0:00	SM 4500 F-C	Fluoride	0.221		0.05	0.2	mg/L	PES
CCR-06	8041008-06	4/11/2018 14:20	4/26/2018 12:02	EPA 200.7	Lead	7.62	U	7.62	100	ug/L	CF
CCR-06	8041008-06	4/11/2018 14:20	4/20/2018 0:00	EPA 200.7	Lithium	227		50	11	ug/L	SGS
CCR-06	8041008-06	4/11/2018 14:20	4/18/2018 0:00	EPA 245.1	Mercury	0.03	U	0.03	0.1	ug/L	PES
CCR-06	8041008-06	4/11/2018 14:20	4/26/2018 12:02	EPA 200.7	Molybdenum	3.92	U	3.92	20	ug/L	CF
CCR-06	8041008-06	4/11/2018 14:20	4/11/2018 14:20	EPA 150.1	pH	5.83		0.05	0.05	SU	AB
CCR-06	8041008-06	4/11/2018 14:20	4/26/2018 12:02	EPA 200.7	Selenium	27	U	27	100	ug/L	CF
CCR-06	8041008-06	4/11/2018 14:20	4/11/2018 14:20	-	Sheen	No Sheen			N/A	AB	
CCR-06	8041008-06	4/11/2018 14:20	4/11/2018 14:20	EPA 120.1	Specific Conductance	3470		1	5	uS/cm	AB
CCR-06	8041008-06	4/11/2018 14:20	4/11/2018 14:20	EPA 170.1	Temperature	25.8		0.1	0.1	°C	AB
CCR-06	8041008-06	4/11/2018 14:20	4/17/2018 0:00	EPA 200.7	Thallium	0.0017	U	0.0017	0.005	mg/L	PES
CCR-06	8041008-06	4/11/2018 14:20	4/11/2018 14:20	EPA 180.1	Turbidity	1.21		0.1	0.5	NTU	AB
CCR-06	8041008-06	4/11/2018 14:20	4/11/2018 14:20	DEP-SOP	Water Level	132.06					
CCR-07	8041008-07	4/12/2018 10:30	4/26/2018 12:06	EPA 200.7	Antimony	12.3	U	12.3	100	ug/L	CF
CCR-07	8041008-07	4/12/2018 10:30	4/17/2018 0:00	EPA 200.7	Arsenic	0.00586	U	0.00586	0.01	mg/L	PES
CCR-07	8041008-07	4/12/2018 10:30	4/26/2018 12:06	EPA 200.7	Barium	47.3		4.66	20	ug/L	CF
CCR-07	8041008-07	4/12/2018 10:30	4/26/2018 12:06	EPA 200.7	Beryllium	2.59	U	2.59	20	ug/L	CF
CCR-07	8041008-07	4/12/2018 10:30	4/26/2018 12:06	EPA 200.7	Cadmium	3.9	U	3.9	20	ug/L	CF
CCR-07	8041008-07	4/12/2018 10:30	4/12/2018 14:20	EPA 200.7	Chromium	5.13	U	5.13	20	ug/L	CF
CCR-07	8041008-07	4/12/2018 10:30	4/17/2018 0:00	EPA 200.7	Cobalt	0.002	U	0.002	0.005	mg/L	PES
CCR-07	8041008-07	4/12/2018 10:30	4/12/2018 10:30	-	Color	Clear			[blank]	AB	
CCR-07	8041008-07	4/12/2018 10:30	4/12/2018 10:30	EPA 360.2	Dissolved Oxygen	0.38		0.1	0.2	mg/L	AB
CCR-07	8041008-07	4/12/2018 10:30	4/17/2018 0:00	SM 4500 F-C	Fluoride	0.404		0.05	0.2	mg/L	PES
CCR-07	8041008-07	4/12/2018 10:30	4/26/2018 12:06	EPA 200.7	Lead	7.62	U	7.62	100	ug/L	CF
CCR-07	8041008-07	4/12/2018 10:30	4/20/2018 0:00	EPA 200.7	Lithium	340		50	11	ug/L	SGS
CCR-07	8041008-07	4/12/2018 10:30	4/18/2018 0:00	EPA 245.1	Mercury	0.03	U	0.03	0.1	ug/L	PES
CCR-07	8041008-07	4/12/2018 10:30	4/26/2018 12:06	EPA 200.7	Molybdenum	3.92	U	3.92	20	ug/L	CF
CCR-07	8041008-07	4/12/2018 10:30	4/12/2018 10:30	EPA 150.1	pH	4.33		0.05	0.05	SU	AB
CCR-07	8041008-07	4/12/2018 10:30	4/26/2018 12:06	EPA 200.7	Selenium	27	U	27	100	ug/L	CF
CCR-07	8041008-07	4/12/2018 10:30	4/12/2018 10:30	-	Sheen	No Sheen			N/A	AB	
CCR-07	8041008-07	4/12/2018 10:30	4/12/2018 10:30	EPA 120.1	Specific Conductance	3630		1	5	uS/cm	AB
CCR-07	8041008-07	4/12/2018 10:30	4/12/2018 10:30	EPA 170.1	Temperature	25		0.1	0.1	°C	AB
CCR-07	8041008-07	4/12/2018 10:30	4/17/2018 0:00	EPA 200.7	Thallium	0.0017	U	0.0017	0.005	mg/L	PES
CCR-07	8041008-07	4/12/2018 10:30	4/12/2018 10:30	EPA 180.1	Turbidity	3.78		0.1	0.5	NTU	AB
CCR-07	8041008-07	4/12/2018 10:30	4/12/2018 10:30	DEP-SOP	Water Level	132.27		0.1	0.5	FT	AB

Table A-1
CCR SAMPLING
Month / Year: April 2018
LAB ANALYSIS REPORT

SampleName	Sample ID	Date/Time Sampled	Date/Time Analyzed	Method	Analyte	Result	Qualifiers	Detection Limit	Reporting Limit	Units	Analyst
CCR-08	8041008-08	4/12/2018 11:19	4/26/2018 12:10	EPA 200.7	Antimony	12.3	U	12.3	100	ug/L	CF
CCR-08	8041008-08	4/12/2018 11:19	4/17/2018 0:00	EPA 200.7	Arsenic	0.00586	UI	0.00586	0.01	mg/L	PES
CCR-08	8041008-08	4/12/2018 11:19	4/26/2018 12:10	EPA 200.7	Barium	26.8		4.66	20	ug/L	CF
CCR-08	8041008-08	4/12/2018 11:19	4/26/2018 12:10	EPA 200.7	Beryllium	2.59	U	2.59	20	ug/L	CF
CCR-08	8041008-08	4/12/2018 11:19	4/26/2018 12:10	EPA 200.7	Cadmium	3.9	U	3.9	20	ug/L	CF
CCR-08	8041008-08	4/12/2018 11:19	4/26/2018 12:10	EPA 200.7	Chromium	5.13	U	5.13	20	ug/L	CF
CCR-08	8041008-08	4/12/2018 11:19	4/17/2018 0:00	EPA 200.7	Cobalt	0.002	U	0.002	0.005	mg/L	PES
CCR-08	8041008-08	4/12/2018 11:19	4/12/2018 11:19	-	Color	Brown			[blank]	AB	
CCR-08	8041008-08	4/12/2018 11:19	4/12/2018 11:19	EPA 360.2	Dissolved Oxygen	0.37		0.1	0.2	mg/L	AB
CCR-08	8041008-08	4/12/2018 11:19	4/17/2018 0:00	SM 4500 F-C	Fluoride	0.4		0.05	0.2	mg/L	PES
CCR-08	8041008-08	4/12/2018 11:19	4/26/2018 12:10	EPA 200.7	Lead	7.62	U	7.62	100	ug/L	CF
CCR-08	8041008-08	4/12/2018 11:19	4/20/2018 0:00	EPA 200.7	Lithium	11	U	50	11	ug/L	SGS
CCR-08	8041008-08	4/12/2018 11:19	4/18/2018 0:00	EPA 245.1	Mercury	0.03	U	0.03	0.1	ug/L	PES
CCR-08	8041008-08	4/12/2018 11:19	4/26/2018 12:10	EPA 200.7	Molybdenum	18	I	3.92	20	ug/L	CF
CCR-08	8041008-08	4/12/2018 11:19	4/12/2018 11:19	EPA 150.1	pH	6.53		0.05	0.05	SU	AB
CCR-08	8041008-08	4/12/2018 11:19	4/26/2018 12:10	EPA 200.7	Selenium	27	U	27	100	ug/L	CF
CCR-08	8041008-08	4/12/2018 11:19	4/12/2018 11:19	-	Sheen	No Sheen			N/A	AB	
CCR-08	8041008-08	4/12/2018 11:19	4/12/2018 11:19	EPA 120.1	Specific Conductance	576		1	5	uS/cm	AB
CCR-08	8041008-08	4/12/2018 11:19	4/12/2018 11:19	EPA 170.1	Temperature	24.3		0.1	0.1	°C	AB
CCR-08	8041008-08	4/12/2018 11:19	4/17/2018 0:00	EPA 200.7	Thallium	0.0017	U	0.0017	0.005	mg/L	PES
CCR-08	8041008-08	4/12/2018 11:19	4/12/2018 11:19	EPA 180.1	Turbidity	18.6		0.1	0.5	NTU	AB
CCR-08	8041008-08	4/12/2018 11:19	4/12/2018 11:19	DEP-SOP	Water Level	132.83		0.1	0.5	FT	AB
CCR-09	8041008-09	4/12/2018 12:23	4/26/2018 11:42	EPA 200.7	Antimony	12.3	U	12.3	100	ug/L	CF
CCR-09	8041008-09	4/12/2018 12:23	4/17/2018 0:00	EPA 200.7	Arsenic	0.00792	I	0.00586	0.01	mg/L	PES
CCR-09	8041008-09	4/12/2018 12:23	4/26/2018 11:42	EPA 200.7	Barium	76.8		4.66	20	ug/L	CF
CCR-09	8041008-09	4/12/2018 12:23	4/26/2018 11:42	EPA 200.7	Beryllium	2.59	U	2.59	20	ug/L	CF
CCR-09	8041008-09	4/12/2018 12:23	4/26/2018 11:42	EPA 200.7	Cadmium	3.9	U	3.9	20	ug/L	CF
CCR-09	8041008-09	4/12/2018 12:23	4/26/2018 11:42	EPA 200.7	Chromium	5.13	U	5.13	20	ug/L	CF
CCR-09	8041008-09	4/12/2018 12:23	4/17/2018 0:00	EPA 200.7	Cobalt	0.002	U	0.002	0.005	mg/L	PES
CCR-09	8041008-09	4/12/2018 12:23	4/12/2018 12:23	-	Color	Milky			[blank]	AB	
CCR-09	8041008-09	4/12/2018 12:23	4/12/2018 12:23	EPA 360.2	Dissolved Oxygen	0.41		0.1	0.2	mg/L	AB
CCR-09	8041008-09	4/12/2018 12:23	4/17/2018 0:00	SM 4500 F-C	Fluoride	0.251		0.05	0.2	mg/L	PES
CCR-09	8041008-09	4/12/2018 12:23	4/26/2018 11:42	EPA 200.7	Lead	7.62	U	7.62	100	ug/L	CF
CCR-09	8041008-09	4/12/2018 12:23	4/20/2018 0:00	EPA 200.7	Lithium	160		50	11	ug/L	SGS
CCR-09	8041008-09	4/12/2018 12:23	4/18/2018 0:00	EPA 245.1	Mercury	0.03	U	0.03	0.1	ug/L	PES
CCR-09	8041008-09	4/12/2018 12:23	4/26/2018 11:42	EPA 200.7	Molybdenum	3.92	U	3.92	20	ug/L	CF
CCR-09	8041008-09	4/12/2018 12:23	4/12/2018 12:23	EPA 150.1	pH	4.93		0.05	0.05	SU	AB
CCR-09	8041008-09	4/12/2018 12:23	4/26/2018 11:42	EPA 200.7	Selenium	27	U	27	100	ug/L	CF
CCR-09	8041008-09	4/12/2018 12:23	4/12/2018 12:23	-	Sheen	No Sheen			N/A	AB	
CCR-09	8041008-09	4/12/2018 12:23	4/12/2018 12:23	EPA 120.1	Specific Conductance	7100		1	5	uS/cm	AB
CCR-09	8041008-09	4/12/2018 12:23	4/12/2018 12:23	EPA 170.1	Temperature	25.7		0.1	0.1	°C	AB
CCR-09	8041008-09	4/12/2018 12:23	4/17/2018 0:00	EPA 200.7	Thallium	0.0017	U	0.0017	0.005	mg/L	PES
CCR-09	8041008-09	4/12/2018 12:23	4/12/2018 12:23	EPA 180.1	Turbidity	24		0.1	0.5	NTU	AB
CCR-09	8041008-09	4/12/2018 12:23	4/12/2018 12:23	DEP-SOP	Water Level	131.52		0.1	0.5	FT	AB
CCR-10R	8041008-10	4/12/2018 13:02	4/26/2018 12:57	EPA 200.7	Antimony	12.3	U	12.3	100	ug/L	CF
CCR-10R	8041008-10	4/12/2018 13:02	4/17/2018 0:00	EPA 200.7	Arsenic	0.00586	U	0.00586	0.01	mg/L	PES
CCR-10R	8041008-10	4/12/2018 13:02	4/26/2018 12:57	EPA 200.7	Barium	7.39	I	4.66	20	ug/L	CF
CCR-10R	8041008-10	4/12/2018 13:02	4/26/2018 12:57	EPA 200.7	Beryllium	2.59	U	2.59	20	ug/L	CF
CCR-10R	8041008-10	4/12/2018 13:02	4/26/2018 12:57	EPA 200.7	Cadmium	3.9	U	3.9	20	ug/L	CF
CCR-10R	8041008-10	4/12/2018 13:02	4/26/2018 12:57	EPA 200.7	Chromium	5.13	U	5.13	20	ug/L	CF
CCR-10R	8041008-10	4/12/2018 13:02	4/12/2018 13:02	EPA 200.7	Cobalt	0.002	U	0.002	0.005	mg/L	PES
CCR-10R	8041008-10	4/12/2018 13:02	4/12/2018 13:02	-	Color	Clear			[blank]	AB	
CCR-10R	8041008-10	4/12/2018 13:02	4/12/2018 13:02	EPA 360.2	Dissolved Oxygen	0.2		0.1	0.2	mg/L	AB
CCR-10R	8041008-10	4/12/2018 13:02	4/17/2018 0:00	SM 4500 F-C	Fluoride	0.189	I	0.05	0.2	mg/L	PES
CCR-10R	8041008-10	4/12/2018 13:02	4/26/2018 12:57	EPA 200.7	Lead	7.62	U	7.62	100	ug/L	CF
CCR-10R	8041008-10	4/12/2018 13:02	4/20/2018 0:00	EPA 200.7	Lithium	11	U	50	11	ug/L	SGS
CCR-10R	8041008-10	4/12/2018 13:02	4/18/2018 0:00	EPA 245.1	Mercury	0.03	U	0.03	0.1	ug/L	PES
CCR-10R	8041008-10	4/12/2018 13:02	4/26/2018 12:57	EPA 200.7	Molybdenum	3.92	U	3.92	20	ug/L	CF
CCR-10R	8041008-10	4/12/2018 13:02	4/12/2018 13:02	EPA 150.1	pH	5.23		0.05	0.05	SU	AB
CCR-10R	8041008-10	4/12/2018 13:02	4/26/2018 12:57	EPA 200.7	Selenium	27	U	27	100	ug/L	CF
CCR-10R	8041008-10	4/12/2018 13:02	4/12/2018 13:02	-	Sheen	No Sheen			N/A	AB	
CCR-10R	8041008-10	4/12/2018 13:02	4/12/2018 13:02	EPA 120.1	Specific Conductance	638		1	5	uS/cm	AB
CCR-10R	8041008-10	4/12/2018 13:02	4/12/2018 13:02	EPA 170.1	Temperature	24.8		0.1	0.1	°C	AB
CCR-10R	8041008-10	4/12/2018 13:02	4/17/2018 0:00	EPA 200.7	Thallium	0.0017	U	0.0017	0.005	mg/L	PES
CCR-10R	8041008-10	4/12/2018 13:02	4/12/2018 13:02	EPA 180.1	Turbidity	3.19		0.1	0.5	NTU	AB
CCR-10R	8041008-10	4/12/2018 13:02	4/12/2018 13:02	DEP-SOP	Water Level	131.04		0.1	0.5	FT	AB
CCR-11	8041008-11	4/12/2018 13:37	4/26/2018 13:01	EPA 200.7	Antimony	12.3	U	12.3	100	ug/L	CF
CCR-11	8041008-11	4/12/2018 13:37	4/17/2018 0:00	EPA 200.7	Arsenic	0.0668		0.00586	0.01	mg/L	PES
CCR-11	8041008-11	4/12/2018 13:37	4/26/2018 13:01	EPA 200.7	Barium	42.7		4.66	20	ug/L	CF
CCR-11	8041008-11	4/12/2018 13:37	4/12/2018 13:37	EPA 200.7	Beryllium	2.59	U	2.59	20	ug/L	CF
CCR-11	8041008-11	4/12/2018 13:37	4/26/2018 13:01	EPA 200.7	Cadmium	3.9	U	3.9	20	ug/L	CF
CCR-11	8041008-11	4/12/2018 13:37	4/26/2018 13:01	EPA 200.7	Chromium	5.13	U	5.13	20	ug/L	CF
CCR-11	8041008-11	4/12/2018 13:37	4/17/2018 0:00	EPA 200.7	Cobalt	0.002	U	0.002	0.005	mg/L	PES
CCR-11	8041008-11	4/12/2018 13:37	4/12/2018 13:37	-	Color	Clear			[blank]	AB	
CCR-11	8041008-11	4/12/2018 13:37	4/12/2018 13:37	EPA 360.2	Dissolved Oxygen	0.51		0.1	0.2	mg/L	AB
CCR-11	8041008-11	4/12/2018 13:37	4/17/2018 0:00	SM 4500 F-C	Fluoride	0.614		0.05	0.2	mg/L	PES
CCR-11	8041008-11	4/12/2018 13:37	4/26/2018 13:01	EPA 200.7	Lead	7.62	U	7.62	100	ug/L	CF

Table A-1
CCR SAMPLING
Month / Year: April 2018
LAB ANALYSIS REPORT

SampleName	Sample ID	Date/Time Sampled	Date/Time Analyzed	Method	Analyte	Result	Qualifiers	Detection Limit	Reporting Limit	Units	Analyst
CCR-11	8041008-11	4/12/2018 13:37	4/20/2018 0:00	EPA 200.7	Lithium	11	U	50	11	ug/L	SGS
CCR-11	8041008-11	4/12/2018 13:37	4/18/2018 0:00	EPA 245.1	Mercury	0.03	U	0.03	0.1	ug/L	PES
CCR-11	8041008-11	4/12/2018 13:37	4/26/2018 13:01	EPA 200.7	Molybdenum	3.92	U	3.92	20	ug/L	CF
CCR-11	8041008-11	4/12/2018 13:37	4/12/2018 13:37	EPA 150.1	pH	4.4		0.05	0.05	SU	AB
CCR-11	8041008-11	4/12/2018 13:37	4/26/2018 13:01	EPA 200.7	Selenium	27	U	27	100	ug/L	CF
CCR-11	8041008-11	4/12/2018 13:37	4/12/2018 13:37	-	Sheen	No Sheen				N/A	AB
CCR-11	8041008-11	4/12/2018 13:37	4/12/2018 13:37	EPA 120.1	Specific Conductance	4670		1	5	uS/cm	AB
CCR-11	8041008-11	4/12/2018 13:37	4/12/2018 13:37	EPA 170.1	Temperature	24.8		0.1	0.1	°C	AB
CCR-11	8041008-11	4/12/2018 13:37	4/17/2018 0:00	EPA 200.7	Thallium	0.0017	U	0.0017	0.005	mg/L	PES
CCR-11	8041008-11	4/12/2018 13:37	4/12/2018 13:37	EPA 180.1	Turbidity	12		0.1	0.5	NTU	AB
CCR-11	8041008-11	4/12/2018 13:37	4/12/2018 13:37	DEP-SOP	Water Level	131.18		0.1	0.5	FT	AB
CCR-12	8041008-12	4/12/2018 14:12	4/26/2018 13:05	EPA 200.7	Antimony	12.3	U	12.3	100	ug/L	CF
CCR-12	8041008-12	4/12/2018 14:12	4/17/2018 0:00	EPA 200.7	Arsenic	0.0375		0.00586	0.01	mg/L	PES
CCR-12	8041008-12	4/12/2018 14:12	4/26/2018 13:05	EPA 200.7	Barium	14.9	I	4.66	20	ug/L	CF
CCR-12	8041008-12	4/12/2018 14:12	4/26/2018 13:05	EPA 200.7	Beryllium	2.59	U	2.59	20	ug/L	CF
CCR-12	8041008-12	4/12/2018 14:12	4/26/2018 13:05	EPA 200.7	Cadmium	3.9	U	3.9	20	ug/L	CF
CCR-12	8041008-12	4/12/2018 14:12	4/26/2018 13:05	EPA 200.7	Chromium	5.13	U	5.13	20	ug/L	CF
CCR-12	8041008-12	4/12/2018 14:12	4/17/2018 0:00	EPA 200.7	Cobalt	0.002	U	0.002	0.005	mg/L	PES
CCR-12	8041008-12	4/12/2018 14:12	4/12/2018 14:12	-	Color	Clear			[blank]	AB	
CCR-12	8041008-12	4/12/2018 14:12	4/12/2018 14:12	EPA 360.2	Dissolved Oxygen	0.16		0.1	0.2	mg/L	AB
CCR-12	8041008-12	4/12/2018 14:12	4/17/2018 0:00	SM 4500 F-C	Fluoride	0.691		0.05	0.2	mg/L	PES
CCR-12	8041008-12	4/12/2018 14:12	4/26/2018 13:05	EPA 200.7	Lead	7.62	U	7.62	100	ug/L	CF
CCR-12	8041008-12	4/12/2018 14:12	4/20/2018 0:00	EPA 200.7	Lithium	11	U	50	11	ug/L	SGS
CCR-12	8041008-12	4/12/2018 14:12	4/18/2018 0:00	EPA 245.1	Mercury	0.03	U	0.03	0.1	ug/L	PES
CCR-12	8041008-12	4/12/2018 14:12	4/26/2018 13:05	EPA 200.7	Molybdenum	3.92	U	3.92	20	ug/L	CF
CCR-12	8041008-12	4/12/2018 14:12	4/12/2018 14:12	EPA 150.1	pH	6.56		0.05	0.05	SU	AB
CCR-12	8041008-12	4/12/2018 14:12	4/26/2018 13:05	EPA 200.7	Selenium	27	U	27	100	ug/L	CF
CCR-12	8041008-12	4/12/2018 14:12	4/12/2018 14:12	-	Sheen	No Sheen			N/A	AB	
CCR-12	8041008-12	4/12/2018 14:12	4/12/2018 14:12	EPA 120.1	Specific Conductance	2760		1	5	uS/cm	AB
CCR-12	8041008-12	4/12/2018 14:12	4/12/2018 14:12	EPA 170.1	Temperature	24.2		0.1	0.1	°C	AB
CCR-12	8041008-12	4/12/2018 14:12	4/17/2018 0:00	EPA 200.7	Thallium	0.0017	U	0.0017	0.005	mg/L	PES
CCR-12	8041008-12	4/12/2018 14:12	4/12/2018 14:12	EPA 180.1	Turbidity	9.2		0.1	0.5	NTU	AB
CCR-12	8041008-12	4/12/2018 14:12	4/12/2018 14:12	DEP-SOP	Water Level	131.15		0.1	0.5	FT	AB
CCR-13	8041008-13	4/12/2018 14:50	4/26/2018 13:08	EPA 200.7	Antimony	12.3	U	12.3	100	ug/L	CF
CCR-13	8041008-13	4/12/2018 14:50	4/17/2018 0:00	EPA 200.7	Arsenic	0.00646	I	0.00586	0.01	mg/L	PES
CCR-13	8041008-13	4/12/2018 14:50	4/26/2018 13:08	EPA 200.7	Barium	38.5		4.66	20	ug/L	CF
CCR-13	8041008-13	4/12/2018 14:50	4/26/2018 13:08	EPA 200.7	Beryllium	2.59	U	2.59	20	ug/L	CF
CCR-13	8041008-13	4/12/2018 14:50	4/26/2018 13:08	EPA 200.7	Cadmium	3.9	U	3.9	20	ug/L	CF
CCR-13	8041008-13	4/12/2018 14:50	4/26/2018 13:08	EPA 200.7	Chromium	5.13	U	5.13	20	ug/L	CF
CCR-13	8041008-13	4/12/2018 14:50	4/17/2018 0:00	EPA 200.7	Cobalt	0.002	U	0.002	0.005	mg/L	PES
CCR-13	8041008-13	4/12/2018 14:50	4/12/2018 14:50	-	Color	Clear			[blank]	AB	
CCR-13	8041008-13	4/12/2018 14:50	4/12/2018 14:50	EPA 360.2	Dissolved Oxygen	0.22		0.1	0.2	mg/L	AB
CCR-13	8041008-13	4/12/2018 14:50	4/17/2018 0:00	SM 4500 F-C	Fluoride	1.15		0.05	0.2	mg/L	PES
CCR-13	8041008-13	4/12/2018 14:50	4/26/2018 13:08	EPA 200.7	Lead	7.62	U	7.62	100	ug/L	CF
CCR-13	8041008-13	4/12/2018 14:50	4/20/2018 0:00	EPA 200.7	Lithium	258		50	11	ug/L	SGS
CCR-13	8041008-13	4/12/2018 14:50	4/18/2018 0:00	EPA 245.1	Mercury	0.03	U	0.03	0.1	ug/L	PES
CCR-13	8041008-13	4/12/2018 14:50	4/26/2018 13:08	EPA 200.7	Molybdenum	3.92	U	3.92	20	ug/L	CF
CCR-13	8041008-13	4/12/2018 14:50	4/12/2018 14:50	EPA 150.1	pH	4.05		0.05	0.05	SU	AB
CCR-13	8041008-13	4/12/2018 14:50	4/26/2018 13:08	EPA 200.7	Selenium	27	U	27	100	ug/L	CF
CCR-13	8041008-13	4/12/2018 14:50	4/12/2018 14:50	-	Sheen	No Sheen			N/A	AB	
CCR-13	8041008-13	4/12/2018 14:50	4/12/2018 14:50	EPA 120.1	Specific Conductance	39.3		1	5	uS/cm	AB
CCR-13	8041008-13	4/12/2018 14:50	4/12/2018 14:50	EPA 170.1	Temperature	25.2		0.1	0.1	°C	AB
CCR-13	8041008-13	4/12/2018 14:50	4/17/2018 0:00	EPA 200.7	Thallium	0.0017	U	0.0017	0.005	mg/L	PES
CCR-13	8041008-13	4/12/2018 14:50	4/12/2018 14:50	EPA 180.1	Turbidity	1.65		0.1	0.5	NTU	AB
CCR-13	8041008-13	4/12/2018 14:50	4/12/2018 14:50	DEP-SOP	Water Level	130.83		0.1	0.5	FT	AB
CCR-14	8041008-14	4/12/2018 15:19	4/26/2018 13:12	EPA 200.7	Antimony	12.3	U	12.3	100	ug/L	CF
CCR-14	8041008-14	4/12/2018 15:19	4/17/2018 0:00	EPA 200.7	Arsenic	0.00586	U	0.00586	0.01	mg/L	PES
CCR-14	8041008-14	4/12/2018 15:19	4/26/2018 13:12	EPA 200.7	Barium	13.2	I	4.66	20	ug/L	CF
CCR-14	8041008-14	4/12/2018 15:19	4/26/2018 13:12	EPA 200.7	Beryllium	2.59	U	2.59	20	ug/L	CF
CCR-14	8041008-14	4/12/2018 15:19	4/26/2018 13:12	EPA 200.7	Cadmium	3.9	U	3.9	20	ug/L	CF
CCR-14	8041008-14	4/12/2018 15:19	4/26/2018 13:12	EPA 200.7	Chromium	5.13	U	5.13	20	ug/L	CF
CCR-14	8041008-14	4/12/2018 15:19	4/17/2018 0:00	EPA 200.7	Cobalt	0.002	U	0.002	0.005	mg/L	PES
CCR-14	8041008-14	4/12/2018 15:19	4/12/2018 15:19	-	Color	Clear			[blank]	AB	
CCR-14	8041008-14	4/12/2018 15:19	4/12/2018 15:19	EPA 360.2	Dissolved Oxygen	0.18		0.1	0.2	mg/L	AB
CCR-14	8041008-14	4/12/2018 15:19	4/17/2018 0:00	SM 4500 F-C	Fluoride	0.48		0.05	0.2	mg/L	PES
CCR-14	8041008-14	4/12/2018 15:19	4/26/2018 13:12	EPA 200.7	Lead	7.62	U	7.62	100	ug/L	CF
CCR-14	8041008-14	4/12/2018 15:19	4/20/2018 0:00	EPA 200.7	Lithium	11	U	50	11	ug/L	SGS
CCR-14	8041008-14	4/12/2018 15:19	4/18/2018 0:00	EPA 245.1	Mercury	0.03	U	0.03	0.1	ug/L	PES
CCR-14	8041008-14	4/12/2018 15:19	4/12/2018 15:19	EPA 200.7	Molybdenum	3.92	U	3.92	20	ug/L	CF
CCR-14	8041008-14	4/12/2018 15:19	4/12/2018 15:19	EPA 150.1	pH	5.05		0.05	0.05	SU	AB
CCR-14	8041008-14	4/12/2018 15:19	4/26/2018 13:12	EPA 200.7	Selenium	27	U	27	100	ug/L	CF
CCR-14	8041008-14	4/12/2018 15:19	4/12/2018 15:19	-	Sheen	No Sheen			N/A	AB	
CCR-14	8041008-14	4/12/2018 15:19	4/12/2018 15:19	EPA 120.1	Specific Conductance	2220		1	5	uS/cm	AB
CCR-14	8041008-14	4/12/2018 15:19	4/12/2018 15:19	EPA 170.1	Temperature	25.5		0.1	0.1	°C	AB
CCR-14	8041008-14	4/12/2018 15:19	4/17/2018 0:00	EPA 200.7	Thallium	0.0017	U	0.0017	0.005	mg/L	PES
CCR-14	8041008-14	4/12/2018 15:19	4/12/2018 15:19	EPA 180.1	Turbidity	3.65		0.1	0.5	NTU	AB
CCR-14	8041008-14	4/12/2018 15:19	4/12/2018 15:19	DEP-SOP	Water Level	130.17		0.1	0.5	FT	AB

Table A-1
CCR SAMPLING
Month / Year: April 2018
LAB ANALYSIS REPORT

SampleName	Sample ID	Date/Time Sampled	Date/Time Analyzed	Method	Analyte	Result	Qualifiers	Detection Limit	Reporting Limit	Units	Analyst
Equipment Blank	8041008-15	4/12/2018 15:31	4/26/2018 11:39	EPA 200.7	Antimony	12.3 U		12.3	100	ug/L	CF
Equipment Blank	8041008-15	4/12/2018 15:31	4/17/2018 0:00	EPA 200.7	Arsenic	0.00586 U		0.00586	0.01	mg/L	PES
Equipment Blank	8041008-15	4/12/2018 15:31	4/26/2018 11:39	EPA 200.7	Barium	4.66 U		4.66	20	ug/L	CF
Equipment Blank	8041008-15	4/12/2018 15:31	4/26/2018 11:39	EPA 200.7	Beryllium	2.59 U		2.59	20	ug/L	CF
Equipment Blank	8041008-15	4/12/2018 15:31	4/26/2018 11:39	EPA 200.7	Cadmium	3.9 U		3.9	20	ug/L	CF
Equipment Blank	8041008-15	4/12/2018 15:31	4/26/2018 11:39	EPA 200.7	Chromium	5.13 U		5.13	20	ug/L	CF
Equipment Blank	8041008-15	4/12/2018 15:31	4/17/2018 0:00	EPA 200.7	Cobalt	0.002 U		0.002	0.005	mg/L	PES
Equipment Blank	8041008-15	4/12/2018 15:31	4/12/2018 15:31	-	Color	Clear			[blank]	AB	
Equipment Blank	8041008-15	4/12/2018 15:31	4/12/2018 15:31	EPA 360.2	Dissolved Oxygen	5.6		0.1	0.2	mg/L	AB
Equipment Blank	8041008-15	4/12/2018 15:31	4/17/2018 0:00	SM 4500 F-C	Fluoride	0.498		0.05	0.2	mg/L	PES
Equipment Blank	8041008-15	4/12/2018 15:31	4/26/2018 11:39	EPA 200.7	Lead	7.62 U		7.62	100	ug/L	CF
Equipment Blank	8041008-15	4/12/2018 15:31	4/20/2018 0:00	EPA 200.7	Lithium	11 U		50	11	ug/L	SGS
Equipment Blank	8041008-15	4/12/2018 15:31	4/18/2018 0:00	EPA 245.1	Mercury	0.03 U		0.03	0.1	ug/L	PES
Equipment Blank	8041008-15	4/12/2018 15:31	4/26/2018 11:39	EPA 200.7	Molybdenum	3.92 U		3.92	20	ug/L	CF
Equipment Blank	8041008-15	4/12/2018 15:31	4/12/2018 15:31	EPA 150.1	pH	5.7		0.05	0.05	SU	AB
Equipment Blank	8041008-15	4/12/2018 15:31	4/26/2018 11:39	EPA 200.7	Selenium	27 U		27	100	ug/L	CF
Equipment Blank	8041008-15	4/12/2018 15:31	4/12/2018 15:31	-	Sheen	No Sheen			N/A	AB	
Equipment Blank	8041008-15	4/12/2018 15:31	4/12/2018 15:31	EPA 120.1	Specific Conductance	3.54		1	5	uS/cm	AB
Equipment Blank	8041008-15	4/12/2018 15:31	4/12/2018 15:31	EPA 170.1	Temperature	33.8		0.1	0.1	°C	AB
Equipment Blank	8041008-15	4/12/2018 15:31	4/17/2018 0:00	EPA 200.7	Thallium	0.0017 U		0.0017	0.005	mg/L	PES
Equipment Blank	8041008-15	4/12/2018 15:31	4/12/2018 15:31	EPA 180.1	Turbidity	1.18		0.1	0.5	NTU	AB

SampleName	Sample ID	Date/Time Sampled	Date/Time Analyzed	Method	Analyte	Result	Error +/-	Detection Limit	Units
CCR-01	8041008-01	4/11/2018 10:32	4/26/2018 13:00	EPA 903.1	Radium 226	4.6	0.6	0.1	pCi/l
CCR-01	8041008-01	4/11/2018 10:32	4/25/2018 11:07	EPA 903.1	Radium 228	2	0.7	0.8	pCi/l
CCR-02	8041008-02	4/11/2018 11:11	4/26/2018 13:00	EPA 903.1	Radium 226	3.9	0.6	0.2	pCi/l
CCR-02	8041008-02	4/11/2018 11:11	4/25/2018 11:07	EPA 903.1	Radium 228	1.9	0.6	0.8	pCi/l
CCR-03	8041008-03	4/11/2018 11:52	4/26/2018 13:00	EPA 903.1	Radium 226	3.1	0.5	0.1	pCi/l
CCR-03	8041008-03	4/11/2018 11:52	4/25/2018 11:07	EPA 903.1	Radium 228	0.8 U	0.5	0.8	pCi/l
CCR-04	8041008-04	4/11/2018 12:37	4/26/2018 13:00	EPA 903.1	Radium 226	29.3	1.7	0.2	pCi/l
CCR-04	8041008-04	4/11/2018 12:37	4/25/2018 11:07	EPA 903.1	Radium 228	16.5	1.3	0.8	pCi/l
CCR-05	8041008-05	4/11/2018 13:35	4/26/2018 14:15	EPA 903.1	Radium 226	12	1	0.1	pCi/l
CCR-05	8041008-05	4/11/2018 13:35	4/25/2018 11:07	EPA 903.1	Radium 228	6.8	1	0.9	pCi/l
CCR-06	8041008-06	4/11/2018 14:20	4/26/2018 14:15	EPA 903.1	Radium 226	3.6	0.5	0.1	pCi/l
CCR-06	8041008-06	4/11/2018 14:20	4/25/2018 12:09	EPA 903.1	Radium 228	1.2	0.6	0.9	pCi/l
CCR-07	8041008-07	4/12/2018 10:30	4/26/2018 14:15	EPA 903.1	Radium 226	8.7	0.9	0.2	pCi/l
CCR-07	8041008-07	4/12/2018 10:30	4/25/2018 12:09	EPA 903.1	Radium 228	3	0.7	0.7	pCi/l
CCR-08	8041008-08	4/12/2018 11:19	4/26/2018 14:15	EPA 903.1	Radium 226	5.5	0.7	0.1	pCi/l
CCR-08	8041008-08	4/12/2018 11:19	4/25/2018 12:09	EPA 903.1	Radium 228	0.9 U	0.6	0.9	pCi/l
CCR-09	8041008-09	4/12/2018 12:23	4/26/2018 14:15	EPA 903.1	Radium 226	0.06	0.2	0.1	pCi/l
CCR-09	8041008-09	4/12/2018 12:23	4/25/2018 12:09	EPA 903.1	Radium 228	0.8 U	0.5	0.8	pCi/l
CCR-10R	8041008-10	4/12/2018 13:02	4/27/2018 9:38	EPA 903.1	Radium 226	2.8	0.5	0.2	pCi/l
CCR-10R	8041008-10	4/12/2018 13:02	4/26/2018 10:02	EPA 903.1	Radium 228	0.8	0.5	0.8	pCi/l
CCR-11	8041008-11	4/12/2018 13:37	4/27/2018 9:38	EPA 903.1	Radium 226	0.5	0.2	0.2	pCi/l
CCR-11	8041008-11	4/12/2018 13:37	4/26/2018 10:02	EPA 903.1	Radium 228	0.8U	0.5	0.8	pCi/l
CCR-12	8041008-12	4/12/2018 14:12	4/27/2018 9:38	EPA 903.1	Radium 226	2.2	0.4	0.2	pCi/l
CCR-12	8041008-12	4/12/2018 14:12	4/26/2018 11:04	EPA 903.1	Radium 228	0.8 U	0.5	0.8	pCi/l
CCR-13	8041008-13	4/12/2018 14:50	4/27/2018 9:38	EPA 903.1	Radium 226	51.9	2.2	0.2	pCi/l
CCR-13	8041008-13	4/12/2018 14:50	4/26/2018 11:04	EPA 903.1	Radium 228	5.5	0.8	0.7	pCi/l
CCR-14	8041008-14	4/12/2018 15:19	4/27/2018 9:38	EPA 903.1	Radium 226	22.5	1.4	0.1	pCi/l
CCR-14	8041008-14	4/12/2018 15:19	4/26/2018 11:04	EPA 903.1	Radium 228	0.8 U	0.5	0.8	pCi/l
Equipment Blank	8041008-15	4/12/2018 15:31	4/27/2018 10:44	EPA 903.1	Radium 226	0.4	0.2	0.2	pCi/l
Equipment Blank	8041008-15	4/12/2018 15:31	4/26/2018 11:04	EPA 903.1	Radium 228	0.8 U	0.5	0.8	pCi/l

U = Compound was analyzed for but not detected.

J-7 = Estimated Value exceeds the MCL.

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

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.

Table A-2
CCR SAMPLING
Month / Year: JULY 2018
LAB ANALYSIS REPORT

SampleName	Sample ID	Date/Time Sampled	Date/Time Analyzed	Method	Analyte	Result	Qualifiers	Detection Limit	Reporting Limit	Units	Analyst
CCR-01	8070211-01	7/17/2018 9:20	7/30/2018	EPA 200.7	Arsenic	4.1		2.5	3	ug/L	SGS
CCR-01	8070211-01	7/17/2018 9:20	7/30/2018	EPA 200.7	Barium	28.6	I	17	200	ug/L	SGS
CCR-01	8070211-01	7/17/2018 9:20	7/30/2018	EPA 200.7	Boron	85	U	85	100	ug/L	SGS
CCR-01	8070211-01	7/17/2018 9:20	7/30/2018	EPA 200.7	Calcium	31200		130	5000	ug/L	SGS
CCR-01	8070211-01	7/17/2018 9:20	7/18/2018 18:37	EPA 300.0	Chloride	4.17		0.038	0.1	mg/L	CF
CCR-01	8070211-01	7/17/2018 9:20	9/12/2018 6:22	-	Color	Clear	Clear		[blank]	AB	
CCR-01	8070211-01	7/17/2018 9:20	9/12/2018 6:22	EPA 360.2	Dissolved Oxygen	4.64		0.1	0.2	mg/L	AB
CCR-01	8070211-01	7/17/2018 9:20	8/3/2018 16:02	SM 4500 F-C	Fluoride	0.05	U	0.05	2	mg/L	PES
CCR-01	8070211-01	7/17/2018 9:20	7/30/2018	EPA 200.7	Lithium	9.1	U	9.1	50	ug/L	SGS
CCR-01	8070211-01	7/17/2018 9:20	7/30/2018	EPA 200.7	Molybdenum	4.5	U	4.5	20	ug/L	SGS
CCR-01	8070211-01	7/17/2018 9:20	9/12/2018 6:22	EPA 150.1	pH	5.25		0.05	0.05	ug/L	AB
CCR-01	8070211-01	7/17/2018 9:20	8/8/2018 13:08	EPA 903.1	Radium 226	4.8±0.6		0.2		pCi/l	FRS
CCR-01	8070211-01	7/17/2018 9:20	8/7/2018 10:16	EPA Ra-05	Radium 228	2.0±0.6		0.7		pCi/l	FRS
CCR-01	8070211-01	7/17/2018 9:20	7/30/2018	EPA 200.7	Selenium	5.5	U	5.5	10	ug/L	SGS
CCR-01	8070211-01	7/17/2018 9:20	9/12/2018 6:22	-	Sheen	No Sheen	No Sheen		N/A	AB	
CCR-01	8070211-01	7/17/2018 9:20	9/12/2018 6:22	EPA 120.1	Specific Conductance	227		1	5	uS/cm	AB
CCR-01	8070211-01	7/17/2018 9:20	7/18/2018 18:37	EPA 300.0	Sulfate as SO4	72.3		0.025	0.1	mg/L	CF
CCR-01	8070211-01	7/17/2018 9:20	9/12/2018 6:22	EPA 170.1	Temperature	26.5		0.1	0.1	°C	AB
CCR-01	8070211-01	7/17/2018 9:20	7/23/2018 15:14	EPA 160.1	Total Dissolved Solids	164		10	20	mg/L	CF
CCR-01	8070211-01	7/17/2018 9:20	9/12/2018 6:22	EPA 180.1	Turbidity	2.56		0.1	0.5	NTU	AB
CCR-01	8070211-01	7/17/2018 9:20	9/12/2018 6:22	DEP-SOP	Water Level	133		0.1	0.5	FT	AB
CCR-02	8070211-02	7/17/2018 11:26	7/30/2018	EPA 200.7	Arsenic	2.5	U	2.5	3	ug/L	SGS
CCR-02	8070211-02	7/17/2018 11:26	7/30/2018	EPA 200.7	Barium	47.9	I	17	200	ug/L	SGS
CCR-02	8070211-02	7/17/2018 11:26	7/30/2018	EPA 200.7	Boron	85	U	85	100	ug/L	SGS
CCR-02	8070211-02	7/17/2018 11:26	7/30/2018	EPA 200.7	Calcium	73800		130	5000	ug/L	SGS
CCR-02	8070211-02	7/17/2018 11:26	7/18/2018 15:36	EPA 300.0	Chloride	14.4		0.038	0.1	mg/L	CF
CCR-02	8070211-02	7/17/2018 11:26	9/12/2018 6:22	-	Color	Clear	Clear		[blank]	AB	
CCR-02	8070211-02	7/17/2018 11:26	9/12/2018 6:22	EPA 360.2	Dissolved Oxygen	2.44		0.1	0.2	mg/L	AB
CCR-02	8070211-02	7/17/2018 11:26	8/3/2018 16:02	SM 4500 F-C	Fluoride	0.106	I	0.05	0.2	mg/L	PES
CCR-02	8070211-02	7/17/2018 11:26	7/30/2018	EPA 200.7	Lithium	9.1	U	9.1	50	ug/L	SGS
CCR-02	8070211-02	7/17/2018 11:26	7/30/2018	EPA 200.7	Molybdenum	4.5	U	4.5	20	ug/L	SGS
CCR-02	8070211-02	7/17/2018 11:26	9/12/2018 6:22	EPA 150.1	pH	5.15		0.05	0.05	SU	AB
CCR-02	8070211-02	7/17/2018 11:26	8/8/2018 13:08	EPA 903.1	Radium 226	2.4±0.4		0.2		pCi/l	FRS
CCR-02	8070211-02	7/17/2018 11:26	8/7/2018 10:16	EPA Ra-05	Radium 228	0.8±0.5		0.7		pCi/l	FRS
CCR-02	8070211-02	7/17/2018 11:26	7/30/2018	EPA 200.7	Selenium	5.5	U	5.5	10	ug/L	SGS
CCR-02	8070211-02	7/17/2018 11:26	9/12/2018 6:22	-	Sheen	No Sheen	No Sheen		N/A	AB	
CCR-02	8070211-02	7/17/2018 11:26	9/12/2018 6:22	EPA 120.1	Specific Conductance	462		1	5	uS/cm	AB
CCR-02	8070211-02	7/17/2018 11:26	7/18/2018 15:36	EPA 300.0	Sulfate as SO4	167	J-8	0.025	0.1	mg/L	CF
CCR-02	8070211-02	7/17/2018 11:26	9/12/2018 6:22	EPA 170.1	Temperature	28.2		0.1	0.1	°C	AB
CCR-02	8070211-02	7/17/2018 11:26	7/23/2018 15:16	EPA 160.1	Total Dissolved Solids	342		10	20	mg/L	CF
CCR-02	8070211-02	7/17/2018 11:26	9/12/2018 6:22	EPA 180.1	Turbidity	8.06		0.1	0.5	NTU	AB
CCR-02	8070211-02	7/17/2018 11:26	9/12/2018 6:22	DEP-SOP	Water Level	132		0.1	0.5	FT	AB
CCR-03	8070211-03	7/17/2018 13:37	7/30/2018	EPA 200.7	Arsenic	2.5	U	2.5		ug/L	SGS
CCR-03	8070211-03	7/17/2018 13:37	7/30/2018	EPA 200.7	Barium	30.8	I	17	200	ug/L	SGS
CCR-03	8070211-03	7/17/2018 13:37	7/30/2018	EPA 200.7	Boron	1790		85	100	ug/L	SGS
CCR-03	8070211-03	7/17/2018 13:37	7/30/2018	EPA 200.7	Calcium	513000		630	25000	ug/L	SGS
CCR-03	8070211-03	7/17/2018 13:37	7/18/2018 16:27	EPA 300.0	Chloride	49.5		0.038	0.1	mg/L	CF
CCR-03	8070211-03	7/17/2018 13:37	9/12/2018 6:22	-	Color	Clear	Clear		[blank]	AB	
CCR-03	8070211-03	7/17/2018 13:37	9/12/2018 6:22	EPA 360.2	Dissolved Oxygen	1.52		0.1	0.2	mg/L	AB
CCR-03	8070211-03	7/17/2018 13:37	8/1/2018 9:58	SM 4500 F-C	Fluoride	0.161		0.05	0.2	mg/L	PES
CCR-03	8070211-03	7/17/2018 13:37	7/30/2018	EPA 200.7	Lithium	9.1	U	9.1	50	ug/L	SGS
CCR-03	8070211-03	7/17/2018 13:37	8/2/2018 12:40	EPA 200.7	Molybdenum	4.5	U	4.5	20	ug/L	SGS
CCR-03	8070211-03	7/17/2018 13:37	9/12/2018 6:22	EPA 150.1	pH	5.49		0.05	0.05	SU	AB
CCR-03	8070211-03	7/17/2018 13:37	8/8/2018 13:08	EPA 903.1	Radium 226	3.3±0.5		0.2		pCi/l	FRS
CCR-03	8070211-03	7/17/2018 13:37	8/7/2018 0:00	EPA Ra-05	Radium 228	0.8±0.5	U		0.7	pCi/l	FRS
CCR-03	8070211-03	7/17/2018 13:37	7/30/2018	EPA 200.7	Selenium	5.5	U	5.5	10	ug/L	SGS
CCR-03	8070211-03	7/17/2018 13:37	9/12/2018 6:22	-	Sheen	No Sheen	No Sheen		N/A	AB	
CCR-03	8070211-03	7/17/2018 13:37	9/12/2018 6:22	EPA 120.1	Specific Conductance	2270		1	5	uS/cm	AB
CCR-03	8070211-03	7/17/2018 13:37	7/18/2018 16:27	EPA 300.0	Sulfate as SO4	1160	J-7, J-8	0.025	0.1	mg/L	CF
CCR-03	8070211-03	7/17/2018 13:37	9/12/2018 6:22	EPA 170.1	Temperature	27.7		0.1	0.1	°C	AB
CCR-03	8070211-03	7/17/2018 13:37	7/23/2018 15:18	EPA 160.1	Total Dissolved Solids	2020	J-7	20	40	mg/L	CF
CCR-03	8070211-03	7/17/2018 13:37	9/12/2018 6:22	EPA 180.1	Turbidity	1.86		0.1	0.5	NTU	AB
CCR-03	8070211-03	7/17/2018 13:37	9/12/2018 6:22	DEP-SOP	Water Level	133		0.1	0.5	FT	AB
CCR-03	8070211-03R	7/17/2018 13:37	7/18/2018 16:02	EPA 300.0	Sulfate as SO4	1220	J-7	0.5	2	mg/L	CF
CCR-04	8070211-04	7/17/2018 13:37	7/30/2018	EPA 200.7	Arsenic	13	U	13	15	ug/L	SGS
CCR-04	8070211-04	7/17/2018 13:37	7/30/2018	EPA 200.7	Barium	253		17	200	ug/L	SGS
CCR-04	8070211-04	7/17/2018 13:37	7/30/2018	EPA 200.7	Boron	734		85	100	ug/L	SGS
CCR-04	8070211-04	7/17/2018 13:37	7/30/2018	EPA 200.7	Calcium	1130000		1300	50000	ug/L	SGS
CCR-04	8070211-04	7/17/2018 13:37	7/18/2018 16:53	EPA 300.0	Chloride	3050	J-7	1.52	4	mg/L	CF
CCR-04	8070211-04	7/17/2018 13:37	9/12/2018 6:22	-	Color	Clear	Clear		[blank]	AB	
CCR-04	8070211-04	7/17/2018 13:37	9/12/2018 6:22	EPA 360.2	Dissolved Oxygen	2.66		0.1	0.2	mg/L	AB
CCR-04	8070211-04	7/17/2018 13:37	8/1/2018 9:58	SM 4500 F-C	Fluoride	1.92		0.25	1	mg/L	PES
CCR-04	8070211-04	7/17/2018 13:37	7/30/2018	EPA 200.7	Lithium	36.7	I	9.1	50	ug/L	SGS
CCR-04	8070211-04	7/17/2018 13:37	8/2/2018 12:44	EPA 200.7	Molybdenum	4.5	U	4.5	20	ug/L	SGS
CCR-04	8070211-04	7/17/2018 13:37	9/12/2018 6:22	EPA 150.1	pH	3.9		0.05	0.05	SU	AB
CCR-04	8070211-04	7/17/2018 13:37	8/8/2018 13:08	EPA 903.1	Radium 226	29.7±1.6		0.2		pCi/l	FRS

Table A-2
CCR SAMPLING
Month / Year: JULY 2018
LAB ANALYSIS REPORT

SampleName	Sample ID	Date/Time Sampled	Date/Time Analyzed	Method	Analyte	Result	Qualifiers	Detection Limit	Reporting Limit	Units	Analyst
CCR-04	8070211-04	7/17/2018 13:37	8/7/2018 11:18	EPA Ra-05	Radium 228	21.3±1.4		0.7	pCi/l	FRS	
CCR-04	8070211-04	7/17/2018 13:37	7/30/2018	EPA 200.7	Selenium	28	U	28	50 ug/L	SGS	
CCR-04	8070211-04	7/17/2018 13:37	9/12/2018 6:22	-	Sheen	No Sheen	No Sheen		N/A	AB	
CCR-04	8070211-04	7/17/2018 13:37	9/12/2018 6:22	EPA 120.1	Specific Conductance	1003		1	5 uS/cm	AB	
CCR-04	8070211-04	7/17/2018 13:37	7/18/2018 16:53	EPA 300.0	Sulfate as SO4	553	J-7	1	4 mg/L	CF	
CCR-04	8070211-04	7/17/2018 13:37	9/12/2018 6:22	EPA 170.1	Temperature	28.3		0.1	0.1 °C	AB	
CCR-04	8070211-04	7/17/2018 13:37	7/23/2018 15:20	EPA 160.1	Total Dissolved Solids	6470	J-7	40	80 mg/L	CF	
CCR-04	8070211-04	7/17/2018 13:37	9/12/2018 6:22	EPA 180.1	Turbidity	11.2		0.1	0.5 NTU	AB	
CCR-04	8070211-04	7/17/2018 13:37	9/12/2018 6:22	DEP-SOP	Water Level	130		0.1	0.5 FT	AB	
CCR-05	8070211-05	7/17/2018 14:21	7/30/2018	EPA 200.7	Arsenic	13	U	13	15 ug/L	SGS	
CCR-05	8070211-05	7/17/2018 14:21	8/2/2018 12:48	EPA 200.7	Barium	81.3	I	17	200 ug/L	SGS	
CCR-05	8070211-05	7/17/2018 14:21	7/30/2018	EPA 200.7	Boron	792	85	100	ug/L	SGS	
CCR-05	8070211-05	7/17/2018 14:21	8/2/2018 12:48	EPA 200.7	Calcium	1670000		2500	100000 ug/L	SGS	
CCR-05	8070211-05	7/17/2018 14:21	7/18/2018 17:19	EPA 300.0	Chloride	4590	J-7, J-8	1.52	4 mg/L	CF	
CCR-05	8070211-05	7/17/2018 14:21	9/12/2018 6:22	-	Color	Clear	Clear		[blank]	AB	
CCR-05	8070211-05	7/17/2018 14:21	9/12/2018 6:22	EPA 360.2	Dissolved Oxygen	0.21		0.1	0.2 mg/L	AB	
CCR-05	8070211-05	7/17/2018 14:21	8/1/2018 9:58	SM 4500 F-C	Fluoride	0.0552		0.05	0.2 mg/L	PES	
CCR-05	8070211-05	7/17/2018 14:21	7/30/2018	EPA 200.7	Lithium	5240		9.1	50 ug/L	SGS	
CCR-05	8070211-05	7/17/2018 14:21	8/2/2018 12:48	EPA 200.7	Molybdenum	4.5	U	4.5	20 ug/L	SGS	
CCR-05	8070211-05	7/17/2018 14:21	9/12/2018 6:22	EPA 150.1	pH	5.21		0.05	0.05 SU	AB	
CCR-05	8070211-05	7/17/2018 14:21	8/8/2018 13:08	EPA 903.1	Radium 226	13.7±1.1		0.2	pCi/l	FRS	
CCR-05	8070211-05	7/17/2018 14:21	8/7/2018 11:18	EPA Ra-05	Radium 228	7.4±1.0		0.7	pCi/l	FRS	
CCR-05	8070211-05	7/17/2018 14:21	7/30/2018	EPA 200.7	Selenium	28	U	28	50 ug/L	SGS	
CCR-05	8070211-05	7/17/2018 14:21	9/12/2018 6:22	-	Sheen	No Sheen	No Sheen		N/A	AB	
CCR-05	8070211-05	7/17/2018 14:21	9/12/2018 6:22	EPA 120.1	Specific Conductance	14660		1	5 uS/cm	AB	
CCR-05	8070211-05	7/17/2018 14:21	7/18/2018 17:19	EPA 300.0	Sulfate as SO4	330	J-7	1	4 mg/L	CF	
CCR-05	8070211-05	7/17/2018 14:21	9/12/2018 6:22	EPA 170.1	Temperature	27.1		0.1	0.1 °C	AB	
CCR-05	8070211-05	7/17/2018 14:21	7/23/2018 15:22	EPA 160.1	Total Dissolved Solids	8900	J-7	40	80 mg/L	CF	
CCR-05	8070211-05	7/17/2018 14:21	9/12/2018 6:22	EPA 180.1	Turbidity	19.6		0.1	0.5 NTU	AB	
CCR-05	8070211-05	7/17/2018 14:21	9/12/2018 6:22	DEP-SOP	Water Level	132		0.1	0.5 FT	AB	
CCR-06	8070211-06	7/18/2018 10:10	7/30/2018	EPA 200.7	Arsenic	3.3		2.5	3 ug/L	SGS	
CCR-06	8070211-06	7/18/2018 10:10	8/2/2018 13:44	EPA 200.7	Barium	17	U	17	200 ug/L	SGS	
CCR-06	8070211-06	7/18/2018 10:10	7/30/2018	EPA 200.7	Boron	404		85	100 ug/L	SGS	
CCR-06	8070211-06	7/18/2018 10:10	8/2/2018 13:44	EPA 200.7	Calcium	318000		380	15000 ug/L	SGS	
CCR-06	8070211-06	7/18/2018 10:10	7/20/2018 13:17	EPA 300.0	Chloride	187		0.76	2 mg/L	CF	
CCR-06	8070211-06	7/18/2018 10:10	9/12/2018 6:22	-	Color	Clear	Clear		[blank]	AB	
CCR-06	8070211-06	7/18/2018 10:10	9/12/2018 6:22	EPA 360.2	Dissolved Oxygen	0.29		0.1	0.2 mg/L	AB	
CCR-06	8070211-06	7/18/2018 10:10	8/1/2018 9:58	SM 4500 F-C	Fluoride	0.215		0.05	0.2 mg/L	PES	
CCR-06	8070211-06	7/18/2018 10:10	7/30/2018	EPA 200.7	Lithium	83.7		9.1	50 ug/L	SGS	
CCR-06	8070211-06	7/18/2018 10:10	8/2/2018 13:44	EPA 200.7	Molybdenum	4.5	U	4.5	20 ug/L	SGS	
CCR-06	8070211-06	7/18/2018 10:10	9/12/2018 6:22	EPA 150.1	pH	6.22		0.05	0.05 SU	AB	
CCR-06	8070211-06	7/18/2018 10:10	8/8/2018 14:13	EPA 903.1	Radium 226	2.0±0.4		0.2	pCi/l	FRS	
CCR-06	8070211-06	7/18/2018 10:10	8/7/2018 11:18	EPA Ra-05	Radium 228	0.9±0.6		0.7	pCi/l	FRS	
CCR-06	8070211-06	7/18/2018 10:10	7/30/2018	EPA 200.7	Selenium	5.5	U	5.5	10 ug/L	SGS	
CCR-06	8070211-06	7/18/2018 10:10	9/12/2018 6:22	-	Sheen	No Sheen	No Sheen		N/A	AB	
CCR-06	8070211-06	7/18/2018 10:10	9/12/2018 6:22	EPA 120.1	Specific Conductance	1832		1	5 uS/cm	AB	
CCR-06	8070211-06	7/18/2018 10:10	7/20/2018 13:17	EPA 300.0	Sulfate as SO4	568	J-7	0.5	2 mg/L	CF	
CCR-06	8070211-06	7/18/2018 10:10	9/12/2018 6:22	EPA 170.1	Temperature	26.8		0.1	0.1 °C	AB	
CCR-06	8070211-06	7/18/2018 10:10	7/23/2018 15:24	EPA 160.1	Total Dissolved Solids	1320	J-7	10	20 mg/L	CF	
CCR-06	8070211-06	7/18/2018 10:10	9/12/2018 6:22	EPA 180.1	Turbidity	1.45		0.1	0.5 NTU	AB	
CCR-06	8070211-06	7/18/2018 10:10	9/12/2018 6:22	DEP-SOP	Water Level	134		0.1	0.5 FT	AB	
CCR-07	8070211-07	7/18/2018 11:00	7/30/2018	EPA 200.7	Arsenic	2.5	U	2.5	3 ug/L	SGS	
CCR-07	8070211-07	7/18/2018 11:00	8/2/2018 13:48	EPA 200.7	Barium	17	U	17	200 ug/L	SGS	
CCR-07	8070211-07	7/18/2018 11:00	7/30/2018	EPA 200.7	Boron	575	85	100	ug/L	SGS	
CCR-07	8070211-07	7/18/2018 11:00	8/2/2018 13:48	EPA 200.7	Calcium	81300		130	5000 ug/L	SGS	
CCR-07	8070211-07	7/18/2018 11:00	7/20/2018 13:43	EPA 300.0	Chloride	105		0.38	1 mg/L	CF	
CCR-07	8070211-07	7/18/2018 11:00	9/12/2018 6:22	-	Color	Clear	Clear		[blank]	AB	
CCR-07	8070211-07	7/18/2018 11:00	9/12/2018 6:22	EPA 360.2	Dissolved Oxygen	4.87		0.1	0.2 mg/L	AB	
CCR-07	8070211-07	7/18/2018 11:00	8/1/2018 9:58	SM 4500 F-C	Fluoride	0.0961		0.05	0.2 mg/L	PES	
CCR-07	8070211-07	7/18/2018 11:00	7/30/2018	EPA 200.7	Lithium	38.5	I	9.1	50 ug/L	SGS	
CCR-07	8070211-07	7/18/2018 11:00	8/2/2018 13:48	EPA 200.7	Molybdenum	4.5	U	4.5	20 ug/L	SGS	
CCR-07	8070211-07	7/18/2018 11:00	9/12/2018 6:22	EPA 150.1	pH	5.1		0.05	0.05 SU	AB	
CCR-07	8070211-07	7/18/2018 11:00	8/8/2018 14:13	EPA 903.1	Radium 226	1.9±0.4		0.2	pCi/l	FRS	
CCR-07	8070211-07	7/18/2018 11:00	8/7/2018 11:18	EPA Ra-05	Radium 228	1.0±0.5		0.7	pCi/l	FRS	
CCR-07	8070211-07	7/18/2018 11:00	7/30/2018	EPA 200.7	Selenium	5.5	U	5.5	10 ug/L	SGS	
CCR-07	8070211-07	7/18/2018 11:00	9/12/2018 6:22	-	Sheen	No Sheen	No Sheen		N/A	AB	
CCR-07	8070211-07	7/18/2018 11:00	9/12/2018 6:22	EPA 120.1	Specific Conductance	670		1	5 uS/cm	AB	
CCR-07	8070211-07	7/18/2018 11:00	7/20/2018 13:43	EPA 300.0	Sulfate as SO4	176		0.25	1 mg/L	CF	
CCR-07	8070211-07	7/18/2018 11:00	9/12/2018 6:22	EPA 170.1	Temperature	26.8		0.1	0.1 °C	AB	
CCR-07	8070211-07	7/18/2018 11:00	7/23/2018 15:26	EPA 160.1	Total Dissolved Solids	350		10	20 mg/L	CF	
CCR-07	8070211-07	7/18/2018 11:00	9/12/2018 6:22	EPA 180.1	Turbidity	6.93		0.1	0.5 NTU	AB	
CCR-07	8070211-07	7/18/2018 11:00	9/12/2018 6:22	DEP-SOP	Water Level	134		0.1	0.5 FT	AB	
CCR-08	8070211-08	7/18/2018 13:35	7/30/2018	EPA 200.7	Arsenic	3.8		3.5	3 ug/L	SGS	
CCR-08	8070211-08	7/18/2018 13:35	8/2/2018 13:52	EPA 200.7	Barium	31.6	I	17	200 ug/L	SGS	
CCR-08	8070211-08	7/18/2018 13:35	7/30/2018	EPA 200.7	Boron	101		85	100 ug/L	SGS	
CCR-08	8070211-08	7/18/2018 13:35	8/2/2018 13:52	EPA 200.7	Calcium	96100		130	5000 ug/L	SGS	

Table A-2
CCR SAMPLING
Month / Year: JULY 2018
LAB ANALYSIS REPORT

SampleName	Sample ID	Date/Time Sampled	Date/Time Analyzed	Method	Analyte	Result	Qualifiers	Detection Limit	Reporting Limit	Units	Analyst
CCR-08	8070211-08	7/18/2018 13:35	7/20/2018 14:09	EPA 300.0	Chloride	6.06		0.38	1	mg/L	CF
CCR-08	8070211-08	7/18/2018 13:35	9/12/2018 6:22	-	Color	Clear	Clear		[blank]	AB	
CCR-08	8070211-08	7/18/2018 13:35	9/12/2018 6:22	EPA 360.2	Dissolved Oxygen	4.05		0.1	0.2	mg/L	AB
CCR-08	8070211-08	7/18/2018 13:35	8/1/2018 9:58	SM 4500 F-C	Fluoride	0.324		0.05	0.2	mg/L	PES
CCR-08	8070211-08	7/18/2018 13:35	7/30/2018	EPA 200.7	Lithium	9.1	I	9.1	50	ug/L	SGS
CCR-08	8070211-08	7/18/2018 13:35	8/2/2018 13:52	EPA 200.7	Molybdenum	15.3	I	4.5	20	ug/L	SGS
CCR-08	8070211-08	7/18/2018 13:35	9/12/2018 6:22	EPA 150.1	pH	6.81		0.05	0.05	SU	AB
CCR-08	8070211-08	7/18/2018 13:35	8/8/2018 14:13	EPA 903.1	Radium 226	4.8±0.6		0.2		pCi/l	FRS
CCR-08	8070211-08	7/18/2018 13:35	8/7/2018 11:18	EPA Ra-05	Radium 228	0.7±0.4	I	0.7		pCi/l	FRS
CCR-08	8070211-08	7/18/2018 13:35	7/30/2018	EPA 200.7	Selenium	5.5	I	5.5	10	ug/L	SGS
CCR-08	8070211-08	7/18/2018 13:35	9/12/2018 6:22	-	Sheen	No Sheen	No Sheen		N/A		AB
CCR-08	8070211-08	7/18/2018 13:35	9/12/2018 6:22	EPA 120.1	Specific Conductance	549.1		1	5	uS/cm	AB
CCR-08	8070211-08	7/18/2018 13:35	7/20/2018 14:09	EPA 300.0	Sulfate as SO4	95.8		0.25	1	mg/L	CF
CCR-08	8070211-08	7/18/2018 13:35	9/12/2018 6:22	EPA 170.1	Temperature	25		0.1	0.1	°C	AB
CCR-08	8070211-08	7/18/2018 13:35	7/23/2018 15:28	EPA 160.1	Total Dissolved Solids	310		10	20	mg/L	CF
CCR-08	8070211-08	7/18/2018 13:35	9/12/2018 6:22	EPA 180.1	Turbidity	0.96		0.1	0.5	NTU	AB
CCR-08	8070211-08	7/18/2018 13:35	9/12/2018 6:22	DEP-SOP	Water Level	135		0.1	0.5	FT	AB
CCR-09	8070211-09	7/18/2018 14:15	7/30/2018	EPA 200.7	Arsenic	7.5	I	7.5	9	ug/L	SGS
CCR-09	8070211-09	7/18/2018 14:15	8/2/2018 13:55	EPA 200.7	Barium	85.7	I	17	200	ug/L	SGS
CCR-09	8070211-09	7/18/2018 14:15	7/30/2018	EPA 200.7	Boron	351		85	100	ug/L	SGS
CCR-09	8070211-09	7/18/2018 14:15	8/2/2018 13:55	EPA 200.7	Calcium	913000		1300	50000	ug/L	SGS
CCR-09	8070211-09	7/18/2018 14:15	7/20/2018 14:35	EPA 300.0	Chloride	1560	J-7	1.52	4	mg/L	CF
CCR-09	8070211-09	7/18/2018 14:15	9/12/2018 6:22	-	Color	Clear	Clear		[blank]	AB	
CCR-09	8070211-09	7/18/2018 14:15	9/12/2018 6:22	EPA 360.2	Dissolved Oxygen	0.38		0.1	0.2	mg/L	AB
CCR-09	8070211-09	7/18/2018 14:15	8/1/2018 9:58	SM 4500 F-C	Fluoride	0.186		0.05	0.2	mg/L	PES
CCR-09	8070211-09	7/18/2018 14:15	7/30/2018	EPA 200.7	Lithium	156		9.1	50	ug/L	SGS
CCR-09	8070211-09	7/18/2018 14:15	8/2/2018 13:55	EPA 200.7	Molybdenum	4.5	I	4.5	20	ug/L	SGS
CCR-09	8070211-09	7/18/2018 14:15	9/12/2018 6:22	EPA 150.1	pH	5.24		0.05	0.05	SU	AB
CCR-09	8070211-09	7/18/2018 14:15	8/8/2018 14:13	EPA 903.1	Radium 226	7.3±0.8		0.2		pCi/l	FRS
CCR-09	8070211-09	7/18/2018 14:15	8/7/2018 11:18	EPA Ra-05	Radium 228	1.8±0.6		0.7		pCi/l	FRS
CCR-09	8070211-09	7/18/2018 14:15	7/30/2018	EPA 200.7	Selenium	17	I	17	30	ug/L	SGS
CCR-09	8070211-09	7/18/2018 14:15	9/12/2018 6:22	-	Sheen	No Sheen	No Sheen		N/A		AB
CCR-09	8070211-09	7/18/2018 14:15	9/12/2018 6:22	EPA 120.1	Specific Conductance	6680		1	5	uS/cm	AB
CCR-09	8070211-09	7/18/2018 14:15	7/20/2018 14:35	EPA 300.0	Sulfate as SO4	1080	J-7	1	4	mg/L	CF
CCR-09	8070211-09	7/18/2018 14:15	9/12/2018 6:22	EPA 170.1	Temperature	26.6		0.1	0.1	°C	AB
CCR-09	8070211-09	7/18/2018 14:15	7/23/2018 15:30	EPA 160.1	Total Dissolved Solids	4300	J-7	40	80	mg/L	CF
CCR-09	8070211-09	7/18/2018 14:15	9/12/2018 6:22	EPA 180.1	Turbidity	19.1		0.1	0.5	NTU	AB
CCR-09	8070211-09	7/18/2018 14:15	9/12/2018 6:22	DEP-SOP	Water Level	133		0.1	0.5	FT	AB
CCR-10	8070211-10	7/19/2018 9:16	7/30/2018	EPA 200.7	Arsenic	2.6	I	2.5	3	ug/L	SGS
CCR-10	8070211-10	7/19/2018 9:16	8/2/2018 13:59	EPA 200.7	Barium	17	I	17	200	ug/L	SGS
CCR-10	8070211-10	7/19/2018 9:16	7/30/2018	EPA 200.7	Boron	312		85	100	ug/L	SGS
CCR-10	8070211-10	7/19/2018 9:16	8/2/2018 13:59	EPA 200.7	Calcium	138000		130	5000	ug/L	SGS
CCR-10	8070211-10	7/19/2018 9:16	7/20/2018 17:10	EPA 300.0	Chloride	21		0.38	1	mg/L	CF
CCR-10	8070211-10	7/19/2018 9:16	9/12/2018 6:22	-	Color	Clear	Clear		[blank]	AB	
CCR-10	8070211-10	7/19/2018 9:16	9/12/2018 6:22	EPA 360.2	Dissolved Oxygen	0.19		0.1	0.2	mg/L	AB
CCR-10	8070211-10	7/19/2018 9:16	8/1/2018 9:58	SM 4500 F-C	Fluoride	0.12		0.05	0.2	mg/L	PES
CCR-10	8070211-10	7/19/2018 9:16	7/30/2018	EPA 200.7	Lithium	9.1	I	9.1	50	ug/L	SGS
CCR-10	8070211-10	7/19/2018 9:16	8/2/2018 13:59	EPA 200.7	Molybdenum	4.5	I	4.5	20	ug/L	SGS
CCR-10	8070211-10	7/19/2018 9:16	9/12/2018 6:22	EPA 150.1	pH	5.34		0.05	0.05	SU	AB
CCR-10	8070211-10	7/19/2018 9:16	8/8/2018 14:13	EPA 903.1	Radium 226	1.9±0.4		0.2		pCi/l	FRS
CCR-10	8070211-10	7/19/2018 9:16	8/7/2018 11:18	EPA Ra-05	Radium 228	0.8±0.5	I	0.7		pCi/l	FRS
CCR-10	8070211-10	7/19/2018 9:16	7/30/2018	EPA 200.7	Selenium	5.5	I	5.5	10	ug/L	SGS
CCR-10	8070211-10	7/19/2018 9:16	9/12/2018 6:22	-	Sheen	No Sheen	No Sheen		N/A		AB
CCR-10	8070211-10	7/19/2018 9:16	9/12/2018 6:22	EPA 120.1	Specific Conductance	918		1	5	uS/cm	AB
CCR-10	8070211-10	7/19/2018 9:16	7/20/2018 17:10	EPA 300.0	Sulfate as SO4	352	J-7	0.25	1	mg/L	CF
CCR-10	8070211-10	7/19/2018 9:16	9/12/2018 6:22	EPA 170.1	Temperature	25.4		0.1	0.1	°C	AB
CCR-10	8070211-10	7/19/2018 9:16	7/23/2018 15:32	EPA 160.1	Total Dissolved Solids	604	J-7	10	20	mg/L	CF
CCR-10	8070211-10	7/19/2018 9:16	9/12/2018 6:22	EPA 180.1	Turbidity	2.66		0.1	0.5	NTU	AB
CCR-10	8070211-10	7/19/2018 9:16	9/12/2018 6:22	DEP-SOP	Water Level	133		0.1	0.5	FT	AB
CCR-11	8070211-11	7/19/2018 10:03	7/30/2018	EPA 200.7	Arsenic	112		2.5	3	ug/L	SGS
CCR-11	8070211-11	7/19/2018 10:03	8/2/2018 14:03	EPA 200.7	Barium	49.6	I	17	200	ug/L	SGS
CCR-11	8070211-11	7/19/2018 10:03	7/30/2018	EPA 200.7	Boron	495		85	100	ug/L	SGS
CCR-11	8070211-11	7/19/2018 10:03	8/2/2018 14:03	EPA 200.7	Calcium	552000		630	25000	ug/L	SGS
CCR-11	8070211-11	7/19/2018 10:03	7/20/2018 15:01	EPA 300.0	Chloride	537	J-7	0.76	2	mg/L	CF
CCR-11	8070211-11	7/19/2018 10:03	9/12/2018 6:22	-	Color	Clear	Clear		[blank]	AB	
CCR-11	8070211-11	7/19/2018 10:03	9/12/2018 6:22	EPA 360.2	Dissolved Oxygen	0.47		0.1	0.2	mg/L	AB
CCR-11	8070211-11	7/19/2018 10:03	8/1/2018 9:58	SM 4500 F-C	Fluoride	0.541		0.05	0.2	mg/L	PES
CCR-11	8070211-11	7/19/2018 10:03	7/30/2018	EPA 200.7	Lithium	33.8	I	9.1	50	ug/L	SGS
CCR-11	8070211-11	7/19/2018 10:03	8/2/2018 14:03	EPA 200.7	Molybdenum	4.5	I	4.5	20	ug/L	SGS
CCR-11	8070211-11	7/19/2018 10:03	9/12/2018 6:22	EPA 150.1	pH	4.94		0.05	0.05	SU	AB
CCR-11	8070211-11	7/19/2018 10:03	8/8/2018 9:55	EPA 903.1	Radium 226	3.0±0.3		0.2		pCi/l	FRS
CCR-11	8070211-11	7/19/2018 10:03	8/8/2018 9:16	EPA Ra-05	Radium 228	3.1±0.7		0.7		pCi/l	FRS
CCR-11	8070211-11	7/19/2018 10:03	7/30/2018	EPA 200.7	Selenium	7.9	I	5.5	10	ug/L	SGS
CCR-11	8070211-11	7/19/2018 10:03	9/12/2018 6:22	-	Sheen	No Sheen	No Sheen		N/A		AB
CCR-11	8070211-11	7/19/2018 10:03	9/12/2018 6:22	EPA 120.1	Specific Conductance	47.9		1	5	uS/cm	AB
CCR-11	8070211-11	7/19/2018 10:03	7/20/2018 15:01	EPA 300.0	Sulfate as SO4	1630	J-7	0.5	2	mg/L	CF

Table A-2
CCR SAMPLING
Month / Year: JULY 2018
LAB ANALYSIS REPORT

SampleName	Sample ID	Date/Time Sampled	Date/Time Analyzed	Method	Analyte	Result	Qualifiers	Detection Limit	Reporting Limit	Units	Analyst
CCR-11	8070211-11	7/19/2018 10:03	9/12/2018 6:22	EPA 170.1	Temperature	26.3		0.1	0.1	°C	AB
CCR-11	8070211-11	7/19/2018 10:03	7/25/2018 13:50	EPA 160.1	Total Dissolved Solids	3400	J-7	20	40	mg/L	CF
CCR-11	8070211-11	7/19/2018 10:03	9/12/2018 6:22	EPA 180.1	Turbidity	7.92		0.1	0.5	NTU	AB
CCR-11	8070211-11	7/19/2018 10:03	9/12/2018 6:22	DEP-SOP	Water Level	133		0.1	0.5	FT	AB
CCR-12	8070211-12	7/19/2018 10:49	7/30/2018	EPA 200.7	Arsenic	49.8		2.5	3	ug/L	SGS
CCR-12	8070211-12	7/19/2018 10:49	8/2/2018 14:07	EPA 200.7	Barium	18.2	I	17	200	ug/L	SGS
CCR-12	8070211-12	7/19/2018 10:49	7/30/2018	EPA 200.7	Boron	623		85	100	ug/L	SGS
CCR-12	8070211-12	7/19/2018 10:49	8/2/2018 14:07	EPA 200.7	Calcium	612000		630	25000	ug/L	SGS
CCR-12	8070211-12	7/19/2018 10:49	7/20/2018 15:27	EPA 300.0	Chloride	20.4		0.76	2	mg/L	CF
CCR-12	8070211-12	7/19/2018 10:49	9/12/2018 6:22	-	Color	Clear	Clear		[blank]	AB	
CCR-12	8070211-12	7/19/2018 10:49	9/12/2018 6:22	EPA 360.2	Dissolved Oxygen	1.37		0.1	0.2	mg/L	AB
CCR-12	8070211-12	7/19/2018 10:49	8/1/2018 9:58	SM 4500 F-C	Fluoride	0.571		0.05	0.2	mg/L	PES
CCR-12	8070211-12	7/19/2018 10:49	7/30/2018	EPA 200.7	Lithium	9.1	U	9.1	50	ug/L	SGS
CCR-12	8070211-12	7/19/2018 10:49	8/2/2018 14:07	EPA 200.7	Molybdenum	7.5	I	4.5	20	ug/L	SGS
CCR-12	8070211-12	7/19/2018 10:49	9/12/2018 6:22	EPA 150.1	pH	6.61		0.05	0.05	SU	AB
CCR-12	8070211-12	7/19/2018 10:49	8/8/2018 9:55	EPA 903.1	Radium 226	2.9±0.3		0.2	pCi/l	FRS	
CCR-12	8070211-12	7/19/2018 10:49	8/8/2018 9:16	EPA Ra-05	Radium 228	0.7±0.5	U	0.7	pCi/l	FRS	
CCR-12	8070211-12	7/19/2018 10:49	7/30/2018	EPA 200.7	Selenium	28	U	28	50	ug/L	SGS
CCR-12	8070211-12	7/19/2018 10:49	9/12/2018 6:22	-	Sheen	No Sheen	No Sheen		N/A	AB	
CCR-12	8070211-12	7/19/2018 10:49	9/12/2018 6:22	EPA 120.1	Specific Conductance	26.8		1	5	uS/cm	AB
CCR-12	8070211-12	7/19/2018 10:49	7/20/2018 15:27	EPA 300.0	Sulfate as SO4	1310	J-7	0.5	2	mg/L	CF
CCR-12	8070211-12	7/19/2018 10:49	9/12/2018 6:22	EPA 170.1	Temperature	26.9		0.1	0.1	°C	AB
CCR-12	8070211-12	7/19/2018 10:49	7/25/2018 13:54	EPA 160.1	Total Dissolved Solids	2350	J-7	20	40	mg/L	CF
CCR-12	8070211-12	7/19/2018 10:49	9/12/2018 6:22	EPA 180.1	Turbidity	2.96		0.1	0.5	NTU	AB
CCR-12	8070211-12	7/19/2018 10:49	9/12/2018 6:22	DEP-SOP	Water Level	132		0.1	0.5	FT	AB
CCR-13	8070211-13	7/19/2018 11:30	7/30/2018	EPA 200.7	Arsenic	2.5	U	2.5	3	ug/L	SGS
CCR-13	8070211-13	7/19/2018 11:30	8/2/2018 14:11	EPA 200.7	Barium	43.4	I	17	200	ug/L	SGS
CCR-13	8070211-13	7/19/2018 11:30	7/30/2018	EPA 200.7	Boron	291		85	100	ug/L	SGS
CCR-13	8070211-13	7/19/2018 11:30	8/2/2018 14:11	EPA 200.7	Calcium	516000		630	25000	ug/L	SGS
CCR-13	8070211-13	7/19/2018 11:30	7/20/2018 15:52	EPA 300.0	Chloride	371	J-7	0.76	2	mg/L	CF
CCR-13	8070211-13	7/19/2018 11:30	9/12/2018 6:22	-	Color	Clear	Clear		[blank]	AB	
CCR-13	8070211-13	7/19/2018 11:30	9/12/2018 6:22	EPA 360.2	Dissolved Oxygen	0.89		0.1	0.2	mg/L	AB
CCR-13	8070211-13	7/19/2018 11:30	8/1/2018 9:58	SM 4500 F-C	Fluoride	0.103		0.05	0.2	mg/L	PES
CCR-13	8070211-13	7/19/2018 11:30	7/30/2018	EPA 200.7	Lithium	266	9.1	50	ug/L	SGS	
CCR-13	8070211-13	7/19/2018 11:30	8/2/2018 14:11	EPA 200.7	Molybdenum	4.5	U	4.5	20	ug/L	SGS
CCR-13	8070211-13	7/19/2018 11:30	9/12/2018 6:22	EPA 150.1	pH	4.63		0.05	0.05	SU	AB
CCR-13	8070211-13	7/19/2018 11:30	8/8/2018 9:55	EPA 903.1	Radium 226	35.5±1.0		0.2	pCi/l	FRS	
CCR-13	8070211-13	7/19/2018 11:30	8/8/2018 9:16	EPA Ra-05	Radium 228	5.1±0.8		0.7	pCi/l	FRS	
CCR-13	8070211-13	7/19/2018 11:30	7/30/2018	EPA 200.7	Selenium	5.5	U	5.5	10	ug/L	SGS
CCR-13	8070211-13	7/19/2018 11:30	9/12/2018 6:22	-	Sheen	No Sheen	No Sheen		N/A	AB	
CCR-13	8070211-13	7/19/2018 11:30	9/12/2018 6:22	EPA 120.1	Specific Conductance	37.6		1	5	uS/cm	AB
CCR-13	8070211-13	7/19/2018 11:30	7/20/2018 15:52	EPA 300.0	Sulfate as SO4	1440	J-7	0.5	2	mg/L	CF
CCR-13	8070211-13	7/19/2018 11:30	9/12/2018 6:22	EPA 170.1	Temperature	27.2		0.1	0.1	°C	AB
CCR-13	8070211-13	7/19/2018 11:30	7/25/2018 13:56	EPA 160.1	Total Dissolved Solids	2880	J-7	20	40	mg/L	CF
CCR-13	8070211-13	7/19/2018 11:30	9/12/2018 6:22	EPA 180.1	Turbidity	6.02		0.1	0.5	NTU	AB
CCR-13	8070211-13	7/19/2018 11:30	9/12/2018 6:22	DEP-SOP	Water Level	133		0.1	0.5	FT	AB
CCR-14	8070211-14	7/19/2018 13:10	7/30/2018	EPA 200.7	Arsenic	13	U	13	15	ug/L	SGS
CCR-14	8070211-14	7/19/2018 13:10	8/2/2018 14:15	EPA 200.7	Barium	23.7	I	17	200	ug/L	SGS
CCR-14	8070211-14	7/19/2018 13:10	7/30/2018	EPA 200.7	Boron	1240		85	100	ug/L	SGS
CCR-14	8070211-14	7/19/2018 13:10	8/2/2018 14:15	EPA 200.7	Calcium	518000		630	25000	ug/L	SGS
CCR-14	8070211-14	7/19/2018 13:10	7/20/2018 16:18	EPA 300.0	Chloride	95.3		0.76	2	mg/L	CF
CCR-14	8070211-14	7/19/2018 13:10	9/12/2018 6:22	-	Color	Clear	Clear		[blank]	AB	
CCR-14	8070211-14	7/19/2018 13:10	9/12/2018 6:22	EPA 360.2	Dissolved Oxygen	0.5		0.1	0.2	mg/L	AB
CCR-14	8070211-14	7/19/2018 13:10	8/1/2018 9:58	SM 4500 F-C	Fluoride	0.472		0.05	0.2	mg/L	PES
CCR-14	8070211-14	7/19/2018 13:10	7/30/2018	EPA 200.7	Lithium	9.1	U	9.1	50	ug/L	SGS
CCR-14	8070211-14	7/19/2018 13:10	8/2/2018 14:15	EPA 200.7	Molybdenum	4.5	U	4.5	20	ug/L	SGS
CCR-14	8070211-14	7/19/2018 13:10	9/12/2018 6:22	EPA 150.1	pH	5.3		0.05	0.05	SU	AB
CCR-14	8070211-14	7/19/2018 13:10	8/8/2018 9:55	EPA 903.1	Radium 226	16.2±0.7		0.2	pCi/l	FRS	
CCR-14	8070211-14	7/19/2018 13:10	8/8/2018 9:16	EPA Ra-05	Radium 228	1.3±0.6		0.7	pCi/l	FRS	
CCR-14	8070211-14	7/19/2018 13:10	7/30/2018	EPA 200.7	Selenium	5.5	U	5.5	10	ug/L	SGS
CCR-14	8070211-14	7/19/2018 13:10	9/12/2018 6:22	-	Sheen	No Sheen	No Sheen		N/A	AB	
CCR-14	8070211-14	7/19/2018 13:10	9/12/2018 6:22	EPA 120.1	Specific Conductance	2620		1	5	uS/cm	AB
CCR-14	8070211-14	7/19/2018 13:10	7/20/2018 16:18	EPA 300.0	Sulfate as SO4	1310	J-7	0.5	2	mg/L	CF
CCR-14	8070211-14	7/19/2018 13:10	9/12/2018 6:22	EPA 170.1	Temperature	25.6		0.1	0.1	°C	AB
CCR-14	8070211-14	7/19/2018 13:10	7/25/2018 13:58	EPA 160.1	Total Dissolved Solids	2170	J-7	20	40	mg/L	CF
CCR-14	8070211-14	7/19/2018 13:10	9/12/2018 6:22	EPA 180.1	Turbidity	1.51		0.1	0.5	NTU	AB
CCR-14	8070211-14	7/19/2018 13:10	9/12/2018 6:22	DEP-SOP	Water Level	132		0.1	0.5	FT	AB
Equipment Blank	8070211-15	7/19/2018 13:45	7/30/2018	EPA 200.7	Arsenic	2.5	U	2.5	3	ug/L	SGS
Equipment Blank	8070211-15	7/19/2018 13:45	8/2/2018 14:19	EPA 200.7	Barium	17	U	17	200	ug/L	SGS
Equipment Blank	8070211-15	7/19/2018 13:45	7/30/2018	EPA 200.7	Boron	85	U	85	100	ug/L	SGS
Equipment Blank	8070211-15	7/19/2018 13:45	8/2/2018 14:19	EPA 200.7	Calcium	130	U	130	5000	ug/L	SGS
Equipment Blank	8070211-15	7/19/2018 13:45	7/20/2018 16:44	EPA 300.0	Chloride	0.076	U	0.076	0.2	mg/L	CF
Equipment Blank	8070211-15	7/19/2018 13:45	9/12/2018 6:22	-	Color	Clear	Clear		[blank]	AB	
Equipment Blank	8070211-15	7/19/2018 13:45	9/12/2018 6:22	EPA 360.2	Dissolved Oxygen	3.65		0.1	0.2	mg/L	AB
Equipment Blank	8070211-15	7/19/2018 13:45	8/1/2018 9:58	SM 4500 F-C	Fluoride	0.05	U	0.05	0.2	mg/L	PES
Equipment Blank	8070211-15	7/19/2018 13:45	7/30/2018	EPA 200.7	Lithium	9.1	U	9.1	50	ug/L	SGS

Table A-2
CCR SAMPLING
Month / Year: JULY 2018
LAB ANALYSIS REPORT

SampleName	Sample ID	Date/Time Sampled	Date/Time Analyzed	Method	Analyte	Result	Qualifiers	Detection Limit	Reporting Limit	Units	Analyst
Equipment Blank	8070211-15	7/19/2018 13:45	8/2/2018 14:19	EPA 200.7	Molybdenum	4.5	U	4.5	20	ug/L	SGS
Equipment Blank	8070211-15	7/19/2018 13:45	9/12/2018 6:22	EPA 150.1	pH	7.18		0.05	0.05	SU	AB
Equipment Blank	8070211-15	7/19/2018 13:45	8/8/2018 9:55	EPA 903.1	Radium 226	0.2±0.1	U	0.2		pCi/l	FRS
Equipment Blank	8070211-15	7/19/2018 13:45	8/8/2018 9:16	EPA Ra-05	Radium 228	0.7±0.5	U	0.7		pCi/l	FRS
Equipment Blank	8070211-15	7/19/2018 13:45	7/30/2018	EPA 200.7	Selenium	5.5	U	5.5	10	ug/L	SGS
Equipment Blank	8070211-15	7/19/2018 13:45	9/12/2018 6:22	-	Sheen	No Sheen	No Sheen			N/A	AB
Equipment Blank	8070211-15	7/19/2018 13:45	9/12/2018 6:22	EPA 120.1	Specific Conductance	1	U	1	5	uS/cm	AB
Equipment Blank	8070211-15	7/19/2018 13:45	7/20/2018 16:44	EPA 300.0	Sulfate as SO4	0.05	U	0.05	0.2	mg/L	CF
Equipment Blank	8070211-15	7/19/2018 13:45	9/12/2018 6:22	EPA 170.1	Temperature	24.8		0.1	0.1	°C	AB
Equipment Blank	8070211-15	7/19/2018 13:45	7/25/2018 14:00	EPA 160.1	Total Dissolved Solids	10	U	10	20	mg/L	CF
Equipment Blank	8070211-15	7/19/2018 13:45	9/12/2018 6:22	EPA 180.1	Turbidity	0.5		0.1	0.5	NTU	AB

U = Compound was analyzed for but not detected.

J-7 = Estimated Value exceeds the MCL.

J-8 = Estimated value; Reported concentration is outside the calibration range.

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

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.

SGS - SGS north America Inc. ; FRS - Florida Radiochemistry Services, Inc.; PES - Phoslab Environmental Services

APPENDIX B

Statistical Worksheets

Table B1: Arsenic Summary

Event	Date	CCR-3	CCR-4	CCR-5	CCR-6	CCR-7	CCR-8	CCR-9	CCR-10	CCR-11	CCR-12	CCR-13	CCR-14
Background	8/4/2016	0.00066 I	0.0017	0.00078 I	0.00073 I	0.00066 I	0.0015	0.0068	0.0015	0.079	0.074	0.0013	0.0027
Background	9/14/2016	0.00055 I	0.0015	0.00087 I	0.00061 I	0.00051 I	0.0026	0.0056	0.0016	0.11	0.058	0.00052 I	0.0019
Background	10/12/2016	0.00054 I	0.0017	0.0011 I	0.00047 I	0.00046 U	0.002	0.0061	0.0018	0.061	0.00089 I	0.043	0.0027
Background	11/2/2016	0.00061 I	0.0016	0.0014	0.00092 I	0.00067 I	0.0016	0.0054	0.0021	0.06	0.041	0.00046 U	0.0025
Background	12/14/2016	0.00071	0.0013	0.00086	0.00055 I	0.00046 U	0.002	0.003	0.0018	0.094	0.027	0.00046 U	0.0026
Background	1/11/2017	0.00046 U	0.0012 I	0.00079 I	0.00051 I	0.00046 U	0.0023	0.0034	0.0014	0.11	0.028	0.00046 U	0.003
Background	2/1/2017	0.00046 U	0.0011 I	0.00046 U	0.00046 U	0.00046 U	0.002	0.0036	0.0018	0.14	0.031	0.00046 U	0.0027
Background	3/15/2017	0.00055 I	0.0012 I	0.00085 I	0.00073 I	0.00064 I	0.0035	0.0041	0.0023	0.13	0.033	0.00067 I	0.0023
Background	4/12/2017	0.00046 U	0.0011 I	0.00087 I	0.00054 I	0.00054 I	0.0057	0.0035	0.0015	0.12	0.02	0.0011 I	0.0021
Background	5/17/2017	0.00046 U	0.001 I	0.00078 I	0.00055 I	0.00056 I	0.0022	0.0035	0.0017	0.14	0.026	0.0008 I	0.0023
Background	6/13/2017	0.00051 I	0.0011 I	0.00099 I	0.00088 I	0.00068 I	0.0021	0.0033	0.002	0.12	0.035	0.0012 I	0.0049
Background	7/11/2017	0.00086 I	0.0017	0.0015	0.00083 I	0.00054 I	0.0024	0.0037	0.0018	0.094	0.036	0.0012 I	0.0031
Background	8/15/2017	NA	0.0012 I	0.0011 I	0.00046 U	0.00046 U	0.0017	0.0049	0.0016	0.12	0.08	0.00069 I	0.0022
Detection	10/13/2017	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
Detection	12/7/2017	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Assessment	4/12/2018	0.00586 U	0.0136	0.00875 I	0.00586 U	0.00586 U	0.00586 U	0.00792 I	0.00586 U	0.0668	0.0375	0.00646 I	0.00586 U
Assessment	7/18/2018	0.0025 U	0.013 U	0.013 U	0.0033	0.0025 U	0.0038	0.0075 U	0.0026 I	0.112	0.0498	0.0025 U	0.013 U
Minimum		<0.00046	<0.013	<0.00046	<0.00046	<0.00046	<0.00586	<0.0075	<0.00586	0.06	0.00089	<0.00046	<0.00586
Maximum		0.00086	0.0136	0.00875	0.0033	0.00068	0.0057	0.00792	0.0026	0.14	0.08	0.043	0.0049
n		14	15	15	15	15	15	15	15	15	15	15	15
Count Detect		8	14	13	12	8	14	14	14	15	15	10	13
Count Non-Detects		6	1	2	3	7	1	1	1	0	0	5	2
Percent Non-Detects		43%	7%	13%	20%	47%	7%	7%	7%	0%	0%	33%	13%
Mean of Detects		0.00062	0.0022	0.0016	0.00089	0.00060	0.0025	0.0046	0.0018	0.1040	0.0385	0.0057	0.0027
Std. Deviation Detects		0.00012	0.0033	0.0022	0.00078	0.00007	0.0011	0.0015	0.0003	0.0269	0.0203	0.0132	0.0007

Notes:

All concentrations reported in milligrams per liter (mg/L)

NA = Not analyzed

U = Result less than the method detection limit

I = Reported value between method detection limit and practical quantification limit

Table B2: Barium Summary

Event	Date	CCR-3	CCR-4	CCR-5	CCR-6	CCR-7	CCR-8	CCR-9	CCR-10	CCR-11	CCR-12	CCR-13	CCR-14
Background	8/4/2016	0.055	0.17	0.073	0.051	0.074	0.032	0.12	0.034	0.071	0.013	0.027	0.018
Background	9/14/2016	0.053	0.19	0.076	0.035	0.039	0.027	0.11	0.032	0.071	0.014	0.042	0.022
Background	10/12/2016	0.042	0.21	0.076	0.025	0.021	0.027	0.11	0.029	0.068	0.048	0.014	0.023
Background	11/2/2016	0.052	0.23	0.071	0.022	0.035	0.027	0.13	0.028	0.06	0.014	0.05	0.021
Background	12/14/2016	0.045	0.27	0.064	0.025	0.037	0.035	0.12	0.023	0.05	0.013	0.049	0.018
Background	1/11/2017	0.042	0.32	0.066	0.031	0.046	0.045	0.11	0.023	0.048	0.013	0.047	0.015
Background	2/1/2017	0.042	0.35	0.069	0.035	0.055	0.052	0.1	0.029	0.056	0.014	0.053	0.015
Background	3/15/2017	0.039	0.3	0.07	0.042	0.062	0.062	0.098	0.028	0.053	0.015	0.049	0.014
Background	4/12/2017	0.036	0.31	0.065	0.042	0.08	0.059	0.091	0.027	0.047	0.013	0.039	0.013
Background	5/17/2017	0.034	0.34	0.064	0.05	0.1	0.064	0.091	0.027	0.05	0.013	0.033	0.012
Background	6/13/2017	0.035	0.31	0.065	0.039	0.067	0.03	0.09	0.02	0.052	0.015	0.012	0.012
Background	7/11/2017	0.039	0.36	0.07	0.029	0.044	0.033	0.093	0.018	0.054	0.014	0.01	0.015
Background	8/15/2017	0.034	0.29	0.073	0.019	0.023	0.038	0.098	0.015	0.055	0.013	0.029	0.018
Detection	10/13/2017	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
Detection	12/7/2017	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Assessment	4/12/2018	0.0281	0.24	0.0654	0.0169 I	0.0473	0.0268	0.0768	0.00739 I	0.0427	0.0149 I	0.0385	0.0132 I
Assessment	7/18/2018	0.0308 I	0.253	0.0813 I	0.017 U	0.017 U	0.0316 I	0.0857 I	0.017 U	0.0496 I	0.0182 I	0.0434 I	0.0237 I
Minimum		0.0281	0.17	0.064	<0.017	<0.017	0.0268	0.0768	<0.017	0.0427	0.013	0.01	0.012
Maximum		0.055	0.36	0.0813	0.051	0.1	0.064	0.13	0.034	0.071	0.048	0.053	0.0237
n		15	15	15	15	15	15	15	15	15	15	15	15
Count Detects		15	15	15	14	14	15	15	14	15	15	15	15
Count Non-Detects		0	0	0	1	1	0	0	1	0	0	0	0
Percent Non-Detects		0%	0%	0%	7%	7%	0%	0%	7%	0%	0%	0%	0%
Mean of Detects		0.0405	0.2760	0.0699	0.033	0.0522	0.0393	0.102	0.0243	0.0552	0.0163	0.0357	0.0169
Std. Deviation Detects		0.0081	0.0589	0.0052	0.0109	0.0224	0.0136	0.0147	0.0072	0.0087	0.0089	0.0145	0.0040

Notes:

All concentrations reported in milligrams per liter (mg/L)

NA = Not analyzed

U = Result less than the method detection limit

I = Reported value between method detection limit and practical quantification limit

Table B3: Fluoride Summary

Event	Date	CCR-3	CCR-4	CCR-5	CCR-6	CCR-7	CCR-8	CCR-9	CCR-10	CCR-11	CCR-12	CCR-13	CCR-14
Background	8/4/2016	0.15	0.1	0.05 I	0.09 I	0.24	0.28	0.2	0.09 I	0.39	0.58	0.26	0.4
Background	9/14/2016	0.13	0.05 I	0.05 I	0.11	0.12	0.28	0.18	0.08 I	0.39	0.55	0.57	0.42
Background	10/12/2016	0.14	0.032 U	0.05 I	0.15	0.09 I	0.27	0.17	0.09 I	0.4	0.5	0.43	0.4
Background	11/2/2016	0.12	0.032 U	0.04 I	0.13	0.08 I	0.23	0.14	0.08 I	0.35	0.45	0.38	0.35
Background	12/14/2016	0.14	0.032 U	0.05 I	0.16	0.16	0.28	0.14	0.09 I	0.4	0.51	0.54	0.37
Background	1/11/2017	0.17	0.032 U	0.032 U	0.18	0.26	0.29	0.18	0.07 I	0.4	0.51	0.44	0.37
Background	2/1/2017	0.2	0.032 U	0.032 U	0.16	0.28	0.27	0.16	0.11	0.39	0.48	0.53	0.36
Background	3/15/2017	0.15	0.18	0.032 U	0.15	0.33	0.27	0.16	0.08 I	0.42	0.5	0.43	0.39
Background	4/12/2017	0.15	0.11	0.032 U	0.14	0.35	0.25	0.16	0.07 I	0.42	0.46	0.84	0.4
Background	5/17/2017	0.14	0.04 I	0.05 I	0.12	0.34	0.24	0.16	0.1	0.39	0.49	0.37	0.41
Background	6/13/2017	0.16	0.28	0.05 I	0.15	0.35	0.31	0.16	0.1	0.4	0.57	0.15	0.38
Background	7/11/2017	0.15	0.12	0.05 I	0.15	0.24	0.31	0.17	0.1	0.45	0.63	0.14	0.27
Background	8/15/2017	0.17	0.04 I	0.05 I	0.21	0.12	0.34	0.2	0.11	0.47	0.72	0.51	0.4
Detection	10/13/2017	0.162 I	0.264	0.056 I	0.228	0.0894 I	0.321	0.204	0.114 I	0.511	0.582	1.05	0.533
Detection	11/30/2017	0.185 I	0.405	NA	0.272	NA	0.343	0.217	NA	0.538	0.592	1.08	0.05 U
Detection	12/7/2017	NA	NA	NA	NA	NA	NA	NA	NA	0.572	NA	NA	0.511
Assessment	4/12/2018	0.21	0.504	0.0738 I	0.221	0.404	0.4	0.251	0.189 I	0.614	0.691	1.15	0.48
Assessment	7/18/2018	0.161	1.92	0.0552	0.215	0.0961	0.324	0.186	0.12	0.541	0.571	0.103	0.472
Minimum		0.12	<0.032	<0.032	0.09	0.08	0.23	0.14	0.07	0.35	0.45	0.103	<0.05
Maximum		0.21	1.92	0.0738	0.272	0.404	0.4	0.251	0.189	0.614	0.72	1.15	0.533
n		17	17	15	17	16	17	17	16	18	17	17	18
Count Detects		17	12	12	17	16	17	17	16	18	17	17	17
Count Non-Detects		0	5	3	0	0	0	0	0	0	0	0	1
Percent Non-Detects		0%	29%	20%	0%	0%	0%	0%	0%	0%	0%	0%	6%
Mean of Detects		0.16	0.33	0.05	0.17	0.22	0.30	0.18	0.10	0.45	0.55	0.53	0.41
Std. Deviation Detects		0.024	0.521	0.008	0.048	0.113	0.043	0.029	0.028	0.076	0.077	0.324	0.064

Notes:

All concentrations reported in milligrams per liter (mg/L)

NA = Not analyzed

U = Result less than the method detection limit

I = Reported value between method detection limit and practical quantification limit

Table B4: Lithium Summary

Event	Date	CCR-3	CCR-4	CCR-5	CCR-6	CCR-7	CCR-8	CCR-9	CCR-10	CCR-11	CCR-12	CCR-13	CCR-14
Background	8/4/2016	0.0032 U	0.021	2.4	0.41	0.035	0.011	0.073	0.0032 U	0.0032 U	0.0032 U	0.097	0.0032 U
Background	9/14/2016	0.0032 U	0.0095	2.5	0.16	0.0032	0.0057	0.061	0.0032 U	0.0032 U	0.0032 U	0.2	0.0033
Background	10/12/2016	0.0032 U	0.0079	2.5	0.045	0.0032 U	0.0043	0.056	0.0032 U	0.0032 U	0.26	0.0032 U	0.0032 U
Background	11/2/2016	0.0032 U	0.0085	2.4	0.069	0.0032 U	0.0064	0.095	0.0032 U	0.0032 U	0.0032 U	0.31	0.0041
Background	12/14/2016	0.0032 U	0.011	2.4	0.13	0.022	0.018	0.094	0.0032 U	0.0032 U	0.0032 U	0.3	0.0032 U
Background	1/11/2017	0.0032 U	0.012	2.3	0.18	0.026	0.025	0.11	0.0032 U	0.0032 U	0.0032 U	0.32	0.0032 U
Background	2/1/2017	0.0032 U	0.015	2.4	0.21	0.021	0.025	0.12	0.0032 U	0.0032 U	0.0032 U	0.31	0.0032 U
Background	3/15/2017	0.0032 U	0.2	2.4	0.3	0.021	0.032	0.16	0.0032 U	0.0054	0.0032 U	0.32	0.0032 U
Background	4/12/2017	0.0032 U	0.13	2.3	0.34	0.022	0.019	0.19	0.0032 U	0.004	0.0032 U	0.25	0.0032 U
Background	5/17/2017	0.0032 U	0.034	2.3	0.36	0.037	0.023	0.19	0.0032 U	0.0055	0.0032 U	0.19	0.0032 U
Background	6/13/2017	0.0032 U	0.34	2.5	0.42	0.018	0.0053	0.14	0.0032 U	0.0061	0.0032 U	0.017	0.0032 U
Background	7/11/2017	0.0032 U	0.12	2.9	0.13	0.0081	0.0073	0.11	0.0032 U	0.0041	0.0032 U	0.011	0.0032 U
Background	8/15/2017	NA	0.027	3.4	0.13	0.0032 U	0.0071	0.12	0.0032 U	0.0083	0.0032 U	0.13	0.0032 U
Detection	10/13/2017	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
Detection	12/7/2017	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Assessment	4/12/2018	0.011 U	0.022 U	4.21	0.227	0.34	0.011 U	0.16	0.011 U	0.011 U	0.011 U	0.258	0.011 U
Assessment	7/18/2018	0.0091 U	0.0367 I	5.24	0.0837	0.0385 I	0.0091 U	0.156	0.0091 U	0.0338 I	0.0091 U	0.266	0.0091 U
Minimum		<0.0032	<0.022	2.3	0.045	<0.0032	<0.0091	0.056	<0.0032	<0.0032	<0.0032	<0.0032	<0.0032
Maximum		--	0.34	5.24	0.42	0.34	0.032	0.19	--	0.0338	0.26	0.32	0.0041
n		14	15	15	15	15	15	15	15	15	15	15	15
Count Detects		0	14	15	15	12	13	15	0	7	1	14	2
Count Non-Detects		14	1	0	0	3	2	0	15	8	14	1	13
Percent Non-Detects		100%	7%	0%	0%	20%	13%	0%	100%	53%	93%	7%	87%
Mean of Detects		--	0.070	2.81	0.213	0.049	0.015	0.122	--	0.010	--	0.213	--
Std. Deviation Detects		--	0.098	0.851	0.125	0.092	0.010	0.043	--	0.011	--	0.109	--

Notes:

All concentrations reported in milligrams per liter (mg/L)

NA = Not analyzed

U = Result less than the method detection limit

I = Reported value between method detection limit and practical quantification limit

Table B5: Molybdenum Summary

Event	Date	CCR-3	CCR-4	CCR-5	CCR-6	CCR-7	CCR-8	CCR-9	CCR-10	CCR-11	CCR-12	CCR-13	CCR-14
Background	8/4/2016	0.00085 U	0.015	0.00085 U	0.00085 U	0.00085 U	0.0066 I	0.001 I	0.0012 I				
Background	9/14/2016	0.00085 U	0.013	0.00085 U	0.00085 U	0.001 I	0.0058 I	0.00085 U	0.0023 I				
Background	10/12/2016	0.00085 U	0.00085 U	0.00085 U	0.0013 I	0.00085 U	0.012	0.00085 U	0.00085 U	0.00085 U	0.00085 U	0.0064 I	0.0021 I
Background	11/2/2016	0.00085 U	0.00085 U	0.00085 U	0.002 I	0.00085 U	0.013	0.00085 U	0.00085 U	0.00085 U	0.0061 I	0.00085 U	0.0018 I
Background	12/14/2016	0.00085 U	0.00085 U	0.00085 U	0.0017 I	0.00085 U	0.018	0.00085 U	0.00085 U	0.00085 U	0.0061 I	0.00085 U	0.0016 I
Background	1/11/2017	0.00085 U	0.00085 U	0.00085 U	0.0017 I	0.00085 U	0.019	0.00085 U	0.00085 U	0.00085 U	0.006 I	0.00085 U	0.0015 I
Background	2/1/2017	0.00085 U	0.00085 U	0.00085 U	0.0011 I	0.00085 U	0.018	0.00085 U	0.00085 U	0.00089 I	0.0064 I	0.00085 U	0.00086 I
Background	3/15/2017	0.00085 U	0.019	0.00085 U	0.0062 I	0.00085 U	0.0059 I	0.00085 U	0.00085 U				
Background	4/12/2017	0.00085 U	0.016	0.00085 U	0.00085 U	0.00085 U	0.0056 I	0.0026 I	0.00085 U				
Background	5/17/2017	0.00085 U	0.02	0.00085 U	0.00085 U	0.00085 U	0.0066 I	0.00085 U	0.00085 U				
Background	6/13/2017	0.00085 U	0.019	0.00085 U	0.00085 U	0.00096 I	0.012	0.0048 I	0.00085 U				
Background	7/11/2017	0.00085 U	0.016	0.00085 U	0.00085 U	0.00085 U	0.013	0.0037 I	0.00085 U				
Background	8/15/2017	0.00085 U	0.00085 U	0.00085 U	0.0026 I	0.00085 U	0.014	0.0014 I	0.00085 U	0.0011 I	0.011	0.00085 U	0.002 I
Detection	10/13/2017	NA											
Detection	11/30/2017	NA											
Detection	12/7/2017	NA											
Assessment	4/12/2018	0.00418 I	0.00392 U	0.00392 U	0.00392 U	0.018 I	0.00392 U						
Assessment	7/18/2018	0.0045 U	0.0153 I	0.0045 U	0.0045 U	0.0045 U	0.0075 I	0.0045 U	0.0045 U				
Minimum		<0.00085	<0.00085	<0.00085	<0.00085	<0.00085	0.012	<0.00085	<0.00085	<0.00085	<0.00085	<0.00085	<0.00085
Maximum		0.00418	--	--	0.0026	--	0.02	0.0014	0.0062	0.0011	0.013	0.0064	0.0023
n	15	15	15	15	15	15	15	15	15	15	15	15	15
Count Detect	1	0	0	6	0	15	1	1	4	13	5	8	
Count Non-Detects	14	15	15	9	15	0	14	14	11	2	10	7	
Percent Non-Detects	93%	100%	100%	60%	100%	0%	93%	93%	73%	13%	67%	47%	
Mean of Detects	--	--	--	0.0017	--	0.0164	--	--	0.0010	0.0076	0.0037	0.0017	
Std. Deviation Detects	--	--	--	0.0005	--	0.00257	--	--	0.0001	0.0026	0.0021	0.0005	

Notes:

All concentrations reported in milligrams per liter (mg/L)

NA = Not analyzed

U = Result less than the method detection limit

I = Reported value between method detection limit and practical quantification limit

Table B6: Radium 226+228 Summary

Event	Date	CCR-3	CCR-4	CCR-5	CCR-6	CCR-7	CCR-8	CCR-9	CCR-10	CCR-11	CCR-12	CCR-13	CCR-14
Background	8/4/2016	24.7	39.7	18.7	9.71	7.24	22	3.77	2.79	9.21	3	29.7	25.7
Background	9/14/2016	6.91	41	18	7.63	12.8	3.99	20.6	3.02	10.4	2.75	0.629	30.7
Background	10/12/2016	6.11	47.8	18.6	4.9	6.83	4.32	20.1	1.93	11.4	2.84	70.2	28.4
Background	11/2/2016	6.7	48.2	17	3.7	5.9	3.71	21.4	1.28	8.05	3.06	74.6	27
Background	12/14/2016	7.05	77.3	19.3	5.77	14.1	5.84	22.2	1.64	10.6	2.87	85.7	42.1
Background	1/11/2017	6.19	82.2	19.5	5.81	17.9	5.56	21.7	2.01	10.6	2.37	81.4	36.4
Background	2/1/2017	5.61	71.7	16.2	6.07	16.3	7.37	18.4	1.18	9.13	2.48	70.9	35.8
Background	3/15/2017	4.43	59	16.2	6.53	15.1	8.77	14.4	1.58	5.89	2.68	60.9	29.4
Background	4/12/2017	4.62	66.8	16	7.3	19.4	9.28	15.3	1.5	7.78	2.11	52.6	32.4
Background	5/17/2017	3.81	71.1	13.8	8.53	20.6	7.32	13.5	1.38	8.93	2.01	30.3	24.8
Background	6/13/2017	3.87	56.4	16.4	6.58	17.3	4.27	18.2	1.15	10.2	3.19	8.98	42.2
Background	7/11/2017	5.02	71.9	15.9	6.86	12.3	4.41	14.4	1.02	7.11	2.46	5.06	35.1
Background	8/15/2017	4.17	61.7	17.2	4.05	4.93	5.27	15.5	0.864	7.99	2.55	36.2	28.2
Detection	10/13/2017	NA	NA	NA	NA	NA							
Detection	11/30/2017	NA	NA	NA	NA	NA							
Detection	12/7/2017	NA	NA	NA	NA	NA							
Assessment	4/12/2018	3.9	45.8	18.8	4.8	11.7	6.4	0.86	3.6	1.3	3	57.4	23.3
Assessment	7/18/2018	4.1	51	21.1	2.9	2.9	5.5	9.1	2.7	6.1	3.6	40.6	17.5
Minimum		3.81	39.7	13.8	2.9	2.9	3.71	0.86	0.864	1.3	2.01	0.629	17.5
Maximum		24.7	82.2	21.1	9.71	20.6	22	22.2	3.6	11.4	3.6	85.7	42.2
n		15	15	15	15	15	15	15	15	15	15	15	15
Count Detect		15	15	15	15	15	15	15	15	15	15	15	15
Count Non-Detects		0	0	0	0	0	0	0	0	0	0	0	0
Percent Non-Detects		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Mean of Detects		6.48	59.4	17.5	6.08	12.4	6.93	15.3	1.84	8.31	2.73	47.0	30.6
Std. Deviation Detects		5.18	13.6	1.86	1.84	5.62	4.50	6.44	0.82	2.56	0.42	28.0	6.86

Notes:

All concentrations reported in picocuries per liter (pCi/L)

NA = Not analyzed

U = Result less than the method detection limit

I = Reported value between method detection limit and practical quantification limit

Table B7: Selenium

Event	Date	CCR-3	CCR-4	CCR-5	CCR-6	CCR-7	CCR-8	CCR-9	CCR-10	CCR-11	CCR-12	CCR-13	CCR-14
Background	8/4/2016	0.00035 I	0.00084 I	0.00097 I	0.00047 I	0.00042 I	0.00089 I	0.0012 I	0.00035 I	0.0018	0.00095 I	0.00077 I	0.00045 I
Background	9/14/2016	0.00042 I	0.00071 I	0.0007 I	0.00033 I	0.00024 I	0.00024 U	0.0011 I	0.00024 U	0.0018	0.00081 I	0.00032 I	0.00024 U
Background	10/12/2016	0.00024 U	0.00024 U	0.00034 I	0.00024 U	0.00024 U	0.00024 U	0.00056 I	0.00024 U	0.0013	0.00024 U	0.00055 I	0.00024 U
Background	11/2/2016	0.00024 U	0.00081 I	0.00086 I	0.00036 I	0.00031 I	0.00024 U	0.00089 I	0.00024 U	0.0017	0.00024 U	0.00024 U	0.00024 U
Background	12/14/2016	0.00077 I	0.0013	0.00087 I	0.00033 I	0.00026 I	0.00031 I	0.001 I	0.00024 U	0.0015	0.00048 I	0.00024 U	0.00024 U
Background	1/11/2017	0.00028 I	0.00099 I	0.00073 I	0.00024 U	0.00042 I	0.00024 U	0.001 I	0.00024 U	0.0015	0.00072 I	0.00024 U	0.00024 U
Background	2/1/2017	0.00024 U	0.00046 I	0.00024 U	0.00024 U	0.00024 U	0.00024 U	0.00083 I	0.0003 I	0.0015	0.0004 I	0.00024 U	0.00024 U
Background	3/15/2017	0.00024 U	0.00029 I	0.00024 U	0.00024 U	0.00024 U	0.00024 U	0.00071 I	0.0032	0.0013	0.00032 I	0.00024 U	0.00024 U
Background	4/12/2017	0.00024 U	0.00046 I	0.00024 U	0.00024 U	0.00024 U	0.00024 U	0.00047 I	0.00024 U	0.0014	0.00024 U	0.0021	0.00024 U
Background	5/17/2017	0.00024 U	0.00059 I	0.00028 I	0.00024 U	0.00024 U	0.00024 U	0.00068 I	0.00024 U	0.0015	0.00043 I	0.00024 U	0.00024 U
Background	6/13/2017	0.00086 I	0.0012 I	0.00087 I	0.00043 I	0.00043 I	0.00083 I	0.0012 I	0.00025 I	0.0018	0.00077 I	0.00038 I	0.00024 U
Background	7/11/2017	0.00034 I	0.0013	0.001 I	0.00073 I	0.00033 I	0.0003 I	0.0014	0.00048 I	0.0023	0.001 I	0.00085 I	0.00068 I
Background	8/15/2017	0.0003 I	0.0031	0.00049 I	0.00037 I	0.00024 U	0.00024 U	0.0015	0.00058 I	0.0019	0.0014	0.00051 I	0.00024 U
Detection	10/13/2017	NA	NA	NA	NA	NA							
Detection	11/30/2017	NA	NA	NA	NA	NA							
Detection	12/7/2017	NA	NA	NA	NA	NA							
Assessment	4/12/2018	0.027 U	0.027 U	0.027 U	0.027 U	0.027 U							
Assessment	7/18/2018	0.0055 U	0.028 U	0.028 U	0.0055 U	0.0055 U	0.0055 U	0.017 U	0.0055 U	0.0079 I	0.028 U	0.0055 U	0.0055 U
Minimum		<0.00024	<0.00024	<0.00024	<0.00024	<0.00024	<0.00024	<0.017	<0.00024	<0.027	<0.00024	<0.00024	<0.00024
Maximum		0.00086	0.0031	0.001	0.00073	0.00043	0.00089	0.0015	0.0032	0.0079	0.0014	0.0021	0.00068
n	15	15	15	15	15	15	15	15	15	15	15	15	15
Count Detects	7	12	10	7	7	4	13	6	14	10	7	2	
Count Non-Detects	8	3	5	8	8	11	2	9	1	5	8	13	
Percent Non-Detects	53%	20%	33%	53%	53%	73%	13%	60%	7%	33%	53%	87%	
Mean of Detects	0.0005	0.0010	0.0007	0.0004	0.0003	0.0006	0.0010	0.0009	0.0021	0.0007	0.0008	0.0006	
Std. Deviation Detects	0.0002	0.0007	0.0003	0.0001	0.0001	0.0003	0.0003	0.0012	0.0017	0.0003	0.0006	0.0002	

Notes:

All concentrations reported in milligrams per liter (mg/L)

NA = Not analyzed

U = Result less than the method detection limit

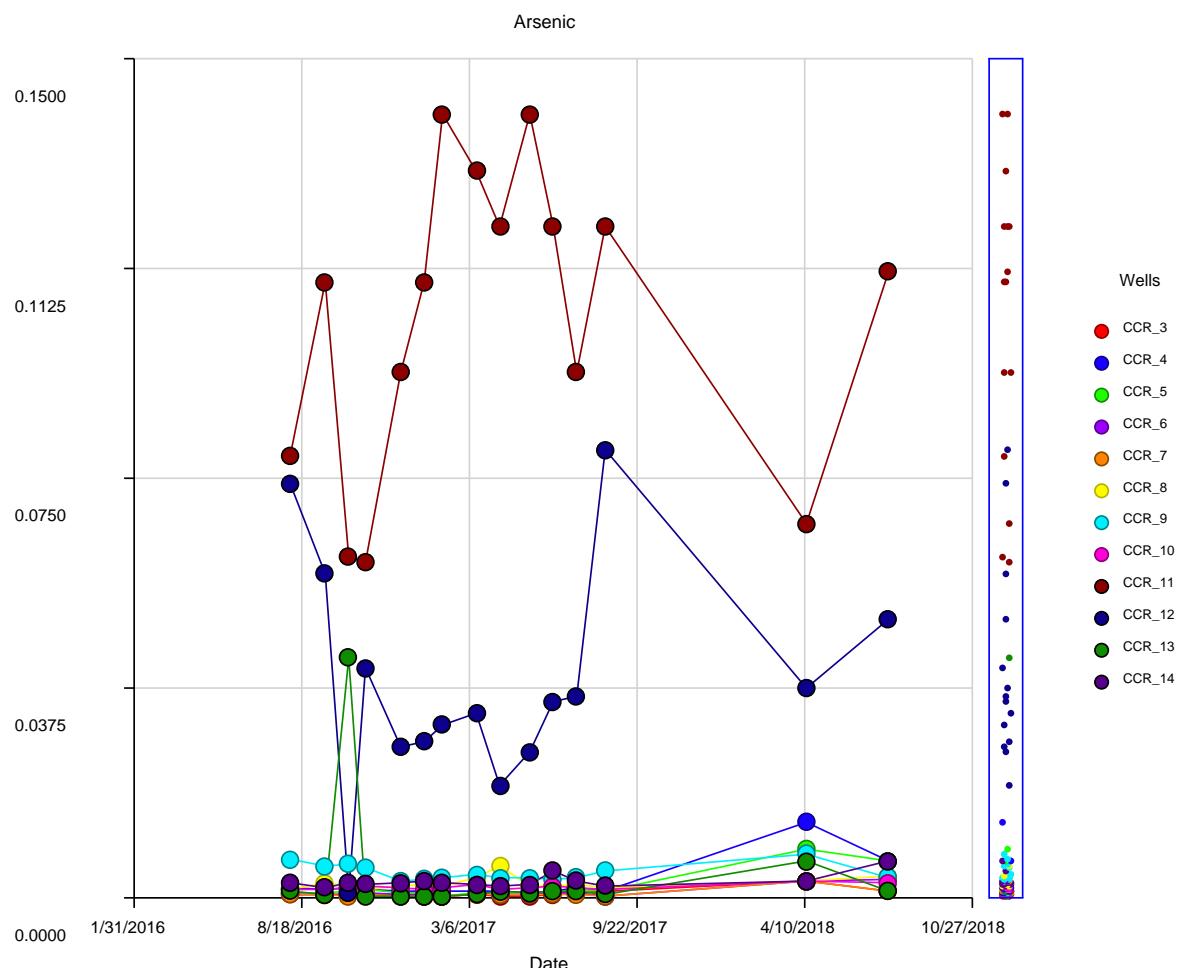
I = Reported value between method detection limit and practical quantification limit

Scatter Plots

Dataset

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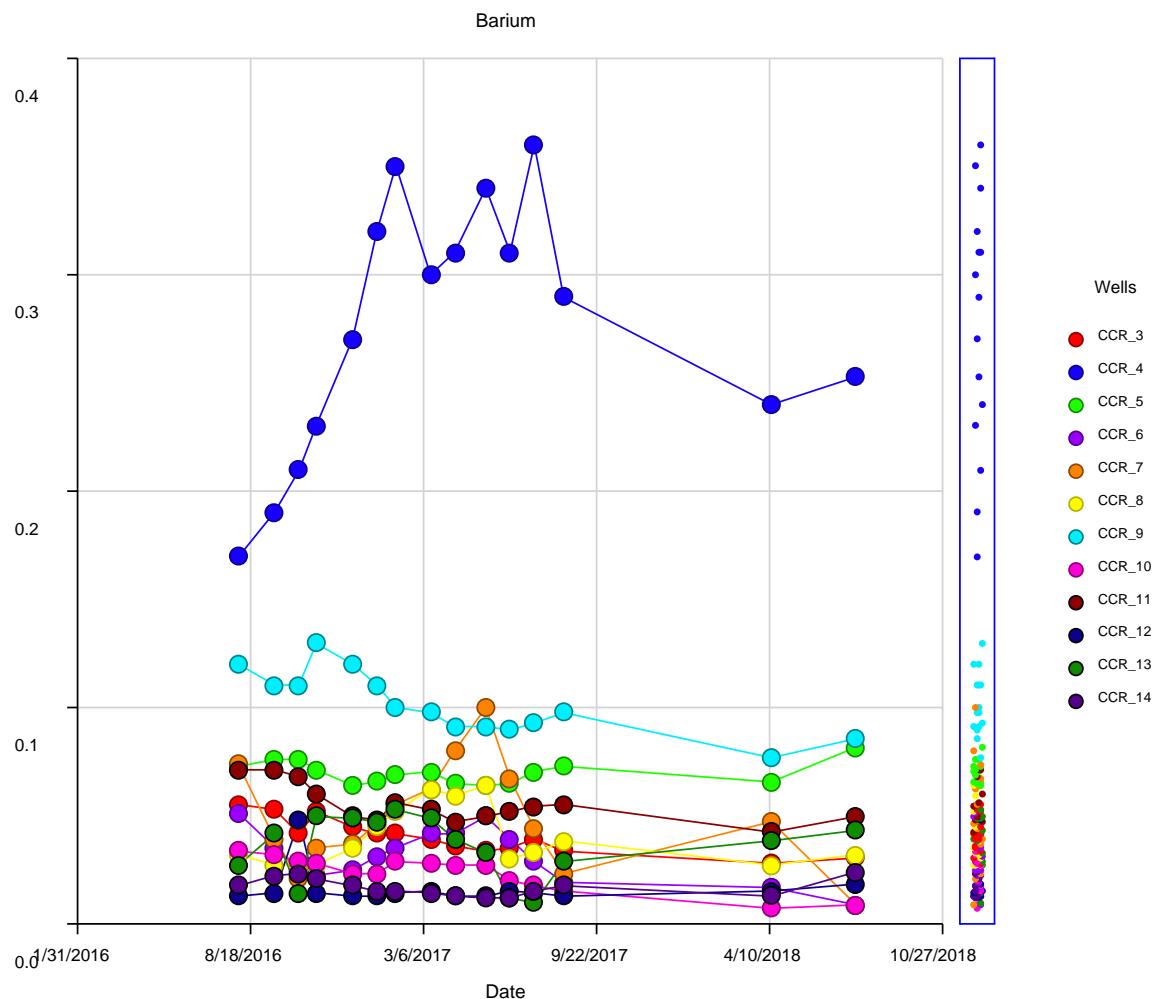
Scatter Plot Section



Scatter Plots

Dataset

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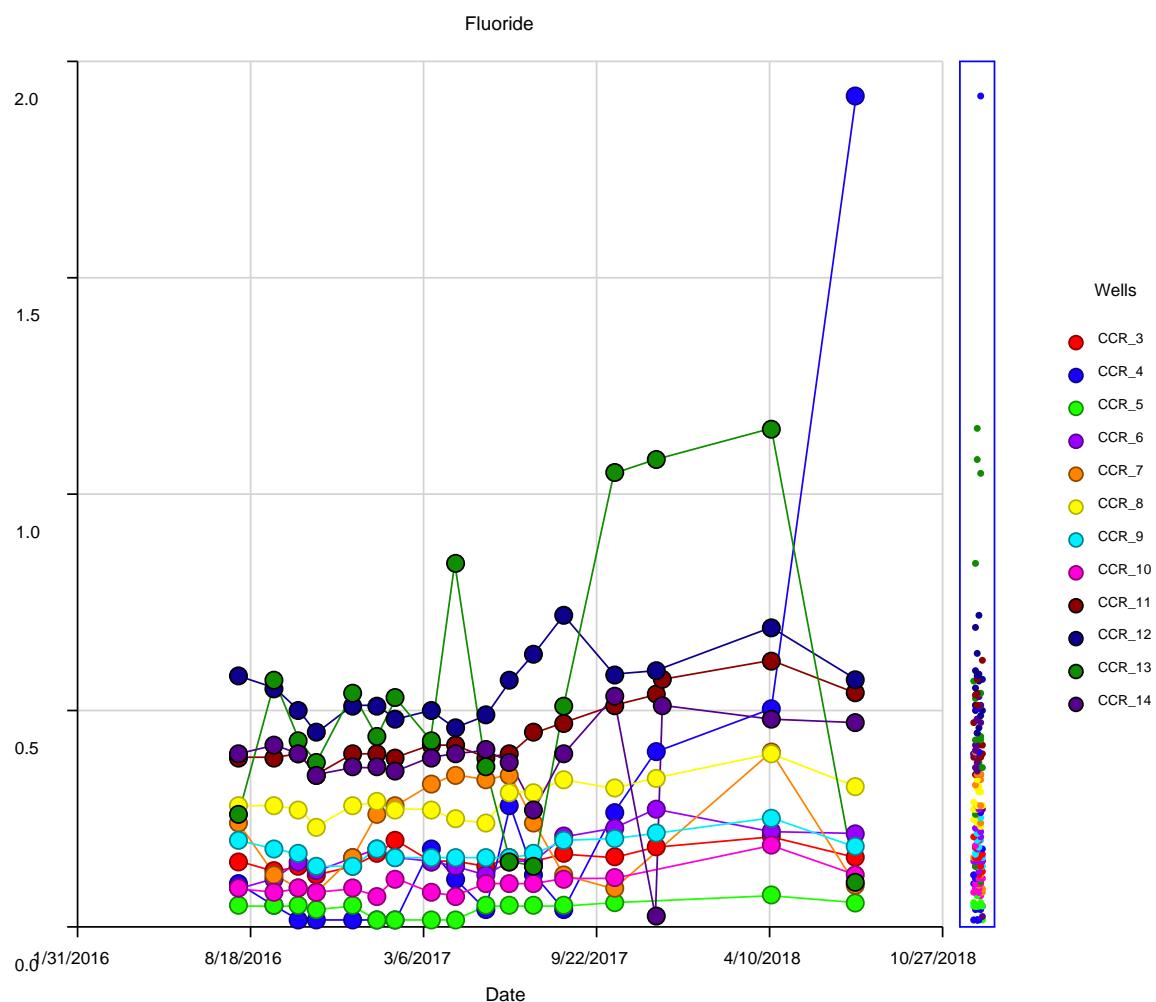
Scatter Plot Section

Scatter Plots

Dataset

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Scatter Plot Section

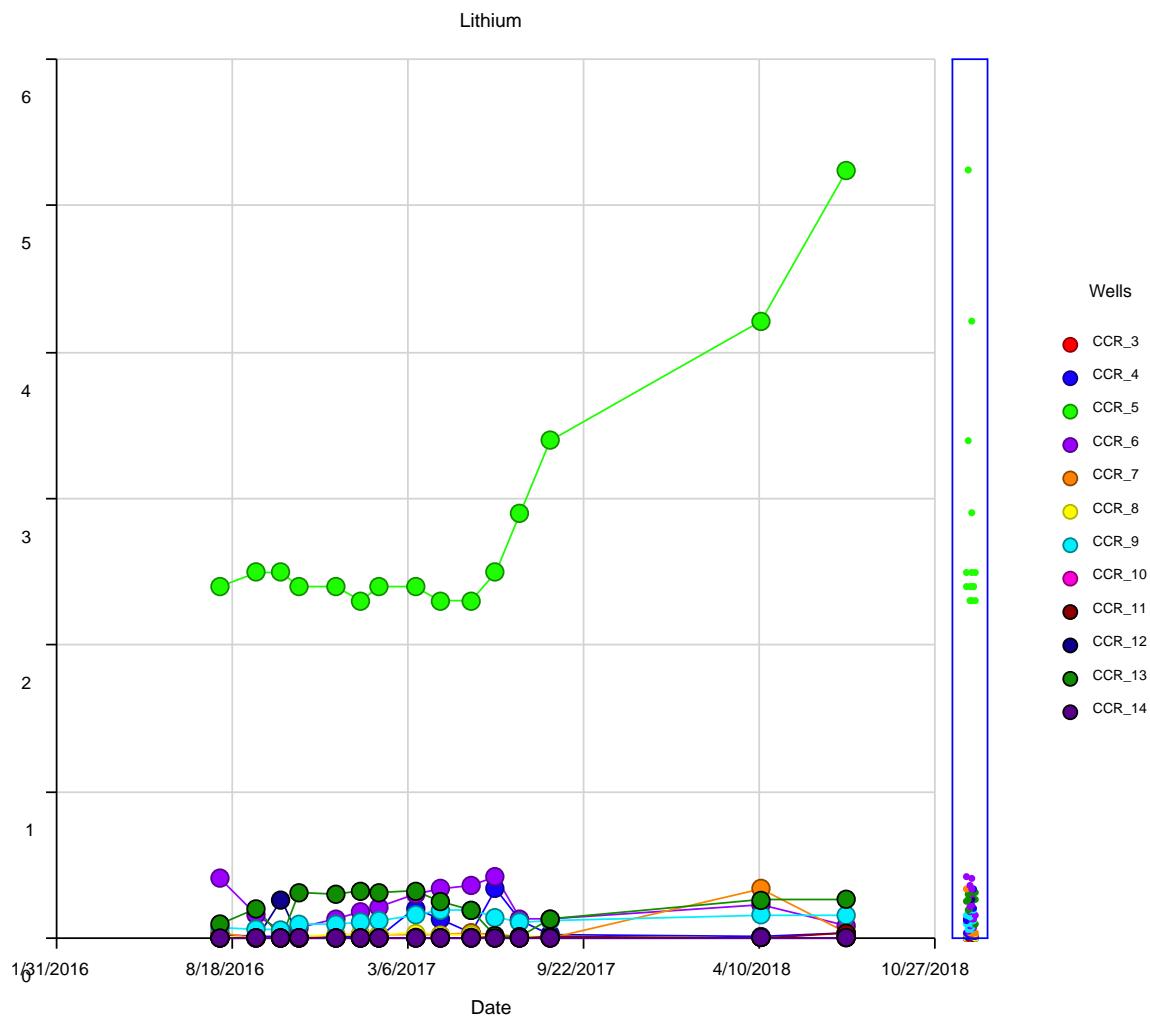


Scatter Plots

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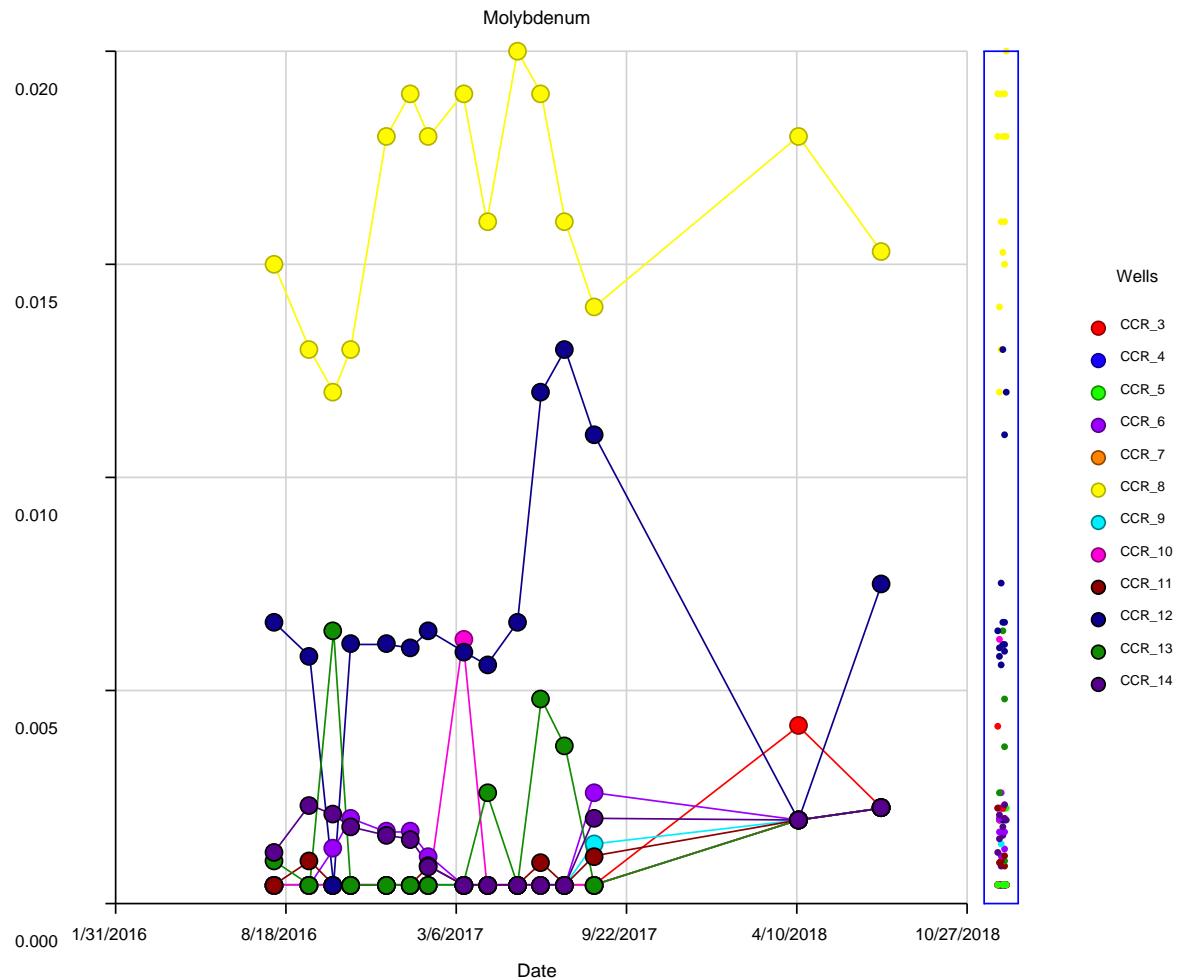


Scatter Plots

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Scatter Plot Section

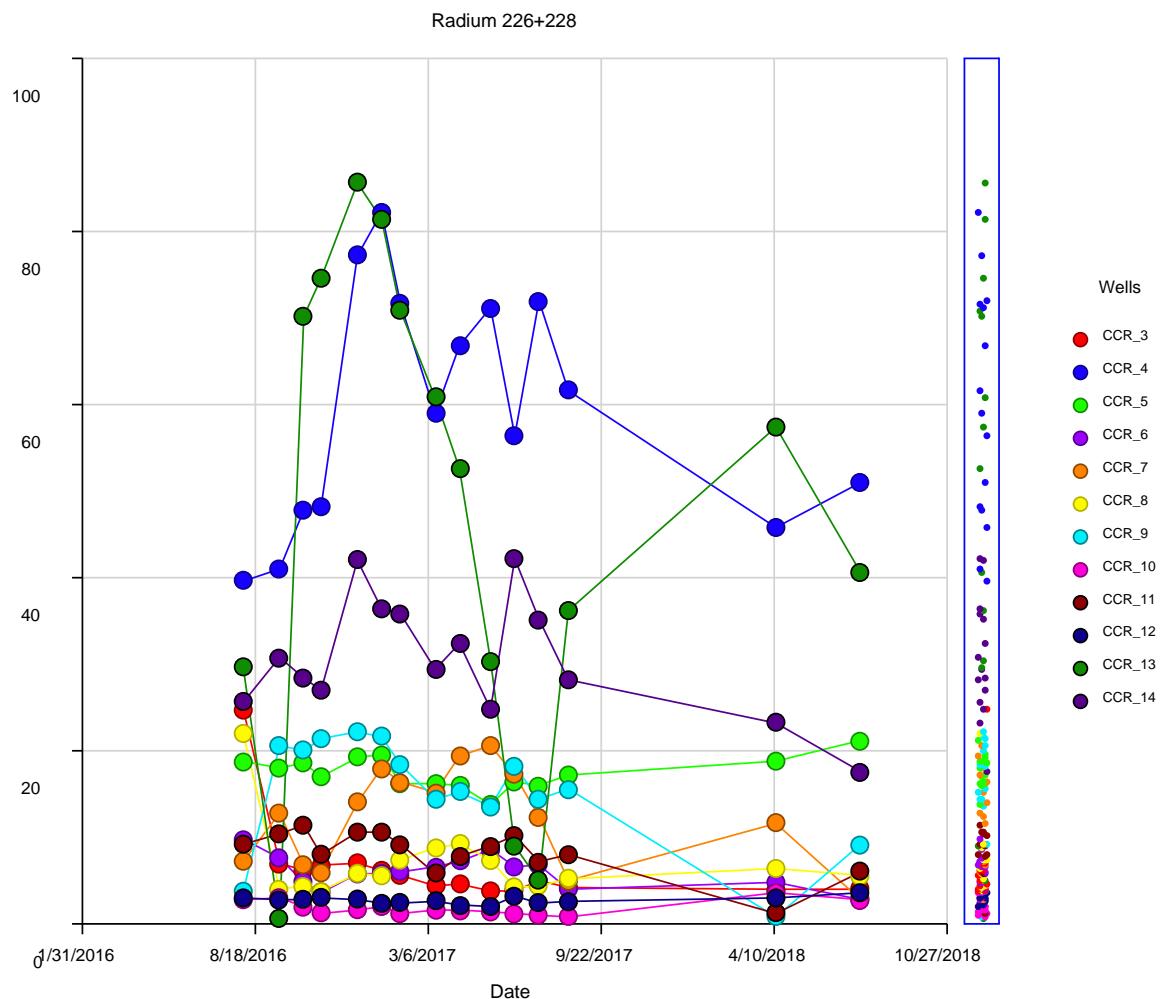


Scatter Plots

Dataset

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Scatter Plot Section

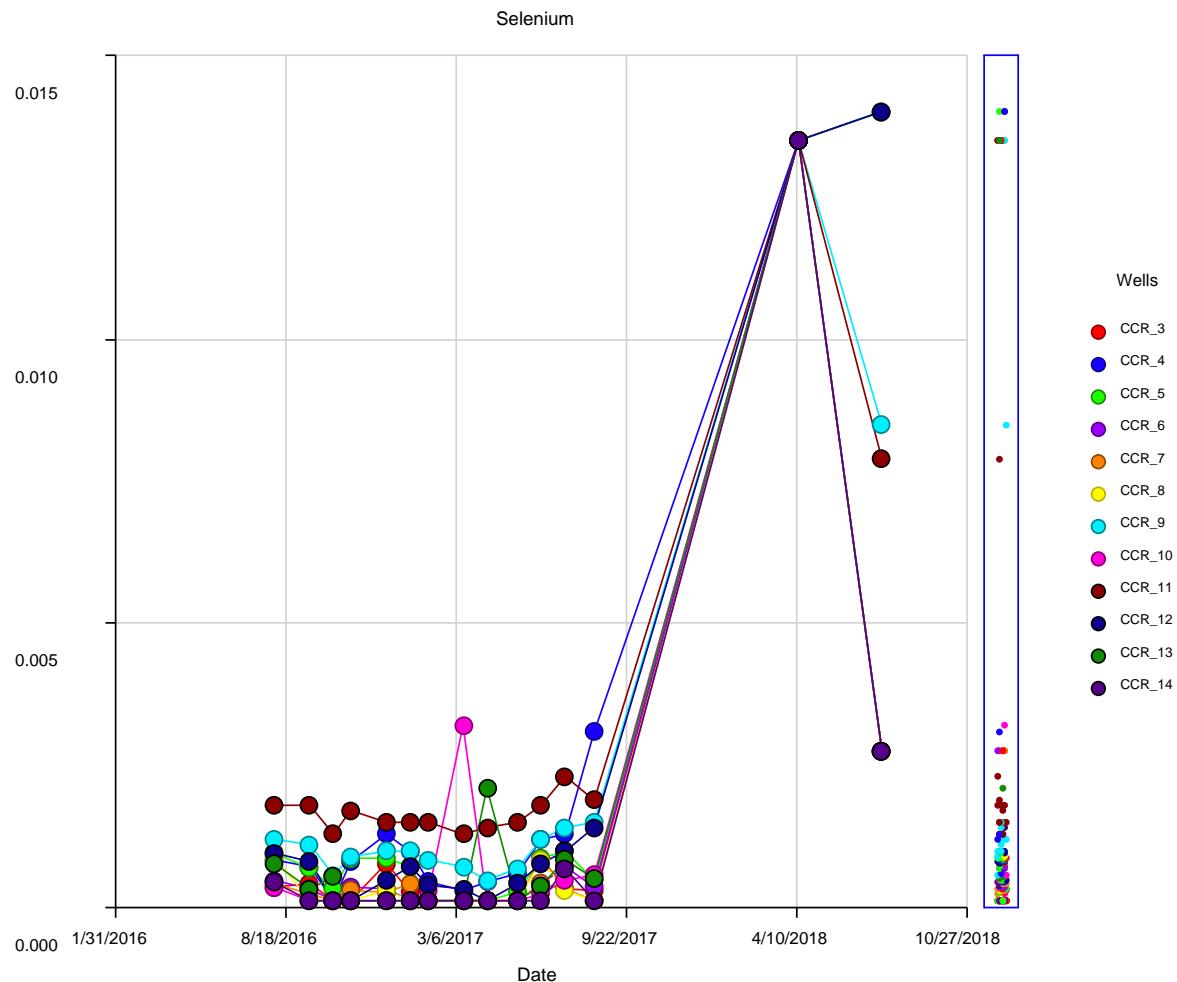


Scatter Plots

Dataset

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Scatter Plot Section



General Statistics on Uncensored Data

Date/Time of Computation ProUCL 5.110/10/2018 8:57:30 AM

From File ApplV_grp.xls

General Statistics for Censored Data Set (with NDs) using Kaplan Meier Method

Variable	NumObs	# Missing	Num Ds	NumNDs	% NDs	Min ND	Max ND	KM Mean	KM Var	KM SD	KM CV
CCR1 (antimony)	14	4	1	13	92.86%	0.001	0.0123	0.00102	2.8402E-9	5.3294E-5	0.0525
CCR1 (arsenic)	15	3	14	1	6.67%	0.00586	0.00586	0.00165	6.4867E-7	8.0540E-4	0.489
CCR1 (barium)	15	3	15	0	0.00%	N/A	N/A	0.0256	4.2877E-5	0.00655	0.256
CCR1 (beryllium)	14	4	0	14	100.00%	3.4000E-4	0.00259	N/A	N/A	N/A	N/A
CCR1 (cadmium)	14	4	0	14	100.00%	3.4000E-4	0.0039	N/A	N/A	N/A	N/A
CCR1 (chromium)	14	4	11	3	21.43%	0.0011	0.00513	0.00158	2.2899E-7	4.7853E-4	0.302
CCR1 (cobalt)	14	4	2	12	85.71%	4.0000E-4	0.002	4.0462E-4	1.787E-10	1.3368E-5	0.033
CCR1 (fluoride)	16	2	1	15	93.75%	0.032	0.05	0.0344	8.4609E-5	0.0092	0.268
CCR1 (lead)	14	4	3	11	78.57%	3.5000E-4	0.00762	3.9000E-4	1.3538E-8	1.1635E-4	0.298
CCR1 (lithium)	15	3	0	15	100.00%	0.0032	0.011	N/A	N/A	N/A	N/A
CCR1 (mercury)	14	4	0	14	100.00%	3.0000E-5	7.0000E-5	N/A	N/A	N/A	N/A
CCR1 (molybdenum)	15	3	5	10	66.67%	8.5000E-4	0.0045	0.00127	5.1850E-7	7.2007E-4	0.565
CCR1 (radium226+228)	15	3	15	0	0.00%	N/A	N/A	4.789	1.005	1.002	0.209
CCR1 (selenium)	15	3	6	9	60.00%	2.4000E-4	0.027	5.8077E-4	2.2539E-7	4.7475E-4	0.817
CCR1 (thallium)	14	4	0	14	100.00%	8.5000E-5	0.0017	N/A	N/A	N/A	N/A
CCR2 (antimony)	14	4	0	14	100.00%	0.001	0.0123	N/A	N/A	N/A	N/A
CCR2 (arsenic)	15	3	4	11	73.33%	4.6000E-4	0.00586	5.0692E-4	1.2160E-8	1.1027E-4	0.218
CCR2 (barium)	15	3	15	0	0.00%	N/A	N/A	0.0577	1.5899E-4	0.0126	0.219
CCR2 (beryllium)	14	4	0	14	100.00%	3.4000E-4	0.00259	N/A	N/A	N/A	N/A
CCR2 (cadmium)	14	4	0	14	100.00%	3.4000E-4	0.0039	N/A	N/A	N/A	N/A
CCR2 (chromium)	14	4	5	9	64.29%	0.0011	0.00513	0.00161	1.5542E-6	0.00125	0.773
CCR2 (cobalt)	14	4	1	13	92.86%	4.0000E-4	0.002	4.0692E-4	5.751E-10	2.3982E-5	0.0589
CCR2 (fluoride)	17	1	17	0	0.00%	N/A	N/A	0.0836	0.00108	0.0328	0.393
CCR2 (lead)	14	4	2	12	85.71%	3.5000E-4	0.00762	4.8077E-4	9.5592E-8	3.0918E-4	0.643
CCR2 (lithium)	15	3	0	15	100.00%	0.0032	0.011	N/A	N/A	N/A	N/A
CCR2 (mercury)	14	4	1	13	92.86%	3.0000E-5	7.0000E-5	3.6429E-5	5.372E-10	2.3179E-5	0.636
CCR2 (molybdenum)	15	3	6	9	60.00%	8.5000E-4	0.0045	0.00106	1.3707E-7	3.7024E-4	0.349
CCR2 (radium226+228)	15	3	15	0	0.00%	N/A	N/A	5.391	2.206	1.485	0.276
CCR2 (selenium)	15	3	7	8	53.33%	2.4000E-4	0.0055	0.00215	4.5926E-5	0.00678	3.151
CCR2 (thallium)	14	4	0	14	100.00%	8.5000E-5	0.0017	N/A	N/A	N/A	N/A
CCR3 (antimony)	13	5	0	13	100.00%	0.001	0.0123	N/A	N/A	N/A	N/A
CCR3 (arsenic)	14	4	8	6	42.86%	4.6000E-4	0.00586	5.6917E-4	1.3924E-8	1.1800E-4	0.207
CCR3 (barium)	15	3	15	0	0.00%	N/A	N/A	0.0405	6.5220E-5	0.00808	0.2
CCR3 (beryllium)	14	4	0	14	100.00%	3.4000E-4	0.00259	N/A	N/A	N/A	N/A
CCR3 (cadmium)	14	4	0	14	100.00%	3.4000E-4	0.0039	N/A	N/A	N/A	N/A
CCR3 (chromium)	14	4	8	6	42.86%	0.0011	0.00513	0.00125	2.7101E-8	1.6462E-4	0.132
CCR3 (cobalt)	13	5	0	13	100.00%	4.0000E-4	0.002	N/A	N/A	N/A	N/A
CCR3 (fluoride)	17	1	17	0	0.00%	N/A	N/A	0.158	5.6061E-4	0.0237	0.15
CCR3 (lead)	13	5	2	11	84.62%	3.5000E-4	0.00762	3.6167E-4	1.0972E-9	3.3124E-5	0.0916
CCR3 (lithium)	14	4	0	14	100.00%	0.0032	0.011	N/A	N/A	N/A	N/A
CCR3 (mercury)	13	5	0	13	100.00%	3.0000E-5	7.0000E-5	N/A	N/A	N/A	N/A

General Statistics for Censored Data Set (with NDs) using Kaplan Meier Method

Variable	NumObs	# Missing	Num Ds	NumNDs	% NDs	Min ND	Max ND	KM Mean	KM Var	KM SD	KM CV
CCR3 (molybdenum)	15	3	1	14	93.33%	8.5000E-4	0.0045	0.00109	7.3549E-7	8.5761E-4	0.788
CCR3 (radium226+228)	15	3	15	0	0.00%	N/A	N/A	6.479	26.78	5.175	0.799
CCR3 (selenium)	15	3	7	8	53.33%	2.4000E-4	0.027	3.6615E-4	3.9854E-8	1.9964E-4	0.545
CCR3 (thallium)	13	5	0	13	100.00%	8.5000E-5	0.0017	N/A	N/A	N/A	N/A
CCR4 (antimony)	14	4	3	11	78.57%	0.001	0.0123	0.00104	1.7751E-8	1.3323E-4	0.128
CCR4 (arsenic)	15	3	14	1	6.67%	0.013	0.013	0.00216	9.4145E-6	0.00307	1.423
CCR4 (barium)	15	3	15	0	0.00%	N/A	N/A	0.276	0.00347	0.0589	0.213
CCR4 (beryllium)	14	4	13	1	7.14%	0.00259	0.00259	5.9692E-4	1.9344E-8	1.3908E-4	0.233
CCR4 (cadmium)	14	4	8	6	42.86%	3.4000E-4	0.0039	0.00124	7.6473E-7	8.7449E-4	0.703
CCR4 (chromium)	14	4	13	1	7.14%	0.00513	0.00513	0.0025	1.2953E-6	0.00114	0.455
CCR4 (cobalt)	14	4	13	1	7.14%	0.002	0.002	0.00368	3.9454E-7	6.2812E-4	0.171
CCR4 (fluoride)	17	1	12	5	29.41%	0.032	0.032	0.245	0.195	0.441	1.797
CCR4 (lead)	14	4	4	10	71.43%	3.5000E-4	0.00762	5.1846E-4	1.1978E-7	3.4610E-4	0.668
CCR4 (lithium)	15	3	14	1	6.67%	0.022	0.022	0.0656	0.00845	0.0919	1.401
CCR4 (mercury)	14	4	0	14	100.00%	3.0000E-5	7.0000E-5	N/A	N/A	N/A	N/A
CCR4 (molybdenum)	15	3	0	15	100.00%	8.5000E-4	0.0045	N/A	N/A	N/A	N/A
CCR4 (radium226+228)	15	3	15	0	0.00%	N/A	N/A	59.44	185.4	13.62	0.229
CCR4 (selenium)	15	3	12	3	20.00%	2.4000E-4	0.028	9.4538E-4	5.0539E-7	7.1091E-4	0.752
CCR4 (thallium)	14	4	13	1	7.14%	0.0017	0.0017	3.5692E-4	7.2213E-9	8.4978E-5	0.238
CCR5 (antimony)	14	4	0	14	100.00%	0.001	0.0123	N/A	N/A	N/A	N/A
CCR5 (arsenic)	15	3	13	2	13.33%	4.6000E-4	0.013	0.00151	4.1000E-6	0.00202	1.344
CCR5 (barium)	15	3	15	0	0.00%	N/A	N/A	0.0699	2.7053E-5	0.0052	0.0744
CCR5 (beryllium)	14	4	0	14	100.00%	3.4000E-4	0.00259	N/A	N/A	N/A	N/A
CCR5 (cadmium)	14	4	0	14	100.00%	3.4000E-4	0.0039	N/A	N/A	N/A	N/A
CCR5 (chromium)	14	4	13	1	7.14%	0.00513	0.00513	0.00145	4.4024E-8	2.0982E-4	0.144
CCR5 (cobalt)	14	4	0	14	100.00%	4.0000E-4	0.002	N/A	N/A	N/A	N/A
CCR5 (fluoride)	16	2	12	4	25.00%	0.032	0.032	0.0471	1.1796E-4	0.0109	0.231
CCR5 (lead)	14	4	5	9	64.29%	3.5000E-4	0.00762	4.2462E-4	1.1779E-8	1.0853E-4	0.256
CCR5 (lithium)	15	3	15	0	0.00%	N/A	N/A	2.81	0.724	0.851	0.303
CCR5 (mercury)	14	4	0	14	100.00%	3.0000E-5	7.0000E-5	N/A	N/A	N/A	N/A
CCR5 (molybdenum)	15	3	0	15	100.00%	8.5000E-4	0.0045	N/A	N/A	N/A	N/A
CCR5 (radium226+228)	15	3	15	0	0.00%	N/A	N/A	17.51	3.444	1.856	0.106
CCR5 (selenium)	15	3	10	5	33.33%	2.4000E-4	0.028	6.0231E-4	8.5233E-8	2.9195E-4	0.485
CCR5 (thallium)	14	4	0	14	100.00%	8.5000E-5	0.0017	N/A	N/A	N/A	N/A
CCR6 (antimony)	14	4	0	14	100.00%	0.001	0.0123	N/A	N/A	N/A	N/A
CCR6 (arsenic)	15	3	12	3	20.00%	4.6000E-4	0.00586	8.2429E-4	4.9472E-7	7.0337E-4	0.853
CCR6 (barium)	15	3	14	1	6.67%	0.017	0.017	0.0319	1.1899E-4	0.0109	0.342
CCR6 (beryllium)	14	4	0	14	100.00%	3.4000E-4	0.00259	N/A	N/A	N/A	N/A
CCR6 (cadmium)	14	4	0	14	100.00%	3.4000E-4	0.0039	N/A	N/A	N/A	N/A
CCR6 (chromium)	14	4	6	8	57.14%	0.0011	0.00513	0.00265	2.5944E-5	0.00509	1.926
CCR6 (cobalt)	14	4	0	14	100.00%	4.0000E-4	0.002	N/A	N/A	N/A	N/A
CCR6 (fluoride)	17	1	17	0	0.00%	N/A	N/A	0.167	0.0023	0.0479	0.287
CCR6 (lead)	14	4	2	12	85.71%	3.5000E-4	0.00762	3.5615E-4	2.698E-10	1.6426E-5	0.0461
CCR6 (lithium)	15	3	15	0	0.00%	N/A	N/A	0.213	0.0155	0.125	0.585
CCR6 (mercury)	14	4	0	14	100.00%	3.0000E-5	7.0000E-5	N/A	N/A	N/A	N/A

General Statistics for Censored Data Set (with NDs) using Kaplan Meier Method

Variable	NumObs	# Missing	Num Ds	NumNDs	% NDs	Min ND	Max ND	KM Mean	KM Var	KM SD	KM CV
CCR6 (molybdenum)	15	3	6	9	60.00%	8.5000E-4	0.0045	0.00126	3.0263E-7	5.5012E-4	0.437
CCR6 (radium226+228)	15	3	15	0	0.00%	N/A	N/A	6.076	3.373	1.837	0.302
CCR6 (selenium)	15	3	7	8	53.33%	2.4000E-4	0.027	3.4308E-4	1.8344E-8	1.3544E-4	0.395
CCR6 (thallium)	14	4	0	14	100.00%	8.5000E-5	0.0017	N/A	N/A	N/A	N/A
CCR7 (antimony)	14	4	0	14	100.00%	0.001	0.0123	N/A	N/A	N/A	N/A
CCR7 (arsenic)	15	3	8	7	46.67%	4.6000E-4	0.00586	5.4615E-4	7.2083E-9	8.4902E-5	0.155
CCR7 (barium)	15	3	14	1	6.67%	0.017	0.017	0.0498	5.1112E-4	0.0226	0.454
CCR7 (beryllium)	14	4	0	14	100.00%	3.4000E-4	0.00259	N/A	N/A	N/A	N/A
CCR7 (cadmium)	14	4	0	14	100.00%	3.4000E-4	0.0039	N/A	N/A	N/A	N/A
CCR7 (chromium)	14	4	9	5	35.71%	0.0011	0.00513	0.00164	3.7006E-7	6.0832E-4	0.371
CCR7 (cobalt)	14	4	5	9	64.29%	4.0000E-4	0.002	5.1846E-4	4.0044E-8	2.0011E-4	0.386
CCR7 (fluoride)	16	2	16	0	0.00%	N/A	N/A	0.222	0.0128	0.113	0.511
CCR7 (lead)	14	4	4	10	71.43%	3.5000E-4	0.00762	5.0769E-4	9.5341E-8	3.0877E-4	0.608
CCR7 (lithium)	15	3	12	3	20.00%	0.0032	0.0032	0.0401	0.00657	0.081	2.021
CCR7 (mercury)	14	4	1	13	92.86%	3.0000E-5	7.0000E-5	3.2857E-5	1.061E-10	1.0302E-5	0.314
CCR7 (molybdenum)	15	3	0	15	100.00%	8.5000E-4	0.0045	N/A	N/A	N/A	N/A
CCR7 (radium226+228)	15	3	15	0	0.00%	N/A	N/A	12.35	31.6	5.622	0.455
CCR7 (selenium)	15	3	7	8	53.33%	2.4000E-4	0.027	2.9615E-4	5.6391E-9	7.5094E-5	0.254
CCR7 (thallium)	14	4	0	14	100.00%	8.5000E-5	0.0017	N/A	N/A	N/A	N/A
CCR8 (antimony)	14	4	1	13	92.86%	0.001	0.0123	0.00105	3.4793E-8	1.8653E-4	0.177
CCR8 (arsenic)	15	3	14	1	6.67%	0.00586	0.00586	0.00253	1.1735E-6	0.00108	0.428
CCR8 (barium)	15	3	15	0	0.00%	N/A	N/A	0.0393	1.8402E-4	0.0136	0.345
CCR8 (beryllium)	14	4	0	14	100.00%	3.4000E-4	0.00259	N/A	N/A	N/A	N/A
CCR8 (cadmium)	14	4	0	14	100.00%	3.4000E-4	0.0039	N/A	N/A	N/A	N/A
CCR8 (chromium)	14	4	0	14	100.00%	0.0011	0.00513	N/A	N/A	N/A	N/A
CCR8 (cobalt)	14	4	0	14	100.00%	4.0000E-4	0.002	N/A	N/A	N/A	N/A
CCR8 (fluoride)	17	1	17	0	0.00%	N/A	N/A	0.295	0.00182	0.0427	0.145
CCR8 (lead)	14	4	1	13	92.86%	3.5000E-4	0.00762	3.5769E-4	7.101E-10	2.6647E-5	0.0745
CCR8 (lithium)	15	3	13	2	13.33%	0.0091	0.011	0.0134	8.0689E-5	0.00898	0.67
CCR8 (mercury)	14	4	0	14	100.00%	3.0000E-5	7.0000E-5	N/A	N/A	N/A	N/A
CCR8 (molybdenum)	15	3	15	0	0.00%	N/A	N/A	0.0164	6.6155E-6	0.00257	0.157
CCR8 (radium226+228)	15	3	15	0	0.00%	N/A	N/A	6.934	20.27	4.502	0.649
CCR8 (selenium)	15	3	4	11	73.33%	2.4000E-4	0.027	3.4538E-4	4.8825E-8	2.2096E-4	0.64
CCR8 (thallium)	14	4	1	13	92.86%	8.5000E-5	0.0017	9.0000E-5	3.000E-10	1.7321E-5	0.192
CCR9 (antimony)	14	4	1	13	92.86%	0.001	0.0123	0.00105	3.4793E-8	1.8653E-4	0.177
CCR9 (arsenic)	15	3	14	1	6.67%	0.0075	0.0075	0.00461	2.0980E-6	0.00145	0.314
CCR9 (barium)	15	3	15	0	0.00%	N/A	N/A	0.102	2.1607E-4	0.0147	0.145
CCR9 (beryllium)	14	4	0	14	100.00%	3.4000E-4	0.00259	N/A	N/A	N/A	N/A
CCR9 (cadmium)	14	4	1	13	92.86%	3.4000E-4	0.0039	3.5846E-4	4.0899E-9	6.3953E-5	0.178
CCR9 (chromium)	14	4	4	10	71.43%	0.0011	0.00513	0.00127	1.2367E-7	3.5167E-4	0.277
CCR9 (cobalt)	14	4	0	14	100.00%	4.0000E-4	0.002	N/A	N/A	N/A	N/A
CCR9 (fluoride)	17	1	17	0	0.00%	N/A	N/A	0.179	8.2460E-4	0.0287	0.161
CCR9 (lead)	14	4	3	11	78.57%	3.5000E-4	0.00762	6.1846E-4	4.4801E-7	6.6934E-4	1.082
CCR9 (lithium)	15	3	15	0	0.00%	N/A	N/A	0.122	0.00185	0.043	0.352
CCR9 (mercury)	14	4	0	14	100.00%	3.0000E-5	7.0000E-5	N/A	N/A	N/A	N/A

General Statistics for Censored Data Set (with NDs) using Kaplan Meier Method

Variable	NumObs	# Missing	Num Ds	NumNDs	% NDs	Min ND	Max ND	KM Mean	KM Var	KM SD	KM CV
CCR9 (molybdenum)	15	3	1	14	93.33%	8.5000E-4	0.0045	8.9231E-4	2.1479E-8	1.4656E-4	0.164
CCR9 (radium226+228)	15	3	15	0	0.00%	N/A	N/A	15.3	41.41	6.435	0.421
CCR9 (selenium)	15	3	13	2	13.33%	0.017	0.027	9.6462E-4	9.1209E-8	3.0201E-4	0.313
CCR9 (thallium)	14	4	0	14	100.00%	8.5000E-5	0.0017	N/A	N/A	N/A	N/A
CCR10 (antimony)	14	4	0	14	100.00%	0.001	0.0123	N/A	N/A	N/A	N/A
CCR10 (arsenic)	15	3	14	1	6.67%	0.00586	0.00586	0.00182	1.0311E-7	3.2111E-4	0.176
CCR10 (barium)	15	3	14	1	6.67%	0.017	0.017	0.0234	5.6574E-5	0.00752	0.321
CCR10 (beryllium)	14	4	0	14	100.00%	3.4000E-4	0.00259	N/A	N/A	N/A	N/A
CCR10 (cadmium)	14	4	0	14	100.00%	3.4000E-4	0.0039	N/A	N/A	N/A	N/A
CCR10 (chromium)	14	4	13	1	7.14%	0.00513	0.00513	0.00232	7.1006E-8	2.6647E-4	0.115
CCR10 (cobalt)	14	4	0	14	100.00%	4.0000E-4	0.002	N/A	N/A	N/A	N/A
CCR10 (fluoride)	16	2	16	0	0.00%	N/A	N/A	0.0996	8.0093E-4	0.0283	0.284
CCR10 (lead)	14	4	1	13	92.86%	3.5000E-4	0.00762	3.6615E-4	3.1314E-9	5.5959E-5	0.153
CCR10 (lithium)	15	3	0	15	100.00%	0.0032	0.011	N/A	N/A	N/A	N/A
CCR10 (mercury)	14	4	1	13	92.86%	3.0000E-5	7.0000E-5	3.2857E-5	1.061E-10	1.0302E-5	0.314
CCR10 (molybdenum)	15	3	1	14	93.33%	8.5000E-4	0.0045	0.00121	1.7810E-6	0.00133	1.106
CCR10 (radium226+228)	15	3	15	0	0.00%	N/A	N/A	1.843	0.675	0.822	0.446
CCR10 (selenium)	15	3	6	9	60.00%	2.4000E-4	0.027	5.2615E-4	6.0662E-7	7.7886E-4	1.48
CCR10 (thallium)	14	4	0	14	100.00%	8.5000E-5	0.0017	N/A	N/A	N/A	N/A
CCR11 (antimony)	14	4	1	13	92.86%	0.001	0.0123	0.00104	1.7751E-8	1.3323E-4	0.128
CCR11 (arsenic)	15	3	15	0	0.00%	N/A	N/A	0.104	7.2608E-4	0.0269	0.26
CCR11 (barium)	15	3	15	0	0.00%	N/A	N/A	0.0552	7.6007E-5	0.00872	0.158
CCR11 (beryllium)	14	4	0	14	100.00%	3.4000E-4	0.00259	N/A	N/A	N/A	N/A
CCR11 (cadmium)	14	4	0	14	100.00%	3.4000E-4	0.0039	N/A	N/A	N/A	N/A
CCR11 (chromium)	14	4	13	1	7.14%	0.00513	0.00513	0.00162	9.6686E-8	3.1094E-4	0.192
CCR11 (cobalt)	14	4	0	14	100.00%	4.0000E-4	0.002	N/A	N/A	N/A	N/A
CCR11 (fluoride)	18	0	18	0	0.00%	N/A	N/A	0.447	0.00576	0.0759	0.17
CCR11 (lead)	14	4	7	7	50.00%	3.5000E-4	0.00762	5.5308E-4	9.4267E-8	3.0703E-4	0.555
CCR11 (lithium)	15	3	7	8	53.33%	0.0032	0.011	0.00626	5.6366E-5	0.00751	1.199
CCR11 (mercury)	14	4	0	14	100.00%	3.0000E-5	7.0000E-5	N/A	N/A	N/A	N/A
CCR11 (molybdenum)	15	3	4	11	73.33%	8.5000E-4	0.0045	8.9231E-4	5.8024E-9	7.6173E-5	0.0854
CCR11 (radium226+228)	15	3	15	0	0.00%	N/A	N/A	8.313	6.544	2.558	0.308
CCR11 (selenium)	15	3	14	1	6.67%	0.027	0.027	0.00209	2.6684E-6	0.00163	0.783
CCR11 (thallium)	14	4	0	14	100.00%	8.5000E-5	0.0017	N/A	N/A	N/A	N/A
CCR12 (antimony)	14	4	0	14	100.00%	0.001	0.0123	N/A	N/A	N/A	N/A
CCR12 (arsenic)	15	3	15	0	0.00%	N/A	N/A	0.0385	4.1130E-4	0.0203	0.527
CCR12 (barium)	15	3	15	0	0.00%	N/A	N/A	0.0163	7.8594E-5	0.00887	0.543
CCR12 (beryllium)	14	4	0	14	100.00%	3.4000E-4	0.00259	N/A	N/A	N/A	N/A
CCR12 (cadmium)	14	4	0	14	100.00%	3.4000E-4	0.0039	N/A	N/A	N/A	N/A
CCR12 (chromium)	14	4	1	13	92.86%	0.0011	0.00513	0.0012	1.2000E-7	3.4641E-4	0.289
CCR12 (cobalt)	14	4	2	12	85.71%	4.0000E-4	0.002	5.5385E-4	1.3172E-7	3.6293E-4	0.655
CCR12 (fluoride)	17	1	17	0	0.00%	N/A	N/A	0.552	0.0059	0.0768	0.139
CCR12 (lead)	14	4	1	13	92.86%	3.5000E-4	0.00762	4.0000E-4	3.0000E-8	1.7321E-4	0.433
CCR12 (lithium)	15	3	1	14	93.33%	0.0032	0.011	0.0203	0.0041	0.0641	3.152
CCR12 (mercury)	14	4	0	14	100.00%	3.0000E-5	7.0000E-5	N/A	N/A	N/A	N/A

General Statistics for Censored Data Set (with NDs) using Kaplan Meier Method

Variable	NumObs	# Missing	Num Ds	NumNDs	% NDs	Min ND	Max ND	KM Mean	KM Var	KM SD	KM CV
CCR12 (molybdenum)	15	3	13	2	13.33%	8.5000E-4	0.00392	0.00669	1.0622E-5	0.00326	0.487
CCR12 (radium226+228)	15	3	15	0	0.00%	N/A	N/A	2.731	0.176	0.419	0.153
CCR12 (selenium)	15	3	10	5	33.33%	2.4000E-4	0.028	6.1538E-4	1.1979E-7	3.4611E-4	0.562
CCR12 (thallium)	14	4	1	13	92.86%	8.5000E-5	0.0017	1.0538E-4	4.9864E-9	7.0614E-5	0.67
CCR13 (antimony)	14	4	1	13	92.86%	0.001	0.0123	0.00103	1.1361E-8	1.0659E-4	0.103
CCR13 (arsenic)	15	3	10	5	33.33%	4.6000E-4	0.0025	0.00397	1.1090E-4	0.0105	2.652
CCR13 (barium)	15	3	15	0	0.00%	N/A	N/A	0.0357	2.0885E-4	0.0145	0.405
CCR13 (beryllium)	14	4	0	14	100.00%	3.4000E-4	0.00259	N/A	N/A	N/A	N/A
CCR13 (cadmium)	14	4	0	14	100.00%	3.4000E-4	0.0039	N/A	N/A	N/A	N/A
CCR13 (chromium)	14	4	10	4	28.57%	0.0011	0.00513	0.00175	2.0402E-7	4.5169E-4	0.258
CCR13 (cobalt)	14	4	10	4	28.57%	4.0000E-4	0.002	0.00126	3.5048E-7	5.9202E-4	0.47
CCR13 (fluoride)	17	1	17	0	0.00%	N/A	N/A	0.528	0.105	0.324	0.615
CCR13 (lead)	14	4	0	14	100.00%	3.5000E-4	0.00762	N/A	N/A	N/A	N/A
CCR13 (lithium)	15	3	14	1	6.67%	0.0032	0.0032	0.199	0.0131	0.115	0.576
CCR13 (mercury)	14	4	0	14	100.00%	3.0000E-5	7.0000E-5	N/A	N/A	N/A	N/A
CCR13 (molybdenum)	15	3	5	10	66.67%	8.5000E-4	0.0045	0.00186	2.9615E-6	0.00172	0.926
CCR13 (radium226+228)	15	3	15	0	0.00%	N/A	N/A	47.01	784	28	0.596
CCR13 (selenium)	15	3	7	8	53.33%	2.4000E-4	0.027	5.3231E-4	2.4591E-7	4.9589E-4	0.932
CCR13 (thallium)	14	4	5	9	64.29%	8.5000E-5	0.0017	9.0385E-5	6.331E-11	7.9570E-6	0.088
CCR14 (antimony)	14	4	0	14	100.00%	0.001	0.0123	N/A	N/A	N/A	N/A
CCR14 (arsenic)	15	3	13	2	13.33%	0.00586	0.013	0.00269	5.1609E-7	7.1840E-4	0.267
CCR14 (barium)	15	3	15	0	0.00%	N/A	N/A	0.0169	1.6145E-5	0.00402	0.238
CCR14 (beryllium)	14	4	14	0	0.00%	N/A	N/A	5.0071E-4	3.6161E-7	6.0134E-4	1.201
CCR14 (cadmium)	14	4	2	12	85.71%	3.4000E-4	0.0039	3.6385E-4	3.5929E-9	5.9941E-5	0.165
CCR14 (chromium)	14	4	13	1	7.14%	0.00513	0.00513	0.00173	2.2982E-7	4.7940E-4	0.277
CCR14 (cobalt)	14	4	0	14	100.00%	4.0000E-4	0.002	N/A	N/A	N/A	N/A
CCR14 (fluoride)	18	0	17	1	5.56%	0.05	0.05	0.387	0.0103	0.101	0.262
CCR14 (lead)	14	4	0	14	100.00%	3.5000E-4	0.00762	N/A	N/A	N/A	N/A
CCR14 (lithium)	15	3	2	13	86.67%	0.0032	0.011	0.00328	5.7160E-8	2.3908E-4	0.073
CCR14 (mercury)	14	4	1	13	92.86%	3.0000E-5	7.0000E-5	3.3786E-5	1.863E-10	1.3650E-5	0.404
CCR14 (molybdenum)	15	3	8	7	46.67%	8.5000E-4	0.0045	0.00135	2.8364E-7	5.3258E-4	0.393
CCR14 (radium226+228)	15	3	15	0	0.00%	N/A	N/A	30.6	47.04	6.858	0.224
CCR14 (selenium)	15	3	2	13	86.67%	2.4000E-4	0.027	2.9000E-4	1.5785E-8	1.2564E-4	0.433
CCR14 (thallium)	14	4	0	14	100.00%	8.5000E-5	0.0017	N/A	N/A	N/A	N/A

General Statistics for Raw Data Sets using Detected Data Only

Variable	NumObs	# Missing	Minimum	Maximum	Mean	Median	Var	SD	MAD/0.675	Skewness	CV
CCR1 (antimony)	1	4	0.0012	0.0012	0.0012	0.0012	N/A	N/A	0	N/A	N/A
CCR1 (arsenic)	14	3	9.8000E-4	0.0041	0.00165	0.0014	6.9857E-7	8.3580E-4	4.4477E-4	2.359	0.507
CCR1 (barium)	15	3	0.019	0.045	0.0256	0.023	4.2877E-5	0.00655	0.00148	2.089	0.256
CCR1 (beryllium)	0	4	N/A	N/A	N/A						
CCR1 (cadmium)	0	4	N/A	N/A	N/A						
CCR1 (chromium)	11	4	0.0012	0.0027	0.00167	0.0015	2.4218E-7	4.9212E-4	4.4477E-4	1.203	0.294
CCR1 (cobalt)	2	4	4.1000E-4	4.5000E-4	4.3000E-4	4.3000E-4	8.000E-10	2.8284E-5	2.9652E-5	N/A	0.0658
CCR1 (fluoride)	1	2	0.07	0.07	0.07	0.07	N/A	N/A	0	N/A	N/A
CCR1 (lead)	3	4	3.9000E-4	7.9000E-4	5.2333E-4	3.9000E-4	5.3333E-8	2.3094E-4	0	1.732	0.441
CCR1 (lithium)	0	3	N/A	N/A	N/A						
CCR1 (mercury)	0	4	N/A	N/A	N/A						
CCR1 (molybdenum)	5	3	9.7000E-4	0.003	0.00195	0.0017	7.4758E-7	8.6463E-4	0.00108	0.271	0.442
CCR1 (radium226+228)	15	3	3.23	6.8	4.789	4.62	1.005	1.002	0.815	0.681	0.209
CCR1 (selenium)	6	3	4.2000E-4	0.0018	9.7833E-4	9.9000E-4	2.3378E-7	4.8350E-4	3.9288E-4	0.834	0.494
CCR1 (thallium)	0	4	N/A	N/A	N/A						
CCR2 (antimony)	0	4	N/A	N/A	N/A						
CCR2 (arsenic)	4	3	4.7000E-4	8.7000E-4	6.1250E-4	5.5500E-4	3.1225E-8	1.7671E-4	7.4129E-5	1.658	0.288
CCR2 (barium)	15	3	0.037	0.079	0.0577	0.058	1.5899E-4	0.0126	0.0148	-0.106	0.219
CCR2 (beryllium)	0	4	N/A	N/A	N/A						
CCR2 (cadmium)	0	4	N/A	N/A	N/A						
CCR2 (chromium)	5	4	0.0012	0.0059	0.0025	0.0015	3.8650E-6	0.00197	4.4477E-4	1.907	0.786
CCR2 (cobalt)	1	4	4.9000E-4	4.9000E-4	4.9000E-4	4.9000E-4	N/A	N/A	0	N/A	N/A
CCR2 (fluoride)	17	1	0.05	0.184	0.0836	0.08	0.00108	0.0328	0.0297	1.823	0.393
CCR2 (lead)	2	4	0.0011	0.0013	0.0012	0.0012	2.0000E-8	1.4142E-4	1.4826E-4	N/A	0.118
CCR2 (lithium)	0	3	N/A	N/A	N/A						
CCR2 (mercury)	1	4	1.2000E-4	1.2000E-4	1.2000E-4	1.2000E-4	N/A	N/A	0	N/A	N/A
CCR2 (molybdenum)	6	3	8.9000E-4	0.0019	0.00131	0.0011	2.2066E-7	4.6974E-4	2.5945E-4	0.776	0.359
CCR2 (radium226+228)	15	3	2.41	8.84	5.391	5.54	2.206	1.485	0.86	0.157	0.276
CCR2 (selenium)	7	3	2.4000E-4	0.0275	0.00432	4.9000E-4	1.0452E-4	0.0102	3.4099E-4	2.644	2.366
CCR2 (thallium)	0	4	N/A	N/A	N/A						
CCR3 (antimony)	0	5	N/A	N/A	N/A						
CCR3 (arsenic)	8	4	5.1000E-4	8.6000E-4	6.2375E-4	5.8000E-4	1.3655E-8	1.1686E-4	8.1542E-5	1.314	0.187
CCR3 (barium)	15	3	0.0281	0.055	0.0405	0.039	6.5220E-5	0.00808	0.00741	0.485	0.2
CCR3 (beryllium)	0	4	N/A	N/A	N/A						
CCR3 (cadmium)	0	4	N/A	N/A	N/A						
CCR3 (chromium)	8	4	0.0011	0.0015	0.00134	0.0014	2.5536E-8	1.5980E-4	1.4826E-4	-0.818	0.119
CCR3 (cobalt)	0	5	N/A	N/A	N/A						
CCR3 (fluoride)	17	1	0.12	0.21	0.158	0.15	5.6061E-4	0.0237	0.0163	0.739	0.15
CCR3 (lead)	2	5	3.7000E-4	4.7000E-4	4.2000E-4	4.2000E-4	5.0000E-9	7.0711E-5	7.4129E-5	N/A	0.168
CCR3 (lithium)	0	4	N/A	N/A	N/A						
CCR3 (mercury)	0	5	N/A	N/A	N/A						
CCR3 (molybdenum)	1	3	0.00418	0.00418	0.00418	0.00418	N/A	N/A	0	N/A	N/A
CCR3 (radium226+228)	15	3	3.81	24.7	6.479	5.02	26.78	5.175	1.66	3.539	0.799
CCR3 (selenium)	7	3	2.8000E-4	8.6000E-4	4.7429E-4	3.5000E-4	5.6795E-8	2.3832E-4	1.0378E-4	1.14	0.502
CCR3 (thallium)	0	5	N/A	N/A	N/A						

General Statistics for Raw Data Sets using Detected Data Only

Variable	NumObs	# Missing	Minimum	Maximum	Mean	Median	Var	SD	MAD/0.675	Skewness	CV
CCR4 (antimony)	3	4	0.001	0.0015	0.00117	0.001	8.3333E-8	2.8868E-4	0	1.732	0.247
CCR4 (arsenic)	14	3	0.001	0.0136	0.00221	0.00125	1.0803E-5	0.00329	2.9652E-4	3.703	1.484
CCR4 (barium)	15	3	0.17	0.36	0.276	0.29	0.00347	0.0589	0.0741	-0.346	0.213
CCR4 (beryllium)	13	4	3.6000E-4	8.4000E-4	5.9692E-4	6.0000E-4	2.0956E-8	1.4476E-4	1.6308E-4	0.11	0.243
CCR4 (cadmium)	8	4	4.6000E-4	0.0029	0.00181	0.0019	4.7359E-7	6.8818E-4	2.2239E-4	-0.688	0.381
CCR4 (chromium)	13	4	0.0018	0.0063	0.00252	0.0021	1.4869E-6	0.00122	2.9652E-4	2.856	0.483
CCR4 (cobalt)	13	4	0.0028	0.0046	0.00381	0.0039	2.0744E-7	4.5545E-4	1.4826E-4	-0.828	0.12
CCR4 (fluoride)	12	1	0.04	1.92	0.334	0.15	0.271	0.521	0.163	2.993	1.558
CCR4 (lead)	4	4	5.1000E-4	0.0016	8.9750E-4	7.4000E-4	2.4236E-7	4.9230E-4	2.6686E-4	1.479	0.549
CCR4 (lithium)	14	3	0.0079	0.34	0.0695	0.024	0.00952	0.0976	0.0204	2.018	1.404
CCR4 (mercury)	0	4	N/A	N/A							
CCR4 (molybdenum)	0	3	N/A	N/A							
CCR4 (radium226+228)	15	3	39.7	82.2	59.44	59	185.4	13.62	17.94	0.102	0.229
CCR4 (selenium)	12	3	2.9000E-4	0.0031	0.001	8.2500E-4	5.4828E-7	7.4046E-4	5.4114E-4	2.276	0.737
CCR4 (thallium)	13	4	2.6000E-4	5.1000E-4	3.5692E-4	3.4000E-4	7.8231E-9	8.8448E-5	8.8955E-5	0.733	0.248
CCR5 (antimony)	0	4	N/A	N/A							
CCR5 (arsenic)	13	3	7.8000E-4	0.00875	0.00159	8.7000E-4	4.6850E-6	0.00216	1.3343E-4	3.534	1.363
CCR5 (barium)	15	3	0.064	0.0813	0.0699	0.07	2.7053E-5	0.0052	0.00682	0.694	0.0744
CCR5 (beryllium)	0	4	N/A	N/A							
CCR5 (cadmium)	0	4	N/A	N/A							
CCR5 (chromium)	13	4	0.0012	0.0018	0.00145	0.0014	4.7692E-8	2.1839E-4	2.9652E-4	0.534	0.15
CCR5 (cobalt)	0	4	N/A	N/A							
CCR5 (fluoride)	12	2	0.04	0.0738	0.0521	0.05	6.1582E-5	0.00785	0	1.918	0.151
CCR5 (lead)	5	4	4.6000E-4	7.1000E-4	5.4400E-4	5.2000E-4	9.3300E-9	9.6592E-5	2.9652E-5	1.794	0.178
CCR5 (lithium)	15	3	2.3	5.24	2.81	2.4	0.724	0.851	0.148	2.205	0.303
CCR5 (mercury)	0	4	N/A	N/A							
CCR5 (molybdenum)	0	3	N/A	N/A							
CCR5 (radium226+228)	15	3	13.8	21.1	17.51	17.2	3.444	1.856	1.927	-7.831E-4	0.106
CCR5 (selenium)	10	3	2.8000E-4	0.001	7.1100E-4	7.9500E-4	6.6232E-8	2.5736E-4	2.0015E-4	-0.726	0.362
CCR5 (thallium)	0	4	N/A	N/A							
CCR6 (antimony)	0	4	N/A	N/A							
CCR6 (arsenic)	12	3	4.7000E-4	0.0033	8.8500E-4	6.7000E-4	6.0150E-7	7.7556E-4	2.1497E-4	3.231	0.876
CCR6 (barium)	14	3	0.0169	0.051	0.033	0.033	1.1871E-4	0.0109	0.0126	0.217	0.33
CCR6 (beryllium)	0	4	N/A	N/A							
CCR6 (cadmium)	0	4	N/A	N/A							
CCR6 (chromium)	6	4	0.0012	0.021	0.00468	0.0015	6.3910E-5	0.00799	7.4129E-5	2.448	1.707
CCR6 (cobalt)	0	4	N/A	N/A							
CCR6 (fluoride)	17	1	0.09	0.272	0.167	0.15	0.0023	0.0479	0.0445	0.591	0.287
CCR6 (lead)	2	4	3.7000E-4	4.1000E-4	3.9000E-4	3.9000E-4	8.000E-10	2.8284E-5	2.9652E-5	N/A	0.0725
CCR6 (lithium)	15	3	0.045	0.42	0.213	0.18	0.0155	0.125	0.143	0.452	0.585
CCR6 (mercury)	0	4	N/A	N/A							
CCR6 (molybdenum)	6	3	0.0011	0.0026	0.00173	0.0017	2.8267E-7	5.3166E-4	5.1890E-4	0.668	0.307
CCR6 (radium226+228)	15	3	2.9	9.71	6.076	6.07	3.373	1.837	1.824	0.154	0.302
CCR6 (selenium)	7	3	3.3000E-4	7.3000E-4	4.3143E-4	3.7000E-4	2.0014E-8	1.4147E-4	5.9303E-5	1.977	0.328
CCR6 (thallium)	0	4	N/A	N/A							

General Statistics for Raw Data Sets using Detected Data Only

Variable	NumObs	# Missing	Minimum	Maximum	Mean	Median	Var	SD	MAD/0.675	Skewness	CV
CCR7 (antimony)	0	4	N/A	N/A	N/A						
CCR7 (arsenic)	8	3	5.1000E-4	6.8000E-4	6.0000E-4	6.0000E-4	4.7714E-9	6.9076E-5	8.8955E-5	-0.052	0.115
CCR7 (barium)	14	3	0.021	0.1	0.0522	0.0467	5.0098E-4	0.0224	0.02	0.631	0.429
CCR7 (beryllium)	0	4	N/A	N/A	N/A						
CCR7 (cadmium)	0	4	N/A	N/A	N/A						
CCR7 (chromium)	9	4	0.0012	0.0028	0.00188	0.0019	3.9194E-7	6.2605E-4	8.8955E-4	0.501	0.333
CCR7 (cobalt)	5	4	4.1000E-4	0.001	7.0800E-4	7.9000E-4	5.7170E-8	2.3910E-4	3.1134E-4	-0.191	0.338
CCR7 (fluoride)	16	2	0.08	0.404	0.222	0.24	0.0128	0.113	0.163	0.0852	0.511
CCR7 (lead)	4	4	3.9000E-4	0.0013	8.6250E-4	8.8000E-4	1.7069E-7	4.1315E-4	4.7443E-4	-0.157	0.479
CCR7 (lithium)	12	3	0.0032	0.34	0.0493	0.022	0.00849	0.0922	0.0126	3.381	1.869
CCR7 (mercury)	1	4	7.0000E-5	7.0000E-5	7.0000E-5	7.0000E-5	N/A	N/A	0	N/A	N/A
CCR7 (molybdenum)	0	3	N/A	N/A	N/A						
CCR7 (radium226+228)	15	3	2.9	20.6	12.35	12.8	31.6	5.622	7.561	-0.248	0.455
CCR7 (selenium)	7	3	2.4000E-4	4.3000E-4	3.4429E-4	3.3000E-4	6.3619E-9	7.9762E-5	1.3343E-4	-0.128	0.232
CCR7 (thallium)	0	4	N/A	N/A	N/A						
CCR8 (antimony)	1	4	0.0017	0.0017	0.0017	0.0017	N/A	N/A	0	N/A	N/A
CCR8 (arsenic)	14	3	0.0015	0.0057	0.00253	0.00215	1.2637E-6	0.00112	5.1890E-4	2.011	0.445
CCR8 (barium)	15	3	0.0268	0.064	0.0393	0.033	1.8402E-4	0.0136	0.0089	0.897	0.345
CCR8 (beryllium)	0	4	N/A	N/A	N/A						
CCR8 (cadmium)	0	4	N/A	N/A	N/A						
CCR8 (chromium)	0	4	N/A	N/A	N/A						
CCR8 (cobalt)	0	4	N/A	N/A	N/A						
CCR8 (fluoride)	17	1	0.23	0.4	0.295	0.28	0.00182	0.0427	0.0445	0.778	0.145
CCR8 (lead)	1	4	4.5000E-4	4.5000E-4	4.5000E-4	4.5000E-4	N/A	N/A	0	N/A	N/A
CCR8 (lithium)	13	3	0.0043	0.032	0.0145	0.011	9.0171E-5	0.0095	0.00993	0.506	0.653
CCR8 (mercury)	0	4	N/A	N/A	N/A						
CCR8 (molybdenum)	15	3	0.012	0.02	0.0164	0.016	6.6155E-6	0.00257	0.00297	-0.277	0.157
CCR8 (radium226+228)	15	3	3.71	22	6.934	5.56	20.27	4.502	1.913	2.995	0.649
CCR8 (selenium)	4	3	3.0000E-4	8.9000E-4	5.8250E-4	5.7000E-4	1.0329E-7	3.2139E-4	3.9288E-4	0.0293	0.552
CCR8 (thallium)	1	4	1.5000E-4	1.5000E-4	1.5000E-4	1.5000E-4	N/A	N/A	0	N/A	N/A
CCR9 (antimony)	1	4	0.0017	0.0017	0.0017	0.0017	N/A	N/A	0	N/A	N/A
CCR9 (arsenic)	14	3	0.003	0.00792	0.00463	0.0039	2.3077E-6	0.00152	0.00111	0.945	0.328
CCR9 (barium)	15	3	0.0768	0.13	0.102	0.098	2.1607E-4	0.0147	0.0178	0.35	0.145
CCR9 (beryllium)	0	4	N/A	N/A	N/A						
CCR9 (cadmium)	1	4	5.8000E-4	5.8000E-4	5.8000E-4	5.8000E-4	N/A	N/A	0	N/A	N/A
CCR9 (chromium)	4	4	0.0012	0.0023	0.00165	0.00155	2.5667E-7	5.0662E-4	4.4477E-4	0.738	0.307
CCR9 (cobalt)	0	4	N/A	N/A	N/A						
CCR9 (fluoride)	17	1	0.14	0.251	0.179	0.17	8.2460E-4	0.0287	0.0148	0.957	0.161
CCR9 (lead)	3	4	5.4000E-4	0.0028	0.00151	0.0012	1.3505E-6	0.00116	9.7850E-4	1.125	0.768
CCR9 (lithium)	15	3	0.056	0.19	0.122	0.12	0.00185	0.043	0.0534	0.0835	0.352
CCR9 (mercury)	0	4	N/A	N/A	N/A						
CCR9 (molybdenum)	1	3	0.0014	0.0014	0.0014	0.0014	N/A	N/A	0	N/A	N/A
CCR9 (radium226+228)	15	3	0.86	22.2	15.3	15.5	41.41	6.435	6.82	-1.129	0.421
CCR9 (selenium)	13	3	4.7000E-4	0.0015	9.6462E-4	0.001	9.8810E-8	3.1434E-4	2.9652E-4	0.111	0.326
CCR9 (thallium)	0	4	N/A	N/A	N/A						

General Statistics for Raw Data Sets using Detected Data Only

Variable	NumObs	# Missing	Minimum	Maximum	Mean	Median	Var	SD	MAD/0.675	Skewness	CV
CCR10 (antimony)	0	4	N/A	N/A	N/A						
CCR10 (arsenic)	14	3	0.0014	0.0026	0.00182	0.0018	1.1104E-7	3.3323E-4	2.9652E-4	1.077	0.183
CCR10 (barium)	14	3	0.00739	0.034	0.0243	0.027	5.1809E-5	0.0072	0.00593	-1.031	0.296
CCR10 (beryllium)	0	4	N/A	N/A	N/A						
CCR10 (cadmium)	0	4	N/A	N/A	N/A						
CCR10 (chromium)	13	4	0.0018	0.0028	0.00232	0.0023	7.6923E-8	2.7735E-4	2.9652E-4	-0.0603	0.119
CCR10 (cobalt)	0	4	N/A	N/A	N/A						
CCR10 (fluoride)	16	2	0.07	0.189	0.0996	0.095	8.0093E-4	0.0283	0.0222	2.193	0.284
CCR10 (lead)	1	4	5.6000E-4	5.6000E-4	5.6000E-4	5.6000E-4	N/A	N/A	0	N/A	N/A
CCR10 (lithium)	0	3	N/A	N/A	N/A						
CCR10 (mercury)	1	4	7.0000E-5	7.0000E-5	7.0000E-5	7.0000E-5	N/A	N/A	0	N/A	N/A
CCR10 (molybdenum)	1	3	0.0062	0.0062	0.0062	0.0062	N/A	N/A	0	N/A	N/A
CCR10 (radium226+228)	15	3	0.864	3.6	1.843	1.58	0.675	0.822	0.638	0.902	0.446
CCR10 (selenium)	6	3	2.5000E-4	0.0032	8.6000E-4	4.1500E-4	1.3288E-6	0.00115	2.0756E-4	2.389	1.34
CCR10 (thallium)	0	4	N/A	N/A	N/A						
CCR11 (antimony)	1	4	0.0015	0.0015	0.0015	0.0015	N/A	N/A	0	N/A	N/A
CCR11 (arsenic)	15	3	0.06	0.14	0.104	0.11	7.2608E-4	0.0269	0.0237	-0.435	0.26
CCR11 (barium)	15	3	0.0427	0.071	0.0552	0.053	7.6007E-5	0.00872	0.00504	0.854	0.158
CCR11 (beryllium)	0	4	N/A	N/A	N/A						
CCR11 (cadmium)	0	4	N/A	N/A	N/A						
CCR11 (chromium)	13	4	0.0012	0.0023	0.00162	0.0015	1.0474E-7	3.2364E-4	1.4826E-4	0.953	0.2
CCR11 (cobalt)	0	4	N/A	N/A	N/A						
CCR11 (fluoride)	18	0	0.35	0.614	0.447	0.41	0.00576	0.0759	0.0297	0.962	0.17
CCR11 (lead)	7	4	3.9000E-4	0.0014	7.2714E-4	6.2000E-4	1.2766E-7	3.5729E-4	2.5204E-4	1.278	0.491
CCR11 (lithium)	7	3	0.004	0.0338	0.0096	0.0055	1.1594E-4	0.0108	0.00208	2.55	1.122
CCR11 (mercury)	0	4	N/A	N/A	N/A						
CCR11 (molybdenum)	4	3	8.9000E-4	0.0011	9.8750E-4	9.8000E-4	7.6917E-9	8.7702E-5	8.1542E-5	0.473	0.0888
CCR11 (radium226+228)	15	3	1.3	11.4	8.313	8.93	6.544	2.558	2.179	-1.483	0.308
CCR11 (selenium)	14	3	0.0013	0.0079	0.00209	0.0016	2.8736E-6	0.0017	2.9652E-4	3.58	0.813
CCR11 (thallium)	0	4	N/A	N/A	N/A						
CCR12 (antimony)	0	4	N/A	N/A	N/A						
CCR12 (arsenic)	15	3	8.9000E-4	0.08	0.0385	0.035	4.1130E-4	0.0203	0.0119	0.599	0.527
CCR12 (barium)	15	3	0.013	0.048	0.0163	0.014	7.8594E-5	0.00887	0.00148	3.721	0.543
CCR12 (beryllium)	0	4	N/A	N/A	N/A						
CCR12 (cadmium)	0	4	N/A	N/A	N/A						
CCR12 (chromium)	1	4	0.0024	0.0024	0.0024	0.0024	N/A	N/A	0	N/A	N/A
CCR12 (cobalt)	2	4	0.0013	0.0015	0.0014	0.0014	2.0000E-8	1.4142E-4	1.4826E-4	N/A	0.101
CCR12 (fluoride)	17	1	0.45	0.72	0.552	0.55	0.0059	0.0768	0.0741	0.799	0.139
CCR12 (lead)	1	4	0.001	0.001	0.001	0.001	N/A	N/A	0	N/A	N/A
CCR12 (lithium)	1	3	0.26	0.26	0.26	0.26	N/A	N/A	0	N/A	N/A
CCR12 (mercury)	0	4	N/A	N/A	N/A						
CCR12 (molybdenum)	13	3	0.0056	0.013	0.00758	0.0064	6.7264E-6	0.00259	7.4129E-4	1.425	0.342
CCR12 (radium226+228)	15	3	2.01	3.6	2.731	2.75	0.176	0.419	0.4	0.141	0.153
CCR12 (selenium)	10	3	3.2000E-4	0.0014	7.2800E-4	7.4500E-4	1.1197E-7	3.3462E-4	3.8547E-4	0.705	0.46
CCR12 (thallium)	1	4	3.5000E-4	3.5000E-4	3.5000E-4	3.5000E-4	N/A	N/A	0	N/A	N/A

General Statistics for Raw Data Sets using Detected Data Only

Variable	NumObs	# Missing	Minimum	Maximum	Mean	Median	Var	SD	MAD/0.675	Skewness	CV
CCR13 (antimony)	1	4	0.0014	0.0014	0.0014	0.0014	N/A	N/A	0	N/A	N/A
CCR13 (arsenic)	10	3	5.2000E-4	0.043	0.00569	0.00115	1.7490E-4	0.0132	6.0044E-4	3.065	2.323
CCR13 (barium)	15	3	0.01	0.053	0.0357	0.039	2.0885E-4	0.0145	0.0148	-0.729	0.405
CCR13 (beryllium)	0	4	N/A	N/A							
CCR13 (cadmium)	0	4	N/A	N/A							
CCR13 (chromium)	10	4	0.0013	0.0023	0.00195	0.002	1.0944E-7	3.3082E-4	3.7064E-4	-0.829	0.17
CCR13 (cobalt)	10	4	9.4000E-4	0.0021	0.00152	0.0016	1.8532E-7	4.3048E-4	5.1890E-4	-0.177	0.282
CCR13 (fluoride)	17	1	0.103	1.15	0.528	0.44	0.105	0.324	0.193	0.756	0.615
CCR13 (lead)	0	4	N/A	N/A							
CCR13 (lithium)	14	3	0.011	0.32	0.213	0.254	0.012	0.109	0.089	-0.862	0.514
CCR13 (mercury)	0	4	N/A	N/A							
CCR13 (molybdenum)	5	3	0.001	0.0064	0.0037	0.0037	4.2500E-6	0.00206	0.00163	-1.08E-15	0.557
CCR13 (radium226+228)	15	3	0.629	85.7	47.01	52.6	784	28	32.62	-0.339	0.596
CCR13 (selenium)	7	3	3.2000E-4	0.0021	7.8286E-4	5.5000E-4	3.7412E-7	6.1166E-4	3.2617E-4	2.129	0.781
CCR13 (thallium)	5	4	9.0000E-5	1.1000E-4	9.9000E-5	1.0000E-4	5.500E-11	7.4162E-6	7.4129E-6	0.552	0.0749
CCR14 (antimony)	0	4	N/A	N/A							
CCR14 (arsenic)	13	3	0.0019	0.0049	0.00269	0.0026	5.5910E-7	7.4773E-4	4.4477E-4	2.333	0.278
CCR14 (barium)	15	3	0.012	0.0237	0.0169	0.015	1.6145E-5	0.00402	0.00445	0.488	0.238
CCR14 (beryllium)	14	4	3.4000E-4	0.00259	5.0071E-4	3.4000E-4	3.6161E-7	6.0134E-4	0	3.742	1.201
CCR14 (cadmium)	2	4	4.4000E-4	5.5000E-4	4.9500E-4	4.9500E-4	6.0500E-9	7.7782E-5	8.1542E-5	N/A	0.157
CCR14 (chromium)	13	4	0.0012	0.003	0.00173	0.0016	2.4897E-7	4.9897E-4	2.9652E-4	1.615	0.288
CCR14 (cobalt)	0	4	N/A	N/A							
CCR14 (fluoride)	17	0	0.27	0.533	0.407	0.4	0.00404	0.0635	0.0445	0.231	0.156
CCR14 (lead)	0	4	N/A	N/A							
CCR14 (lithium)	2	3	0.0033	0.0041	0.0037	0.0037	3.2000E-7	5.6569E-4	5.9303E-4	N/A	0.153
CCR14 (mercury)	1	4	8.3000E-5	8.3000E-5	8.3000E-5	8.3000E-5	N/A	N/A	0	N/A	N/A
CCR14 (molybdenum)	8	3	8.6000E-4	0.0023	0.00167	0.0017	2.3120E-7	4.8083E-4	5.1890E-4	-0.467	0.288
CCR14 (radium226+228)	15	3	17.5	42.2	30.6	29.4	47.04	6.858	6.82	0.126	0.224
CCR14 (selenium)	2	3	4.5000E-4	6.8000E-4	5.6500E-4	5.6500E-4	2.6450E-8	1.6263E-4	1.7050E-4	N/A	0.288
CCR14 (thallium)	0	4	N/A	N/A							

Outlier Tests for Selected Variables replacing nondetects with 1/2 the Detection Limit
User Selected Options

Date/Time of Computation ProUCL 5.110/2/2018 10:09:54 PM
From File ApplV_list.xls
Full Precision OFF

Dixon's Outlier Test for Arsenic11

Total N = 15
Number NDs = 0
Number Detects = 15
Number Data (n) = 15
10% critical value: 0.472
5% critical value: 0.525
1% critical value: 0.616
Note: NDs replaced by DL/2 in Outlier Test

1. Data Value 0.14 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.137
For 5% significance level, 0.14 is not an outlier.

2. Data Value 0.06 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.097
For 5% significance level, 0.06 is not an outlier.

Dixon's Outlier Test for Arsenic12

Total N = 15
Number NDs = 0
Number Detects = 15
Number Data (n) = 15
10% critical value: 0.472
5% critical value: 0.525
1% critical value: 0.616
Note: NDs replaced by DL/2 in Outlier Test

1. Data Value 0.08 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.407
For 5% significance level, 0.08 is not an outlier.

2. Data Value 0.00089 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.440
For 5% significance level, 0.00089 is not an outlier.

Dixon's Outlier Test for Lithium4

Total N = 15

Number NDs = 1

Number Detects = 14

Number Data (n) = 15

10% critical value: 0.472

5% critical value: 0.525

1% critical value: 0.616

Note: NDs replaced by DL/2 in Outlier Test

1. Data Value 0.34 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.635

For 5% significance level, 0.34 is an outlier.

2. Data Value 0.0079 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.013

For 5% significance level, 0.0079 is not an outlier.

Dixon's Outlier Test for Lithium5

Total N = 15

Number NDs = 0

Number Detects = 15

Number Data (n) = 15

10% critical value: 0.472

5% critical value: 0.525

1% critical value: 0.616

Note: NDs replaced by DL/2 in Outlier Test

1. Data Value 5.24 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.626

For 5% significance level, 5.24 is an outlier.

2. Data Value 2.3 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.000

For 5% significance level, 2.3 is not an outlier.

Dixon's Outlier Test for Lithium6

Total N = 15

Number NDs = 0

Number Detects = 15

Number Data (n) = 15

10% critical value: 0.472

5% critical value: 0.525

1% critical value: 0.616

Note: NDs replaced by DL/2 in Outlier Test

1. Data Value 0.42 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.178

For 5% significance level, 0.42 is not an outlier.

2. Data Value 0.045 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.123

For 5% significance level, 0.045 is not an outlier.

Dixon's Outlier Test for Lithium7

Total N = 15
Number NDs = 3
Number Detects = 12
Number Data (n) = 15
10% critical value: 0.472
5% critical value: 0.525
1% critical value: 0.616
Note: NDs replaced by DL/2 in Outlier Test

1. Data Value 0.34 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.895

For 5% significance level, 0.34 is an outlier.

2. Data Value 0.0016 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.000

For 5% significance level, 0.0016 is not an outlier.

Dixon's Outlier Test for Lithium9

Total N = 15
Number NDs = 0
Number Detects = 15
Number Data (n) = 15
10% critical value: 0.472
5% critical value: 0.525
1% critical value: 0.616
Note: NDs replaced by DL/2 in Outlier Test

1. Data Value 0.19 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.256

For 5% significance level, 0.19 is not an outlier.

2. Data Value 0.056 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.163

For 5% significance level, 0.056 is not an outlier.

Dixon's Outlier Test for Lithium13

Total N = 15
Number NDs = 1
Number Detects = 14
Number Data (n) = 15
10% critical value: 0.472
5% critical value: 0.525
1% critical value: 0.616
Note: NDs replaced by DL/2 in Outlier Test

1. Data Value 0.32 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.033

For 5% significance level, 0.32 is not an outlier.

2. Data Value 0.0016 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.050

For 5% significance level, 0.0016 is not an outlier.

Dixon's Outlier Test for Radium3

Total N = 15

Number NDs = 0

Number Detects = 15

Number Data (n) = 15

10% critical value: 0.472

5% critical value: 0.525

1% critical value: 0.616

Note: NDs replaced by DL/2 in Outlier Test

1. Data Value 24.7 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.855

For 5% significance level, 24.7 is an outlier.

2. Data Value 3.81 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.029

For 5% significance level, 3.81 is not an outlier.

Dixon's Outlier Test for Radium4

Total N = 15

Number NDs = 0

Number Detects = 15

Number Data (n) = 15

10% critical value: 0.472

5% critical value: 0.525

1% critical value: 0.616

Note: NDs replaced by DL/2 in Outlier Test

1. Data Value 82.2 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.283

For 5% significance level, 82.2 is not an outlier.

2. Data Value 39.7 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.189

For 5% significance level, 39.7 is not an outlier.

Dixon's Outlier Test for Radium5

Total N = 15

Number NDs = 0

Number Detects = 15

Number Data (n) = 15

10% critical value: 0.472

5% critical value: 0.525

1% critical value: 0.616

Note: NDs replaced by DL/2 in Outlier Test

1. Data Value 21.1 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.353

For 5% significance level, 21.1 is not an outlier.

2. Data Value 13.8 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.400

For 5% significance level, 13.8 is not an outlier.

Dixon's Outlier Test for Radium6

Total N = 15

Number NDs = 0

Number Detects = 15

Number Data (n) = 15

10% critical value: 0.472

5% critical value: 0.525

1% critical value: 0.616

Note: NDs replaced by DL/2 in Outlier Test

1. Data Value 9.71 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.367

For 5% significance level, 9.71 is not an outlier.

2. Data Value 2.9 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.243

For 5% significance level, 2.9 is not an outlier.

Dixon's Outlier Test for Radium7

Total N = 15

Number NDs = 0

Number Detects = 15

Number Data (n) = 15

10% critical value: 0.472

5% critical value: 0.525

1% critical value: 0.616

Note: NDs replaced by DL/2 in Outlier Test

1. Data Value 20.6 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.184

For 5% significance level, 20.6 is not an outlier.

2. Data Value 2.9 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.200

For 5% significance level, 2.9 is not an outlier.

Dixon's Outlier Test for Radium8

Total N = 15

Number NDs = 0

Number Detects = 15

Number Data (n) = 15

10% critical value: 0.472

5% critical value: 0.525

1% critical value: 0.616

Note: NDs replaced by DL/2 in Outlier Test

1. Data Value 22 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.746

For 5% significance level, 22 is an outlier.

2. Data Value 3.71 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.111

For 5% significance level, 3.71 is not an outlier.

Dixon's Outlier Test for Radium9

Total N = 15

Number NDs = 0

Number Detects = 15

Number Data (n) = 15

10% critical value: 0.472

5% critical value: 0.525

1% critical value: 0.616

Note: NDs replaced by DL/2 in Outlier Test

1. Data Value 22.2 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.061

For 5% significance level, 22.2 is not an outlier.

2. Data Value 0.86 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.401

For 5% significance level, 0.86 is not an outlier.

Dixon's Outlier Test for Radium11

Total N = 15

Number NDs = 0

Number Detects = 15

Number Data (n) = 15

10% critical value: 0.472

5% critical value: 0.525

1% critical value: 0.616

Note: NDs replaced by DL/2 in Outlier Test

1. Data Value 11.4 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.151

For 5% significance level, 11.4 is not an outlier.

2. Data Value 1.3 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.516

For 5% significance level, 1.3 is not an outlier.

Dixon's Outlier Test for Radium13

Total N = 15

Number NDs = 0

Number Detects = 15

Number Data (n) = 15

10% critical value: 0.472

5% critical value: 0.525

1% critical value: 0.616

Note: NDs replaced by DL/2 in Outlier Test

1. Data Value 85.7 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.145

For 5% significance level, 85.7 is not an outlier.

2. Data Value 0.629 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.113

For 5% significance level, 0.629 is not an outlier.

Dixon's Outlier Test for Radium14

Total N = 15

Number NDs = 0

Number Detects = 15

Number Data (n) = 15

10% critical value: 0.472

5% critical value: 0.525

1% critical value: 0.616

Note: NDs replaced by DL/2 in Outlier Test

1. Data Value 42.2 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.333

For 5% significance level, 42.2 is not an outlier.

For 1% significance level, 42.2 is not an outlier.

2. Data Value 17.5 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.386

For 5% significance level, 17.5 is not an outlier.

Mann-Kendall Trend Test Analysis

User Selected Options

Date/Time of Computation ProUCL 5.110/2/2018 10:21:12 PM
From File AppIV_list.xls
Full Precision OFF
Confidence Coefficient 0.95
Level of Significance 0.05

Arsenic11

General Statistics

Number of Events Reported (m)	18
Number of Missing Events	3
Number or Reported Events Used	15
Number Values Reported (n)	18
Number Values Missing	3
Number Values Used	15
Minimum	0.06
Maximum	0.14
Mean	0.104
Geometric Mean	0.1
Median	0.11
Standard Deviation	0.0269
Coefficient of Variation	0.26

Mann-Kendall Test

M-K Test Value (S)	21
Tabulated p-value	0.164
Standard Deviation of S	20.04
Standardized Value of S	0.998
Approximate p-value	0.159

Insufficient evidence to identify a significant trend at the specified level of significance.

Arsenic12

General Statistics

Number of Events Reported (m)	18
Number of Missing Events	3
Number or Reported Events Used	15
Number Values Reported (n)	18
Number Values Missing	3
Number Values Used	15
Minimum	8.9000E-4
Maximum	0.08
Mean	0.0385
Geometric Mean	0.0296
Median	0.035
Standard Deviation	0.0203
Coefficient of Variation	0.527

Mann-Kendall Test

M-K Test Value (S)	17
Tabulated p-value	0.218
Standard Deviation of S	20.21
Standardized Value of S	0.792
Approximate p-value	0.214

Insufficient evidence to identify a significant trend at the specified level of significance.

Lithium4

General Statistics

Number of Events Reported (m)	18
Number of Missing Events	3
Number or Reported Events Used	15
Number Values Reported (n)	18
Number Values Missing	3
Number Values Used	15
Minimum	0.0079
Maximum	0.34
Mean	0.0663
Geometric Mean	0.0308
Median	0.022
Standard Deviation	0.0948
Coefficient of Variation	1.43

Mann-Kendall Test

M-K Test Value (S)	47
Tabulated p-value	0.01
Standard Deviation of S	20.21
Standardized Value of S	2.276
Approximate p-value	0.0114

Statistically significant evidence of an increasing trend at the specified level of significance.

Lithium5	
General Statistics	
Number of Events Reported (m)	18
Number of Missing Events	3
Number or Reported Events Used	15
Number Values Reported (n)	18
Number Values Missing	3
Number Values Used	15
Minimum	2.3
Maximum	5.24
Mean	2.81
Geometric Mean	2.72
Median	2.4
Standard Deviation	0.851
Coefficient of Variation	0.303

Mann-Kendall Test

M-K Test Value (S)	35
Tabulated p-value	0.046
Standard Deviation of S	19.6
Standardized Value of S	1.734
Approximate p-value	0.0414

Statistically significant evidence of an increasing trend at the specified level of significance.

Lithium6	
General Statistics	
Number of Events Reported (m)	18
Number of Missing Events	3
Number or Reported Events Used	15
Number Values Reported (n)	18
Number Values Missing	3
Number Values Used	15
Minimum	0.045
Maximum	0.42
Mean	0.213
Geometric Mean	0.176
Median	0.18
Standard Deviation	0.125
Coefficient of Variation	0.585

Mann-Kendall Test

M-K Test Value (S)	12
Tabulated p-value	0.279
Standard Deviation of S	20.12
Standardized Value of S	0.547
Approximate p-value	0.292

Insufficient evidence to identify a significant trend at the specified level of significance.

Lithium7
General Statistics

Number of Events Reported (m)	18
Number of Missing Events	3
Number or Reported Events Used	15
Number Values Reported (n)	18
Number Values Missing	3
Number Values Used	15
Minimum	0.0032
Maximum	0.34
Mean	0.0401
Geometric Mean	0.0162
Median	0.021
Standard Deviation	0.0839
Coefficient of Variation	2.092

Mann-Kendall Test

M-K Test Value (S)	21
Tabulated p-value	0.164
Standard Deviation of S	19.94
Standardized Value of S	1.003
Approximate p-value	0.158

Insufficient evidence to identify a significant trend at the specified level of significance.

Lithium9
General Statistics

Number of Events Reported (m)	18
Number of Missing Events	3
Number or Reported Events Used	15
Number Values Reported (n)	18
Number Values Missing	3
Number Values Used	15
Minimum	0.056
Maximum	0.19
Mean	0.122
Geometric Mean	0.115
Median	0.12
Standard Deviation	0.043
Coefficient of Variation	0.352

Mann-Kendall Test

M-K Test Value (S)	57
Tabulated p-value	0.002
Standard Deviation of S	20.11
Standardized Value of S	2.785
Approximate p-value	0.00268

Statistically significant evidence of an increasing trend at the specified level of significance.

Lithium13

General Statistics

Number of Events Reported (m)	18
Number of Missing Events	3
Number or Reported Events Used	15
Number Values Reported (n)	18
Number Values Missing	3
Number Values Used	15
Minimum	0.0032
Maximum	0.32
Mean	0.199
Geometric Mean	0.12
Median	0.25
Standard Deviation	0.119
Coefficient of Variation	0.596

Mann-Kendall Test

M-K Test Value (S)	-3
Tabulated p-value	0.461
Standard Deviation of S	20.16
Standardized Value of S	-0.0992
Approximate p-value	0.46

Insufficient evidence to identify a significant trend at the specified level of significance.

Radium4

General Statistics

Number of Events Reported (m)	18
Number of Missing Events	3
Number or Reported Events Used	15
Number Values Reported (n)	18
Number Values Missing	3
Number Values Used	15
Minimum	39.7
Maximum	82.2
Mean	59.44
Geometric Mean	57.96
Median	59
Standard Deviation	13.62
Coefficient of Variation	0.229

Mann-Kendall Test

M-K Test Value (S)	15
Tabulated p-value	0.248
Standard Deviation of S	20.21
Standardized Value of S	0.693
Approximate p-value	0.244

Insufficient evidence to identify a significant trend at the specified level of significance.

Radium5

General Statistics

Number of Events Reported (m)	18
Number of Missing Events	3
Number or Reported Events Used	15
Number Values Reported (n)	18
Number Values Missing	3
Number Values Used	15
Minimum	13.8
Maximum	21.1
Mean	17.51
Geometric Mean	17.42
Median	17.2
Standard Deviation	1.856
Coefficient of Variation	0.106

Mann-Kendall Test

M-K Test Value (S)	-10
Tabulated p-value	0.313
Standard Deviation of S	20.18
Standardized Value of S	-0.446
Approximate p-value	0.328

Insufficient evidence to identify a significant trend at the specified level of significance.

Radium7

General Statistics

Number of Events Reported (m)	18
Number of Missing Events	3
Number or Reported Events Used	15
Number Values Reported (n)	18
Number Values Missing	3
Number Values Used	15
Minimum	2.9
Maximum	20.6
Mean	12.35
Geometric Mean	10.83
Median	12.8
Standard Deviation	5.622
Coefficient of Variation	0.455

Mann-Kendall Test

M-K Test Value (S)	-3
Tabulated p-value	0.461
Standard Deviation of S	20.21
Standardized Value of S	-0.099
Approximate p-value	0.461

Insufficient evidence to identify a significant trend at the specified level of significance.

Radium9

General Statistics

Number of Events Reported (m)	18
Number of Missing Events	3
Number or Reported Events Used	15
Number Values Reported (n)	18
Number Values Missing	3
Number Values Used	15
Minimum	0.86
Maximum	22.2
Mean	15.3
Geometric Mean	12.49
Median	15.5
Standard Deviation	6.435
Coefficient of Variation	0.421

Mann-Kendall Test

M-K Test Value (S)	-42
Tabulated p-value	0.018
Standard Deviation of S	20.18
Standardized Value of S	-2.031
Approximate p-value	0.0211

Statistically significant evidence of a decreasing trend at the specified level of significance.

Radium11

General Statistics

Number of Events Reported (m)	18
Number of Missing Events	3
Number or Reported Events Used	15
Number Values Reported (n)	18
Number Values Missing	3
Number Values Used	15
Minimum	1.3
Maximum	11.4
Mean	8.313
Geometric Mean	7.62
Median	8.93
Standard Deviation	2.558
Coefficient of Variation	0.308

Mann-Kendall Test

M-K Test Value (S)	-52
Tabulated p-value	0.004
Standard Deviation of S	20.18
Standardized Value of S	-2.527
Approximate p-value	0.00575

Statistically significant evidence of a decreasing trend at the specified level of significance.

Radium13	
General Statistics	
Number of Events Reported (m)	18
Number of Missing Events	3
Number or Reported Events Used	15
Number Values Reported (n)	18
Number Values Missing	3
Number Values Used	15
Minimum	0.629
Maximum	85.7
Mean	47.01
Geometric Mean	30.46
Median	52.6
Standard Deviation	28
Coefficient of Variation	0.596

Mann-Kendall Test

M-K Test Value (S)	-21
Tabulated p-value	0.164
Standard Deviation of S	20.21
Standardized Value of S	-0.99
Approximate p-value	0.161

Insufficient evidence to identify a significant trend at the specified level of significance.

Radium14	
General Statistics	
Number of Events Reported (m)	18
Number of Missing Events	3
Number or Reported Events Used	15
Number Values Reported (n)	18
Number Values Missing	3
Number Values Used	15
Minimum	17.5
Maximum	42.2
Mean	30.6
Geometric Mean	29.86
Median	29.4
Standard Deviation	6.858
Coefficient of Variation	0.224

Mann-Kendall Test

M-K Test Value (S)	-19
Tabulated p-value	0.19
Standard Deviation of S	20.21
Standardized Value of S	-0.891
Approximate p-value	0.187

Insufficient evidence to identify a significant trend at the specified level of significance.

Goodness-of-Fit Test Statistics for Data Sets with Non-Detects

User Selected Options

Date/Time of Computation ProUCL 5.110/2/2018 10:14:53 PM
From File ApplV_list.xls
Full Precision OFF
Confidence Coefficient 0.95

Arsenic11

Raw Statistics

Number of Valid Observations	15
Number of Missing Observations	3
Number of Distinct Observations	10
Minimum	0.06
Maximum	0.14
Mean of Raw Data	0.104
Standard Deviation of Raw Data	0.0269
Khat	14.07
Theta hat	0.00738
Kstar	11.3
Theta star	0.00918
Mean of Log Transformed Data	-2.301
Standard Deviation of Log Transformed Data	0.288

Normal GOF Test Results

Correlation Coefficient R	0.969
Shapiro Wilk Test Statistic	0.919
Shapiro Wilk Critical (0.05) Value	0.881
Approximate Shapiro Wilk P Value	0.249
Lilliefors Test Statistic	0.191
Lilliefors Critical (0.05) Value	0.22

Data appear Normal at (0.05) Significance Level

Arsenic12

Raw Statistics

Number of Valid Observations	15
Number of Missing Observations	3
Number of Distinct Observations	15
Minimum	8.9000E-4
Maximum	0.08
Mean of Raw Data	0.0385
Standard Deviation of Raw Data	0.0203
Khat	2.062
Theta hat	0.0187
Kstar	1.694
Theta star	0.0227
Mean of Log Transformed Data	-3.519
Standard Deviation of Log Transformed Data	1.044

Normal GOF Test Results

Correlation Coefficient R	0.962
Shapiro Wilk Test Statistic	0.934
Shapiro Wilk Critical (0.05) Value	0.881
Approximate Shapiro Wilk P Value	0.273
Lilliefors Test Statistic	0.186
Lilliefors Critical (0.05) Value	0.22

Data appear Normal at (0.05) Significance Level

Lithium4

	Num Obs	Num Miss	Num Valid	Detects	NDs	% NDs
Raw Statistics	18	3	15	14	1	6.67%
	Number	Minimum	Maximum	Mean	Median	SD
Statistics (Non-Detects Only)	1	0.022	0.022	0.022	0.022	N/A
Statistics (Non-Detects Only)	14	0.0079	0.34	0.0695	0.024	0.0976
Statistics (All: NDs treated as DL value)	15	0.0079	0.34	0.0663	0.022	0.0948
Statistics (All: NDs treated as DL/2 value)	15	0.0079	0.34	0.0656	0.021	0.0952
Statistics (Normal ROS Imputed Data)	15	0.0079	0.34	0.0655	0.021	0.0952
Statistics (Gamma ROS Imputed Data)	15	0.0079	0.34	0.0655	0.021	0.0953
Statistics (Lognormal ROS Imputed Data)	15	0.0079	0.34	0.0657	0.021	0.0951
	K hat	K Star	Theta hat Log	Mean Log	Stdv Log	CV Log
Statistics (Non-Detects Only)	0.756	0.642	0.0919	-3.458	1.263	-0.365
Statistics (NDs = DL)	0.776	0.665	0.0855	-3.482	1.221	-0.351
Statistics (NDs = DL/2)	0.746	0.641	0.0879	-3.528	1.247	-0.354
Statistics (Gamma ROS Estimates)	0.741	0.638	0.0883	-3.534	1.253	-0.354
Statistics (Lognormal ROS Estimates)	--	--	--	-3.518	1.239	-0.352

Normal GOF Test Results

	No NDs	NDs = DL	NDs = DL/Normal RO
Correlation Coefficient R	0.824	0.811	0.809

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.688	0.874	Data Not Normal
Shapiro-Wilk (NDs = DL)	0.669	0.881	Data Not Normal
Shapiro-Wilk (NDs = DL/2)	0.666	0.881	Data Not Normal
Shapiro-Wilk (Normal ROS Estimates)	0.666	0.881	Data Not Normal

Lognormal GOF Test Results

	No NDs	NDs = DL	NDs = DL/ Log ROS
Correlation Coefficient R	0.953	0.952	0.943

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.892	0.874	Data Appear Lognormal
Shapiro-Wilk (NDs = DL)	0.893	0.881	Data Appear Lognormal
Shapiro-Wilk (NDs = DL/2)	0.874	0.881	Data Not Lognormal
Shapiro-Wilk (Lognormal ROS Estimates)	0.878	0.881	Data Not Lognormal

Lithium5

Raw Statistics

Number of Valid Observations	15
Number of Missing Observations	3
Number of Distinct Observations	7
Minimum	2.3
Maximum	5.24
Mean of Raw Data	2.81
Standard Deviation of Raw Data	0.851
Khat	15.45
Theta hat	0.182
Kstar	12.41
Theta star	0.226
Mean of Log Transformed Data	1
Standard Deviation of Log Transformed Data	0.248

Normal GOF Test Results

Correlation Coefficient R	0.791
Shapiro Wilk Test Statistic	0.637
Shapiro Wilk Critical (0.05) Value	0.881
Approximate Shapiro Wilk P Value	2.4848E-5
Lilliefors Test Statistic	0.376
Lilliefors Critical (0.05) Value	0.22

Data not Normal at (0.05) Significance Level

Lognormal GOF Test Results

Correlation Coefficient R	0.825
Shapiro Wilk Test Statistic	0.687
Shapiro Wilk Critical (0.05) Value	0.881
Approximate Shapiro Wilk P Value	1.0157E-4
Lilliefors Test Statistic	0.366
Lilliefors Critical (0.05) Value	0.22

Data not Lognormal at (0.05) Significance Level

Lithium6

Raw Statistics

Number of Valid Observations	15
Number of Missing Observations	3
Number of Distinct Observations	13
Minimum	0.045
Maximum	0.42
Mean of Raw Data	0.213
Standard Deviation of Raw Data	0.125
Khat	2.804
Theta hat	0.076
Kstar	2.288
Theta star	0.0931
Mean of Log Transformed Data	-1.735
Standard Deviation of Log Transformed Data	0.675

Normal GOF Test Results

Correlation Coefficient R	0.97
Shapiro Wilk Test Statistic	0.923
Shapiro Wilk Critical (0.05) Value	0.881
Approximate Shapiro Wilk P Value	0.278
Lilliefors Test Statistic	0.147
Lilliefors Critical (0.05) Value	0.22

Data appear Normal at (0.05) Significance Level

Lithium7

	Num Obs	Num Miss	Num Valid	Detects	NDs	% NDs
Raw Statistics	18	3	15	12	3	20.00%
	Number	Minimum	Maximum	Mean	Median	SD
Statistics (Non-Detects Only)	3	0.0032	0.0032	0.0032	0.0032	0
Statistics (Non-Detects Only)	12	0.0032	0.34	0.0493	0.022	0.0922
Statistics (All: NDs treated as DL value)	15	0.0032	0.34	0.0401	0.021	0.0839
Statistics (All: NDs treated as DL/2 value)	15	0.0016	0.34	0.0398	0.021	0.084
Statistics (Normal ROS Imputed Data)	15	-0.13	0.34	0.0194	0.021	0.103
Statistics (Gamma ROS Imputed Data)	15	0.0032	0.34	0.0415	0.021	0.0833
Statistics (Lognormal ROS Imputed Data)	15	0.00144	0.34	0.0399	0.021	0.084
	K hat	K Star	Theta hat	Log Mean	Log Stdv	Log CV
Statistics (Non-Detects Only)	0.837	0.683	0.0589	-3.714	1.085	-0.292
Statistics (NDs = DL)	0.672	0.582	0.0596	-4.12	1.278	-0.31
Statistics (NDs = DL/2)	0.598	0.523	0.0666	-4.259	1.482	-0.348
Statistics (Gamma ROS Estimates)	0.832	0.71	0.0498	-3.893	1.03	-0.265
Statistics (Lognormal ROS Estimates)	--	--	--	-4.187	1.382	-0.33

Normal GOF Test Results

	No NDs	NDs = DL	NDs = DL/Normal RO
Correlation Coefficient R	0.634	0.62	0.624
	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.435	0.859	Data Not Normal
Shapiro-Wilk (NDs = DL)	0.416	0.881	Data Not Normal
Shapiro-Wilk (NDs = DL/2)	0.421	0.881	Data Not Normal
Shapiro-Wilk (Normal ROS Estimates)	0.703	0.881	Data Not Normal

Lognormal GOF Test Results

	No NDs	NDs = DL	NDs = DL/ Log ROS
Correlation Coefficient R	0.909	0.931	0.94
	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.862	0.859	Data Appear Lognormal
Shapiro-Wilk (NDs = DL)	0.872	0.881	Data Not Lognormal
Shapiro-Wilk (NDs = DL/2)	0.887	0.881	Data Appear Lognormal
Shapiro-Wilk (Lognormal ROS Estimates)	0.917	0.881	Data Appear Lognormal

Lithium9

Raw Statistics

Number of Valid Observations	15
Number of Missing Observations	3
Number of Distinct Observations	11
Minimum	0.056
Maximum	0.19
Mean of Raw Data	0.122
Standard Deviation of Raw Data	0.043
Khat	7.931
Theta hat	0.0154
Kstar	6.389
Theta star	0.0191
Mean of Log Transformed Data	-2.165
Standard Deviation of Log Transformed Data	0.384

Normal GOF Test Results

Correlation Coefficient R	0.985
Shapiro Wilk Test Statistic	0.953
Shapiro Wilk Critical (0.05) Value	0.881
Approximate Shapiro Wilk P Value	0.661
Lilliefors Test Statistic	0.122
Lilliefors Critical (0.05) Value	0.22

Data appear Normal at (0.05) Significance Level

Lithium13

	Num Obs	Num Miss	Num Valid	Detects	NDs	% NDs
Raw Statistics	18	3	15	14	1	6.67%
	Number	Minimum	Maximum	Mean	Median	SD
Statistics (Non-Detects Only)	1	0.0032	0.0032	0.0032	0.0032	N/A
Statistics (Non-Detects Only)	14	0.011	0.32	0.213	0.254	0.109
Statistics (All: NDs treated as DL value)	15	0.0032	0.32	0.199	0.25	0.119
Statistics (All: NDs treated as DL/2 value)	15	0.0016	0.32	0.199	0.25	0.119
Statistics (Normal ROS Imputed Data)	15	-0.0404	0.32	0.196	0.25	0.124
Statistics (Gamma ROS Imputed Data)	15	0.011	0.32	0.204	0.25	0.111
Statistics (Lognormal ROS Imputed Data)	15	0.011	0.32	0.2	0.25	0.117
	K hat	K Star	Theta hat	Log Mean	Log Stdv	Log CV
Statistics (Non-Detects Only)	1.72	1.399	0.124	-1.866	1.091	-0.585
Statistics (NDs = DL)	1.12	0.94	0.178	-2.124	1.452	-0.684
Statistics (NDs = DL/2)	1.037	0.874	0.192	-2.17	1.581	-0.728
Statistics (Gamma ROS Estimates)	1.705	1.408	0.12	-1.912	1.066	-0.558
Statistics (Lognormal ROS Estimates)	--	--	--	-2.01	1.191	-0.592

Normal GOF Test Results

	No NDs	NDs = DL	NDs = DL/Normal RO
Correlation Coefficient R	0.938	0.938	0.939

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.861	0.874	Data Not Normal
Shapiro-Wilk (NDs = DL)	0.857	0.881	Data Not Normal
Shapiro-Wilk (NDs = DL/2)	0.858	0.881	Data Not Normal
Shapiro-Wilk (Normal ROS Estimates)	0.87	0.881	Data Not Normal

Lognormal GOF Test Results

	No NDs	NDs = DL	NDs = DL/ Log ROS
Correlation Coefficient R	0.829	0.843	0.832

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.689	0.874	Data Not Lognormal
Shapiro-Wilk (NDs = DL)	0.711	0.881	Data Not Lognormal
Shapiro-Wilk (NDs = DL/2)	0.697	0.881	Data Not Lognormal
Shapiro-Wilk (Lognormal ROS Estimates)	0.724	0.881	Data Not Lognormal

Radium4

Raw Statistics

Number of Valid Observations	15
Number of Missing Observations	3
Number of Distinct Observations	15
Minimum	39.7
Maximum	82.2
Mean of Raw Data	59.44
Standard Deviation of Raw Data	13.62
Khat	19.99
Theta hat	2.974
Kstar	16.03
Theta star	3.707
Mean of Log Transformed Data	4.06
Standard Deviation of Log Transformed Data	0.234

Normal GOF Test Results

Correlation Coefficient R	0.982
Shapiro Wilk Test Statistic	0.948
Shapiro Wilk Critical (0.05) Value	0.881
Approximate Shapiro Wilk P Value	0.591
Lilliefors Test Statistic	0.137
Lilliefors Critical (0.05) Value	0.22

Data appear Normal at (0.05) Significance Level

Radium5

Raw Statistics

Number of Valid Observations	15
Number of Missing Observations	3
Number of Distinct Observations	14
Minimum	13.8
Maximum	21.1
Mean of Raw Data	17.51
Standard Deviation of Raw Data	1.856
Khat	94.24
Theta hat	0.186
Kstar	75.43
Theta star	0.232
Mean of Log Transformed Data	2.858
Standard Deviation of Log Transformed Data	0.107

Normal GOF Test Results

Correlation Coefficient R	0.981
Shapiro Wilk Test Statistic	0.969
Shapiro Wilk Critical (0.05) Value	0.881
Approximate Shapiro Wilk P Value	0.788
Lilliefors Test Statistic	0.126
Lilliefors Critical (0.05) Value	0.22

Data appear Normal at (0.05) Significance Level

Raw Statistics

Number of Valid Observations	15
Number of Missing Observations	3
Number of Distinct Observations	15
Minimum	2.9
Maximum	20.6
Mean of Raw Data	12.35
Standard Deviation of Raw Data	5.622
Khat	3.954
Theta hat	3.124
Kstar	3.208
Theta star	3.851
Mean of Log Transformed Data	2.382
Standard Deviation of Log Transformed Data	0.581

Normal GOF Test Results

Correlation Coefficient R	0.981
Shapiro Wilk Test Statistic	0.946
Shapiro Wilk Critical (0.05) Value	0.881
Approximate Shapiro Wilk P Value	0.559
Lilliefors Test Statistic	0.152
Lilliefors Critical (0.05) Value	0.22

Data appear Normal at (0.05) Significance Level

Raw Statistics

Number of Valid Observations	15
Number of Missing Observations	3
Number of Distinct Observations	14
Minimum	0.86
Maximum	22.2
Mean of Raw Data	15.3
Standard Deviation of Raw Data	6.435
Khat	2.62
Theta hat	5.838
Kstar	2.14
Theta star	7.146
Mean of Log Transformed Data	2.525
Standard Deviation of Log Transformed Data	0.867

Normal GOF Test Results

Correlation Coefficient R	0.94
Shapiro Wilk Test Statistic	0.879
Shapiro Wilk Critical (0.05) Value	0.881
Approximate Shapiro Wilk P Value	0.0499
Lilliefors Test Statistic	0.19
Lilliefors Critical (0.05) Value	0.22

Data appear Approximate Normal at (0.05) Significance Level

Radium11

Raw Statistics

Number of Valid Observations	15
Number of Missing Observations	3
Number of Distinct Observations	14
Minimum	1.3
Maximum	11.4
Mean of Raw Data	8.313
Standard Deviation of Raw Data	2.558
Khat	5.908
Theta hat	1.407
Kstar	4.771
Theta star	1.742
Mean of Log Transformed Data	2.031
Standard Deviation of Log Transformed Data	0.528

Normal GOF Test Results

Correlation Coefficient R	0.932
Shapiro Wilk Test Statistic	0.88
Shapiro Wilk Critical (0.05) Value	0.881
Approximate Shapiro Wilk P Value	0.0422
Lilliefors Test Statistic	0.151
Lilliefors Critical (0.05) Value	0.22

Data appear Approximate Normal at (0.05) Significance Level

Radium13

Raw Statistics

Number of Valid Observations	15
Number of Missing Observations	3
Number of Distinct Observations	15
Minimum	0.629
Maximum	85.7
Mean of Raw Data	47.01
Standard Deviation of Raw Data	28
Khat	1.293
Theta hat	36.35
Kstar	1.079
Theta star	43.57
Mean of Log Transformed Data	3.416
Standard Deviation of Log Transformed Data	1.345

Normal GOF Test Results

Correlation Coefficient R	0.978
Shapiro Wilk Test Statistic	0.938
Shapiro Wilk Critical (0.05) Value	0.881
Approximate Shapiro Wilk P Value	0.45
Lilliefors Test Statistic	0.13
Lilliefors Critical (0.05) Value	0.22

Data appear Normal at (0.05) Significance Level

Radium14

Raw Statistics

Number of Valid Observations	15
Number of Missing Observations	3
Number of Distinct Observations	15
Minimum	17.5
Maximum	42.2
Mean of Raw Data	30.6
Standard Deviation of Raw Data	6.858
Khat	20.5
Theta hat	1.493
Kstar	16.44
Theta star	1.861
Mean of Log Transformed Data	3.396
Standard Deviation of Log Transformed Data	0.234

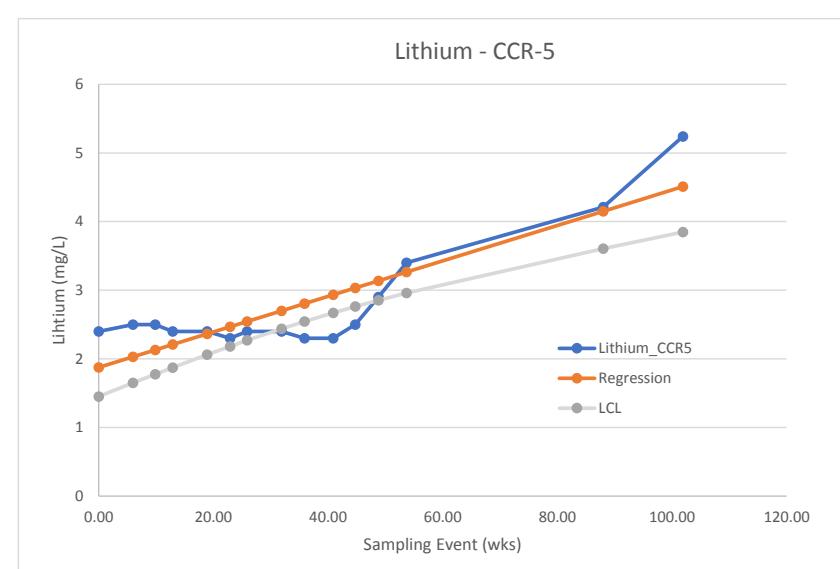
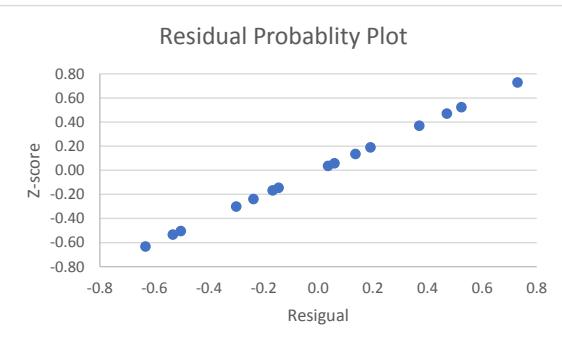
Normal GOF Test Results

Correlation Coefficient R	0.987
Shapiro Wilk Test Statistic	0.971
Shapiro Wilk Critical (0.05) Value	0.881
Approximate Shapiro Wilk P Value	0.867
Lilliefors Test Statistic	0.103
Lilliefors Critical (0.05) Value	0.22

Data appear Normal at (0.05) Significance Level

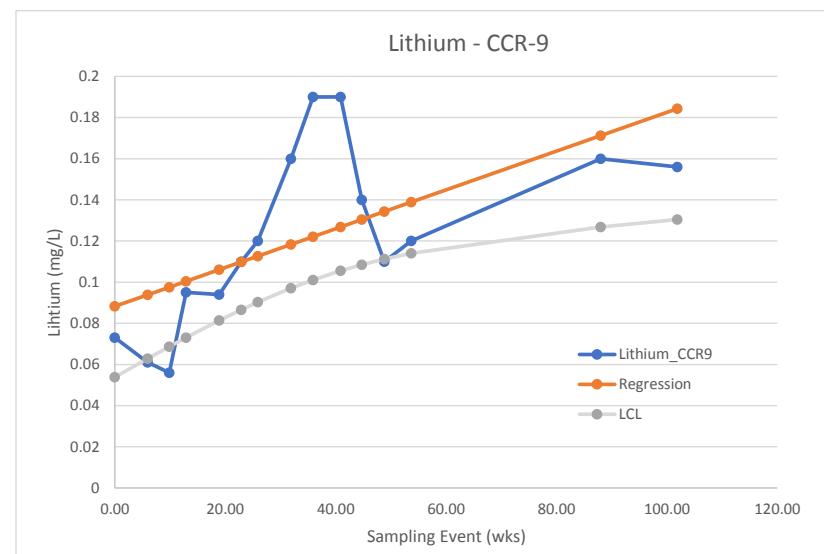
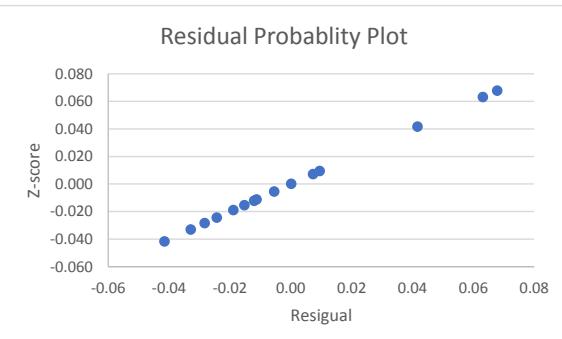
Obs No.	Date	Event_wks	Lithium_CCR5	Regression	Residual	r^2	Residual z score	LCL
1	8/4/2016	0.00	2.4	1.88	0.52	0.275	0.52	1.45
2	9/14/2016	5.96	2.5	2.03	0.47	0.222	0.47	1.65
3	10/12/2016	9.85	2.5	2.13	0.37	0.137	0.37	1.77
4	11/2/2016	12.91	2.4	2.21	0.19	0.036	0.19	1.87
5	12/14/2016	18.90	2.4	2.36	0.04	0.001	0.04	2.06
6	1/11/2017	22.90	2.3	2.47	-0.17	0.028	-0.17	2.18
7	2/1/2017	25.90	2.4	2.54	-0.14	0.021	-0.14	2.27
8	3/15/2017	31.90	2.4	2.70	-0.30	0.090	-0.30	2.44
9	4/12/2017	35.90	2.3	2.80	-0.50	0.253	-0.50	2.55
10	5/17/2017	40.90	2.3	2.93	-0.63	0.400	-0.63	2.67
11	6/13/2017	44.76	2.5	3.03	-0.53	0.284	-0.53	2.76
12	7/11/2017	48.82	2.9	3.14	-0.24	0.056	-0.24	2.85
13	8/15/2017	53.69	3.4	3.26	0.14	0.019	0.14	2.96
14	4/12/2018	87.99	4.21	4.15	0.06	0.004	0.06	3.60
15	7/18/2018	101.91	5.24	4.51	0.73	0.533	0.73	3.85

Slope = 0.0259
 Intercept = 1.875
 n = 15
 Mean Time = 36.15
 $s_e^2(\text{Variance Time})$ = 830.25
 Mean Concentration = 2.81
 $s_e^2(\text{MSE})$ = 0.18
 $F_{(1-2\alpha,2,n-2)}$ = 2.76



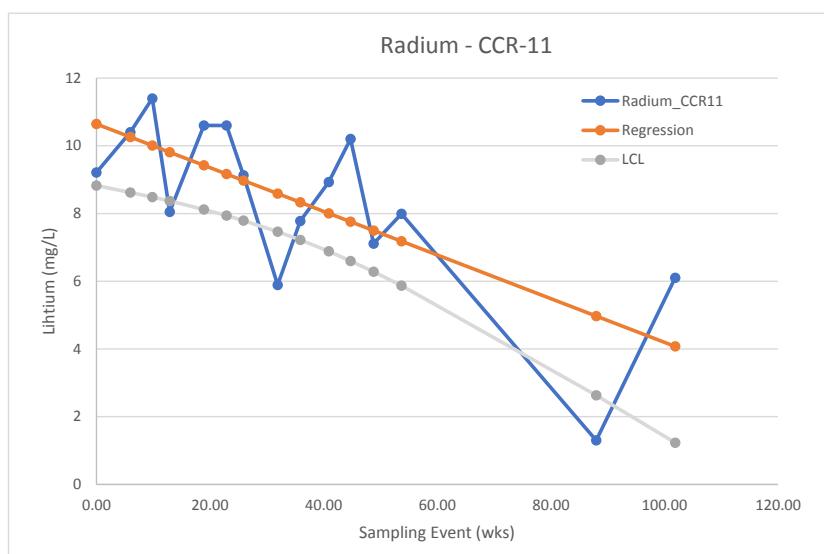
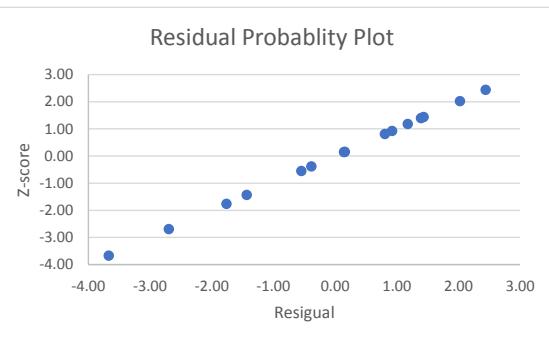
Obs No.	Date	Event_wks	Lithium_CCR9	Regression	Residual	r^2	Residual z score	LCL
1	8/4/2016	0.00	0.073	0.09	-0.02	2.3E-04	-0.015	0.05
2	9/14/2016	5.96	0.061	0.09	-0.03	1.1E-03	-0.033	0.06
3	10/12/2016	9.85	0.056	0.10	-0.04	1.7E-03	-0.042	0.07
4	11/2/2016	12.91	0.095	0.10	-0.01	2.9E-05	-0.005	0.07
5	12/14/2016	18.90	0.094	0.11	-0.01	1.5E-04	-0.012	0.08
6	1/11/2017	22.90	0.11	0.11	0.00	2.6E-08	0.000	0.09
7	2/1/2017	25.90	0.12	0.11	0.01	5.4E-05	0.007	0.09
8	3/15/2017	31.90	0.16	0.12	0.04	1.7E-03	0.042	0.10
9	4/12/2017	35.90	0.19	0.12	0.07	4.6E-03	0.068	0.10
10	5/17/2017	40.90	0.19	0.13	0.06	4.0E-03	0.063	0.11
11	6/13/2017	44.76	0.14	0.13	0.01	9.1E-05	0.010	0.11
12	7/11/2017	48.82	0.11	0.13	-0.02	5.9E-04	-0.024	0.11
13	8/15/2017	53.69	0.12	0.14	-0.02	3.6E-04	-0.019	0.11
14	4/12/2018	87.99	0.16	0.17	-0.01	1.3E-04	-0.011	0.13
15	7/18/2018	101.91	0.156	0.18	-0.03	8.0E-04	-0.028	0.13

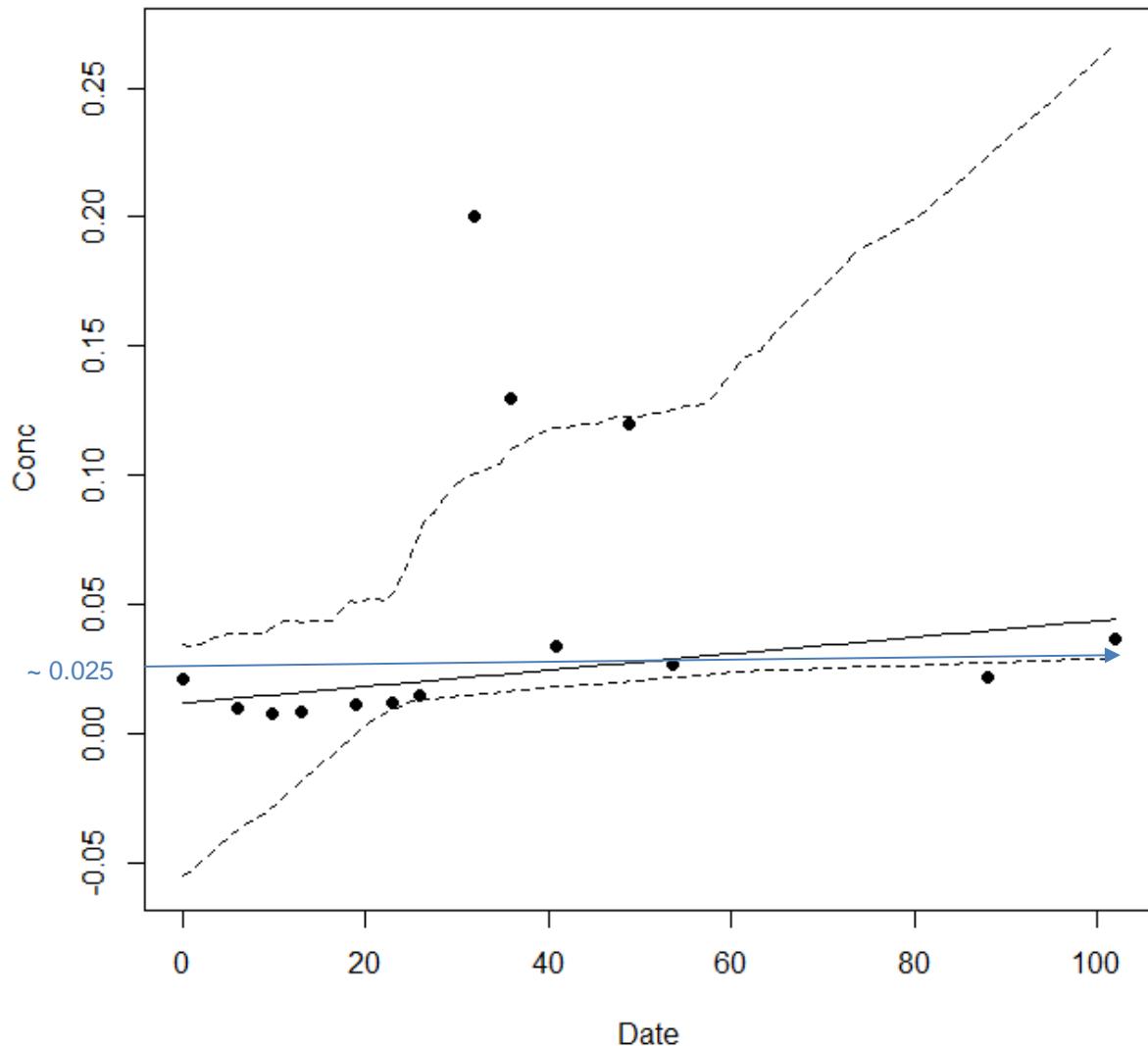
Slope = 0.0009
 Intercept = 0.088
 n = 15
 Mean Time = 36.15
 $s_e^2(\text{Variance Time}) = 830.25$
 Mean Concentration = 0.12
 $s_e^2(\text{MSE}) = 0.00$
 $F_{(1-2a,2,n-2)} = 2.76$



Obs No.	Date	Event_wks	Radium_CCR11	Regression	Residual	r^2	Residual z score	LCL
1	8/4/2016	0.00	9.21	10.64	-1.43	2.05	-1.43	8.83
2	9/14/2016	5.96	10.4	10.26	0.14	0.02	0.14	8.62
3	10/12/2016	9.85	11.4	10.01	1.39	1.94	1.39	8.48
4	11/2/2016	12.91	8.05	9.81	-1.76	3.10	-1.76	8.37
5	12/14/2016	18.90	10.6	9.42	1.18	1.38	1.18	8.12
6	1/11/2017	22.90	10.6	9.17	1.43	2.05	1.43	7.94
7	2/1/2017	25.90	9.13	8.97	0.16	0.02	0.16	7.79
8	3/15/2017	31.90	5.89	8.59	-2.70	7.27	-2.70	7.47
9	4/12/2017	35.90	7.78	8.33	-0.55	0.30	-0.55	7.22
10	5/17/2017	40.90	8.93	8.01	0.92	0.85	0.92	6.88
11	6/13/2017	44.76	10.2	7.76	2.44	5.96	2.44	6.60
12	7/11/2017	48.82	7.11	7.50	-0.39	0.15	-0.39	6.28
13	8/15/2017	53.69	7.99	7.18	0.81	0.65	0.81	5.87
14	4/12/2018	87.99	1.3	4.97	-3.67	13.48	-3.67	2.63
15	7/18/2018	101.91	6.1	4.08	2.02	4.10	2.02	1.23

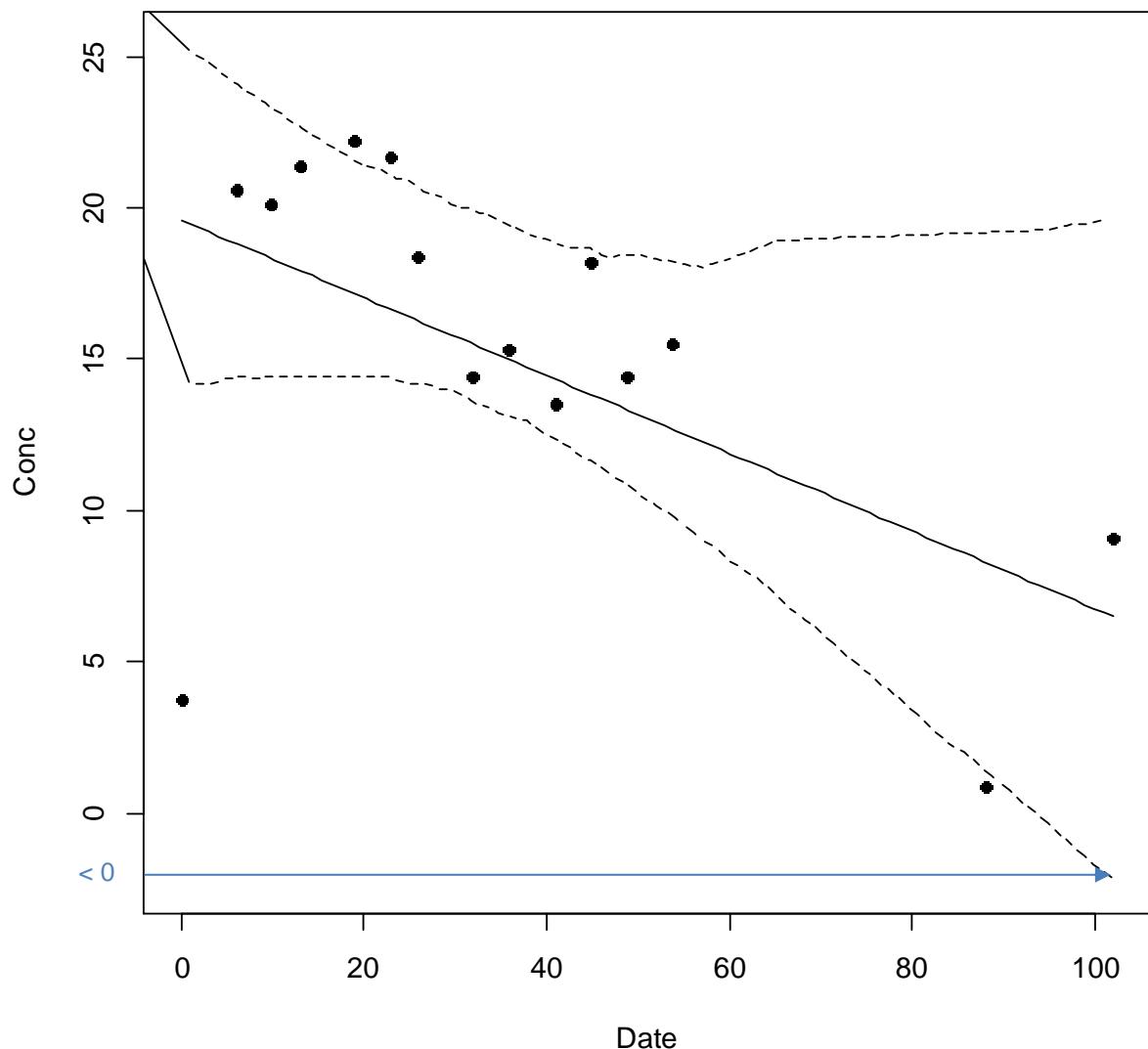
Slope = -0.0644
 Intercept = 10.642
 n = 15
 Mean Time = 36.15
 s_t^2 (Variance Time) = 830.25
 Mean Concentration = 8.31
 s_e^2 (MSE) = 3.33
 $F_{(1-2\alpha, 2, n-2)}$ = 2.76





**CONFIDENCE BAND AROUND THEIL-SEN TREND LINE
LITHIUM _ CCR-4**

(R script for the Theil-Sen Confidence Band from Unified Guidance (Appendix C.3.2)



**CONFIDENCE BAND AROUND THEIL-SEN TREND LINE
RADRIUM 226+228 _ CCR-9**

(R script for the Theil-Sen Confidence Band from Unified Guidance (Appendix C.3.2)



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