Prepared For:

Gavin Power, LLC

Cheshire, Ohio

2017 Annual Groundwater Monitoring and Corrective Action Report

Fly Ash Reservoir
Gavin Power Plant
Cheshire, Ohio

31 January 2018

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Gavin Power, LLC

2017 Annual Groundwater Monitoring and Corrective Action Report

Fly Ash Reservoir
at Gavin Power Plant in Cheshire, Ohio

January 2018

Project No. 0402270

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1.0 INTRODUCTION

The General James M. Gavin Power Plant (Plant) is a coal-fired generating station located in Gallia County in Cheshire, Ohio, along the Ohio River. The Plant consists of three regulated coal combustion residual (CCR) management units that are subject to regulation under Title 40, Code of Federal Regulations, Part 257 (40 CFR §257) (also known as the CCR Rule): the Residual Waste Landfill (RWL), the Fly Ash Reservoir (FAR), and the Bottom Ash Complex (BAC).

This report was produced by Environmental Resource Management, Inc. (ERM), on behalf of Gavin Power, LLC, and focuses on the initial annual groundwater monitoring results for the FAR. The report summarizes the activity at the site over the last year and provides a statistical summary of the findings of samples collected by October 17, 2017 as required by 40 CFR §257.94. Consistent with the notification requirements of the Rule, this annual groundwater monitoring report will be posted to the Plant's operating record and notification will be made to the State of Ohio no later than January 31, 2018, and the report will be placed on the publically accessible internet site within 30 days thereafter (40 CFR §257.105(h), §257.106(h), §257.107(h)). Table 1 cross references the reporting requirements under the CCR Rule with the contents of this report.

Coal combustion byproduct waste ("residual waste") generated by the Plant is currently placed in the 255-acre RWL located west of the main Plant area. Prior to construction of the RWL in 1994, fly ash was sluiced to the FAR just west of the RWL. The FAR was used primarily for wastewater treatment and disposal of fly ash, and was designed to occupy approximately 300 acres of the previously dammed, former Stingy Run stream valley. The FAR received coal combustion materials from the Gavin Plant from the mid-1970s until January 1995. A Closure Plan for the FAR was approved by the Ohio Environmental Protection Agency in 2016. Closure of the FAR is currently in progress, and is anticipated to be completed by 2020.

Table 1 Regulatory Requirement Cross-Reference Table

Regulatory Citation in 40 CFR §257	Requirement (paraphrased)	Where Addressed in this Report
§257.90(e)	Status of the groundwater monitoring program.	Section 2.0
§257.90(e)	Summarize key actions completed.	Section 2.2
§257.90(e)	Describe any problems encountered.	Section 2.2
§257.90(e)	Key activities for upcoming year.	Section 4.0
§257.90(e)(1)	Map, aerial image, or diagram of CCR Unit and monitoring wells	Figure 1
§257.90(e)(2)	Identification of new monitoring wells installed or abandoned during the preceding year.	There were no new monitoring wells installed or abandoned during the preceding year.
§257.90(e)(3)	Summary of groundwater data, wells sampled, date sampled, and whether sample was required under detection or assessment monitoring.	Table 2 and Table 3, Appendix A
§257.90(e)(4)	Narrative Discussion of any transition between monitoring programs.	Section 4.0

2.0 PROGRAM STATUS 257.90(E)

Hydrogeology within the FAR is characterized by a shallow zone of saturation that overlies an upper aquifer system comprised of sandstone and interbedded clay and shale units. The uppermost aquifer system, which includes the Morgantown sandstone and the Cow Run sandstone, is overlain by the Clarksburgh Red Beds, which act as a confining layer.

Over the past 2 years, samples were collected from the certified federal monitoring-well network in the FAR. The groundwater samples were collected as part of Detection Monitoring under 40 CFR §257.94 and analyzed for the constituents listed in Appendix III and Appendix IV to 40 CFR §257.

The groundwater samples were collected from three upgradient wells (96153R, 96154R, and 96156) and five downgradient monitoring wells (2016-01, 2016-03, 2016-15, 2016-07, and 2016-11) in the Morgantown sandstone, as summarized below in Table 2. Monitoring well 9910, which is screened in the Morgantown sandstone, could not be sampled due to an insufficient volume of water within the well. Groundwater samples were collected from two upgradient wells (2016-09 and MW-20) and six downgradient wells (2016-02, 2016-04, 2016-06, 2016-08, 2016-10, and 96147) in the Cow Run sandstone, as summarized below in Table 3.

The monitoring well locations can be viewed on the site location map and aerial image provided in Figure 1. No new wells were installed or decommissioned after the certification of the well network (Geosyntec 2016).

2.1 GROUNDWATER FLOW RATE AND DIRECTION

Depth to groundwater measurements were made at each monitoring well prior to each sampling event. Groundwater elevations, calculated by subtracting the depth to groundwater from the surveyed reference elevation for each well, were reviewed for each sampling event and hydraulic gradients between wells were calculated.

The horizontal hydraulic gradients observed in the Morgantown and Cow Run sandstones were very similar and consistent over time. The hydraulic gradients ranged from approximately 0.01 to 0.05 over the eight sampling events. Average groundwater elevations for wells screened in the Cow Run sandstone, the interpreted potentiometric contours, and the groundwater flow direction are presented in Figure 2. The principal

direction of groundwater flow in the uppermost aquifer system under the FAR (both in the Morgantown and Cow Run sandstones) is from the north, towards the south and southeast. Based on the average measured hydraulic gradient of 0.03, an assumed porosity of 0.3, and a measured hydraulic conductivity of 1.63x10-7 cm/sec (Geosyntec, 2012), the average groundwater velocity in the uppermost aquifer beneath the FAR is estimated to be approximately 0.02 feet per year.

2.2 *SAMPLING SUMMARY*

A summary of the total number of samples collected for each well over the last 2 years, the sample dates, and the well gradient designation (upgradient or downgradient of the CCR unit), is provided in Table 2 and Table 3. Sampling occurred approximately every other month starting in June 8, 2016. The results for metals represent total recoverable metals.

Each of the FAR wells was sampled during each of the eight sampling events from August 2016 through July 2017 for the 40 CFR §257 Appendix III and Appendix IV analytes, with the following exceptions:

- Well 2016-04 was not sampled during the October or December 2016 events due to a pump malfunction, which was repaired for subsequent sampling events.
- Well 2016-07 was not sampled during the June or July 2016 events due to a pump valve malfunction, which was repaired. An additional attempt to sample the well in August 2017 was successful.
- Well 2016-08 did not produce enough water to sample during the July 2017 sampling event. An additional attempt was made in August 2017, but there was still insufficient water in the well to sample.
- Well 2016-11 was not sampled during the October or November 2016 events due to a malfunctioning check valve, which was repaired for subsequent sampling events. The well was not sampled during the June or July 2017 sampling events due to insufficient water. An additional attempt was made to sample the well in August 2017, but there was still insufficient water. This well did not meet the minimum data quality criteria for upper prediction limit (UPL) calculation (see ERM 2017).
- Well 96153R was not sampled during the January 2017 event due to a malfunctioning pump, which was repaired for subsequent sampling events.
- Well 96156 was not analyzed for chloride, fluoride, sulfate, or total dissolved solids (TDS) during the October or November 2016 sampling

events due to lack of sample volume as the well went dry as it was sampled.

- Well MW-20 was not sampled during the January or March 2016 events due to a malfunctioning pump, which was repaired for subsequent sampling events.
- Well 9910 did not produce enough water to be sampled during any of the sampling events except for October 2016 when the well stabilized as it went dry and the pH was able to be recorded.

2.2.1 Data Quality

As discussed below, ERM's data quality review found the laboratory analytical results to be valid, reliable, and useable for decision-making purposes with the listed qualifiers. No analytical results were rejected.

ERM reviewed field and laboratory documentation to assess the validity, reliability and usability of the analytical results. Samples from the first four sampling events (August 2016 through February 2017) were analyzed by American Electric Power (the former owner of the Gavin Plant) at the Dolan Chemical Laboratory located in Groveport Ohio. Available data quality information included field-sampling forms, chain-of-custody documentation, quantitation limits, and completeness of the analyses.

Samples from the second four sampling events (March 2017 through August 2017) were analyzed by TestAmerica of North Canton, Ohio. Data quality information reviewed for these results included field sampling forms, chain-of-custody documentation, holding times, laboratory methods, cooler temperatures, laboratory method blanks, laboratory control sample recoveries, field duplicate samples, matrix spikes/matrix spike duplicates, quantitation limits, and equipment blanks. Data qualifiers were appended to results in the project database as appropriate based on laboratory quality measurements (e.g., control sample recoveries) and field quality measurements (e.g., agreement between normal and field duplicate samples).

Table 2 ***Sampling Dates for Each Monitoring Well in the Morgantown Sandstone***

	Well	2016-01	2016-03	2016-15	2016-07	2016-11	96153R	96154R	96156
	Gradient	DG	DG	DG	DG	DG	UG	UG	UG
Date Sampled	2016-08-23					X	X	X	X
	2016-08-24	X	X		X				
	2016-08-25			X					
	2016-10-03		X				X	X	X
	2016-10-05	X		X	X				
	2016-11-29						X	X	X
	2016-11-30	X			X				
	2016-12-01		X	X					
	2017-01-30					X		X	X
	2017-01-31	X	X		X				
	2017-02-01			X					
	2017-03-21					X	X	X	X
	2017-03-22	X			X				
	2017-03-27		X	X					
	2017-04-25					X	X	X	X
	2017-04-26	X							
	2017-04-27		X	X	X				
	2017-06-06						X	X	X
	2017-06-07	X	X						
	2017-06-08			X					
	2017-07-12						X	X	X
	2017-07-13	X							
	2017-07-14		X	X					
	2017-08-10				X				

Notes: All samples summarized in this table were collected under Detection Monitoring per §257.94. DG is downgradient. UG is upgradient.

Table 3 *Sampling Dates for Each Monitoring Well in the Cow Run Sandstone*

	Well	2016-02	2016-04	2016-06	2016-08	2016-09	2016-10	96147	MW-20
	Gradient	DG	DG	DG	DG	UG	DG	DG	UG
Date Sampled	2016-08-23					X	X	X	X
	2016-08-24	X	X		X				
	2016-08-25			X					
	2016-10-03			X		X	X		
	2016-10-05	X			X			X	X
	2016-11-29					X	X		
	2016-11-30	X			X			X	
	2016-12-01			X					X
	2017-01-30					X	X		
	2017-01-31	X	X		X			X	
	2017-02-01			X					
	2017-03-21					X	X		
	2017-03-22	X			X			X	
	2017-03-27		X	X					
	2017-04-25					X	X		X
	2017-04-26	X							
	2017-04-27		X	X	X			X	
	2017-06-06					X	X		X
	2017-06-07	X	X		X			X	
	2017-06-08			X					
	2017-07-12					X	X		
	2017-07-13	X						X	
	2017-07-14		X	X					X

NoteS: All samples summarized in this table were collected under Detection Monitoring per §257.94. DG is downgradient. UG is upgradient.

3.0 STATISTICAL ANALYSIS AND RESULTS

Consistent with the CCR Rule and the Statistical Analysis Plan (StAP) that is in the operating record (ERM, 2017), a prediction limit approach (40 CFR §257.93(f)) was used to identify potential impacts to groundwater. The steps outlined in the decision framework in the StAP include:

- Pooled vs individual comparisons.
- Establishment of the upgradient dataset.
- Calculating prediction limits.
- Drawing conclusions.

3.1 POOLED VS. INDIVIDUAL WELL COMPARISONS

When multiple upgradient wells were available within the same geologic formation, concentrations were compared among these wells to determine if they could be pooled to create a single upgradient dataset, or alternately, if the background data set should be established for each individual upgradient well. For each analyte, Boxplots (see Appendix A, Figure A-1) and Kruskal Wallis results (see Appendix A, Table A-1) are provided for upgradient wells. The statistical test shows that:

- Concentrations in upgradient wells were significantly different for 13 analytes, so individual well analysis was used for these analytes.
- Concentrations in upgradient wells were not significantly different for 1 analyte (boron), so a pooled analysis was used for this analyte.

Table 4 identifies the statistical analysis that was used for each analyte.

Table 4 Analysis Type for Each Upgradient Dataset

Geology	Analyte	Analysis Type
Cow Run SS	Boron	Pooled
Cow Run SS	Calcium	Individual
Cow Run SS	Chloride	Individual
Cow Run SS	Fluoride	Individual
Cow Run SS	pH	Individual
Cow Run SS	Sulfate	Individual
Cow Run SS	TDS	Individual
Morgantown SS	Boron	Individual
Morgantown SS	Calcium	Individual
Morgantown SS	Chloride	Individual
Morgantown SS	Fluoride	Individual
Morgantown SS	pH	Individual
Morgantown SS	Sulfate	Individual
Morgantown SS	TDS	Individual

3.2 ESTABLISHMENT OF UPGRADIENT DATASET

When evaluating the concentrations of analytes in groundwater, USEPA guidance (2009) recommends performing a quality check of the data to identify any anomalies. In addition to the data validation that was performed (discussed above in Section 2.2.1), descriptive statistics, outlier testing, and checking for temporal stationarity were completed to finalize the upgradient dataset (the supporting documentation is found in Appendix A and discussed below).

3.2.1 Descriptive Statistics

Descriptive statistics were calculated for upgradient wells and analytes at the site (see Appendix A, Table A-2). The descriptive statistics highlight a number of relevant characteristics about the Morgantown SS upgradient datasets including:

- There are a total of 21 well-analyte combinations for the upgradient dataset (three upgradient monitoring wells and seven constituents for Detection Monitoring (40 CFR §257 Appendix III)).
- Nineteen well-analyte combinations have detection rates greater than or equal to 50 percent.
- Nineteen well-analyte combinations have 100 percent detects.
- Seventeen well-analyte combinations follow a normal distribution (using Shapiro-Wilks Normality Test), one well-analyte combination follows a log-normal distribution, and one well-analyte combination had no discernible distribution.

For the Cow Run SS upgradient datasets, descriptive stats highlight the following:

- There are a total of 13 well-analyte combinations for the upgradient dataset (two upgradient monitoring wells, one of which utilizes a pooled analysis and seven 40 CFR §257 Appendix III constituents for Detection Monitoring).
- Thirteen well-analyte combinations have 100 percent detects.
- Six well-analyte combinations follow a normal distribution (using Shapiro-Wilks Normality Test) and three well-analyte combinations follow a log-normal distribution. The remaining well-analyte combinations have no discernible distribution.

3.2.2 Outlier Determination

As discussed in the StAP, both statistical and visual outlier tests were performed on the upgradient datasets. Data points identified as both a statistical and visual outliers (see Appendix A, Figure A-2 and Table A-3) were reviewed by the project hydrogeologists to determine if these data points should be excluded from the dataset. A total of five potential outliers were identified with visual and statistical tests. After careful review, none of these were excluded from UPL calculations (see Appendix A, Table A-3).

3.2.3 Checking for Temporal Stability

A trend test was calculated for all detected values in the upgradient wells as long as they had at least five detected data points and at least 50 percent detection rate. A summary report of the Mann Kendall trend test results and time series plots can be found Appendix A, Figure A-3 and

Table A-4. The following summarize the results of the trend analysis across the two geologic types:

- There are a total of 34 well-analyte combinations in the upgradient dataset.
- Thirty-two well-analyte combinations meet the data requirements of the trend test.
- Three well-analyte combinations had a significant increasing trend.
- One well-analyte combination had a significant decreasing trend.
- Twenty-eight well-analyte combinations had no significant trend (i.e., concentrations were stable over time).

3.3 ESTABLISHING UPPER PREDICTION LIMITS

As described in the StAP, a multi-part assessment of the monitoring wells was performed to determine what type of UPL should be used for the analysis. A complete table of UPLs and the methods used to calculate them can be found in Appendix A, Table A-5.

Upgradient wells that had fewer than five detected values utilized the maximum concentration in the upgradient dataset for the UPL. The two well-analyte combinations that did not meet the minimum data requirements for a calculated UPL are listed below:

- Fluoride in well 96156
- Sulfate in well 96516

A total of four well-analyte combinations were found to have either increasing or decreasing trends. For these well-analyte pairs, a bootstrapped UPL calculated around a Theil Sen trend was used to derive a more accurate UPL (ERM 2017).The remaining 28 well-analyte combinations were found to have no significant trend. Sanitas was used to calculate static UPLs using an annual site-wide false positive rate of 0.1 and a 1-of-2 retesting approach as discussed in the StAP.

3.3.1 Final UPL Selection

A final UPL was selected for each analyte and compared to the most recent sample in downgradient wells. For the boron in Cow Run sandstone the upgradient dataset was pooled prior to UPL calculations, resulting in a single UPL value. The remaining analytes had a UPL value calculated for each of the upgradient wells. For these wells and analytes,

the maximum UPL was selected as the representative UPL for each analyte (or the minimum lower prediction limit [LPL] in the case of pH) (ERM 2017). All final UPL values are shown in Table 5 below and Appendix A, Table A-5.

Table 5 Final UPLs for each Analyte and Geologic Unit

UPL Type	Analyte	Geology	LPL	UPL	Unit
Pooled	Boron	Cow Run SS		0.369	mg/L
Individual	Calcium	Cow Run SS		500	mg/L
Individual	Chloride	Cow Run SS		1,990	mg/L
Individual	Fluoride	Cow Run SS		2.56	mg/L
Individual	pH	Cow Run SS	6.5	12.8	SU
Individual	Sulfate	Cow Run SS		2,200	mg/L
Individual	TDS	Cow Run SS		5,110	mg/L
Individual	Boron	Morgantown SS		0.586	mg/L
Individual	Calcium	Morgantown SS		437	mg/L
Individual	Chloride	Morgantown SS		17,000	mg/L
Individual	Fluoride	Morgantown SS		5	mg/L
Individual	pH	Morgantown SS	5.53	11.5	SU
Individual	Sulfate	Morgantown SS		2,000	mg/L
Individual	TDS	Morgantown SS		25,500	mg/L

LPL = lower prediction limit; mg/L = milligrams per liter; SU = standard units; TDS = total dissolved solids; UPL = upper prediction limit

3.4 CONCLUSIONS

The downgradient samples collected during the August 2017 sampling event were used for compliance comparisons. All downgradient wells were below the UPLs with the following exceptions (Table 6 below, and Appendix A Table A-6).

Table 6 Downgradient Measurements that Exceed the UPL

Analyte	Well	Geology	UPL	Sample Date	Value	Unit	SSI
Boron	2016-02	Cow Run SS	0.369	2017-07-13	0.53	mg/L	Yes
Boron	2016-06	Cow Run SS	0.369	2017-07-14	0.5	mg/L	Yes
Boron	2016-10	Cow Run SS	0.369	2017-07-12	0.54	mg/L	Yes
Boron	96147	Cow Run SS	0.369	2017-07-13	0.5	mg/L	Yes
Chloride	2016-02	Cow Run SS	1,990	2017-07-13	10,000	mg/L	Yes
Chloride	2016-10	Cow Run SS	1,990	2017-07-12	12,000	mg/L	Yes
Fluoride	2016-01	Morgantown SS	5	2017-07-13	16	mg/L	Yes
Fluoride	2016-06	Cow Run SS	2.56	2017-07-14	6.1	mg/L	Yes
Fluoride	96147	Cow Run SS	2.56	2017-07-13	4.6	mg/L	Yes
TDS	2016-02	Cow Run SS	5,110	2017-07-13	17,000	mg/L	Yes
TDS	2016-10	Cow Run SS	5,110	2017-07-12	15,000	mg/L	Yes

LPL = lower prediction limit; mg/L = milligrams per liter; SSI = statistically significant increase; SU = standard units; TDS = total dissolved solids; UPL = upper prediction limit

The downgradient measurements that exceed the UPL are considered statistically significant increases (SSI) above background. The Unified Guidance (USEPA 2009) recommends re-testing as part of the UPL method. Per the Unified Guidance and the 1-of-2 retesting scheme described in the StAP, the downgradient wells with SSIs may be resampled to support an alternate source demonstration (§257.90(e)(2)).

The maximum UPL for fluoride in Morgantown sandstone did not meet the minimum data requirements (5 detected values) for UPL calculations. However, the second highest UPL (4.99 milligrams per liter [mg/L]) was nearly identical to the selected UPL (5 mg/L), so the maximum UPL was retained for compliance point comparisons. These UPLs will be re-

evaluated in future annual reports to ensure they accurately represent current upgradient conditions.

All downgradient wells with initial exceedances were examined for trends to assess the stability of concentrations. A summary of these trend test results can be found in Appendix A, Figure A-4 and Table A-6. Of the downgradient wells with SSIs, none were observed to have decreasing trends, and the following wells had no trends:

- 2016-02 for chloride and TDS
- 2016-06 for boron and fluoride
- 2016-10 for boron

The following wells had significantly increasing trends:

- 2016-01 for fluoride
- 2016-02 for boron
- 96147 for boron, fluoride
- 2016-10 for chloride, TDS

All trends will be monitored closely in future events. All wells with SSIs are plotted in Appendix A, Figure A-4. A summary of all analytical results obtained from the FAR groundwater monitoring is provided in Appendix B.

4.0 KEY FUTURE ACTIVITIES

Consistent with the 1-of-2 retesting approach described in the Unified Guidance (USEPA 2009) and the StAP (ERM 2017), initial exceedances will be retested as soon as practicable. Years of state-required groundwater monitoring (per Ohio Administrative Code 3745-30) at the FAR have been completed. This dataset has been utilized to assist in determining alternate offsite sources for SSIs at the adjacent Gavin Residual Waste Landfill. Utilizing this data, investigation into potential alternate sources of SSIs will begin immediately. Assessment monitoring will be initiated unless an Alternate Source Demonstration can be made successfully by April 15, 2018.

Well 9910 is recommended to be removed from the sampling program due to the continued lack of water and the proximity to Morgantown monitoring well 2016-07.

5.0 REFERENCES

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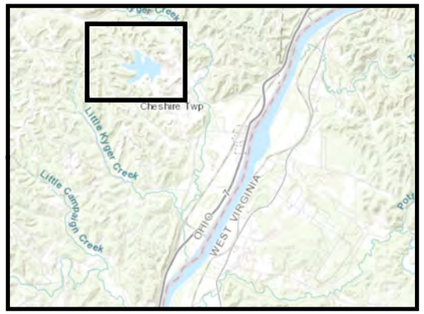
Figures



Legend

- Federal Sampling Program Monitoring Well (Morgantown Sandstone)
- Federal Sampling Program Monitoring Well (Cow Run sandstone)

NOTES:
1. Locations are approximate
2. Aerial Imagery: USA NAIP 2015

N

0 170 340 680 1,020 1,360
Feet

Figure 1: Monitoring Well Network Map
Fly Ash Reservoir
Gavin Power Plant
Cheshire, Ohio

ERM

Q:\Team\DMM\Clients_F_K\Gavin\GavinPowerPlant\MXD\Figure2-1_NW_NetworkMap_FAR.mxd - Dana.Heisenfelt - 1/17/2018

MW-20
762.02

Fly Ash
Reservoir

2016-09
636.83

96149
653.61

630
640
620
610
570
600
580
590
600

2016-08
559.44

2016-06
580.87

96147
dry

2016-04
597.93

96158
577.84

2016-10
619.25

96145 (decommissioned
on 5/6/2014 due
to landfill expansion)

2016-02
573.7

9804
571.21

9801
591.45

2002
Dry

Residual
Waste
Landfill

94136
563.49

93105
573.53

94126
608.57

2016-20
498.34

93100
603.50

93101
582.88

Main
Plant
Area

NOTES:
1. Locations are approximate
2. Groundwater Elevation averaged from 2016 to present
3. Mining data from Ohio Department of Natural Resources
4. Aerial Imagery: USDA NAIP 2015

Legend

- Cow Run Sand Stone Wells with Groundwater Elevation
- Other Wells
- Groundwater Elevation Contours
- Estimated Groundwater Flow Direction

Underground Mines

- Air Shaft
- Drift entry
- Mine Locations (Unassociated)
- Underground Mine

N

0 250 500 1,000 1,500 2,000
Feet

Figure 2: Cow Run
Potentiometric Surface Map
Fly Ash Reservoir
Gavin Power Plant
Cheshire, Ohio

ERM

Q:\Team\DMM\Clients_F_K\Gavin\GavinPowerPlant\MXD\Figure2-2_CowRunPotentiometricSurface_FAR_20180115.mxd - Dana.Heisinhveld - 1/17/2018

Appendix A
Statistical Support

Table 1
Kruskal-Wallis Test Comparion Upgradient Wells
Gavin Power, LLC
Fly Ash Reservoir

Analyte	Geology	N	Num Detects	Percent Detects	DF	KW Statistic	p-value	Conclusion	UPL Type
Boron	Cow Run SS	14	14	1	1	0.0673	0.795	No Significant Difference	Pooled
Calcium	Cow Run SS	14	14	1	1	9.69	0.00186	Significant Difference	Individual
Chloride	Cow Run SS	14	14	1	1	9.64	0.0019	Significant Difference	Individual
Fluoride	Cow Run SS	14	14	1	1	8.84	0.00295	Significant Difference	Individual
pH	Cow Run SS	14	14	1	1	9.66	0.00188	Significant Difference	Individual
Sulfate	Cow Run SS	14	14	1	1	9.62	0.00192	Significant Difference	Individual
TDS	Cow Run SS	14	14	1	1	9.66	0.00188	Significant Difference	Individual
Boron	Morgantown SS	23	23	1	2	8.29	0.0159	Significant Difference	Individual
Calcium	Morgantown SS	23	23	1	2	19.6	<0.001	Significant Difference	Individual
Chloride	Morgantown SS	21	21	1	2	17.8	<0.001	Significant Difference	Individual
Fluoride	Morgantown SS	21	16	0.761904762	2	10.7	0.00468	Significant Difference	Individual
pH	Morgantown SS	23	23	1	2	14.3	<0.001	Significant Difference	Individual
Sulfate	Morgantown SS	21	17	0.80952381	2	15.9	<0.001	Significant Difference	Individual
TDS	Morgantown SS	21	21	1	2	14.8	<0.001	Significant Difference	Individual

Notes

N: number of data points
DF: Degrees of Freedom
statistic: Kruskal Wallis test statistic
p-value: P-values below 0.05 indicate that the median concentrations in the upgradient wells are significantly different from each other and the upgradient wells should not be pooled.
p-value: P-values equal or above 0.05 indicate that the median concentrations in the upgradient wells are not significantly different from each other and the upgradient wells can be pooled.
UPL: upper prediction limit
TDS: total dissolved solids

Table 2
Descriptive Statistics for Upgradient Wells
Gavin Power, LLC
Fly Ash Reservoir

Geology	Analyte	Well	Units	N	Num Detects	Percent Detects	Min ND	Max ND	Min Detect	Median	Mean	Max Detect	SD	CV	Distribution
Cow Run SS	Boron	Pooled	mg/L	14	14	1			0.093	0.155	0.174	0.411	0.0812	0.466	Lognormal
Cow Run SS	Calcium	2016-09	mg/L	8	8	1			30	48.35	67.4	202	56.3	0.835	Lognormal
Cow Run SS	Calcium	MW-20	mg/L	6	6	1			465	497.5	490	500	14.1	0.0288	NDD
Cow Run SS	Chloride	2016-09	mg/L	8	8	1			1490	1560	1620	2000	170	0.105	NDD
Cow Run SS	Chloride	MW-20	mg/L	6	6	1			6.5	13.7	21.2	60.1	20.2	0.952	Lognormal
Cow Run SS	Fluoride	2016-09	mg/L	8	8	1			1.02	1.625	1.62	2.1	0.332	0.205	Normal
Cow Run SS	Fluoride	MW-20	mg/L	6	6	1			0.9	0.975	0.997	1.2	0.107	0.107	Normal
Cow Run SS	pH	2016-09	SU	8	8	1			12.44	12.52	12.5	12.66	0.0841	0.0067	Normal
Cow Run SS	pH	MW-20	SU	6	6	1			6.5	6.515	6.57	6.88	0.15	0.0229	NDD
Cow Run SS	Sulfate	2016-09	mg/L	8	8	1			61.7	72.6	73.2	88	9.7	0.132	Normal
Cow Run SS	Sulfate	MW-20	mg/L	6	6	1			1600	1655	1760	2200	232	0.132	NDD
Cow Run SS	TDS	2016-09	mg/L	8	8	1			3900	4240	4250	4820	306	0.072	Normal
Cow Run SS	TDS	MW-20	mg/L	6	6	1			2500	2610	2620	2710	70.4	0.0269	Normal
Morgantown SS	Boron	96153R	mg/L	7	7	1			0.23	0.448	0.396	0.48	0.109	0.274	NDD
Morgantown SS	Boron	96154R	mg/L	8	8	1			0.395	0.495	0.48	0.53	0.047	0.0979	Normal
Morgantown SS	Boron	96156	mg/L	8	8	1			0.357	0.397	0.399	0.46	0.0326	0.0817	Normal
Morgantown SS	Calcium	96153R	mg/L	7	7	1			72	189	169	210	50.9	0.301	Normal
Morgantown SS	Calcium	96154R	mg/L	8	8	1			2.1	7.375	11.2	31	10.1	0.906	Lognormal
Morgantown SS	Calcium	96156	mg/L	8	8	1			346	380	378	409	21.4	0.0566	Normal
Morgantown SS	Chloride	96153R	mg/L	7	7	1			11.6	19	21.7	35	9.24	0.425	Normal
Morgantown SS	Chloride	96154R	mg/L	8	8	1			410	429.5	438	490	31.5	0.0721	Normal
Morgantown SS	Chloride	96156	mg/L	6	6	1			11700	12000	13000	17000	2030	0.157	NDD
Morgantown SS	Fluoride	96153R	mg/L	7	7	1			0.67	1.2	1.34	2.3	0.706	0.527	Normal
Morgantown SS	Fluoride	96154R	mg/L	8	8	1			3.32	3.75	3.84	4.5	0.538	0.14	NDD
Morgantown SS	Fluoride	96156	mg/L	6	1	0.17	0.5	5	0.33	0.95	1.04	0.33	0.837	0.806	Normal
Morgantown SS	pH	96153R	SU	7	7	1			6.19	7.18	6.98	7.49	0.48	0.0687	Normal
Morgantown SS	pH	96154R	SU	8	8	1			8.67	9.43	9.47	10.67	0.734	0.0775	Normal
Morgantown SS	pH	96156	SU	8	8	1			6.77	7.245	7.56	8.93	0.782	0.103	Normal
Morgantown SS	Sulfate	96153R	mg/L	7	7	1			973	1200	1210	1700	259	0.214	Normal
Morgantown SS	Sulfate	96154R	mg/L	8	8	1			60	93.3	87.8	125	22.6	0.258	Normal
Morgantown SS	Sulfate	96156	mg/L	6	2	0.33	25	100	1	18.75	19.2	1.9	18.4	0.956	Normal
Morgantown SS	TDS	96153R	mg/L	7	7	1			1600	1800	1890	2300	251	0.132	Normal
Morgantown SS	TDS	96154R	mg/L	8	8	1			1400	1525	1590	1940	200	0.126	Normal
Morgantown SS	TDS	96156	mg/L	6	6	1			15000	18200	17700	21000	2350	0.133	Normal

Notes
mg/L: milligrams per liter
N: number of data points
Min ND: The minimum non-detected value
Max ND: The maximum non-detected value
SD: Standard Deviation
CV: Coefficient of Variation (standard deviation divided by the mean)
Normal: The data fit a normal distribution
Lognormal: The data fit a lognormal distribution
NDD: no discernible distribution
SU: standard units
TDS:Total dissolved solids

Table 3
Potential Outliers in Upgradient Wells
Gavin Power, LLC
Fly Ash Reservoir

Well	Sample	Geology	Date	Analyte	RL	Units	Detect	Concentration	UPL Type	Distribution	Statistical Outlier	Visual Outlier	Normal Outlier	Log Statistical Outlier	Log Visual Outlier	Lognormal Outlier	Statistical and Visual Outlier	Notes	Final Outlier Determination
2016-09	2016-09-20161003-01	Cow Run SS	10/3/2016	Boron	0.411	mg/L	TRUE	0.411	Pooled	Lognormal	X	X	X	X	X	X	0	There is no indication of sample collection or lab QC problems based on a review of the field and lab documents. This result is within 2x -3x the other 7 values measured for this well. Therefore this result was retained in the dataset.	Not an outlier
MW-20	MW-20-20161005-01	Cow Run SS	10/5/2016	Boron	0.272	mg/L	TRUE	0.272	Pooled	Lognormal		X							Not an outlier
2016-09	2016-09-20161003-01	Cow Run SS	10/3/2016	Calcium		202 mg/L	TRUE	202	Individual	Lognormal	X	X	X		X				Not an outlier
2016-09	2016-09-20170425-01	Cow Run SS	4/25/2017	Chloride		100 mg/L	TRUE	2000	Individual	NDD		X			X				Not an outlier
MW-20	MW-20-20160823-01	Cow Run SS	8/23/2016	Chloride		60.1 mg/L	TRUE	60.1	Individual	Lognormal	X	X	X						Not an outlier
MW-20	MW20-20170425-01	Cow Run SS	4/25/2017	Fluoride		0.5 mg/L	TRUE	1.2	Individual	Normal	X	X	X	X	X	X	0	There is no indication of sample collection or lab QC problems based on a review of field and lab documentation. This result is within 0.3mg/L of the other 5 values measured for this well, and was retained in the dataset.	Not an outlier
MW-20	MW-20-20160823-01	Cow Run SS	8/23/2016	pH	6.88	SU	TRUE	6.88	Individual	NDD	X	X	X	X	X	X	0	This value is within 0.3 standard units of the other 5 results, and thus is very similar to the rest of the pH results and was retained in the dataset.	Not an outlier
MW-20	MW20-20170425-01	Cow Run SS	4/25/2017	Sulfate		20 mg/L	TRUE	2200	Individual	NDD	X	X	X		X		0	MW-20 is the most upgradient well in the network, so it is unlikely to be impacted by Gavin facility operations. Sources of acid mine drainage associated with historical coal mining likely contribute sulfate to MW-20. Sulfate could also be released in the Cow Run sandstone through the oxidation of naturally occuring pyrite. The field and lab documentation do not suggest any QA issues. Based on these lines of evidence and assessment monitoring completed at well 94136, this value was retained in the dataset	Not an outlier
2016-09	2016-09-20160823-01	Cow Run SS	8/23/2016	TDS	4820	mg/L	TRUE	4820	Individual	Normal		X							Not an outlier
96156	96156-20170321-01	Morgantown SS	3/21/2017	Boron		100 mg/L	TRUE	0.46	Individual	Normal		X			X				Not an outlier
96154R	96154-R-20170130-01	Morgantown SS	1/30/2017	Calcium		22.1 mg/L	TRUE	22.1	Individual	Lognormal		X							Not an outlier
96154R	96154R-20170321-01	Morgantown SS	3/21/2017	Calcium		1000 mg/L	TRUE	31	Individual	Lognormal		X							Not an outlier
96156	96156-20170321-01	Morgantown SS	3/21/2017	Chloride		100 mg/L	TRUE	13000	Individual	NDD	X			X					Not an outlier
96156	96156-20170425-01	Morgantown SS	4/25/2017	Chloride		100 mg/L	TRUE	17000	Individual	NDD	X	X	X	X	X	X	0	A review of laboratory documentation indicates there were no data quality issues. Field records indicate a relatively high turbidity value (72.5 NTU) in the April 2017 sample, however there is no correlation between turbidity and chloride at this well over the 8 sampling rounds, thus this value was retained in the dataset.	Not an outlier
96153R	96153 R-20170425-01	Morgantown SS	4/25/2017	Fluoride		0.5 mg/L	TRUE	2.3	Individual	Normal	X			X					Not an outlier
96154R	96154R-20170712-01	Morgantown SS	7/12/2017	Fluoride		0.5 mg/L	TRUE	4.5	Individual	NDD	X			X					Not an outlier
96154R	96154-R-20160823-01	Morgantown SS	8/23/2016	TDS	1940	mg/L	TRUE	1940	Individual	Normal		X							Not an outlier
96154R	96154-R-20161129-01	Morgantown SS	11/29/2016	TDS	1850	mg/L	TRUE	1850	Individual	Normal		X			X				Not an outlier

Notes
RL Reporting limit
UPL: upper prediction limit
NDD: No Discernible Distribution
SU: Standard units
mg/L: milligrams per liter
Outlier tests were performed on detected data only.
Statistical outliers were determined using a Dixon's test for N < 25 and with Rosner's test for N > 25.
Visual outliers were identified if they fall above the confidence envelope on the QQ plot.
Data points were considered potential outliers if they were both statistical and visual outliers.
NDD wells had data points considered as potential outliers if they were either a normal or lognormal outlier.
[Blank] data distribution indicates that the well data did not have enough detected data points for outlier analysis.
Lognormally distributed data was first log-transformed before visual and statistical outlier tests were performed.
Normal data distribution indicates that the well data was directly used for statistical and visual outlier tests.
NDD indicates that the botrh untransformed and transformed data were examined with statistical and visual outlier tests.

Table 4
Mann Kendall Test for Trends in Upgradient Wells
Gavin Power, LLC
Fly Ash Reservoir

Analyte	Geology	UPL Type	Well	N	Num Dete	Percent De	p-value	tau	Conclusion
Boron	Cow Run SS	Pooled	2016-09, MW-20	14	14	1	0.376	0.183	Stable, No Trend
Calcium	Cow Run SS	Individual	2016-09	8	8	1	0.399	-0.286	Stable, No Trend
Calcium	Cow Run SS	Individual	MW-20	6	6	1	0.227	0.447	Stable, No Trend
Chloride	Cow Run SS	Individual	2016-09	8	8	1	0.0444	0.593	Increasing Trend
Chloride	Cow Run SS	Individual	MW-20	6	6	1	0.0167	-0.867	Decreasing Trend
Fluoride	Cow Run SS	Individual	2016-09	8	8	1	0.72	0.143	Stable, No Trend
Fluoride	Cow Run SS	Individual	MW-20	6	6	1	0.444	-0.276	Stable, No Trend
pH	Cow Run SS	Individual	2016-09	8	8	1	0.383	-0.255	Stable, No Trend
pH	Cow Run SS	Individual	MW-20	6	6	1	0.33	-0.358	Stable, No Trend
Sulfate	Cow Run SS	Individual	2016-09	8	8	1	0.905	0.0714	Stable, No Trend
Sulfate	Cow Run SS	Individual	MW-20	6	6	1	0.702	-0.138	Stable, No Trend
TDS	Cow Run SS	Individual	2016-09	8	8	1	0.132	-0.445	Stable, No Trend
TDS	Cow Run SS	Individual	MW-20	6	6	1	0.126	-0.552	Stable, No Trend
Boron	Morgantown SS	Individual	96153R	7	7	1	0.362	0.293	Stable, No Trend
Boron	Morgantown SS	Individual	96154R	8	8	1	0.0178	0.691	Increasing Trend
Boron	Morgantown SS	Individual	96156	8	8	1	0.105	0.473	Stable, No Trend
Calcium	Morgantown SS	Individual	96153R	7	7	1	0.381	-0.333	Stable, No Trend
Calcium	Morgantown SS	Individual	96154R	8	8	1	0.548	-0.214	Stable, No Trend
Calcium	Morgantown SS	Individual	96156	8	8	1	0.533	-0.182	Stable, No Trend
Chloride	Morgantown SS	Individual	96153R	7	7	1	0.773	0.143	Stable, No Trend
Chloride	Morgantown SS	Individual	96154R	8	8	1	0.373	0.265	Stable, No Trend
Chloride	Morgantown SS	Individual	96156	6	6	1	0.421	0.298	Stable, No Trend
Fluoride	Morgantown SS	Individual	96153R	7	7	1	0.543	0.195	Stable, No Trend
Fluoride	Morgantown SS	Individual	96154R	8	8	1	0.0178	0.691	Increasing Trend
Fluoride	Morgantown SS	Individual	96156	6	1	0.17			Insufficient Data
pH	Morgantown SS	Individual	96153R	7	7	1	0.773	0.143	Stable, No Trend
pH	Morgantown SS	Individual	96154R	8	8	1	1	0	Stable, No Trend
pH	Morgantown SS	Individual	96156	8	8	1	0.275	0.357	Stable, No Trend
Sulfate	Morgantown SS	Individual	96153R	7	7	1	0.543	-0.195	Stable, No Trend
Sulfate	Morgantown SS	Individual	96154R	8	8	1	0.708	-0.109	Stable, No Trend
Sulfate	Morgantown SS	Individual	96156	6	2	0.33			Insufficient Data
TDS	Morgantown SS	Individual	96153R	7	7	1	0.0683	-0.586	Stable, No Trend
TDS	Morgantown SS	Individual	96154R	8	8	1	0.0785	-0.519	Stable, No Trend
TDS	Morgantown SS	Individual	96156	6	6	1	1	0	Stable, No Trend

Notes

UPL: upper prediction limit

N: number of data points

p-value: A two-sided p-value describing the probability of the H0 being true (a=0.05)

tau: Kendall's tau statistic

Trend tests were performed only if the upgradient dataset met the minium data quality criteria (ERM 2017).

TDS: Total dissolved solids

Table 5
Calculated UPLs for Upgradient Datasets
Gavin Power, LLC
Fly Ash Reservoir

Analyte	Geology	UPL Type	Trend	Well	N	Num Detects	Percent Detects	LPL	UPL	units	ND adjustment	Transformation	Alpha	Method	Final LPL	Final UPL	Notes
Boron	Cow Run SS	Pooled	Stable, No Trend	2016-09, MW-20	14	14	100%		0.369	mg/L	None	x^(1/3)	0.00125	Param Inter 1 of 2		X	
Calcium	Cow Run SS	Individual	Stable, No Trend	2016-09	8	8	100%		301	mg/L	None	ln(x)	0.00125	Param Intra 1 of 2			
Calcium	Cow Run SS	Individual	Stable, No Trend	MW-20	6	6	100%		500	mg/L	None	No	0.0339	NP Intra (normality) 1 of 2		X	
Chloride	Cow Run SS	Individual	Increasing Trend	2016-09	8	8	100%		1990	mg/L	None	No	0.0214	NP Detrended UPL		X	
Chloride	Cow Run SS	Individual	Decreasing Trend	MW-20	6	6	100%		23.5	mg/L	None	No	0.00125	NP Detrended UPL			
Fluoride	Cow Run SS	Individual	Stable, No Trend	2016-09	8	8	100%		2.56	mg/L	None	No	0.00125	Param Intra 1 of 2		X	
Fluoride	Cow Run SS	Individual	Stable, No Trend	MW-20	6	6	100%		1.36	mg/L	None	No	0.00125	Param Intra 1 of 2			
pH	Cow Run SS	Individual	Stable, No Trend	2016-09	8	8	100%	12.3	12.8	SU	None	No	0.000627	Param Intra 1 of 2		X	
pH	Cow Run SS	Individual	Stable, No Trend	MW-20	6	6	100%	6.5	6.88	SU	None	No	0.0678	NP Intra (normality) 1 of 2	X		
Sulfate	Cow Run SS	Individual	Stable, No Trend	2016-09	8	8	100%		101	mg/L	None	No	0.00125	Param Intra 1 of 2			
Sulfate	Cow Run SS	Individual	Stable, No Trend	MW-20	6	6	100%		2200	mg/L	None	No	0.0339	NP Intra (normality) 1 of 2		X	
TDS	Cow Run SS	Individual	Stable, No Trend	2016-09	8	8	100%		5110	mg/L	None	No	0.00125	Param Intra 1 of 2		X	
TDS	Cow Run SS	Individual	Stable, No Trend	MW-20	6	6	100%		2860	mg/L	None	No	0.00125	Param Intra 1 of 2			
Boron	Morgantown SS	Individual	Stable, No Trend	96153R	7	7	100%		0.586	mg/L	None	x^3	0.0015	Param Intra 1 of 2		X	
Boron	Morgantown SS	Individual	Increasing Trend	96154R	8	8	100%		0.575	mg/L	None	No	0.0015	NP Detrended UPL			
Boron	Morgantown SS	Individual	Stable, No Trend	96156	8	8	100%		0.489	mg/L	None	No	0.0015	Param Intra 1 of 2			
Calcium	Morgantown SS	Individual	Stable, No Trend	96153R	7	7	100%		323	mg/L	None	No	0.0015	Param Intra 1 of 2			
Calcium	Morgantown SS	Individual	Stable, No Trend	96154R	8	8	100%		39	mg/L	None	No	0.0015	Param Intra 1 of 2			
Calcium	Morgantown SS	Individual	Stable, No Trend	96156	8	8	100%		437	mg/L	None	No	0.0015	Param Intra 1 of 2		X	
Chloride	Morgantown SS	Individual	Stable, No Trend	96153R	7	7	100%		49.6	mg/L	None	No	0.0015	Param Intra 1 of 2			
Chloride	Morgantown SS	Individual	Stable, No Trend	96154R	8	8	100%		524	mg/L	None	No	0.0015	Param Intra 1 of 2			
Chloride	Morgantown SS	Individual	Stable, No Trend	96156	6	6	100%		17000	mg/L	None	No	0.0339	NP Intra (normality) 1 of 2		X	
Fluoride	Morgantown SS	Individual	Stable, No Trend	96153R	7	7	100%		3.48	mg/L	None	No	0.0015	Param Intra 1 of 2			
Fluoride	Morgantown SS	Individual	Increasing Trend	96154R	8	8	100%		4.99	mg/L	None	No	0.0214	NP Detrended UPL			
Fluoride	Morgantown SS	Individual	Insufficient Data	96156	6	1	17%		5	mg/L				<5 Detects, Max RL used		X	<5 Detected values, <50 Percent Detects
pH	Morgantown SS	Individual	Stable, No Trend	96153R	7	7	100%	5.53	8.43	SU	None	No	0.000752	Param Intra 1 of 2	X		
pH	Morgantown SS	Individual	Stable, No Trend	96154R	8	8	100%	7.46	11.5	SU	None	No	0.000752	Param Intra 1 of 2		X	
pH	Morgantown SS	Individual	Stable, No Trend	96156	8	8	100%	5.41	9.7	SU	None	No	0.000752	Param Intra 1 of 2			
Sulfate	Morgantown SS	Individual	Stable, No Trend	96153R	7	7	100%		2000	mg/L	None	No	0.0015	Param Intra 1 of 2		X	
Sulfate	Morgantown SS	Individual	Stable, No Trend	96154R	8	8	100%		150	mg/L	None	No	0.0015	Param Intra 1 of 2			
Sulfate	Morgantown SS	Individual	Insufficient Data	96156	6	2	33%		100	mg/L				<5 Detects, Max RL used			<5 Detected values, <50 Percent Detects
TDS	Morgantown SS	Individual	Stable, No Trend	96153R	7	7	100%		2650	mg/L	None	No	0.0015	Param Intra 1 of 2			
TDS	Morgantown SS	Individual	Stable, No Trend	96154R	8	8	100%		2140	mg/L	None	No	0.0015	Param Intra 1 of 2			
TDS	Morgantown SS	Individual	Stable, No Trend	96156	6	6	100%		25500	mg/L	None	No	0.0015	Param Intra 1 of 2		X	

Notes

N: number of data points

LPL: lower prediction limit. These were only calculated for pH

UPL: upper prediction limit. UPLs were constructed with a site wide false positive rate of 0.1 and a 1 of 2 retesting.

UPLs were calculated using Sanitas Software.

ND: Non-dectect

mg/L: milligrams per liter

SU: Standard units

NP: non parametric

RL: Reporting Limit

Intra: indicates an Individual UPL was used

Inter: indicates an Pooled UPL was used

In the case where multiple UPLs were calculated for an analyte, the maximum UPL was used as the final UPL.

In the case where multiple LPLs were calculated for an pH the minimum LPL was used as the final LPL.

Table 6
Comparison of UPLs to downgradient wells
Gavin Power, LLC
Fly Ash Reservoir

Analyte	Well	Geology	LPL	UPL	units	Recent Date	Observation	Qualifier	Obs > UPL	Notes	Mann Kendall P-value	Mann Kendall tau
Boron	2016-02	Cow Run SS		0.369	mg/L	7/13/2017	0.53		X	Trend Test: Increasing Trend	0.0141	0.714
Boron	2016-04	Cow Run SS		0.369	mg/L	7/14/2017	0.3					
Boron	2016-06	Cow Run SS		0.369	mg/L	7/14/2017	0.5		X	Trend Test: Stable, No Trend	0.209	0.371
Boron	2016-08	Cow Run SS		0.369	mg/L	6/7/2017	0.32					
Boron	2016-10	Cow Run SS		0.369	mg/L	7/12/2017	0.54		X	Trend Test: Stable, No Trend	0.109	0.5
Boron	96147	Cow Run SS		0.369	mg/L	7/13/2017	0.5		X	Trend Test: Increasing Trend	0.0178	0.691
Calcium	2016-02	Cow Run SS		500	mg/L	7/13/2017	480					
Calcium	2016-04	Cow Run SS		500	mg/L	7/14/2017	24					
Calcium	2016-06	Cow Run SS		500	mg/L	7/14/2017	4					
Calcium	2016-08	Cow Run SS		500	mg/L	6/7/2017	140					
Calcium	2016-10	Cow Run SS		500	mg/L	7/12/2017	500					
Calcium	96147	Cow Run SS		500	mg/L	7/13/2017	19					
Chloride	2016-02	Cow Run SS		1990	mg/L	7/13/2017	10000		X	Trend Test: Stable, No Trend	0.399	0.286
Chloride	2016-04	Cow Run SS		1990	mg/L	7/14/2017	1100					
Chloride	2016-06	Cow Run SS		1990	mg/L	7/14/2017	540					
Chloride	2016-08	Cow Run SS		1990	mg/L	6/7/2017	1200					
Chloride	2016-10	Cow Run SS		1990	mg/L	7/12/2017	12000		X	Trend Test: Increasing Trend	0.00183	0.909
Chloride	96147	Cow Run SS		1990	mg/L	7/13/2017	460					
Fluoride	2016-02	Cow Run SS		2.56	mg/L	7/13/2017	5	ND				
Fluoride	2016-04	Cow Run SS		2.56	mg/L	7/14/2017	1.1					
Fluoride	2016-06	Cow Run SS		2.56	mg/L	7/14/2017	6.1		X	Trend Test: Stable, No Trend	0.061	0.571
Fluoride	2016-08	Cow Run SS		2.56	mg/L	6/7/2017	2.3					
Fluoride	2016-10	Cow Run SS		2.56	mg/L	7/12/2017	2.5	ND				
Fluoride	96147	Cow Run SS		2.56	mg/L	7/13/2017	4.6		X	Trend Test: Increasing Trend	0.0141	0.714
pH	2016-02	Cow Run SS	6.5	12.8	SU	7/13/2017	7.09					
pH	2016-04	Cow Run SS	6.5	12.8	SU	7/14/2017	8.22					
pH	2016-06	Cow Run SS	6.5	12.8	SU	7/14/2017	8.28					
pH	2016-08	Cow Run SS	6.5	12.8	SU	6/7/2017	12.42					
pH	2016-10	Cow Run SS	6.5	12.8	SU	7/12/2017	7.86					
pH	96147	Cow Run SS	6.5	12.8	SU	7/13/2017	7.95					
Sulfate	2016-02	Cow Run SS		2200	mg/L	7/13/2017	240					
Sulfate	2016-04	Cow Run SS		2200	mg/L	7/14/2017	290					
Sulfate	2016-06	Cow Run SS		2200	mg/L	7/14/2017	110					
Sulfate	2016-08	Cow Run SS		2200	mg/L	6/7/2017	89					
Sulfate	2016-10	Cow Run SS		2200	mg/L	7/12/2017	670					
Sulfate	96147	Cow Run SS		2200	mg/L	7/13/2017	140					
TDS	2016-02	Cow Run SS		5110	mg/L	7/13/2017	17000		X	Trend Test: Stable, No Trend	0.708	-0.109
TDS	2016-04	Cow Run SS		5110	mg/L	7/14/2017	2400					
TDS	2016-06	Cow Run SS		5110	mg/L	7/14/2017	1600					
TDS	2016-08	Cow Run SS		5110	mg/L	6/7/2017	3000					
TDS	2016-10	Cow Run SS		5110	mg/L	7/12/2017	15000		X	Trend Test: Increasing Trend	0.0178	0.691
TDS	96147	Cow Run SS		5110	mg/L	7/13/2017	1800					
Boron	2016-01	Morgantown SS		0.586	mg/L	7/13/2017	0.35					
Boron	2016-03	Morgantown SS		0.586	mg/L	7/14/2017	0.44					
Boron	2016-05	Morgantown SS		0.586	mg/L	7/14/2017	0.1					
Boron	2016-07	Morgantown SS		0.586	mg/L	8/10/2017	0.44					

Table 6
Comparison of UPLs to downgradient wells
Gavin Power, LLC
Fly Ash Reservoir

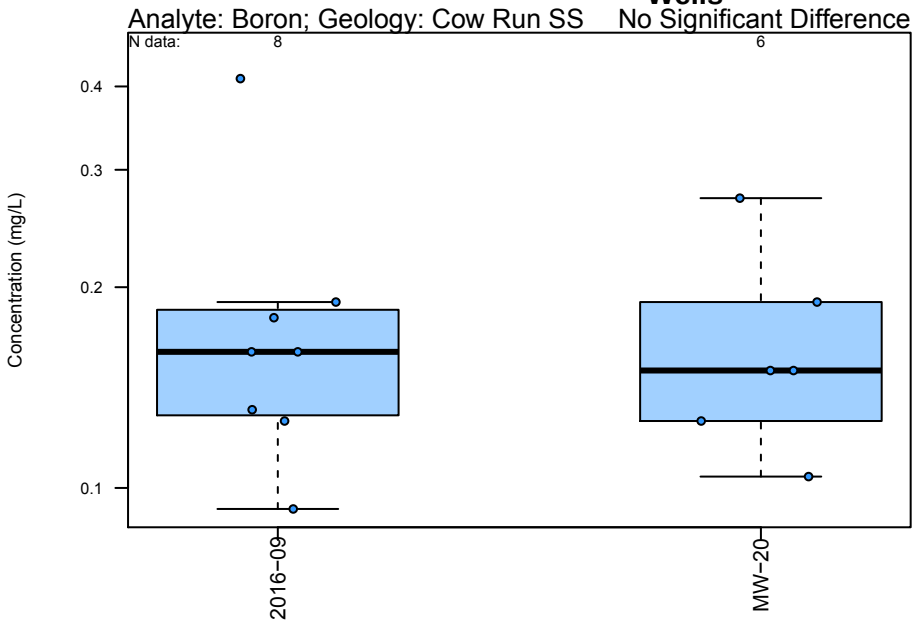
Analyte	Well	Geology	LPL	UPL	units	Recent Date	Observation	Qualifier	Obs > UPL	Notes	Mann Kendall P-value	Mann Kendall tau
Boron	2016-11	Morgantown SS		0.586	mg/L	4/25/2017	0.35					
Calcium	2016-01	Morgantown SS		437	mg/L	7/13/2017	8.6					
Calcium	2016-03	Morgantown SS		437	mg/L	7/14/2017	140					
Calcium	2016-05	Morgantown SS		437	mg/L	7/14/2017	31					
Calcium	2016-07	Morgantown SS		437	mg/L	8/10/2017	41					
Calcium	2016-11	Morgantown SS		437	mg/L	4/25/2017	34					
Chloride	2016-01	Morgantown SS		17000	mg/L	7/13/2017	210					
Chloride	2016-03	Morgantown SS		17000	mg/L	7/14/2017	22					
Chloride	2016-05	Morgantown SS		17000	mg/L	7/14/2017	16					
Chloride	2016-07	Morgantown SS		17000	mg/L	8/10/2017	1200					
Chloride	2016-11	Morgantown SS		17000	mg/L	4/25/2017	2800					
Fluoride	2016-01	Morgantown SS		5	mg/L	7/13/2017	16		X	Trend Test: Increasing Trend	<0.001	0.929
Fluoride	2016-03	Morgantown SS		5	mg/L	7/14/2017	0.19					
Fluoride	2016-05	Morgantown SS		5	mg/L	7/14/2017	0.22					
Fluoride	2016-07	Morgantown SS		5	mg/L	8/10/2017	2.6					
Fluoride	2016-11	Morgantown SS		5	mg/L	4/25/2017	2.2					
pH	2016-01	Morgantown SS	5.53	11.5	SU	7/7/2017	11.03					
pH	2016-03	Morgantown SS	5.53	11.5	SU	7/14/2017	6.93					
pH	2016-05	Morgantown SS	5.53	11.5	pH units	7/14/2017	8.01					
pH	2016-07	Morgantown SS	5.53	11.5	SU	8/10/2017	9.1					
pH	2016-11	Morgantown SS	5.53	11.5	SU	4/25/2017	8.35					
Sulfate	2016-01	Morgantown SS		2000	mg/L	7/13/2017	150					
Sulfate	2016-03	Morgantown SS		2000	mg/L	7/14/2017	400					
Sulfate	2016-05	Morgantown SS		2000	mg/L	7/14/2017	130					
Sulfate	2016-07	Morgantown SS		2000	mg/L	8/10/2017	77					
Sulfate	2016-11	Morgantown SS		2000	mg/L	4/25/2017	750					
TDS	2016-01	Morgantown SS		25500	mg/L	7/13/2017	950					
TDS	2016-03	Morgantown SS		25500	mg/L	7/14/2017	1000					
TDS	2016-05	Morgantown SS		25500	mg/L	7/14/2017	400					
TDS	2016-07	Morgantown SS		25500	mg/L	8/10/2017	2500					
TDS	2016-11	Morgantown SS		25500	mg/L	4/25/2017	4900					

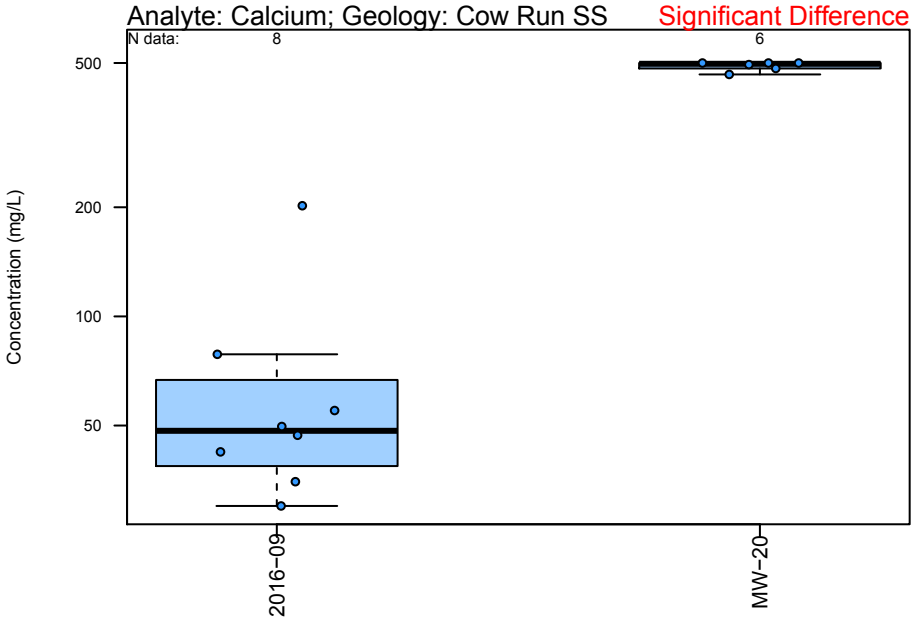
Notes

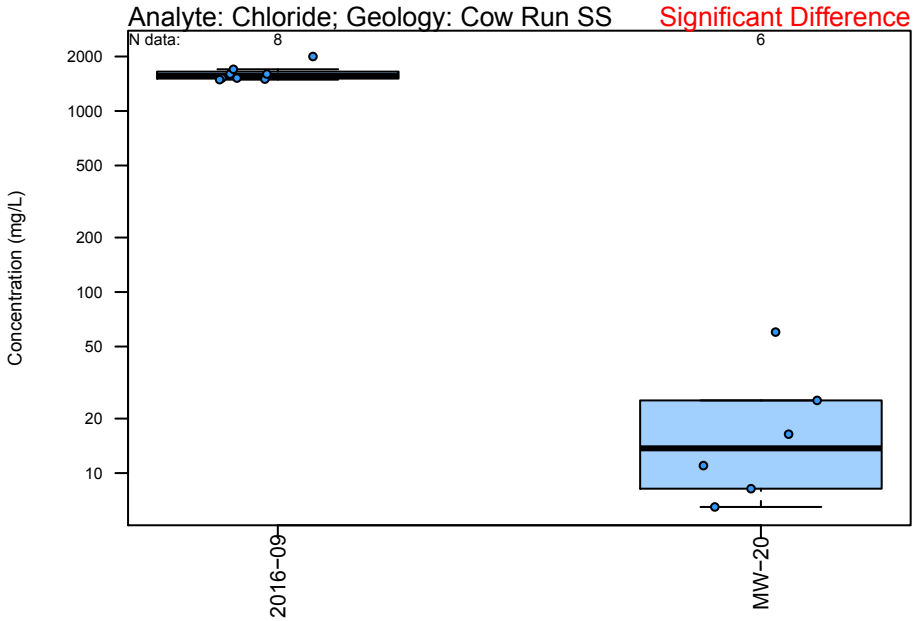
LPL: lower prediction limit
UPL: upper prediction limit
mg/L: milligrams per liter
Obs > UPL:The observation is greater than the UPL
SU: Standard units
tau: Kendall's tau statistic
p-value: A two-sided p-value describing the probability of the H0 being true (a=0.05)
"Exceed 'X' indicates that the most recent observed value is higher than the UPL (or out of range of the LPL and UPL in the case of pH.)"
"Exceed 'X0' indicates that the two most recent values are higher than the UPL, but the upgradient well is 100% ND."
"Exceed '0' indicated that the most recent observed value is higher than the UPL, but is not scored as an SSI due to Double Quantification Rule (ERM 2017)."

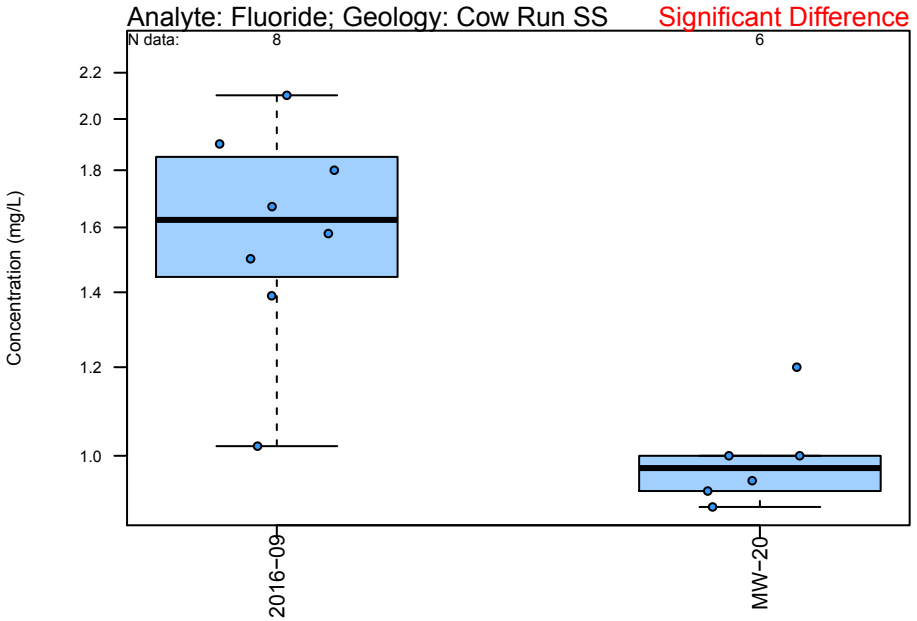
Unit: Fly Ash Reservoir

Figure A-1: Boxplots of Upgradient Wells



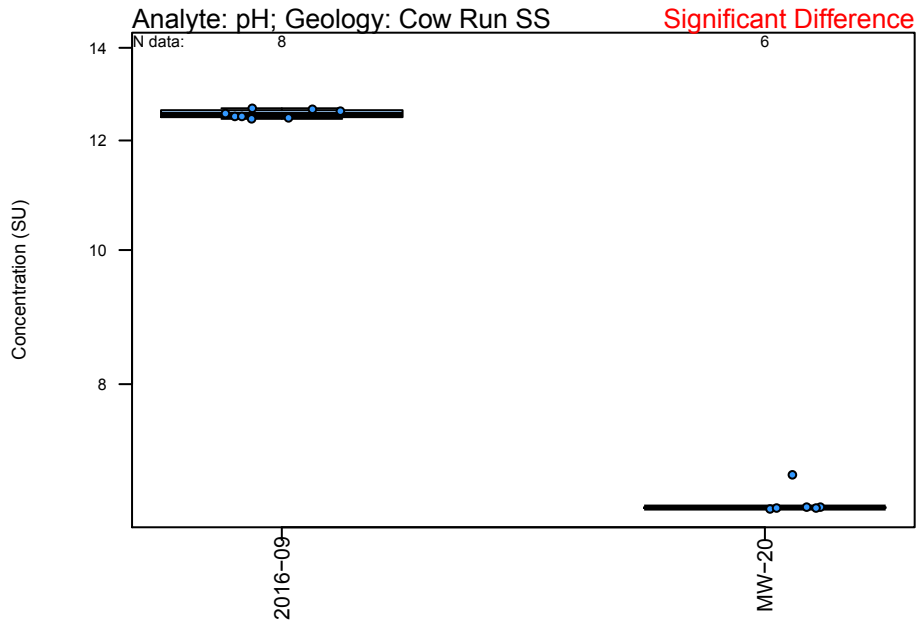


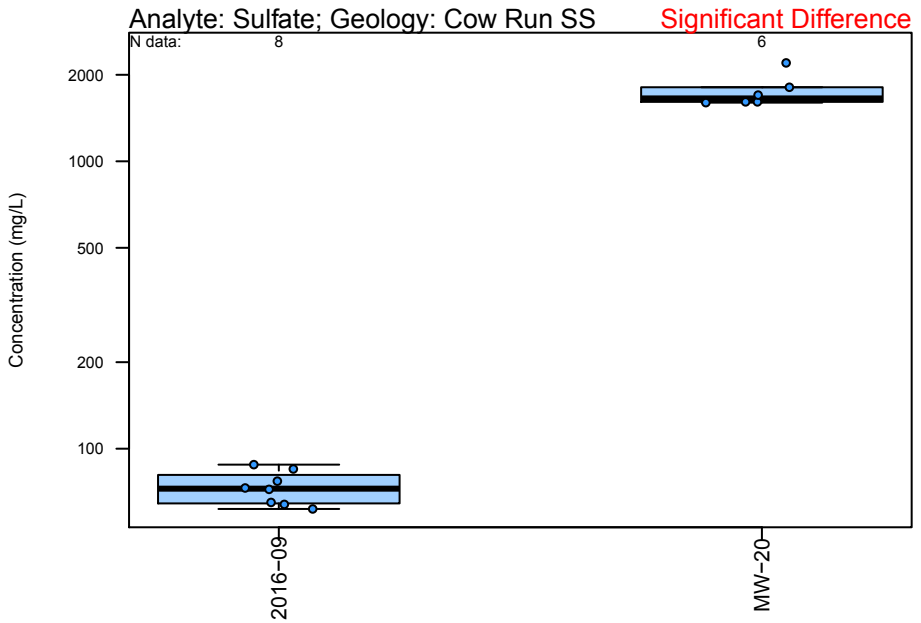


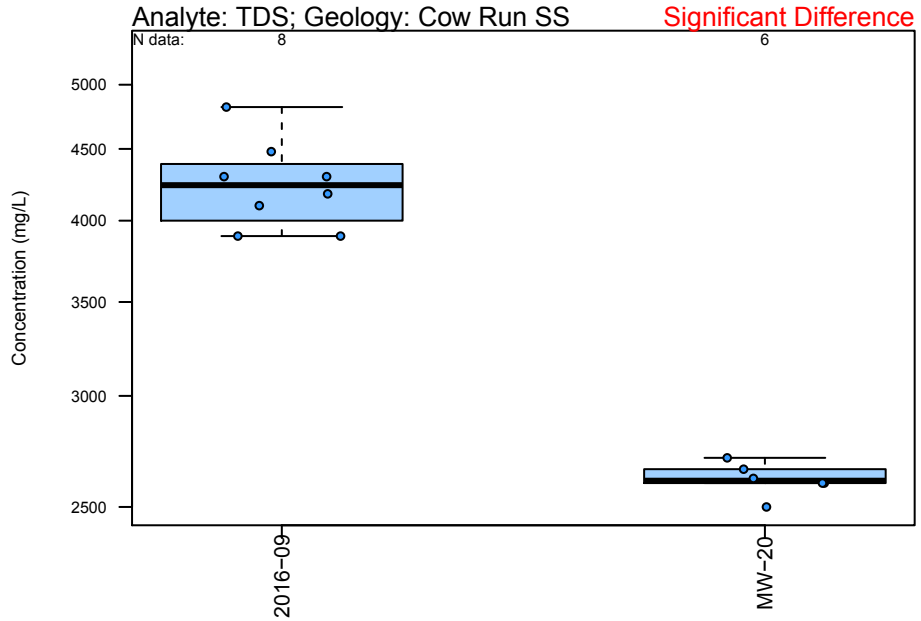


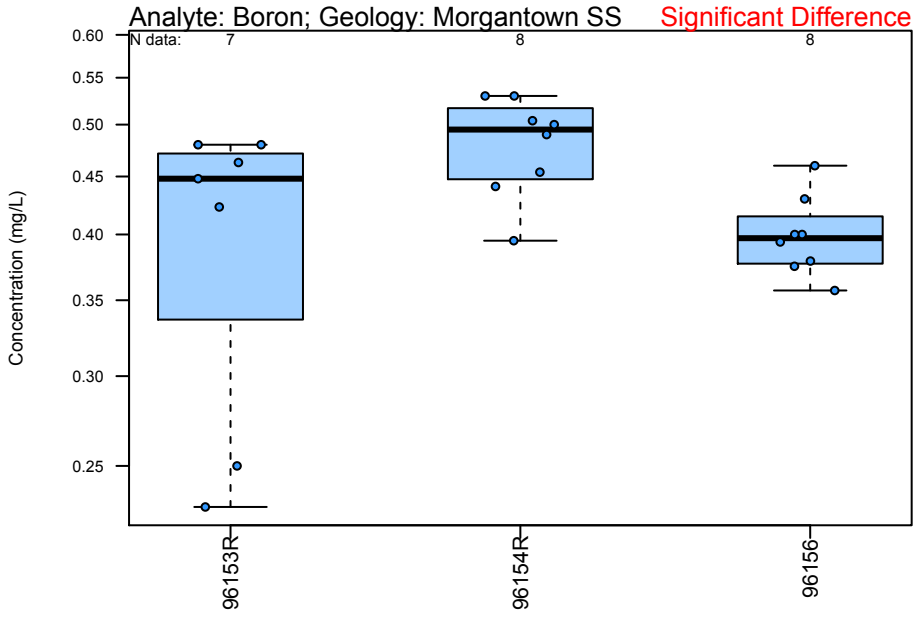
Unit: Fly Ash Reservoir

Figure A-1: Boxplots of Upgradient Wells

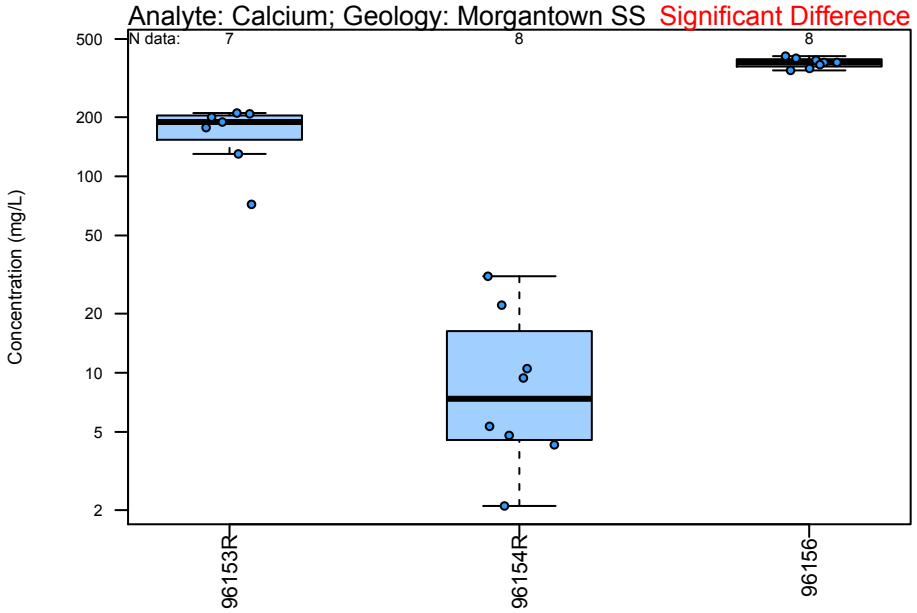


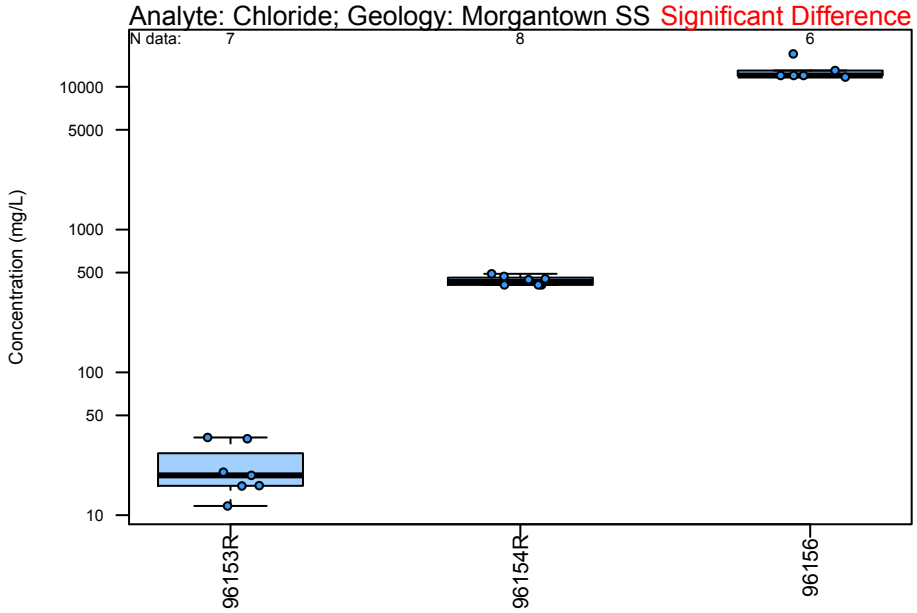


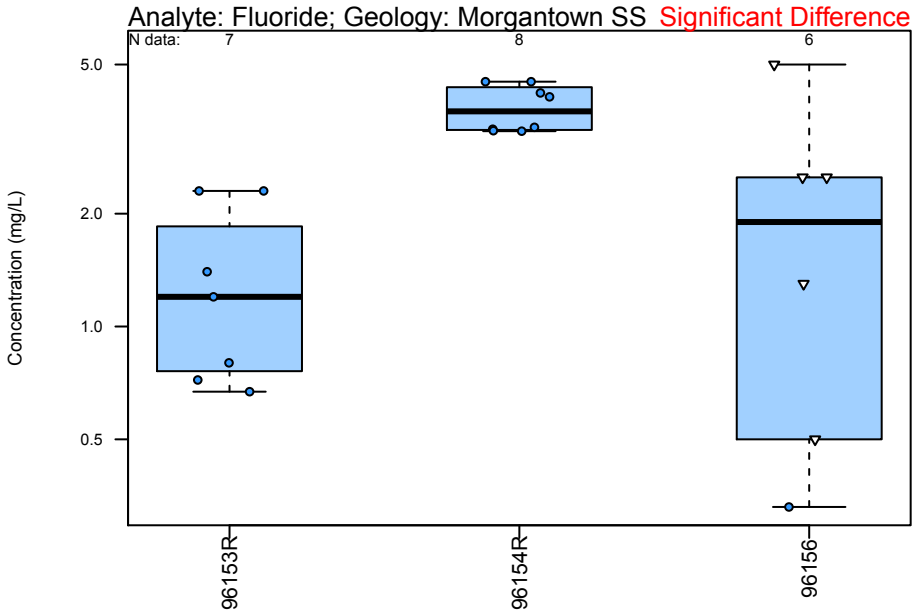


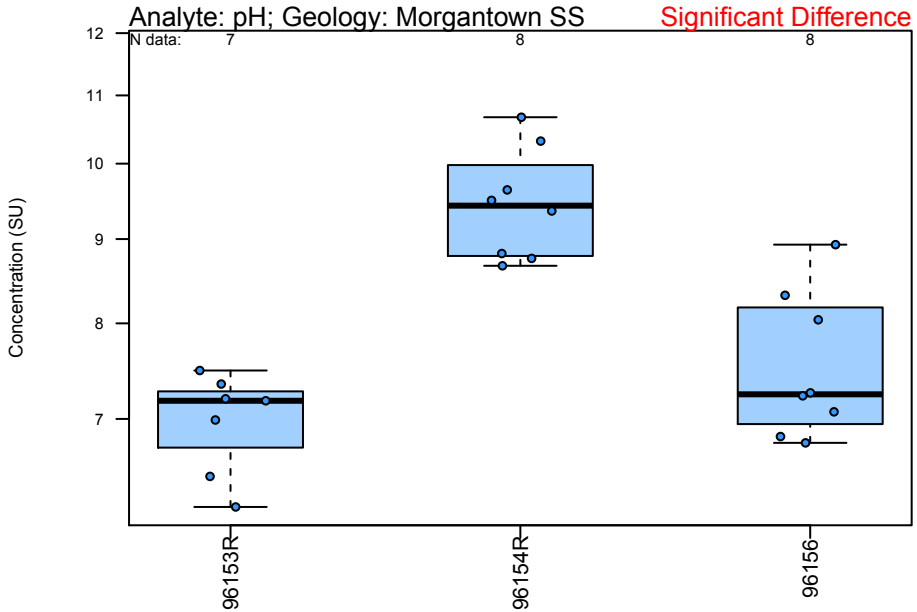


Unit: Fly Ash Reservoir
Figure A-1: Boxplots of Upgradient Wells

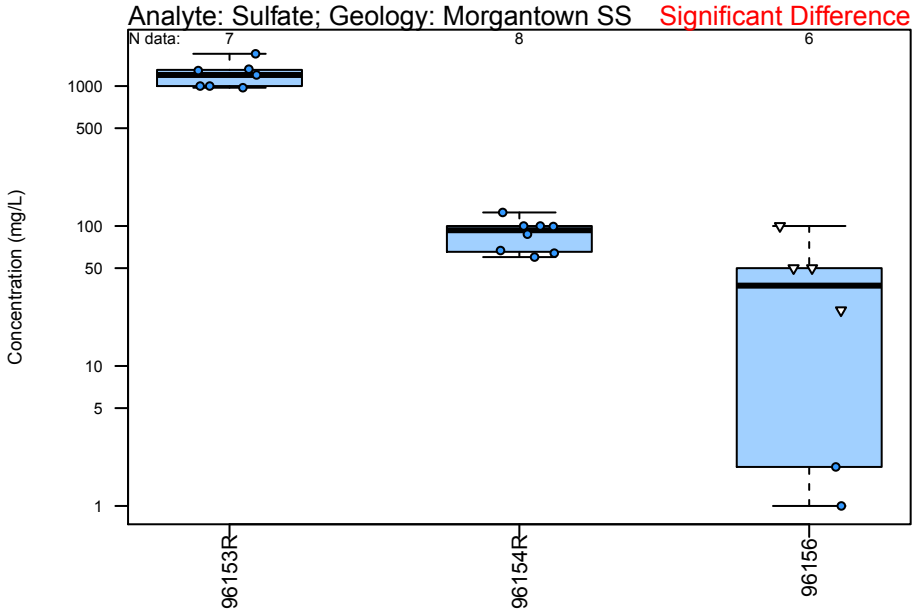


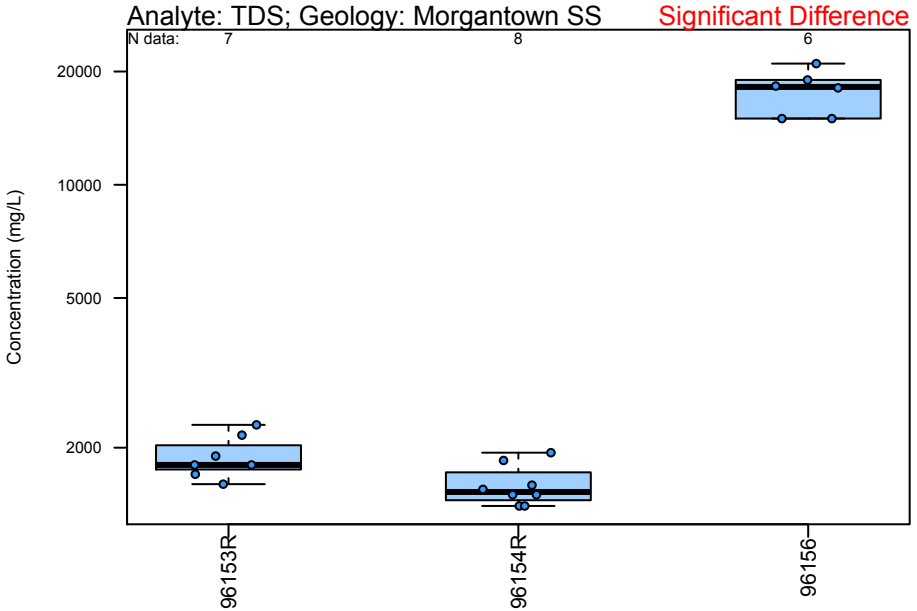






Unit: Fly Ash Reservoir
Figure A-1: Boxplots of Upgradient Wells





Unit: Fly Ash Reservoir
Figure A-2: QQ Plots of Upgradient Wells

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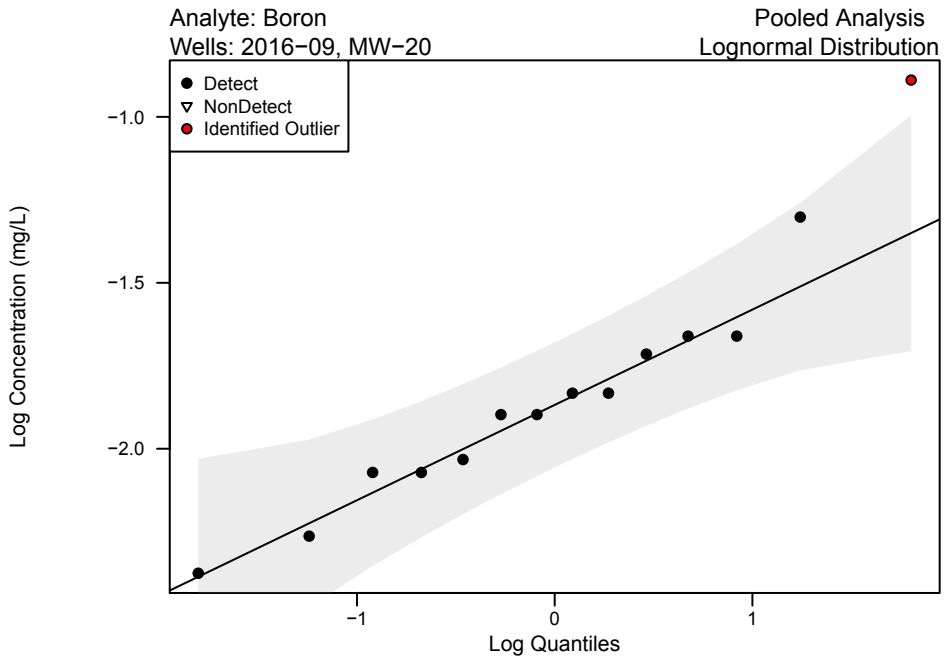

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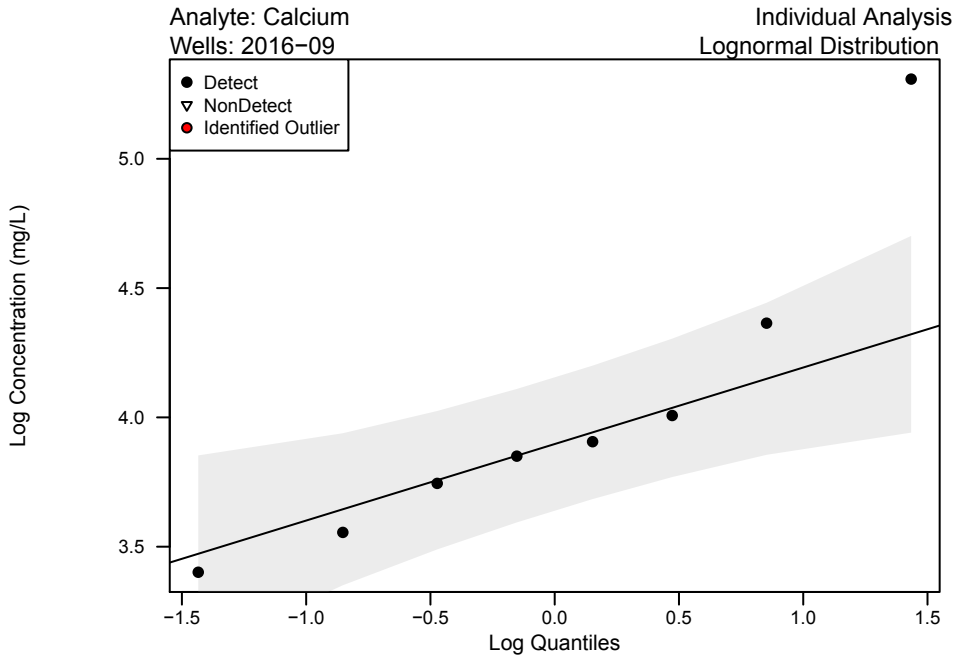
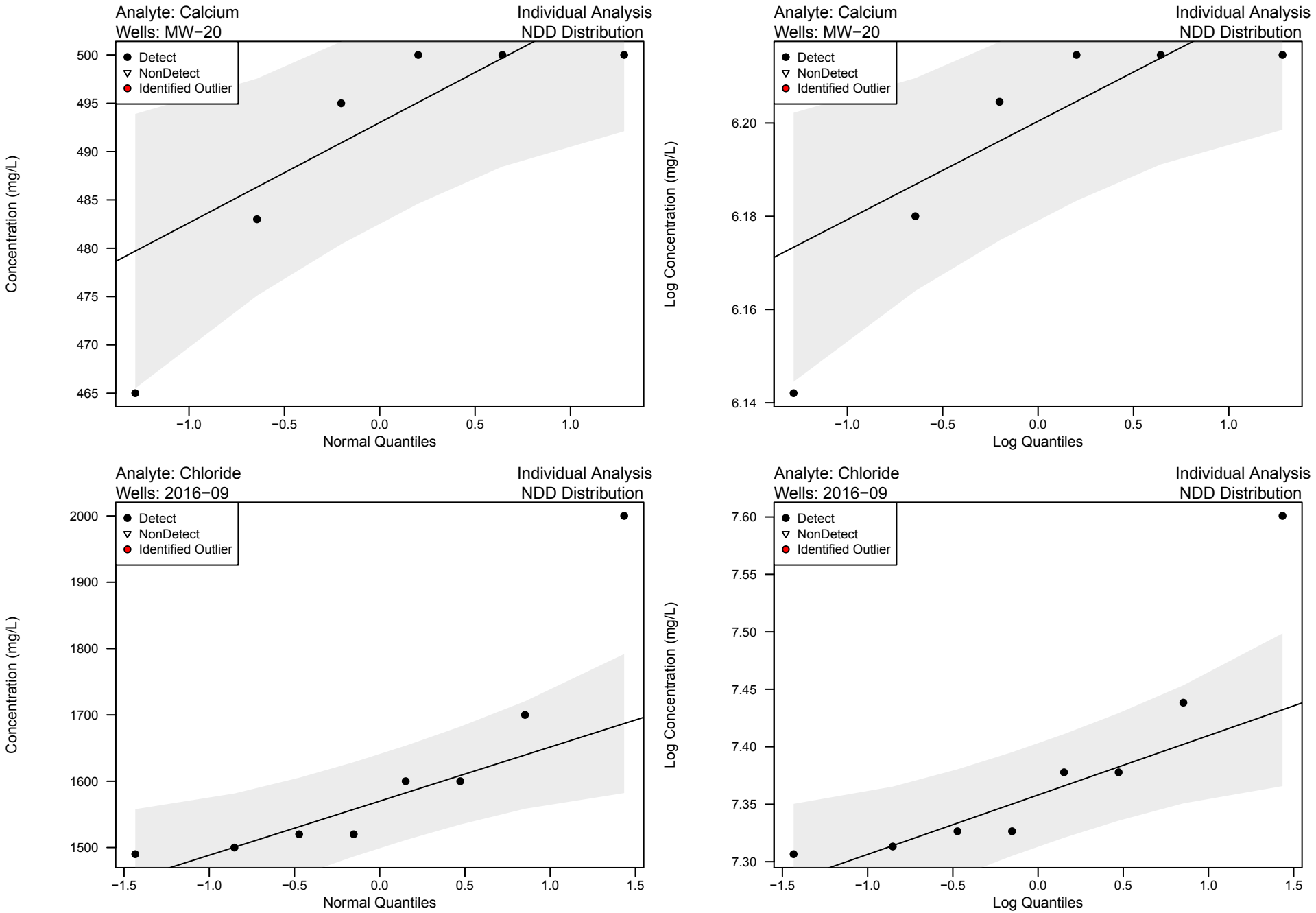


Unit: Fly Ash Reservoir
Figure A-2: QQ Plots of Upgradient Wells



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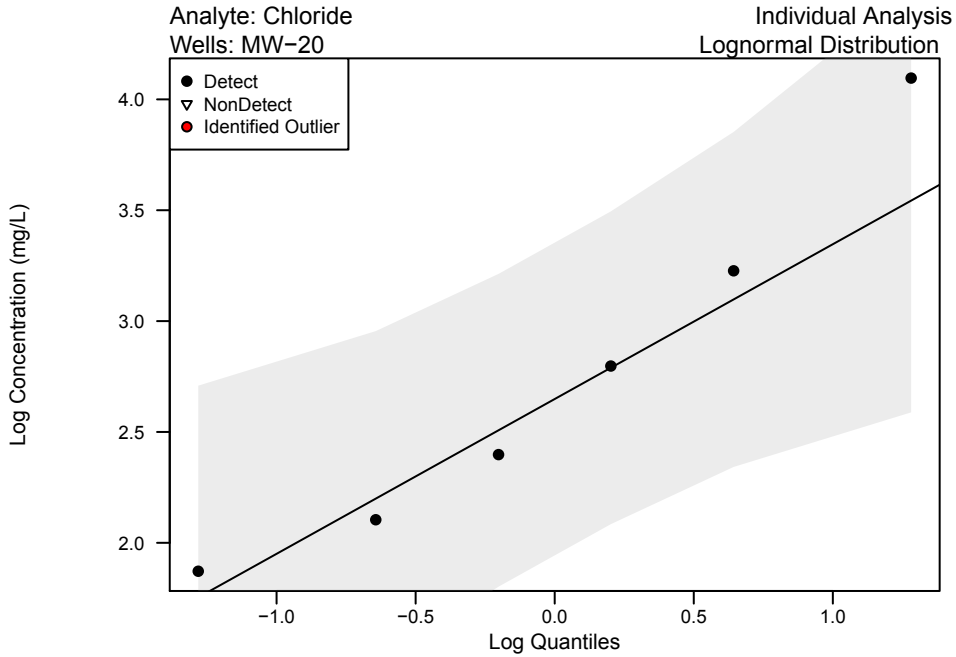

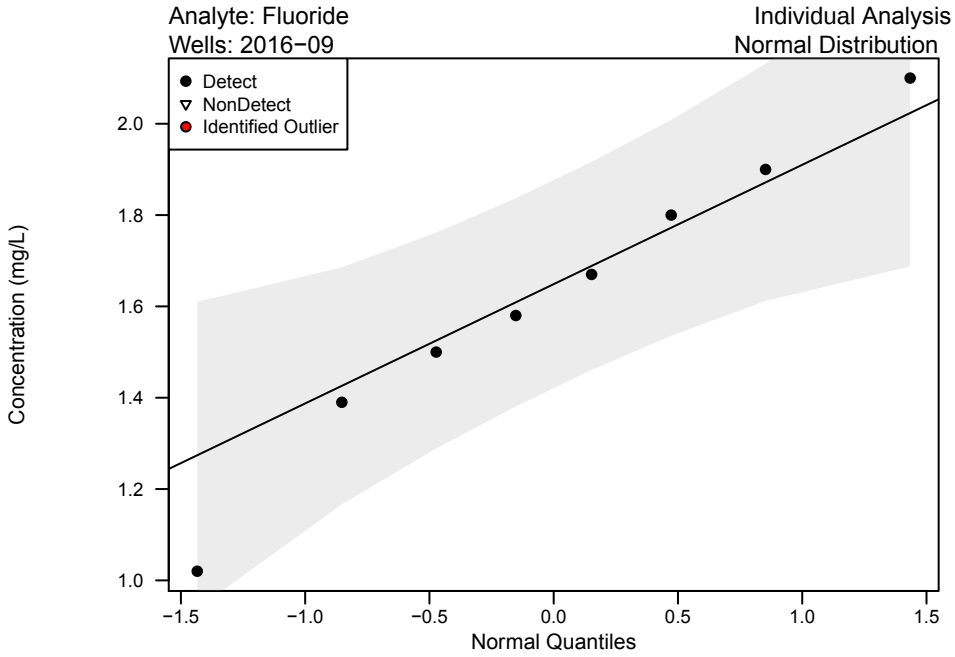

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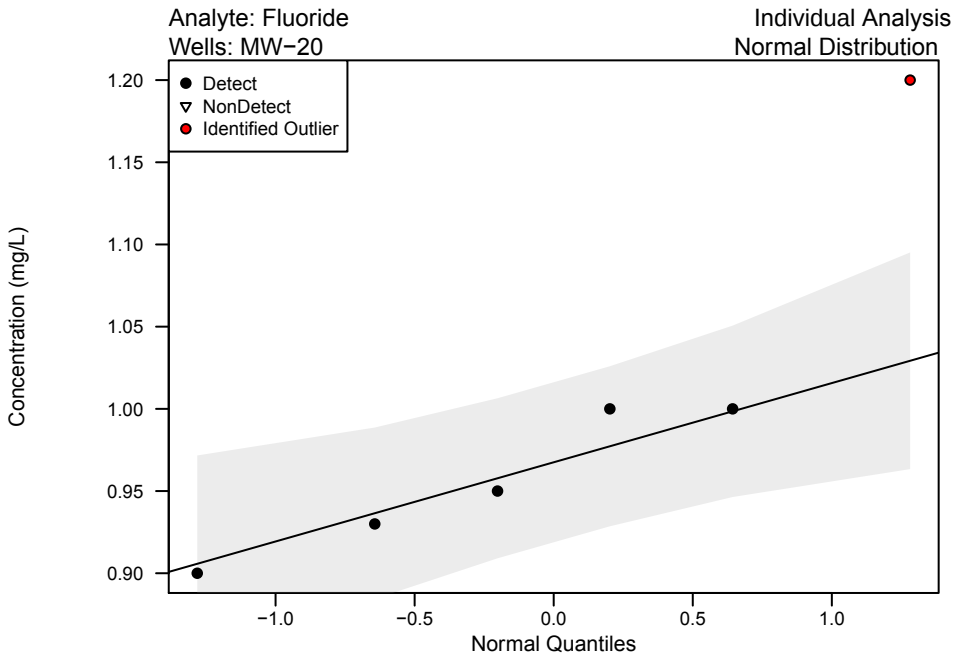
Unit: Fly Ash Reservoir
Figure A-2: QQ Plots of Upgradient Wells



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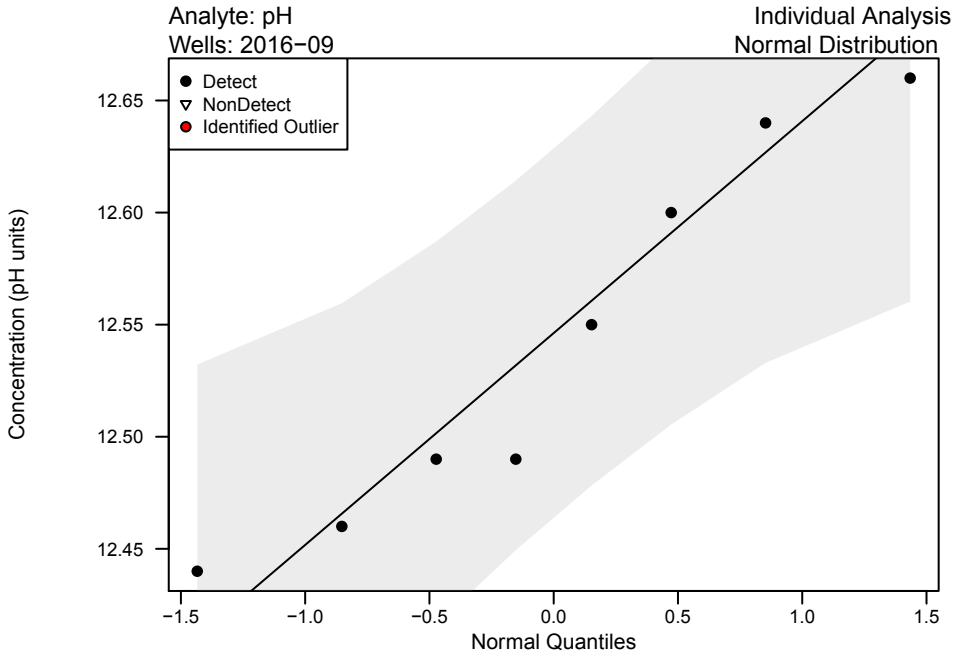

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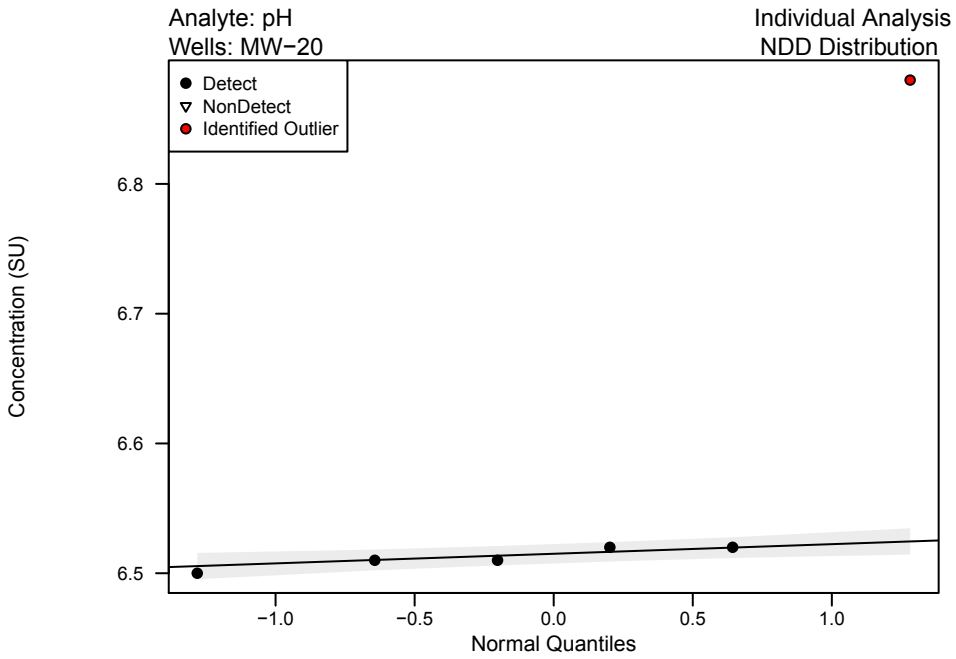
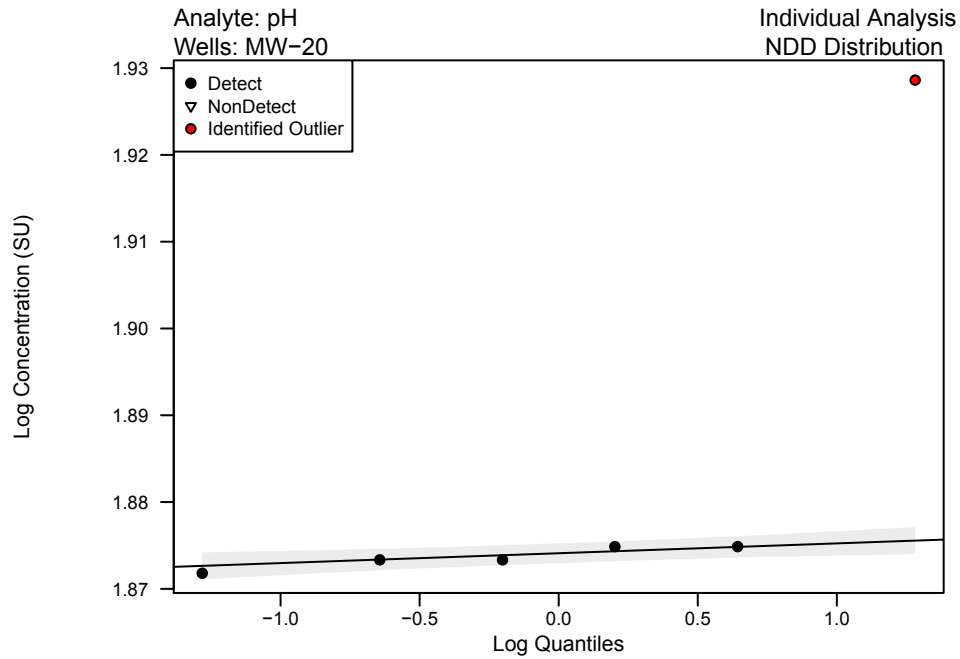
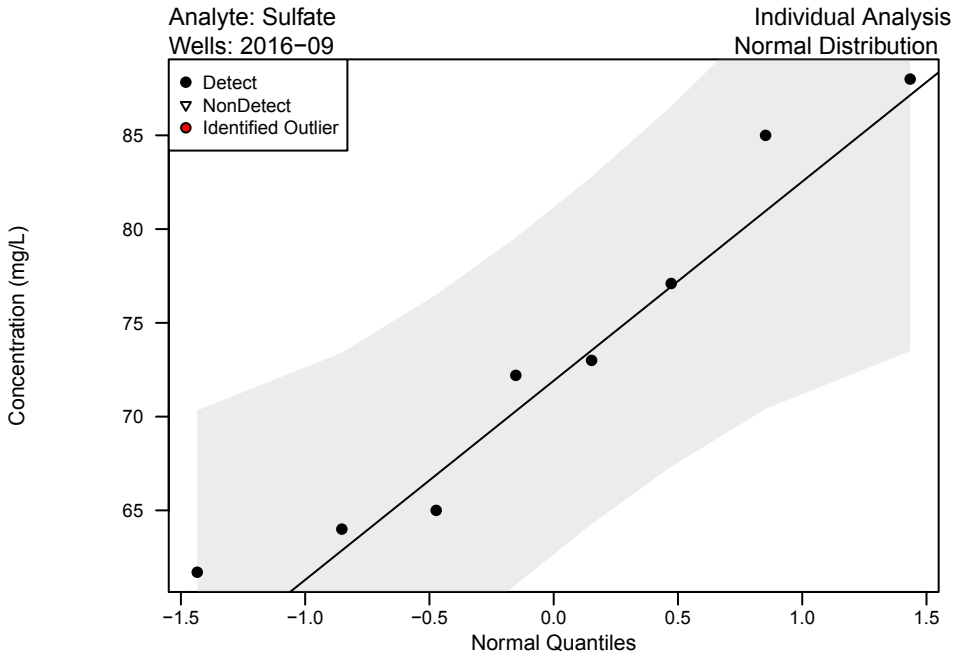
Unit: Fly Ash Reservoir
Figure A-2: QQ Plots of Upgradient Wells







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Unit: Fly Ash Reservoir

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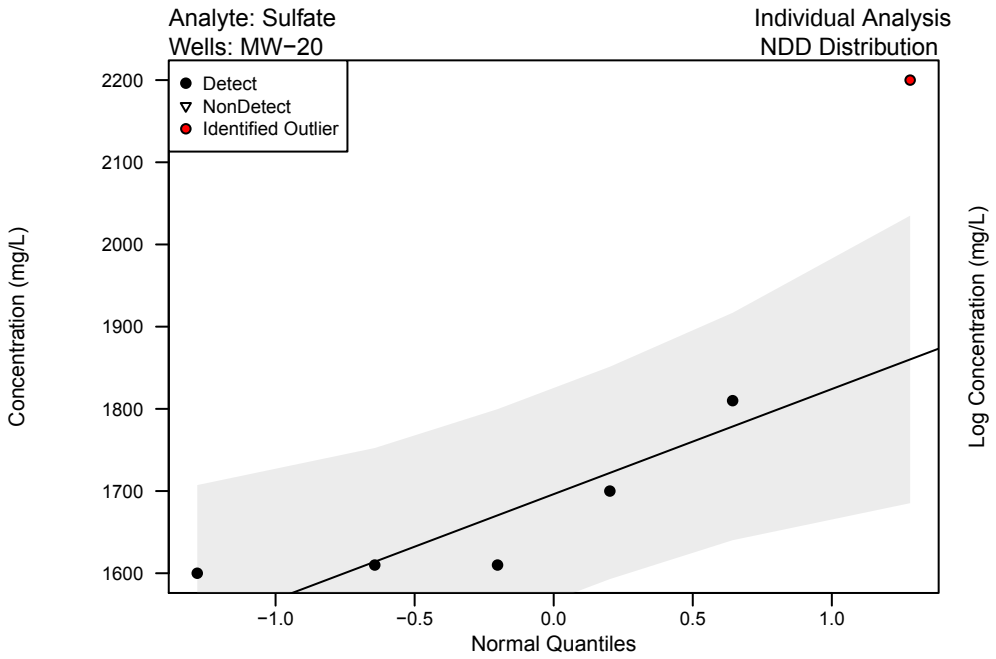

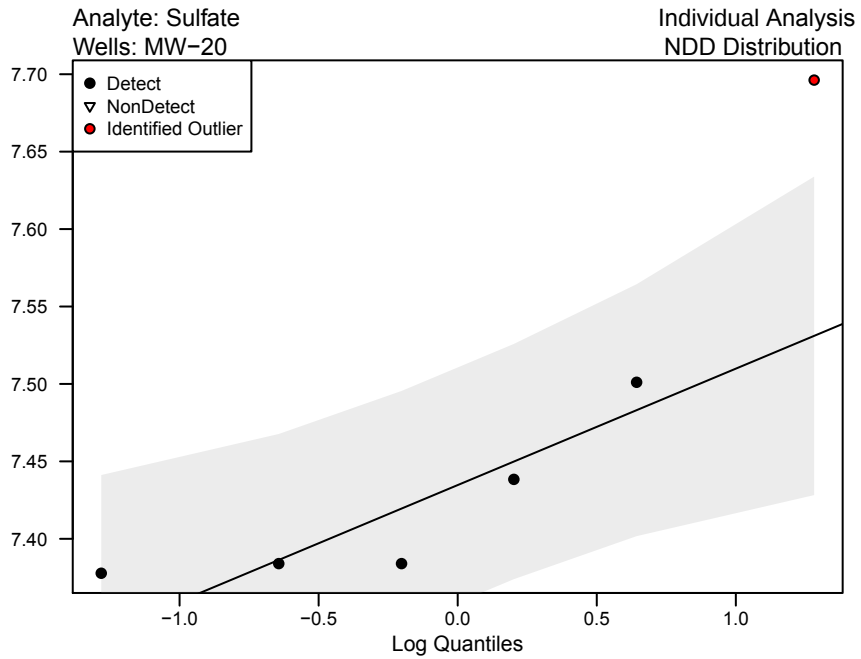

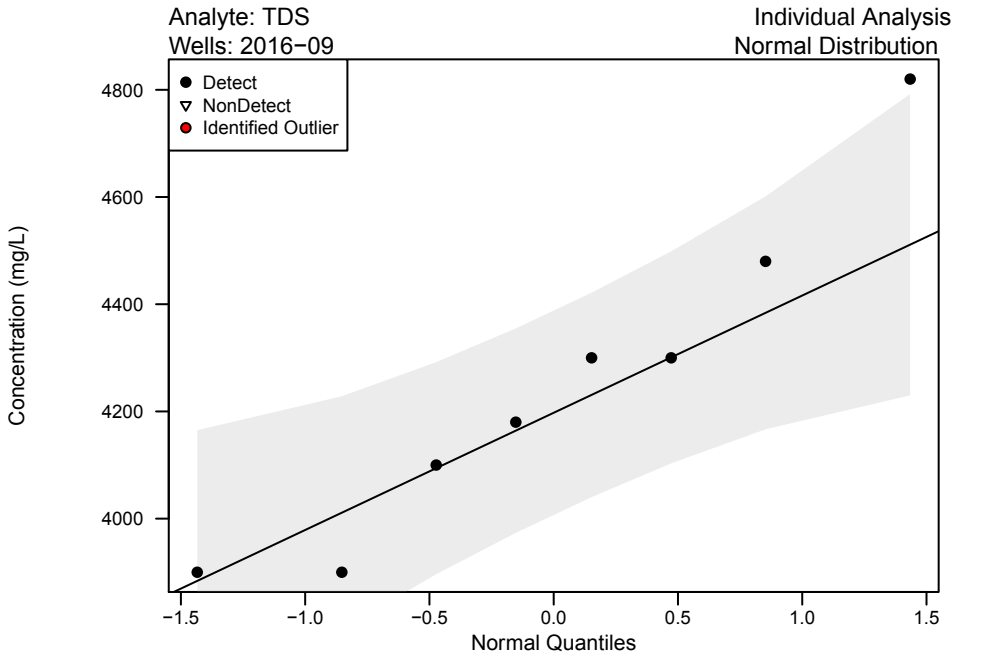

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Unit: Fly Ash Reservoir
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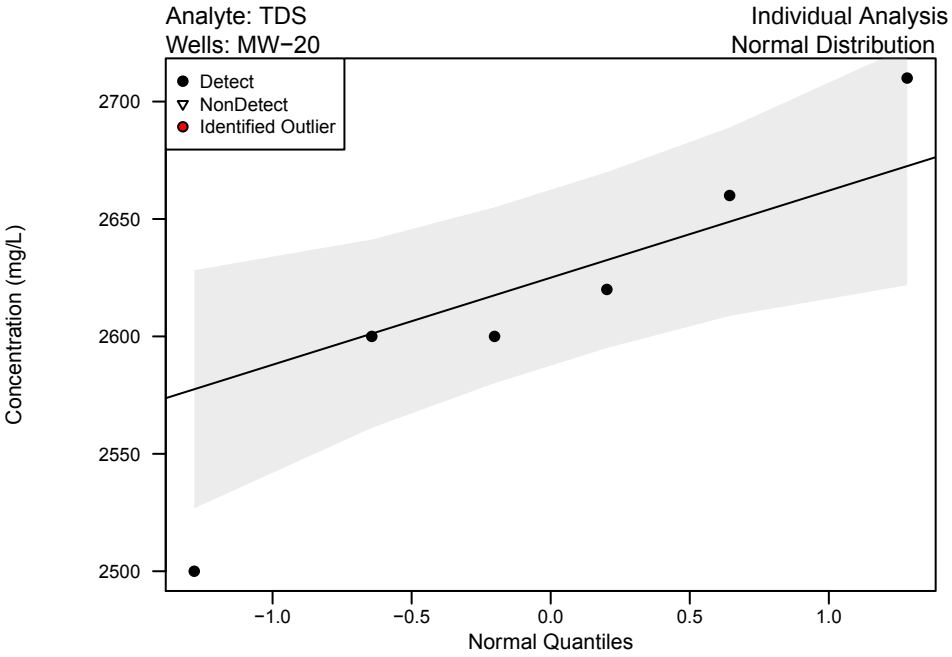

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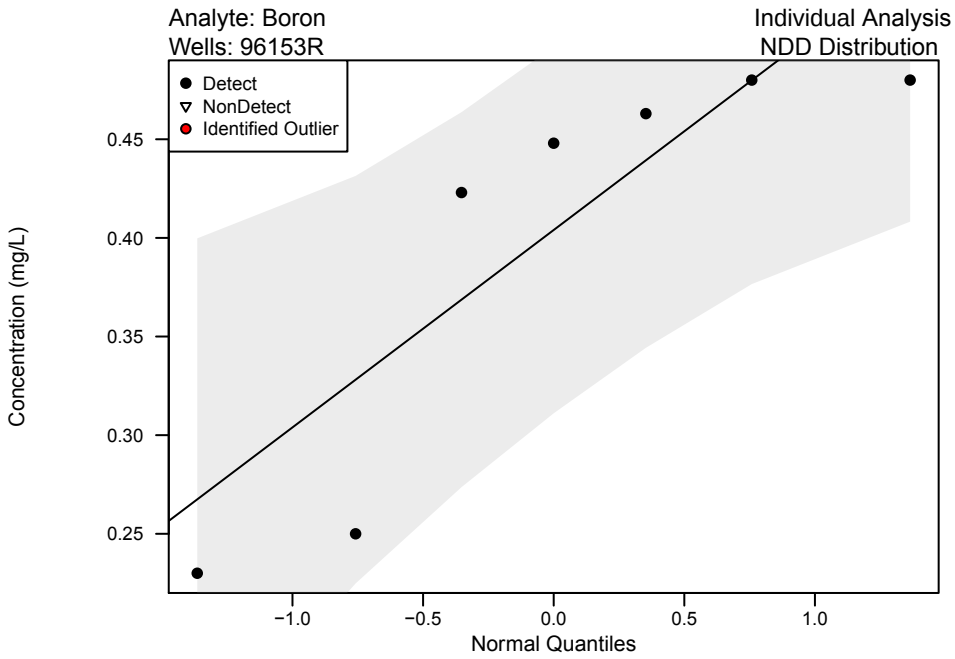
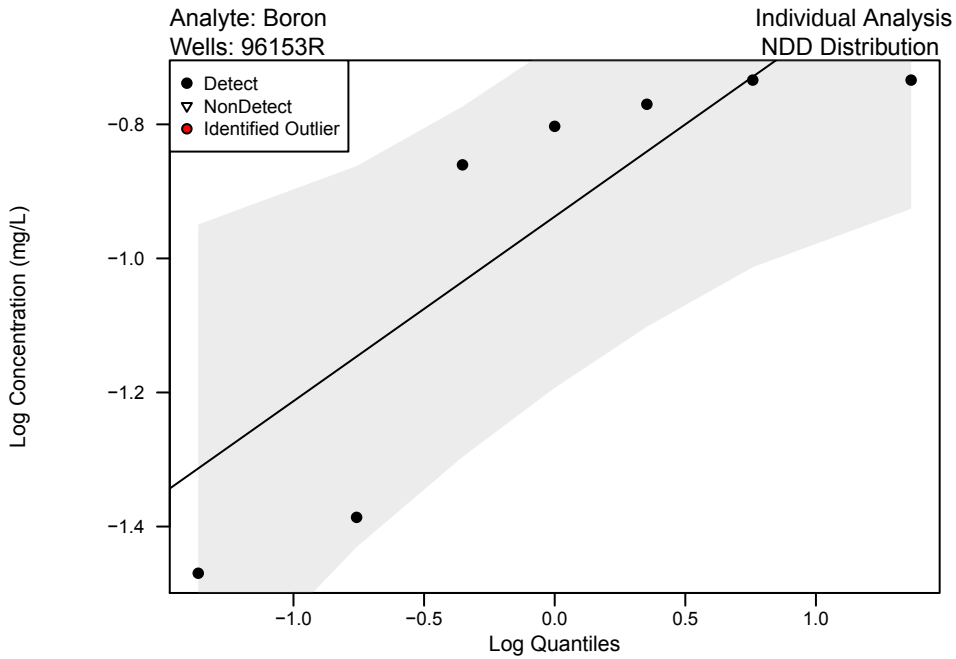
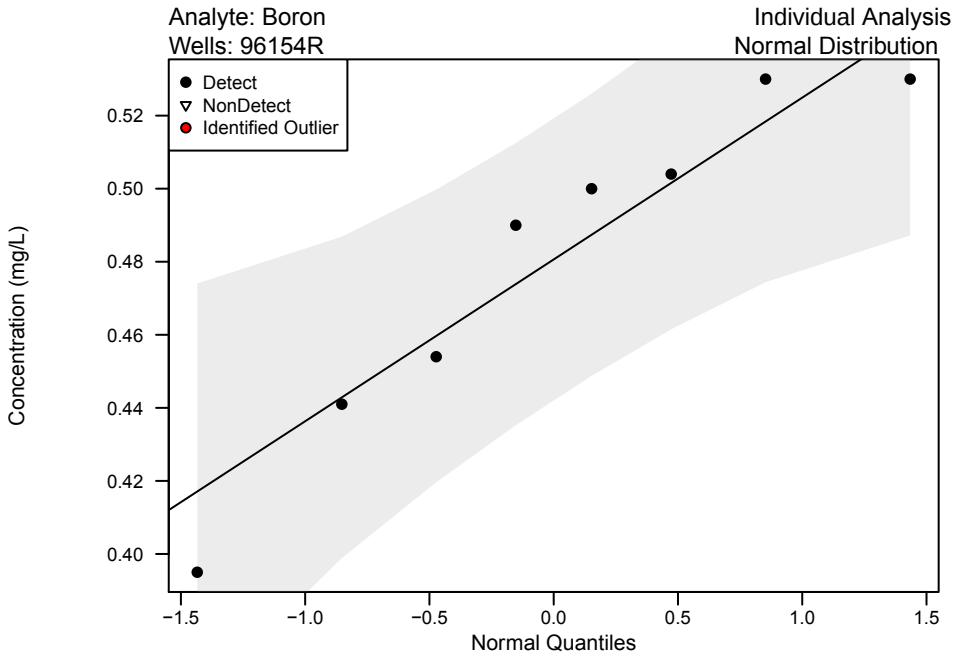
Unit: Fly Ash Reservoir
Figure A-2: QQ Plots of Upgradient Wells







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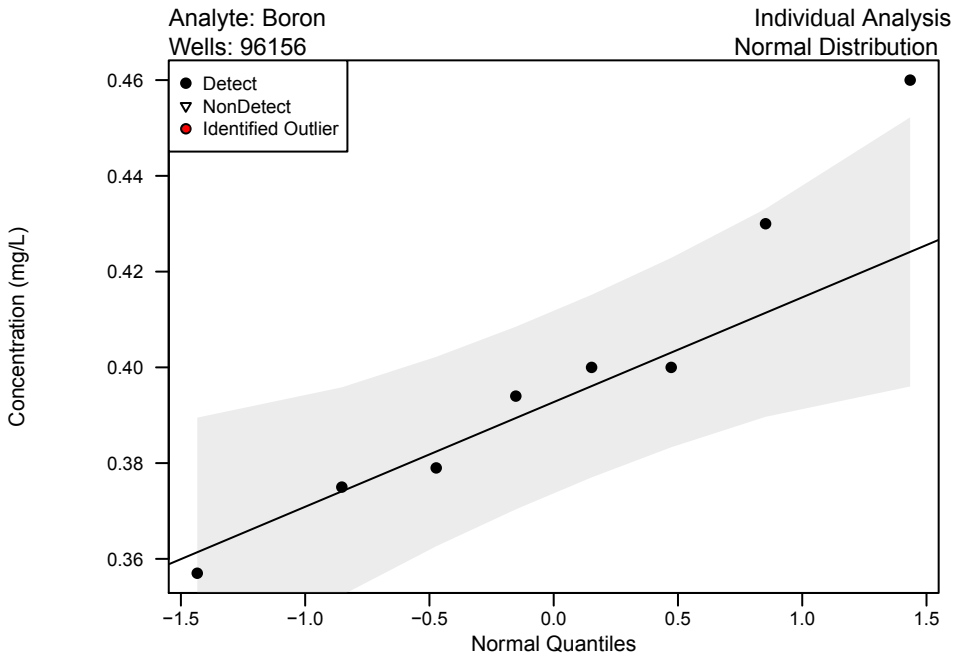
Unit: Fly Ash Reservoir
Figure A-2: QQ Plots of Upgradient Wells



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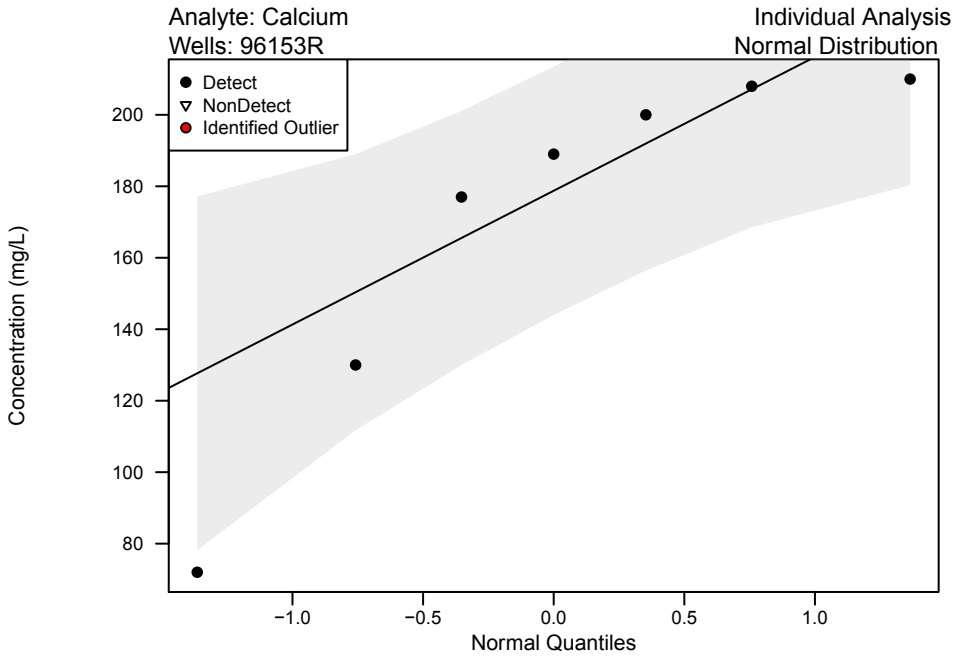

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Unit: Fly Ash Reservoir
Figure A-2: QQ Plots of Upgradient Wells

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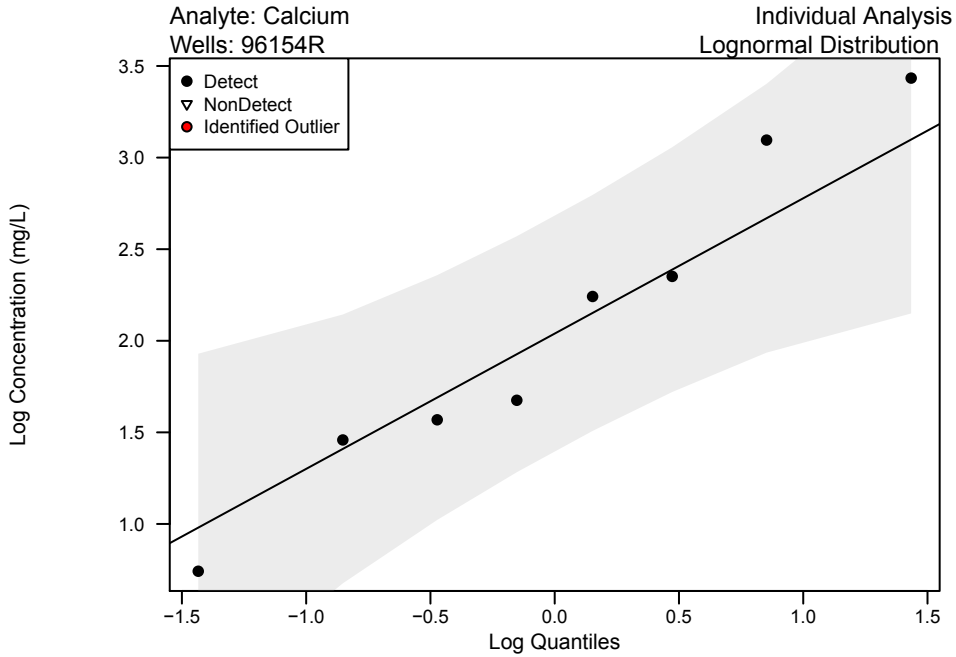

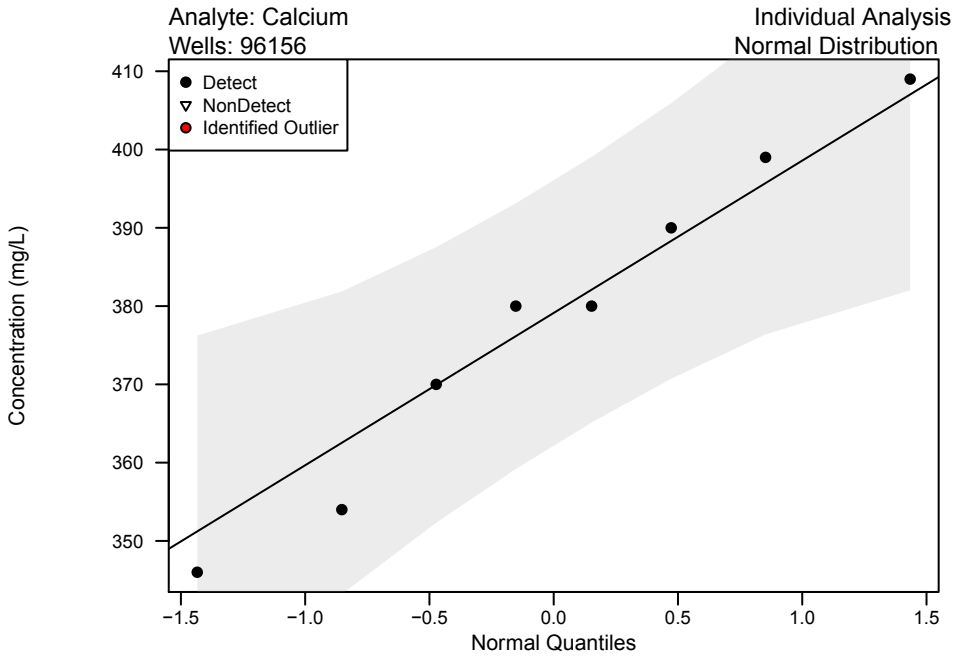

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Unit: Fly Ash Reservoir
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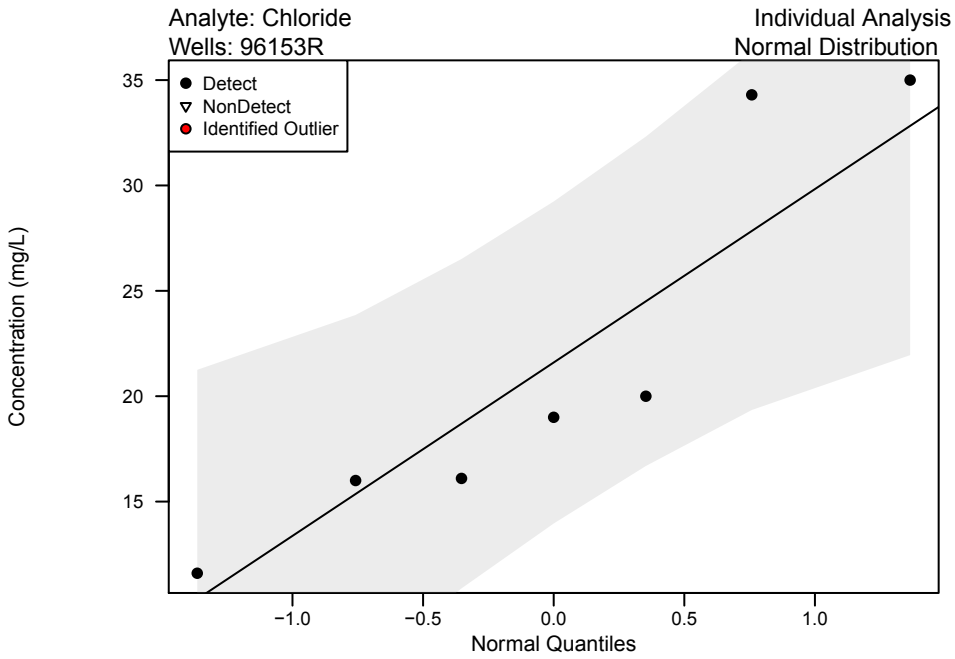

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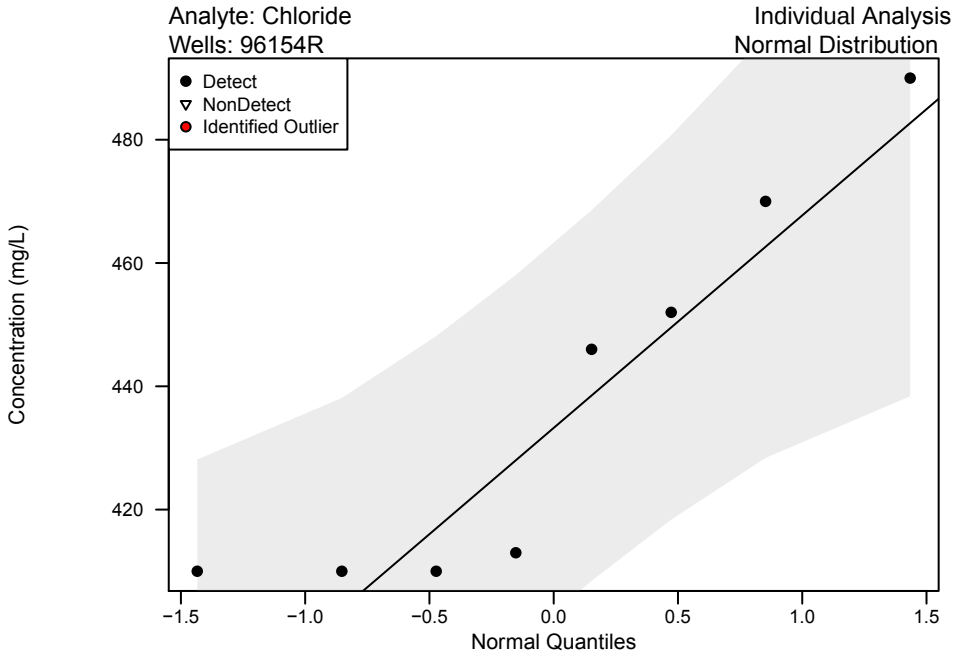

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Unit: Fly Ash Reservoir
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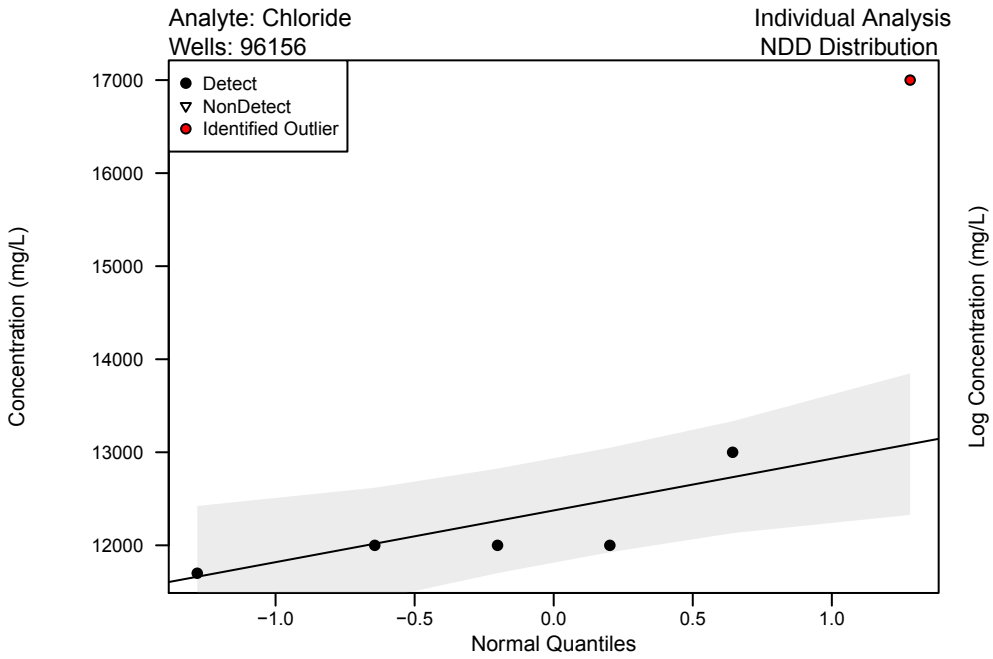

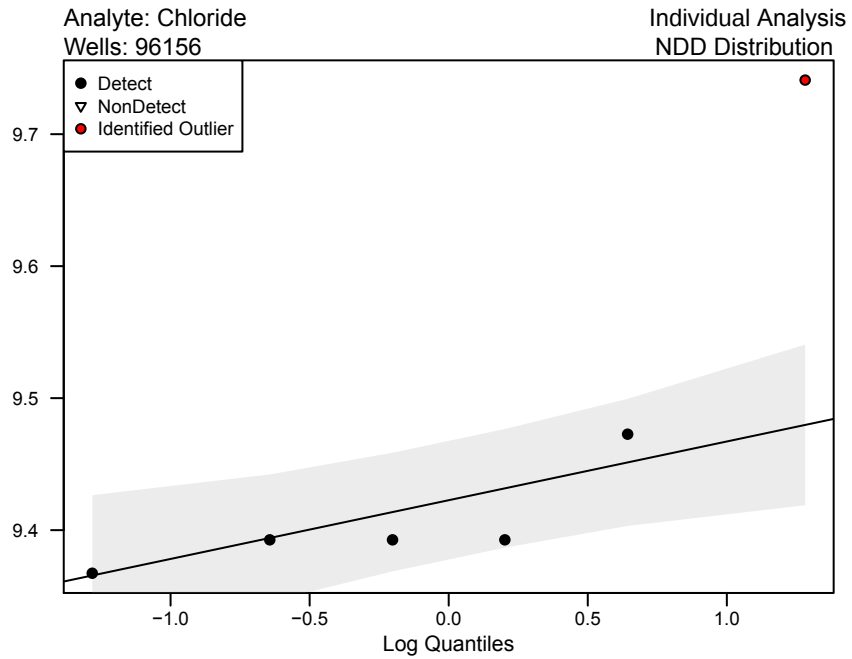

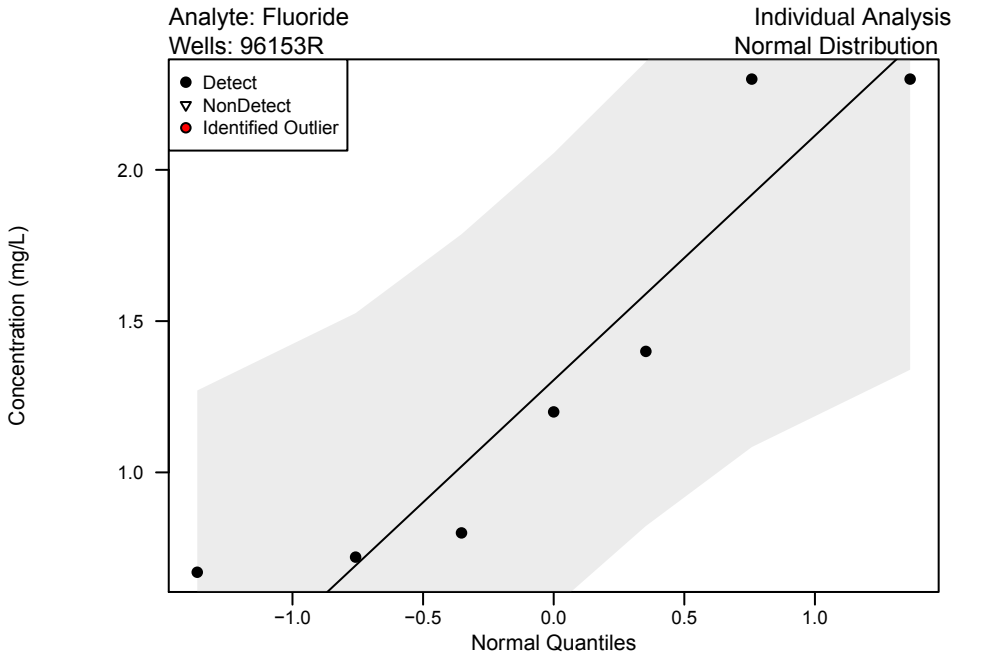

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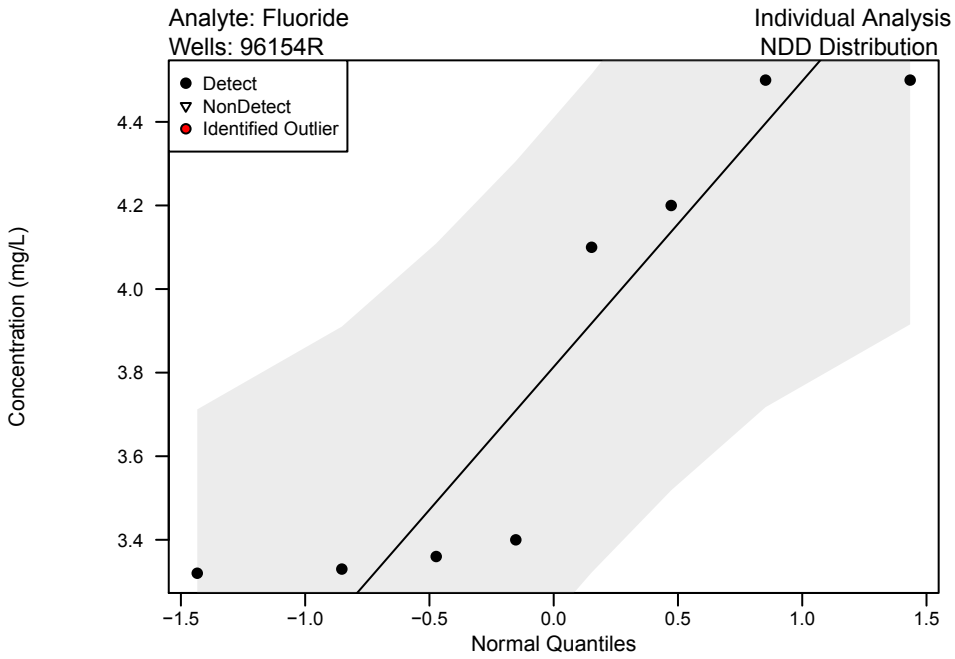
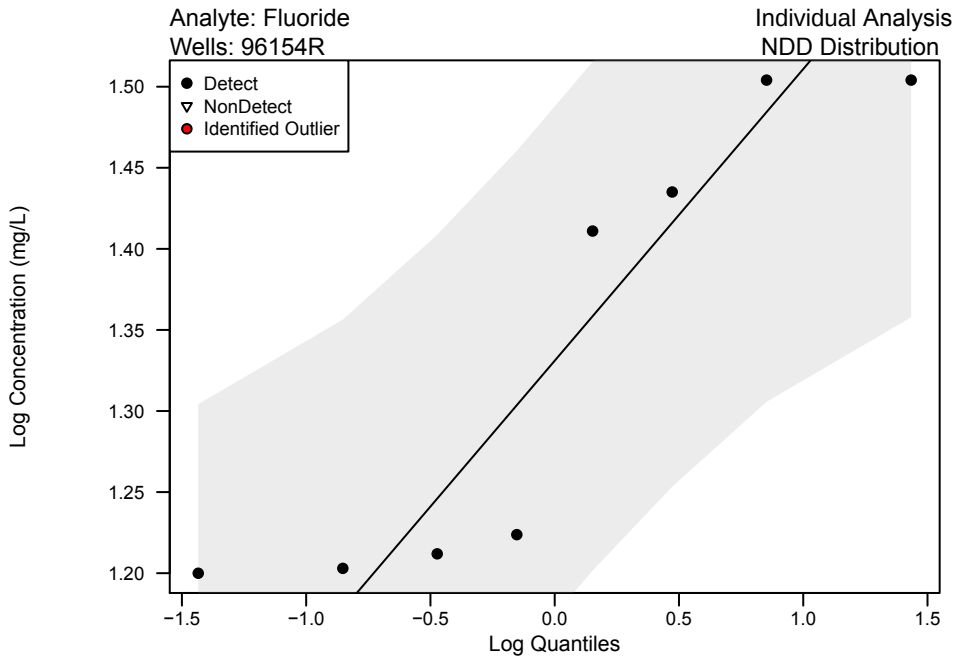
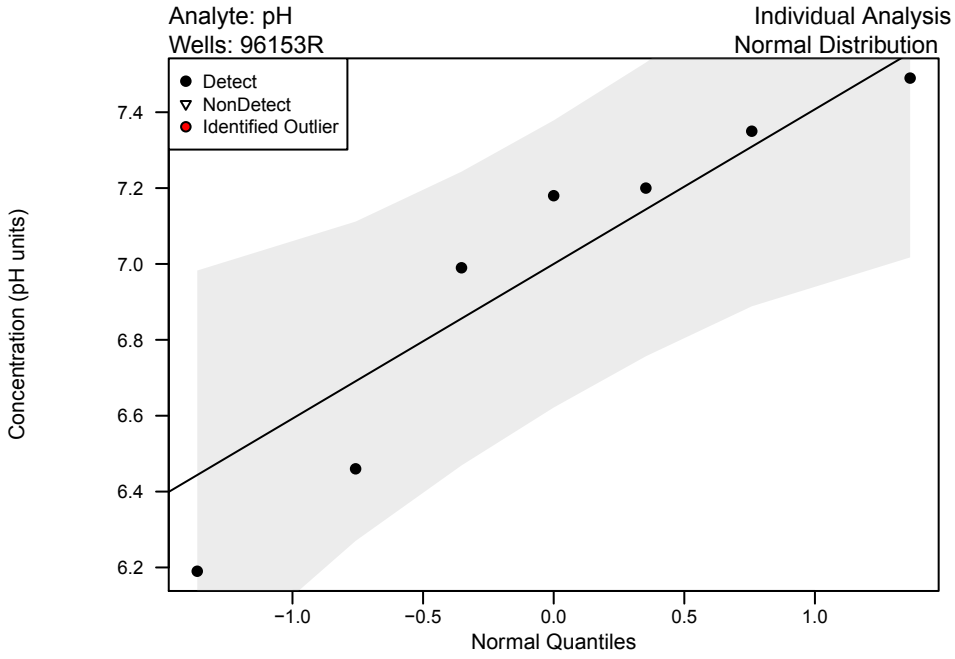
not Lognormal/NDD distribution.

Unit: Fly Ash Reservoir
Figure A-2: QQ Plots of Upgradient Wells







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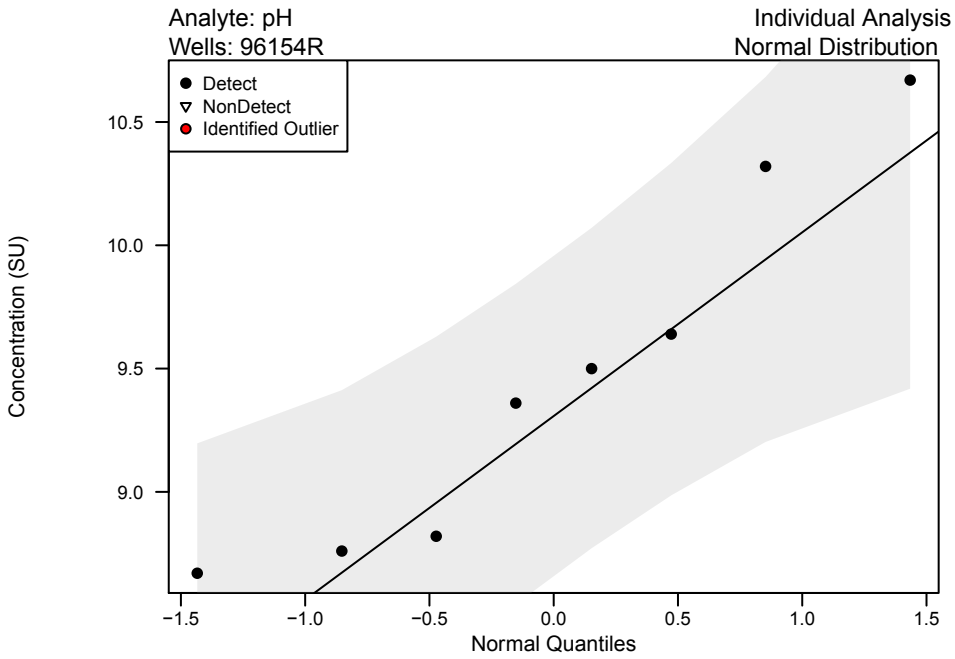
not Lognormal/NDD distribution.

Unit: Fly Ash Reservoir
Figure A-2: QQ Plots of Upgradient Wells



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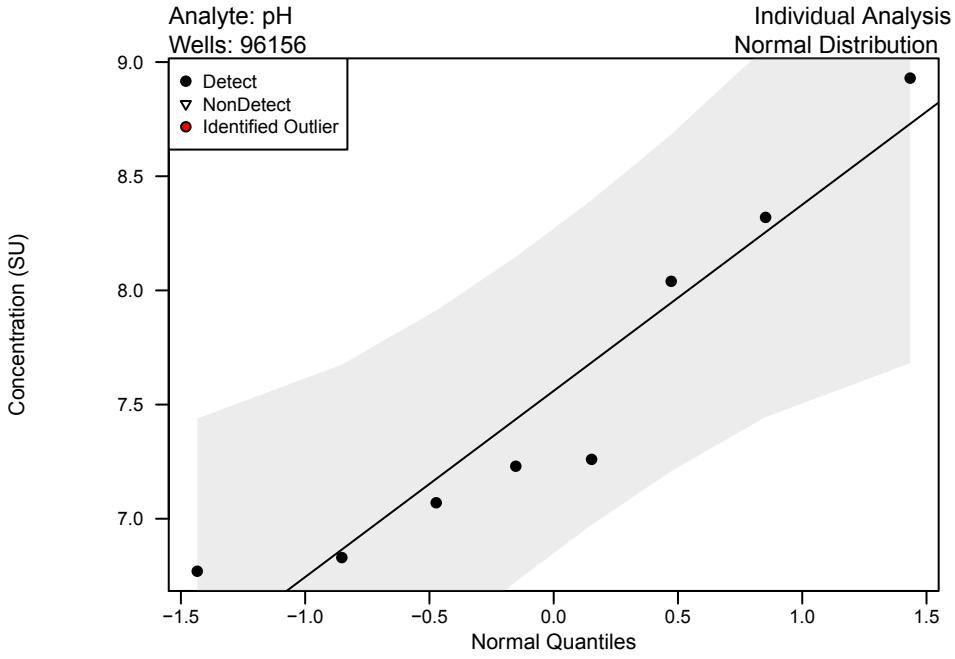

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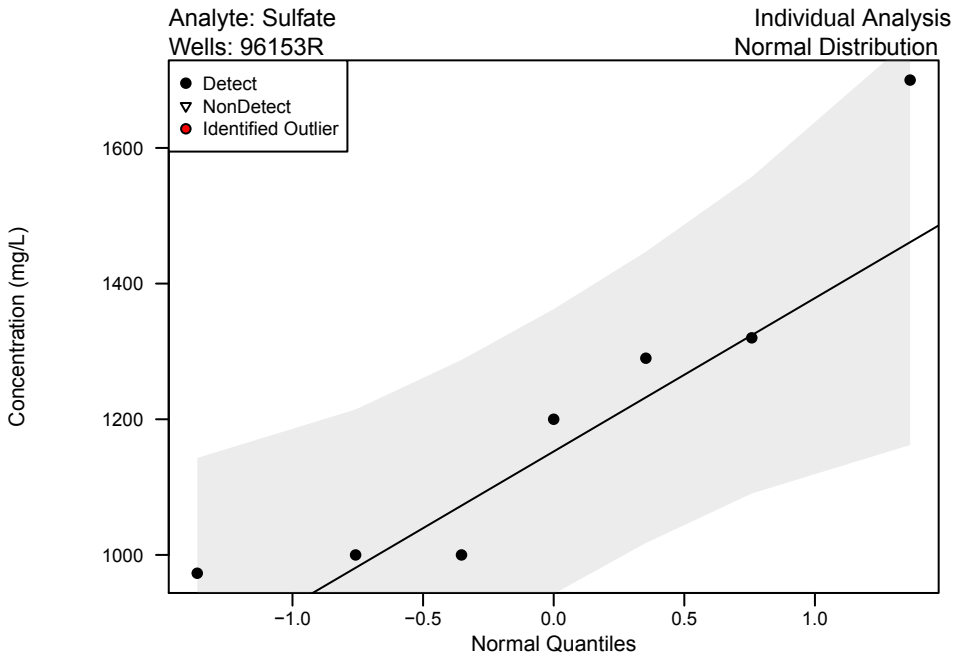
not Lognormal/NDD distribution.

Unit: Fly Ash Reservoir
Figure A-2: QQ Plots of Upgradient Wells



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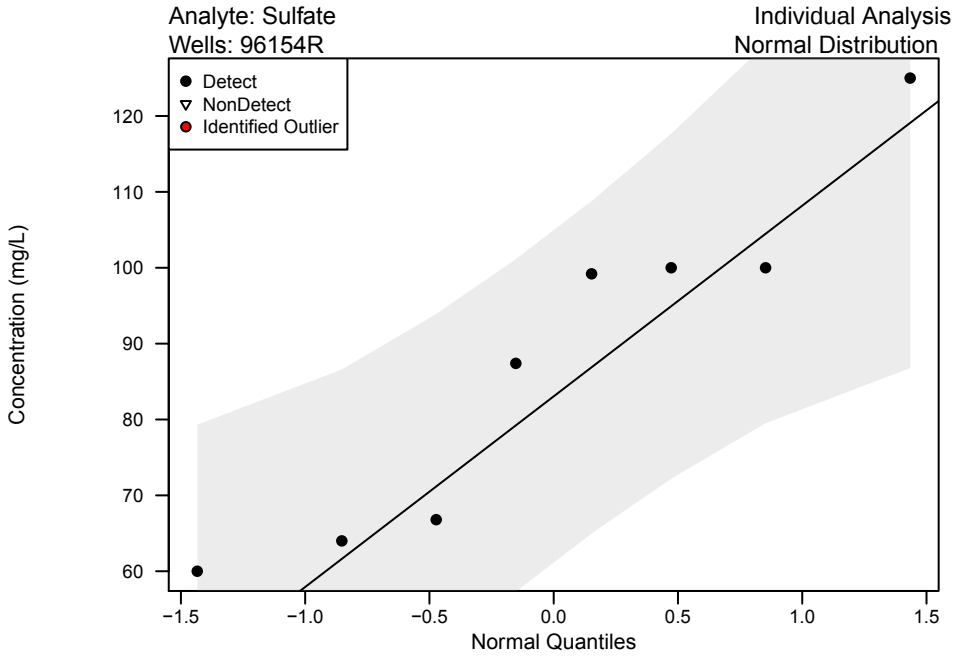

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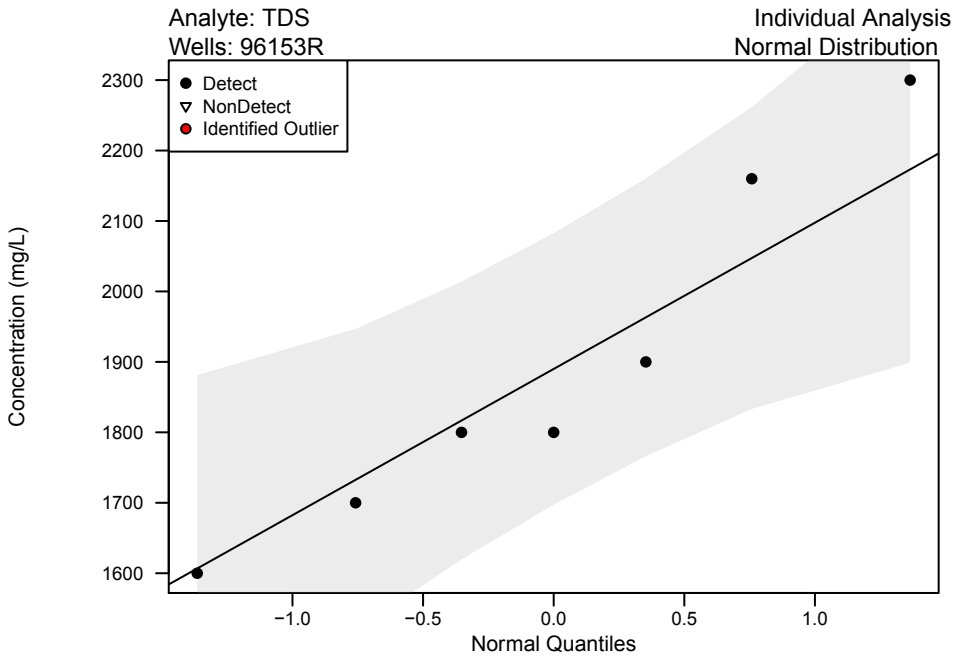
not Lognormal/NDD distribution.

Unit: Fly Ash Reservoir
Figure A-2: QQ Plots of Upgradient Wells



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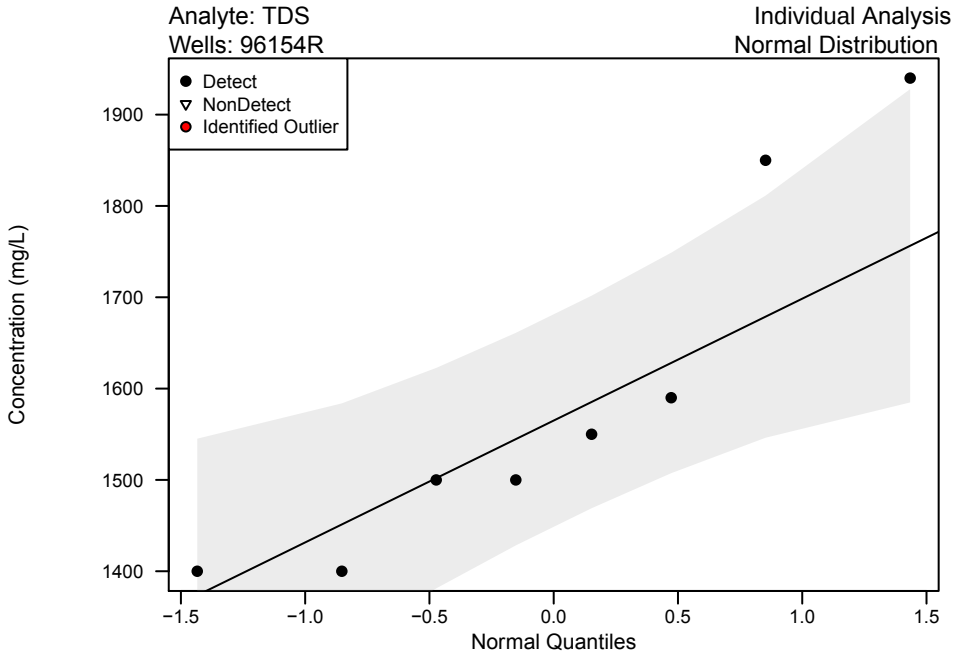

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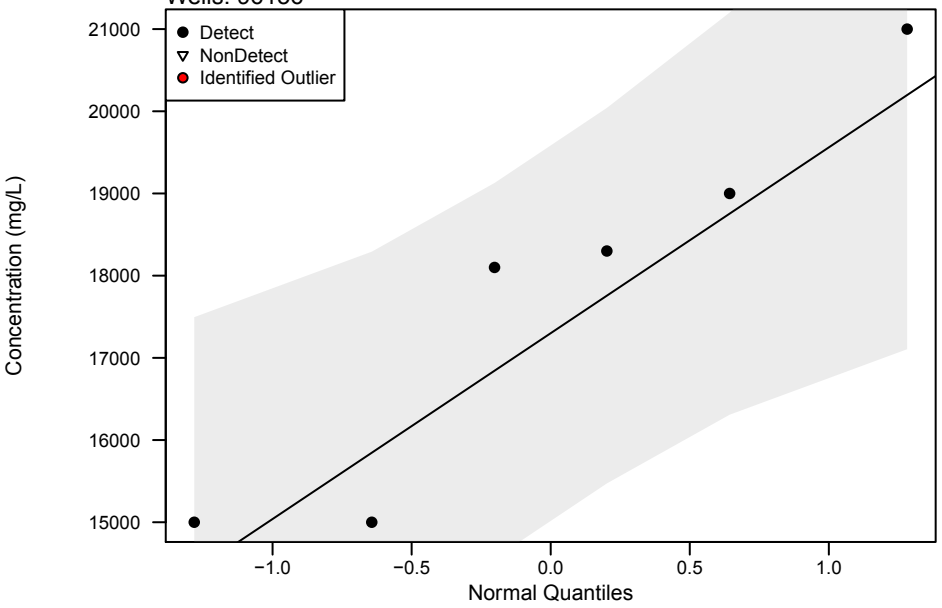
not Lognormal/NDD distribution.

Unit: Fly Ash Reservoir
Figure A-2: QQ Plots of Upgradient Wells

Analyte: TDS
Wells: 96156



Individual Analysis Normal Distribution

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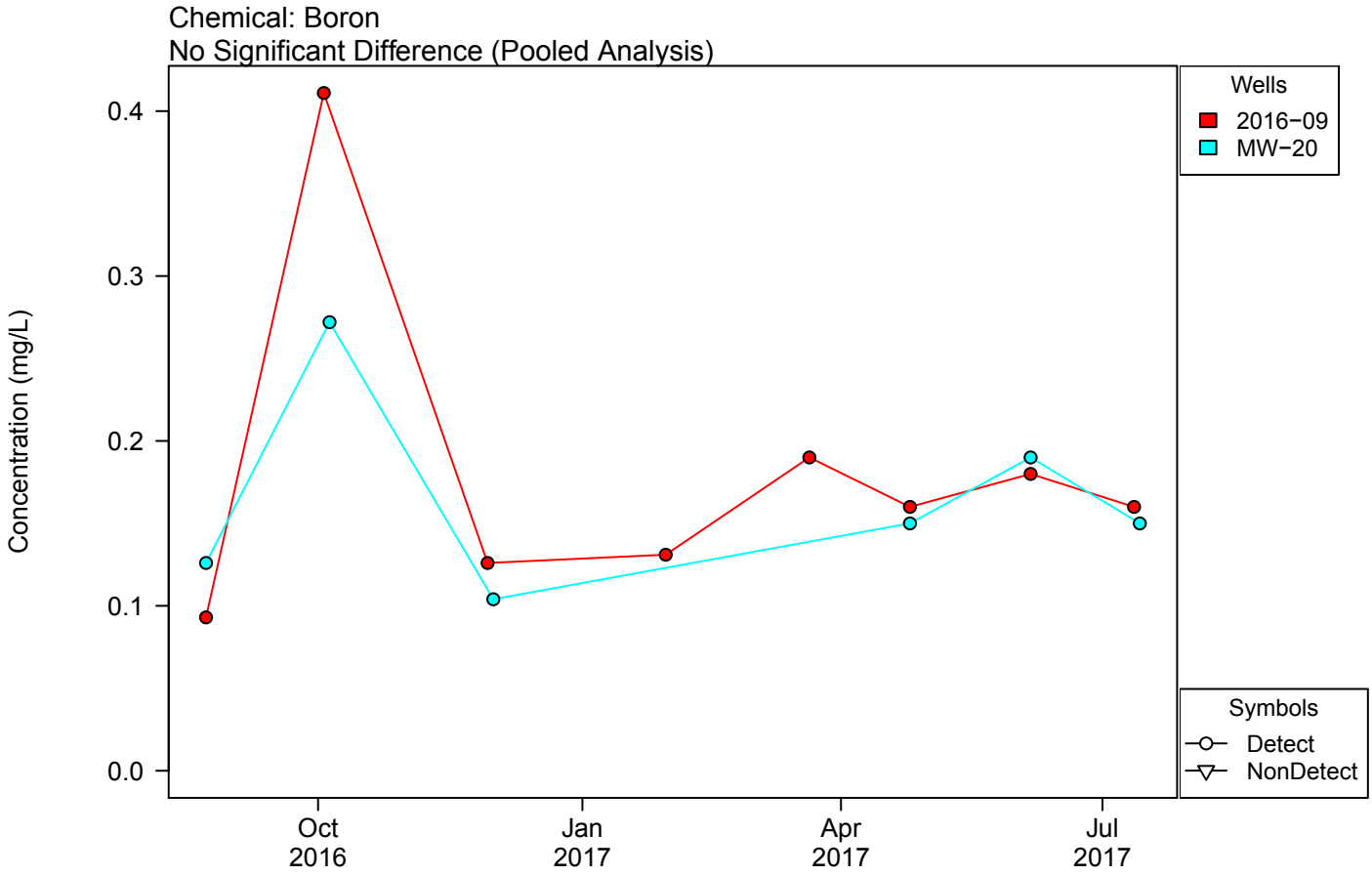
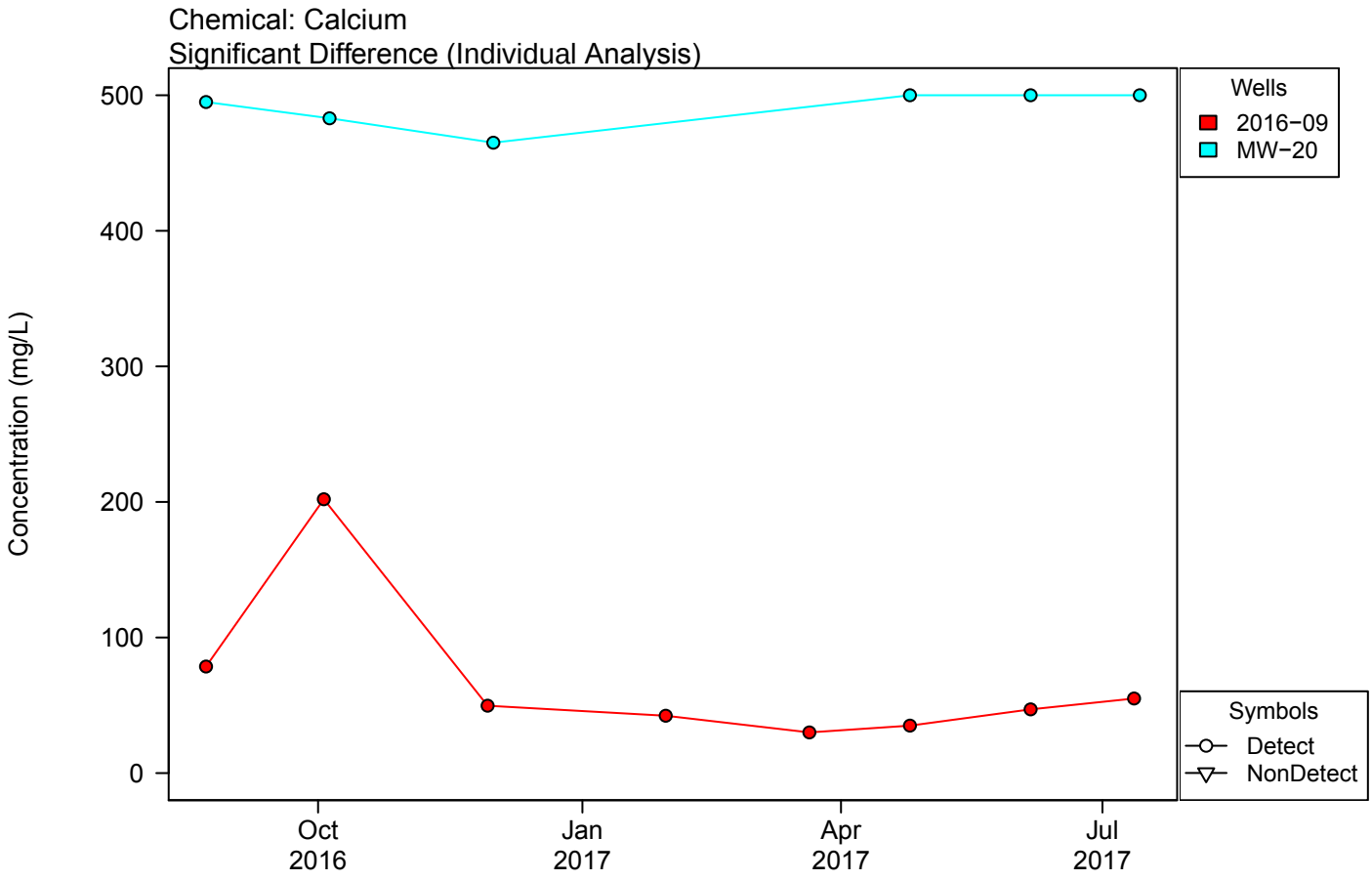
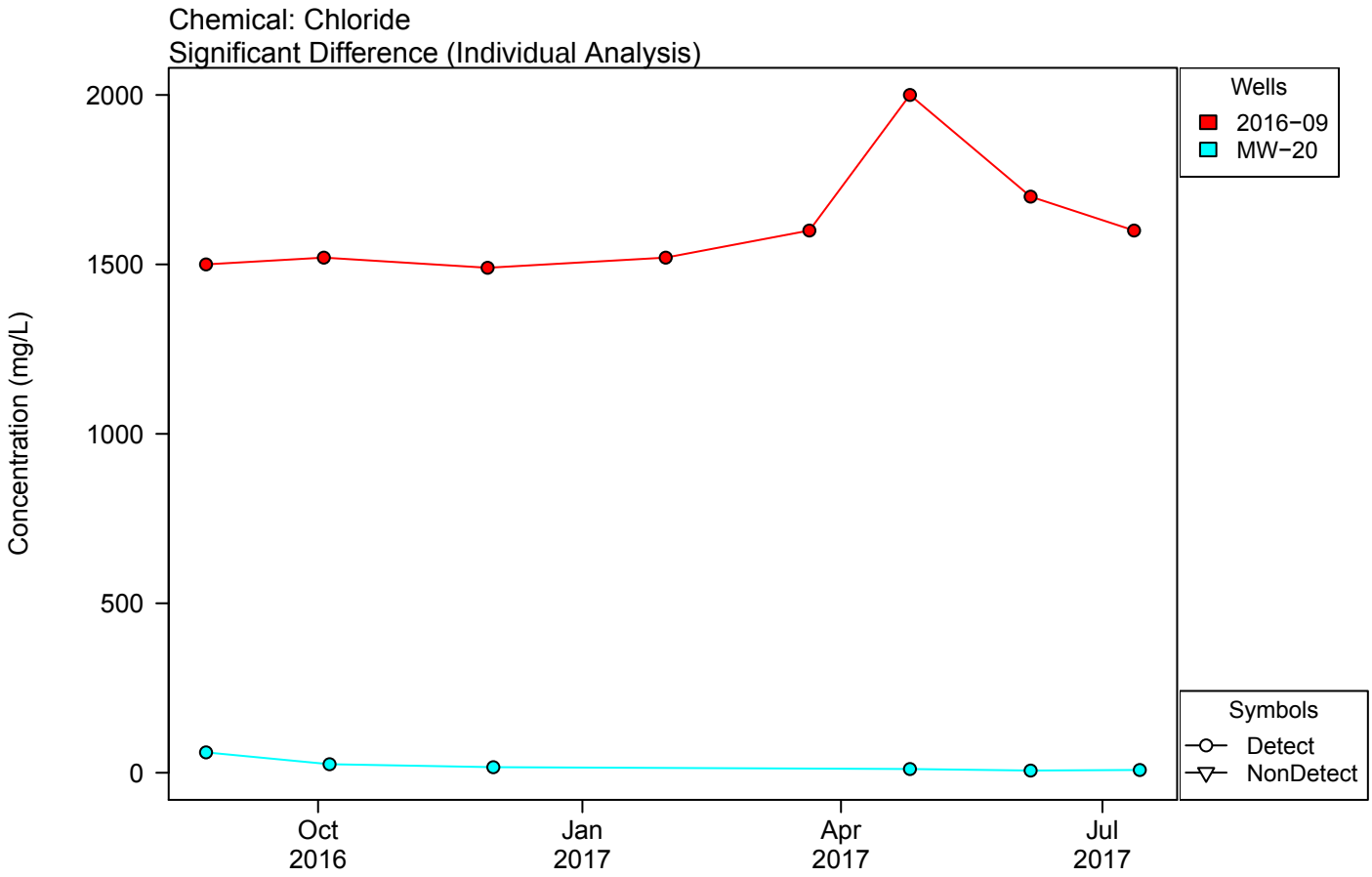
not Lognormal/NDD distribution.

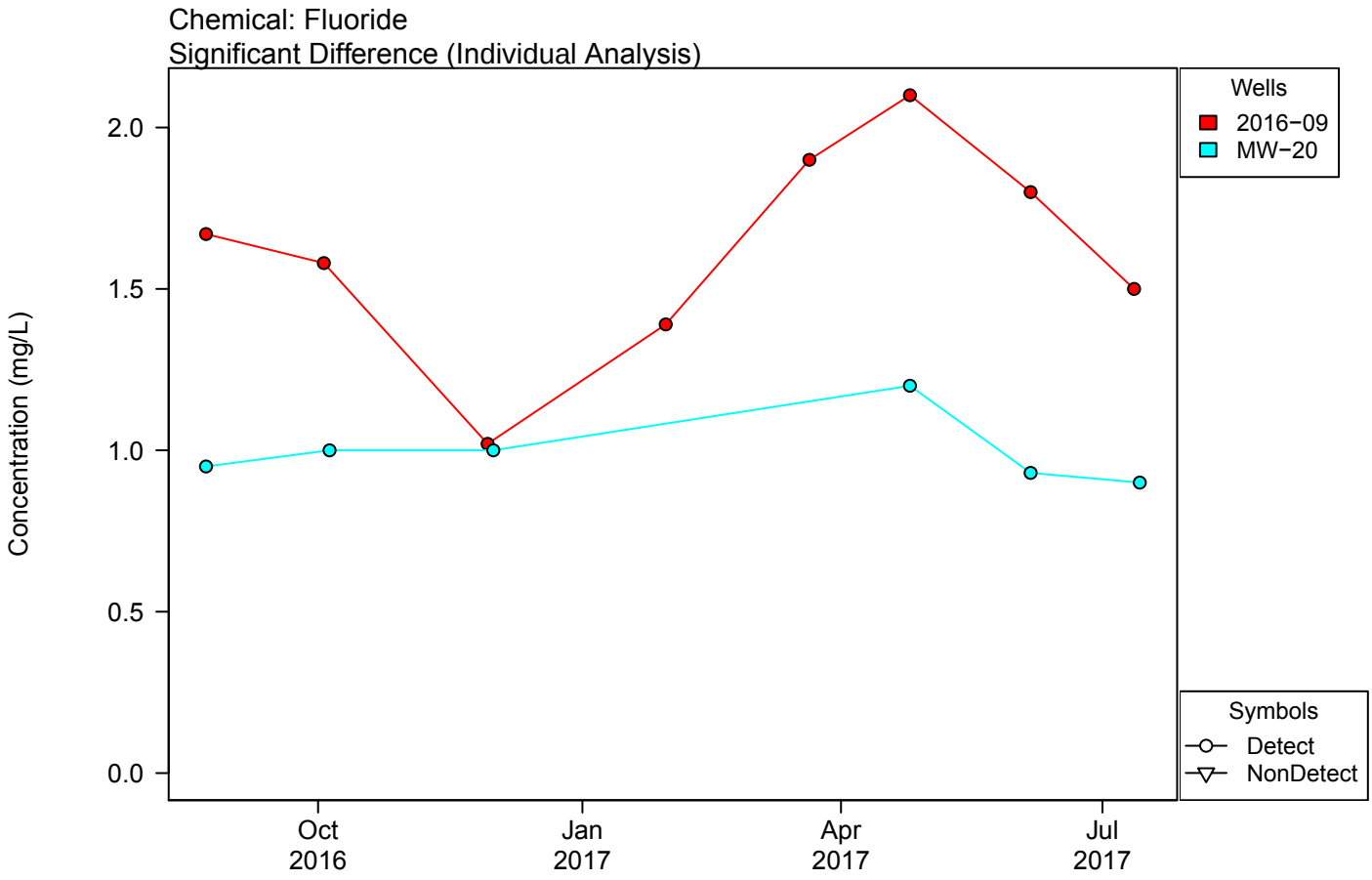
Unit: Fly Ash Reservoir Cow Run SS
Figure A-3: Timeseries of Upgradient Wells



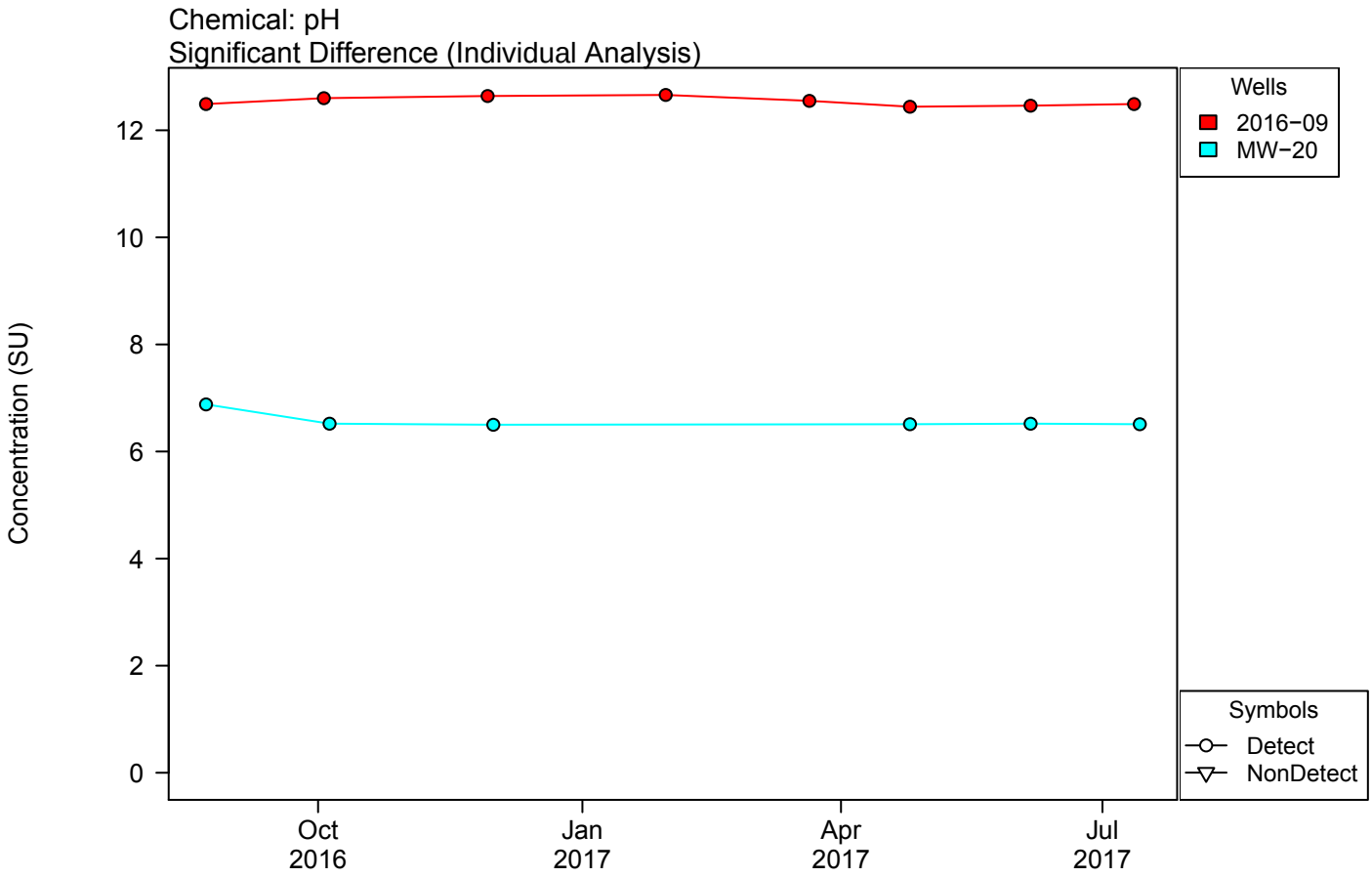


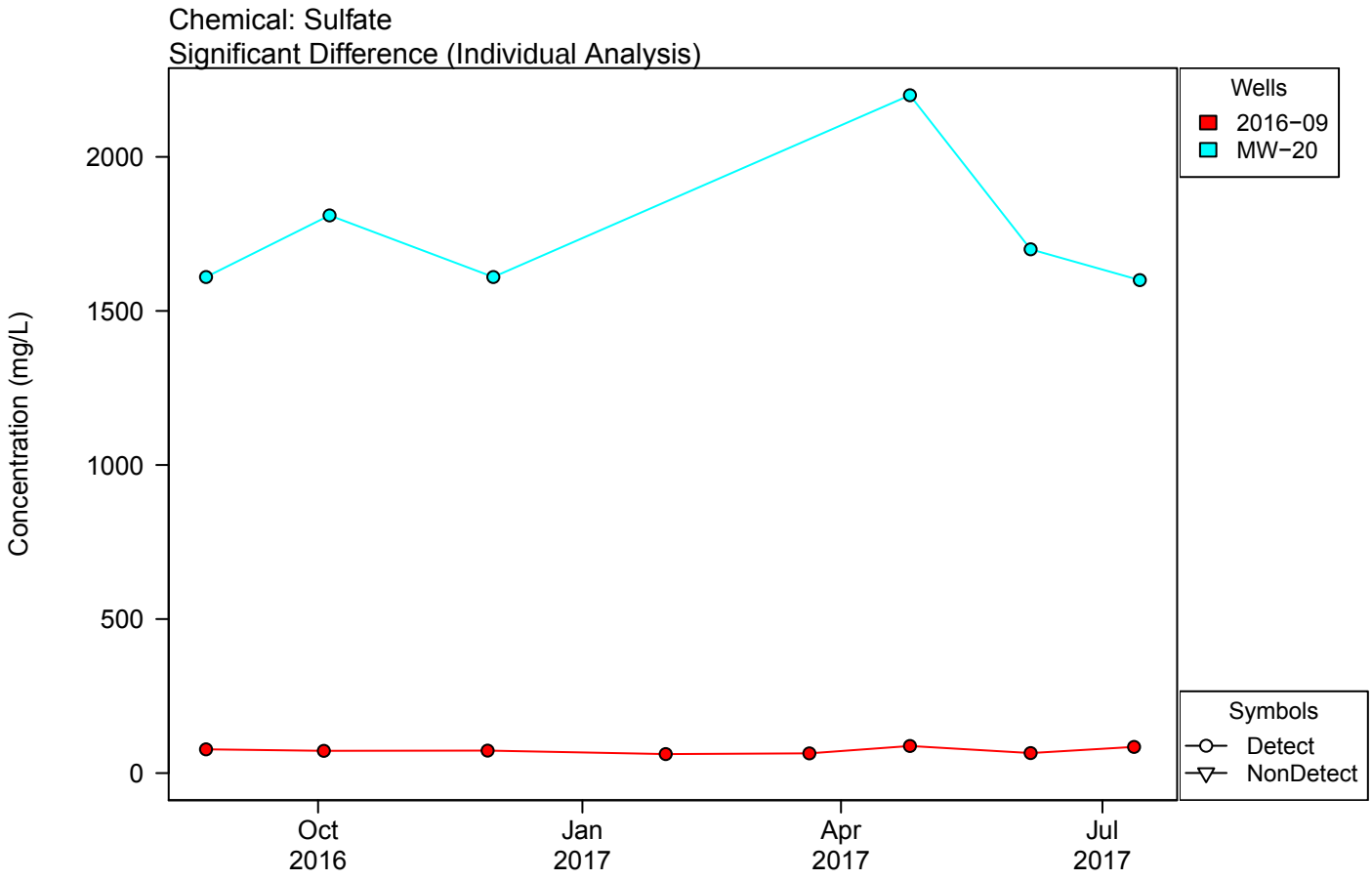
Unit: Fly Ash Reservoir Cow Run SS
Figure A-3: Timeseries of Upgradient Wells



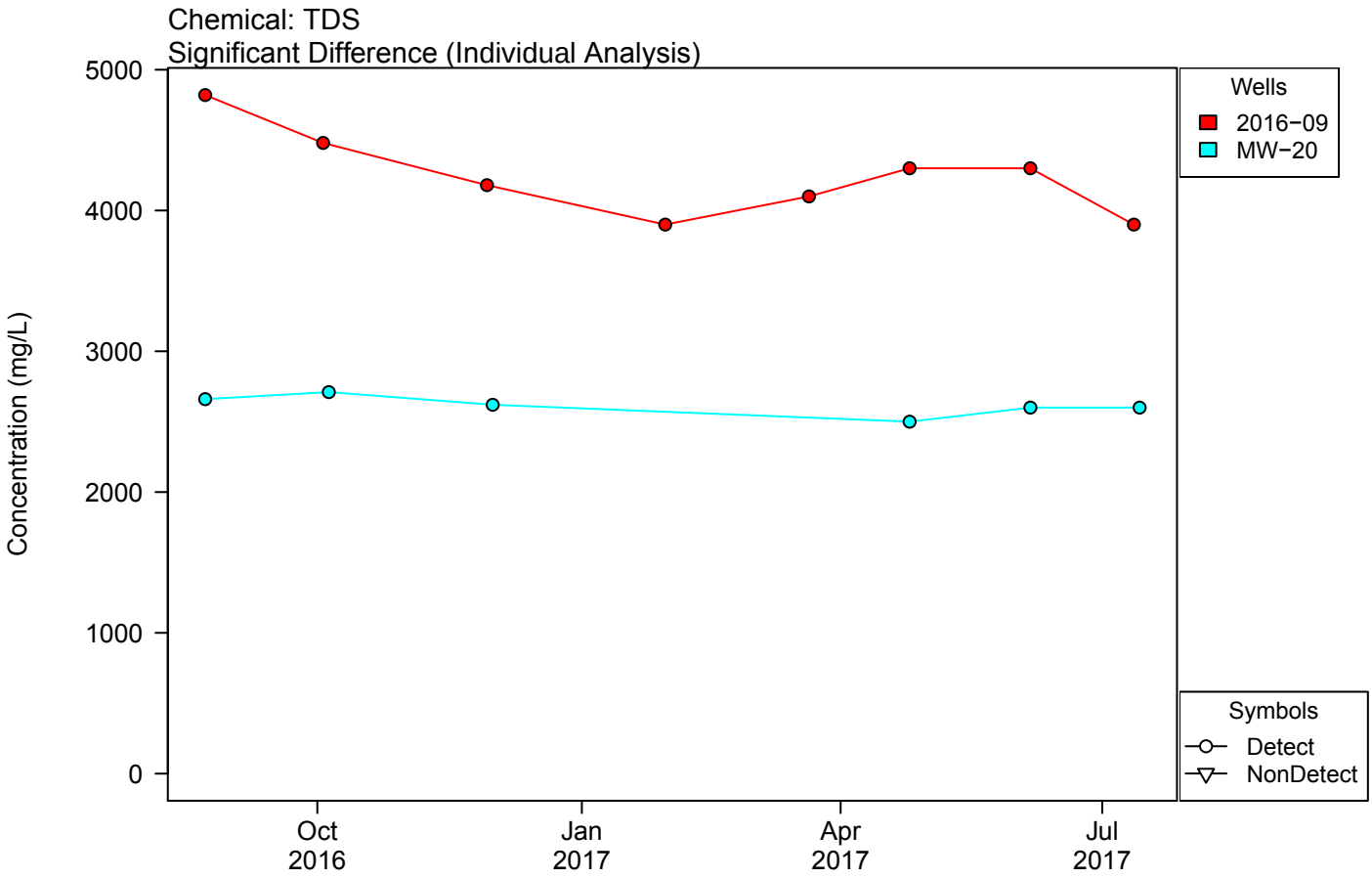


Unit: Fly Ash Reservoir Cow Run SS
Figure A-3: Timeseries of Upgradient Wells

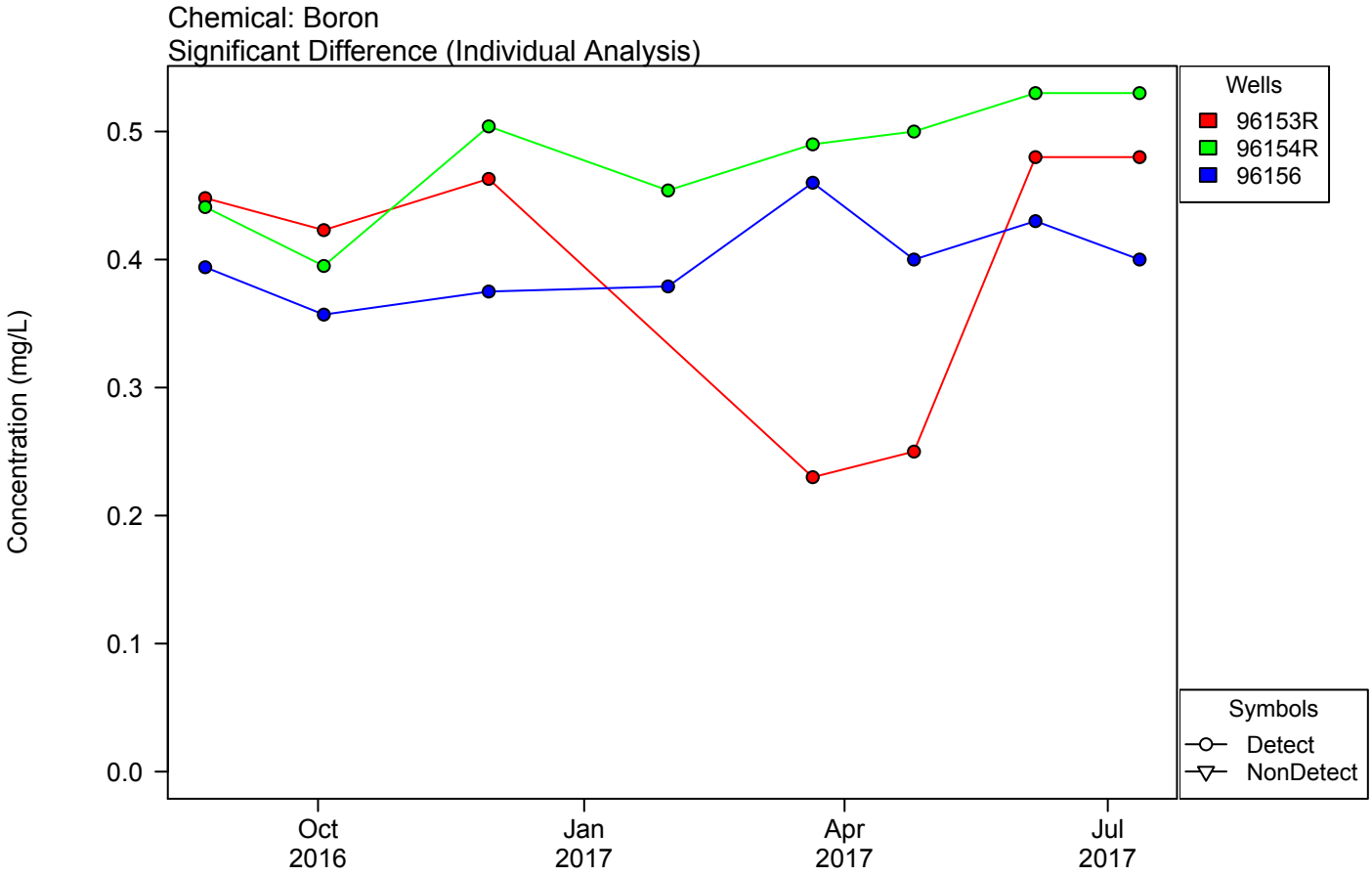


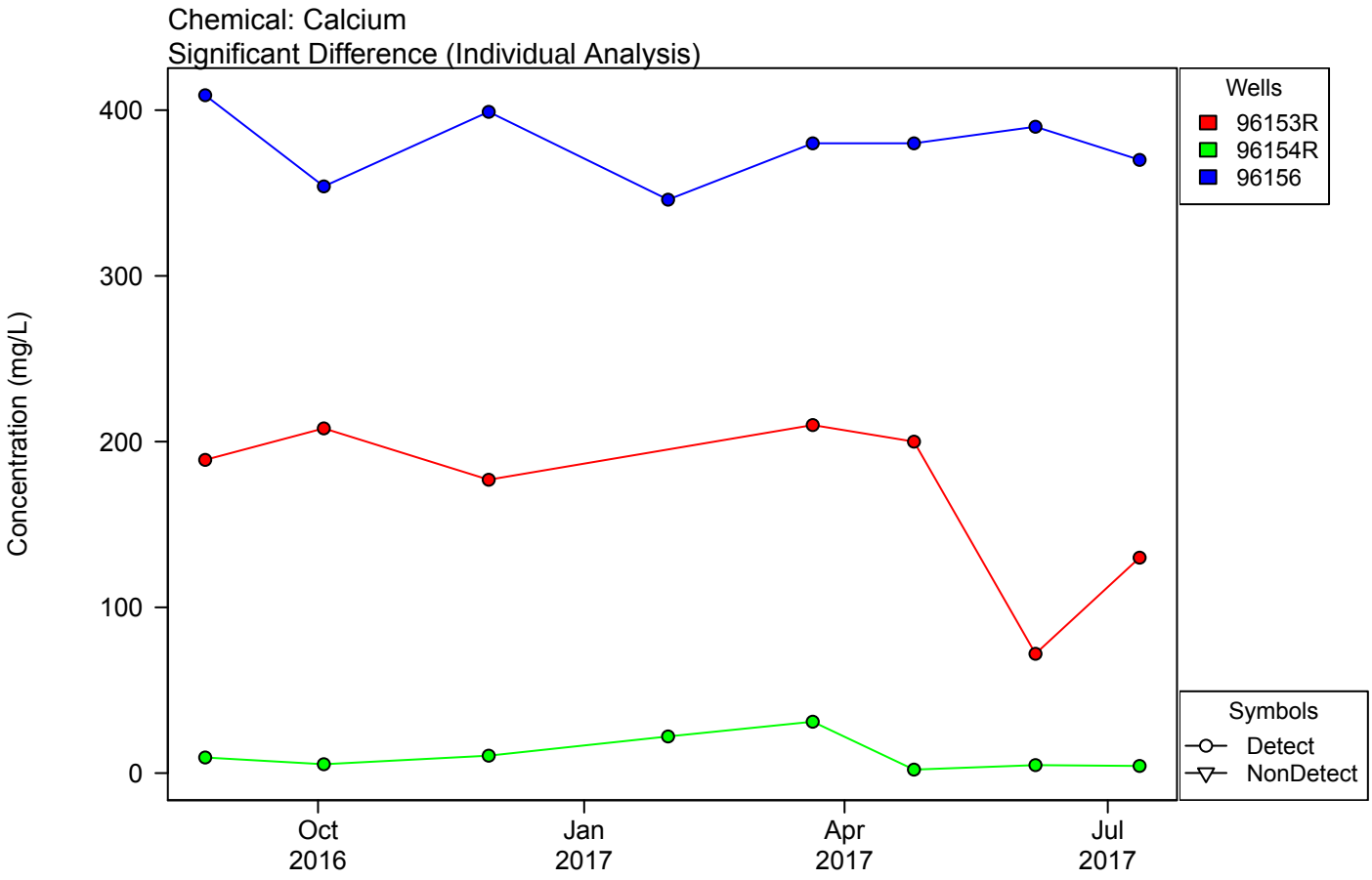


Unit: Fly Ash Reservoir Cow Run SS
Figure A-3: Timeseries of Upgradient Wells

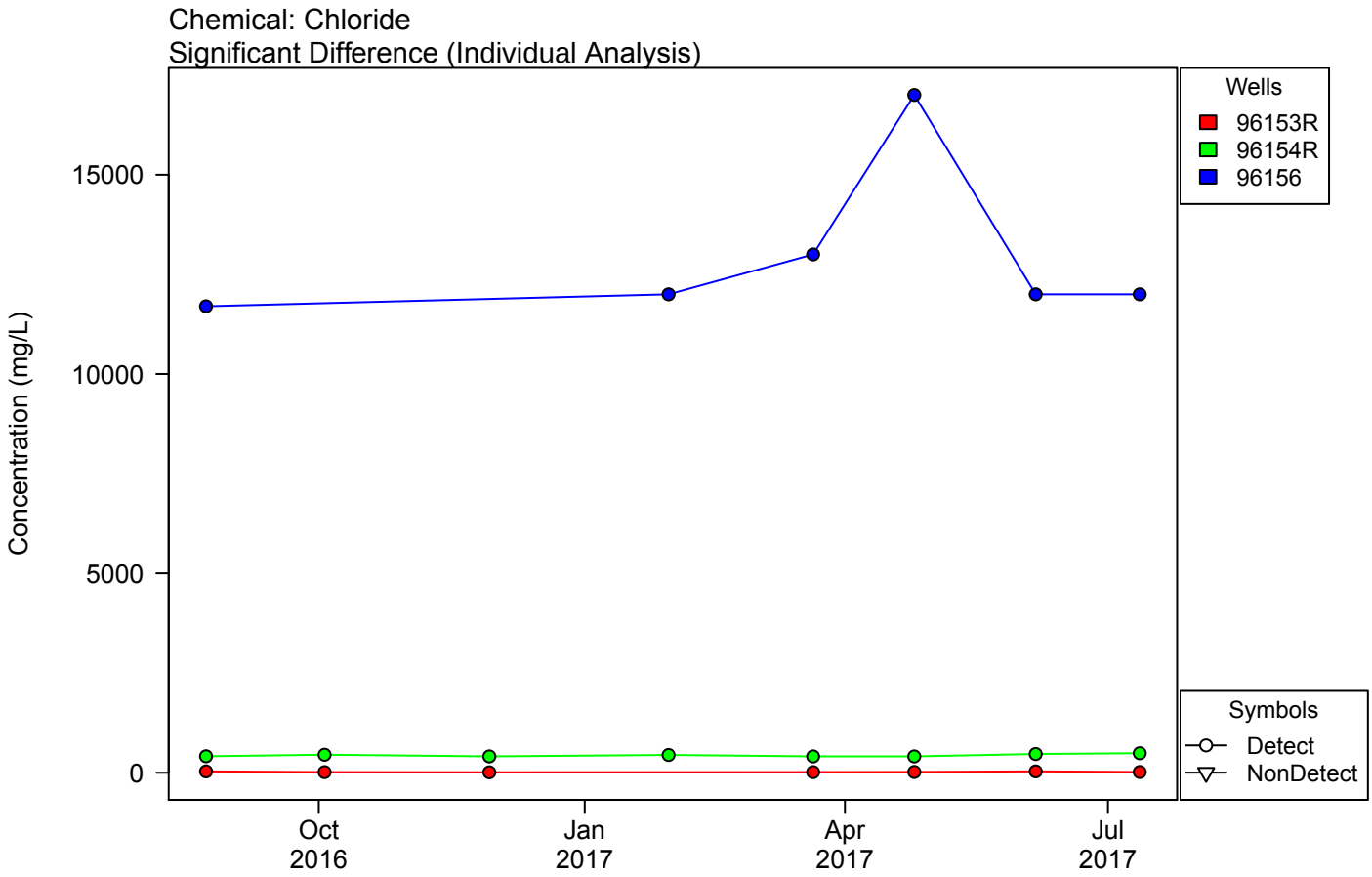


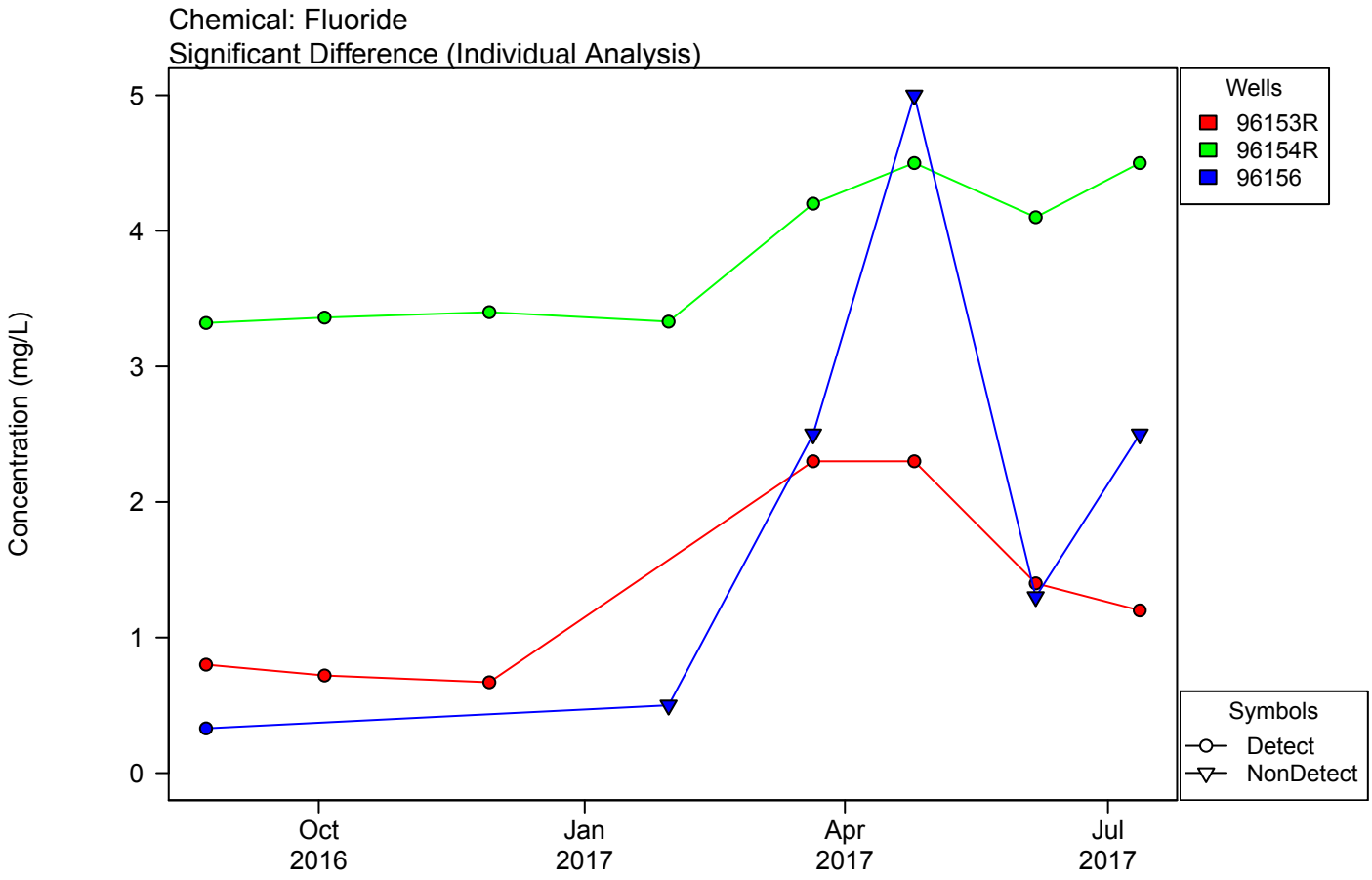
Unit: Fly Ash Reservoir Morgantown SS
Figure A-3: Timeseries of Upgradient Wells



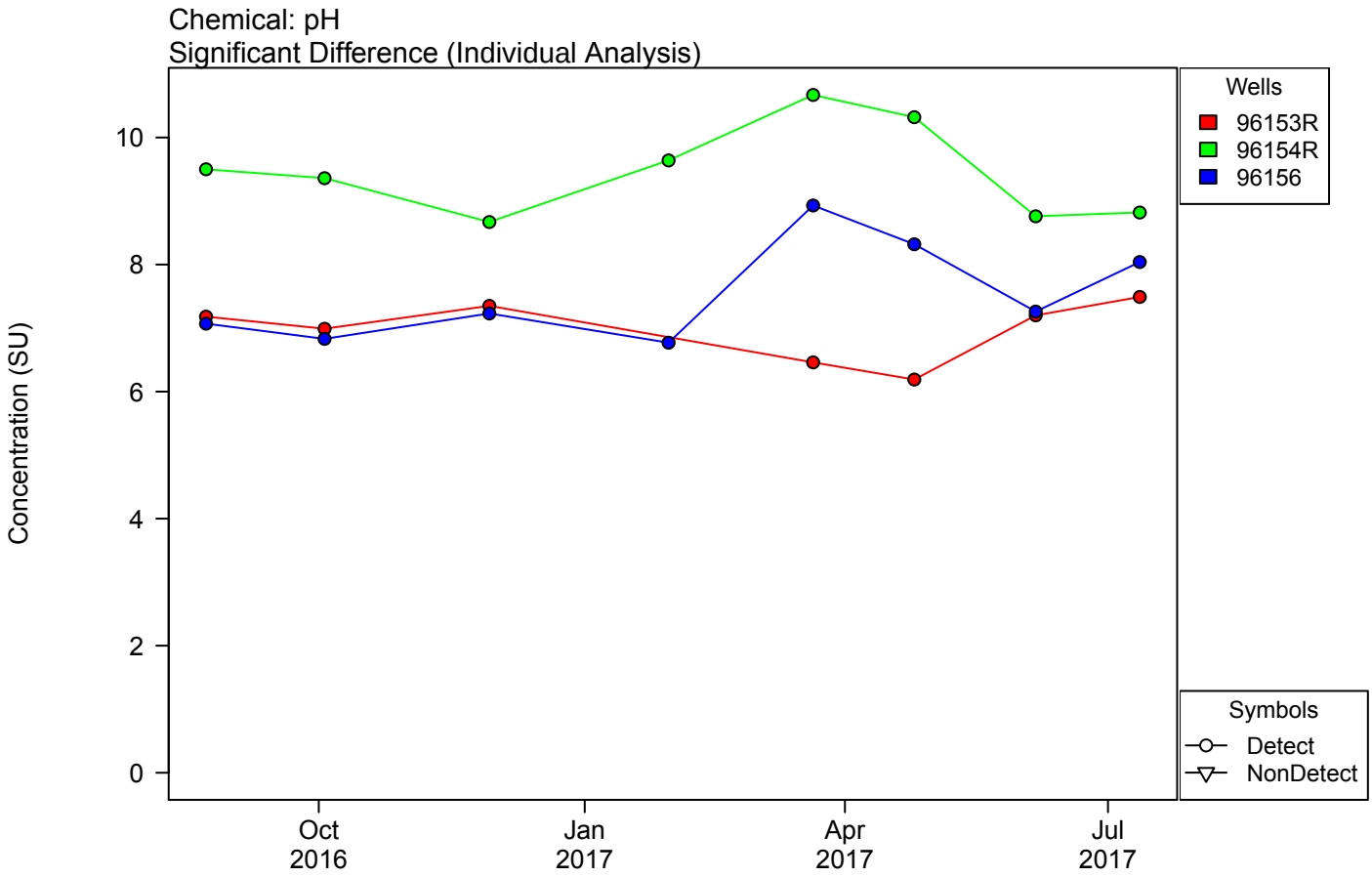


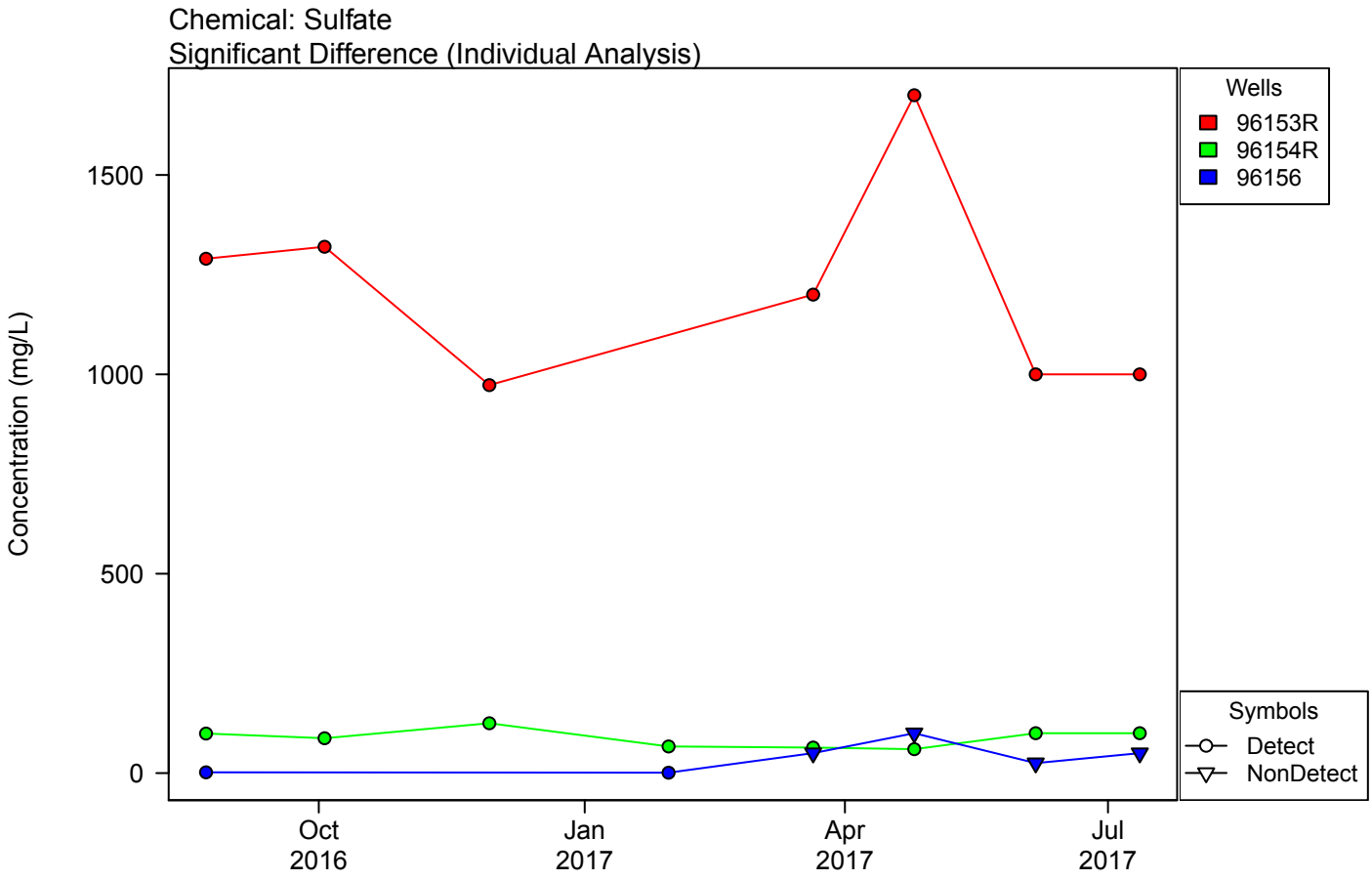
Unit: Fly Ash Reservoir Morgantown SS
Figure A-3: Timeseries of Upgradient Wells



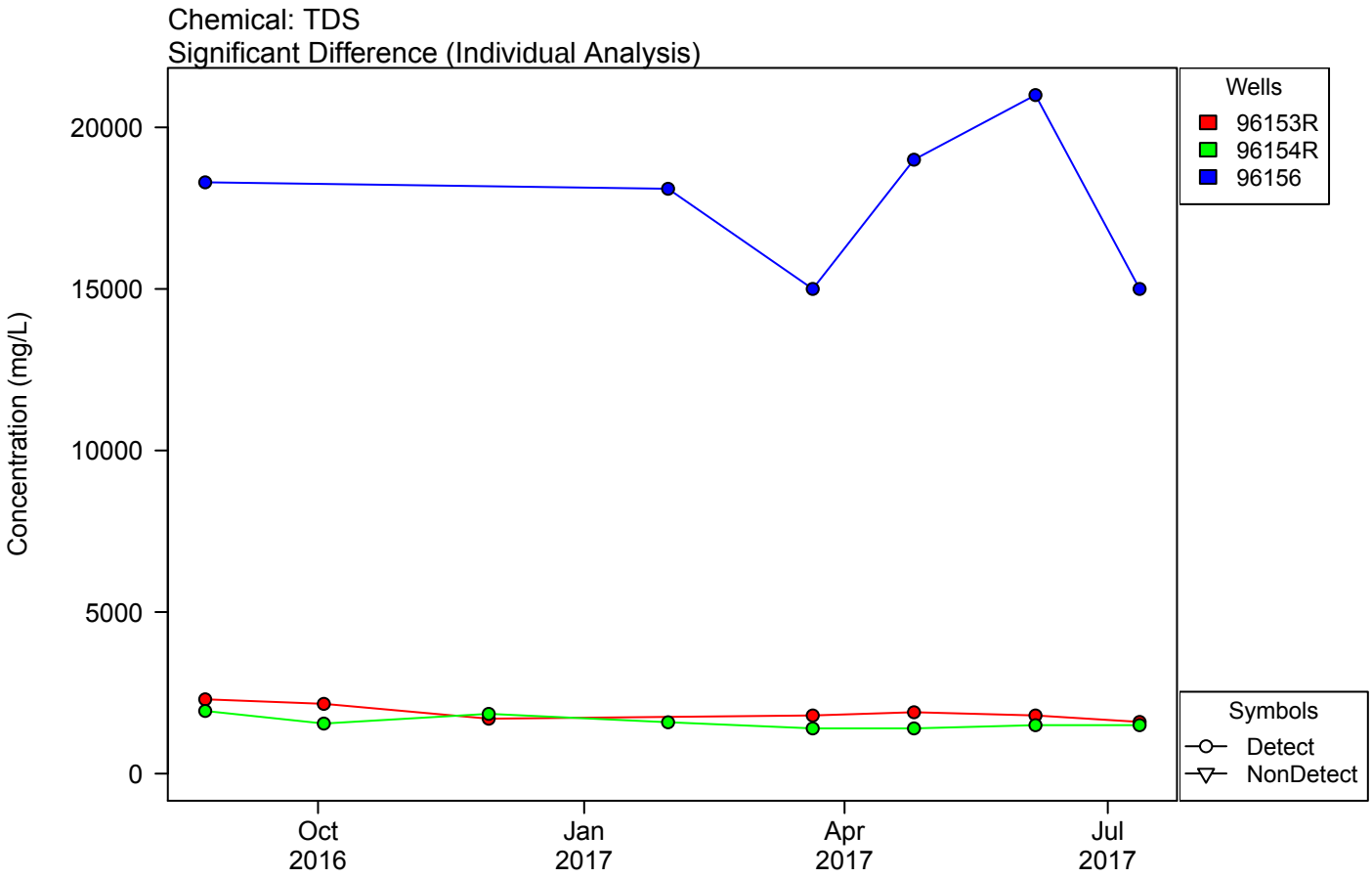


Unit: Fly Ash Reservoir Morgantown SS
Figure A-3: Timeseries of Upgradient Wells



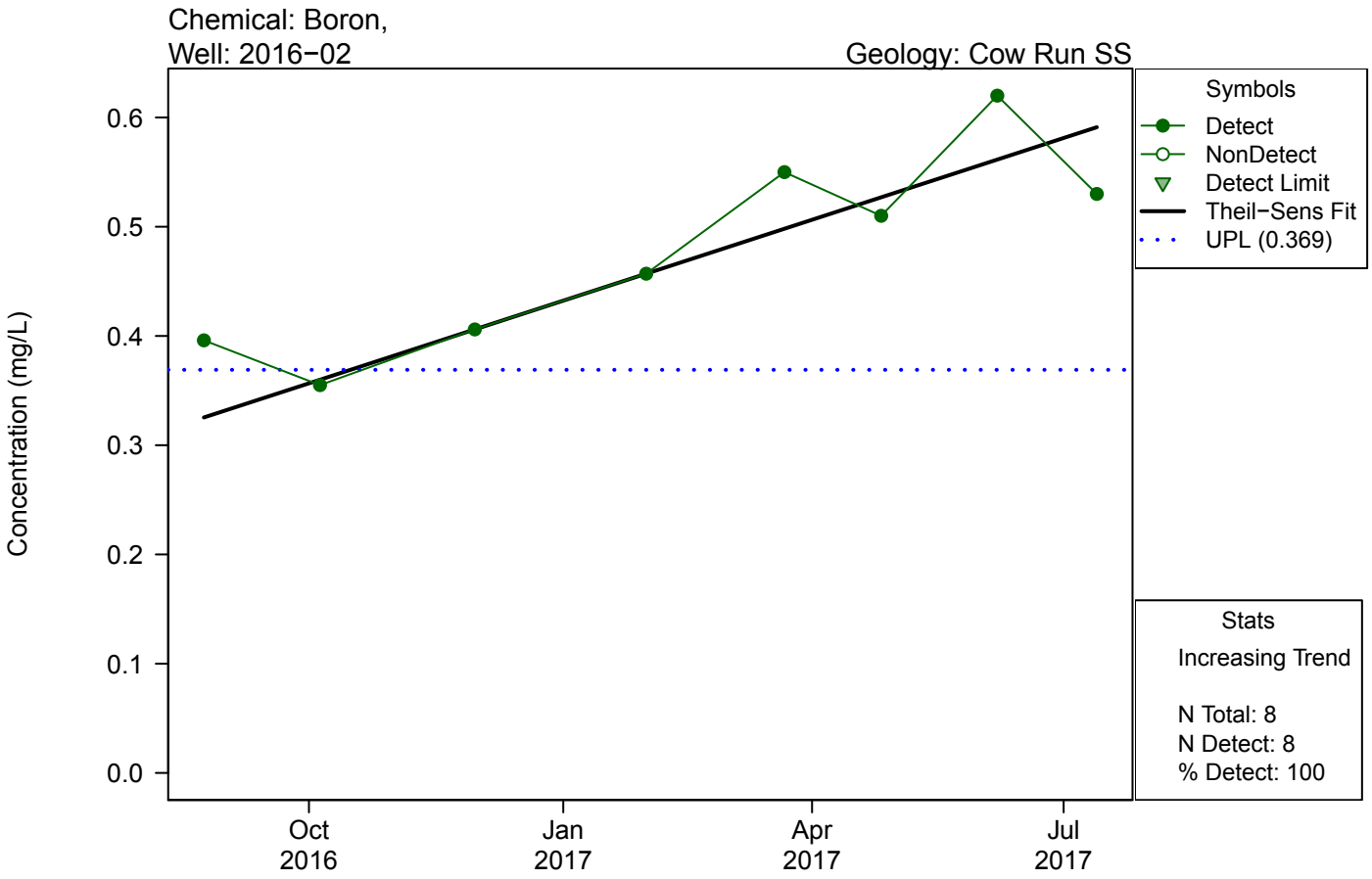


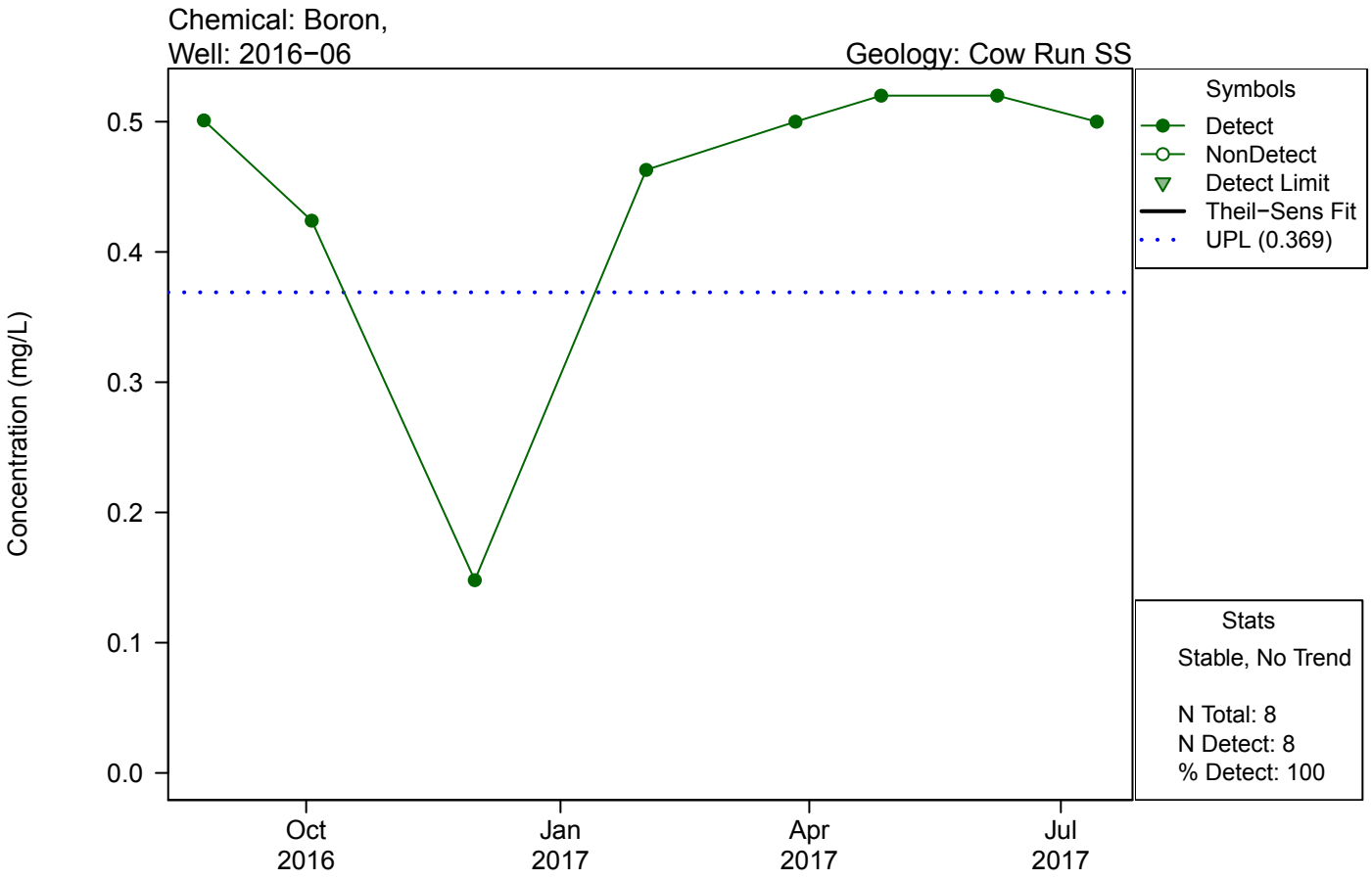
Unit: Fly Ash Reservoir Morgantown SS
Figure A-3: Timeseries of Upgradient Wells



Unit: Fly Ash Reservoir

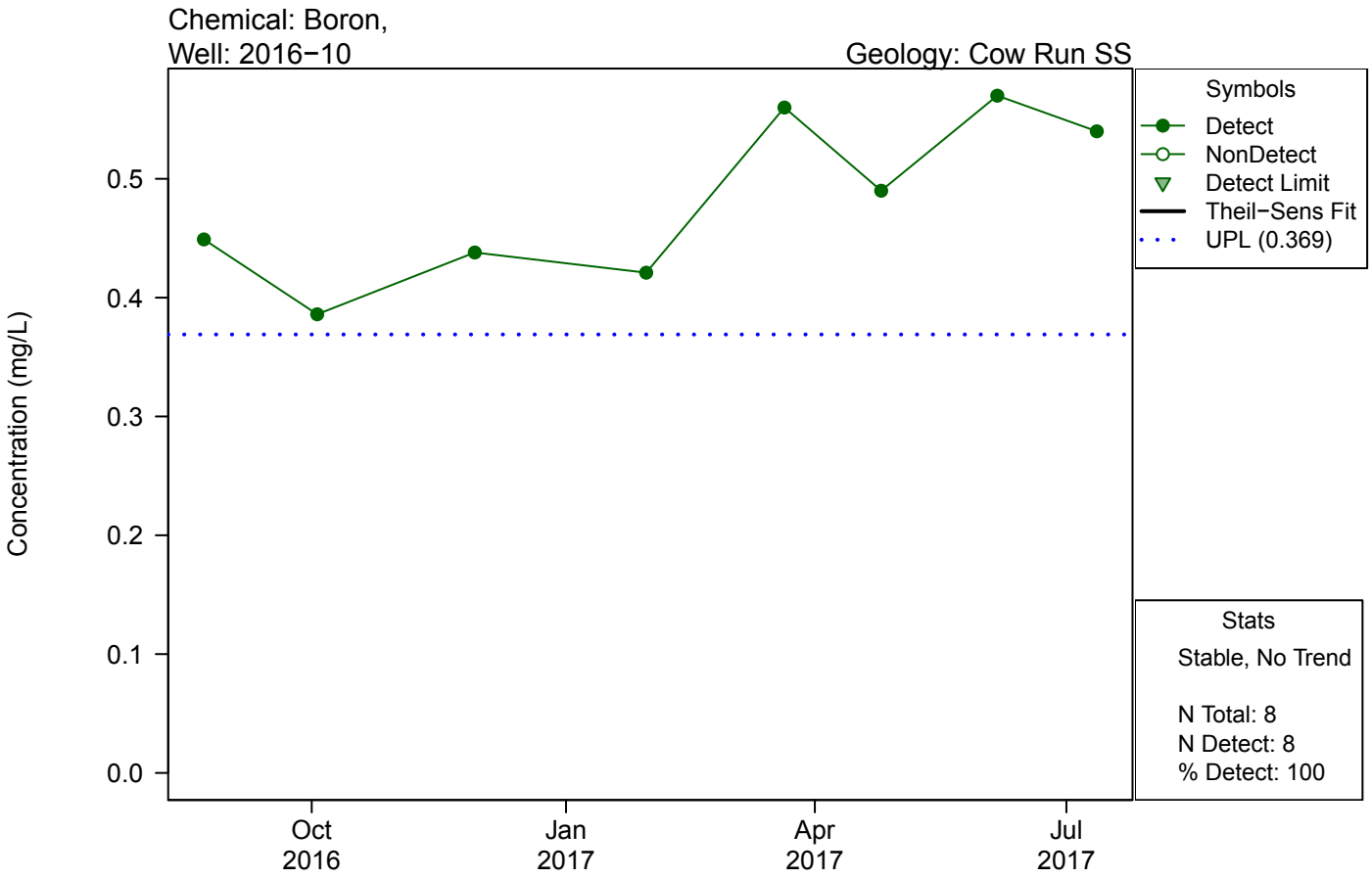
Figure A-4: Trend Analysis of Downgradient Wells with Exceedances

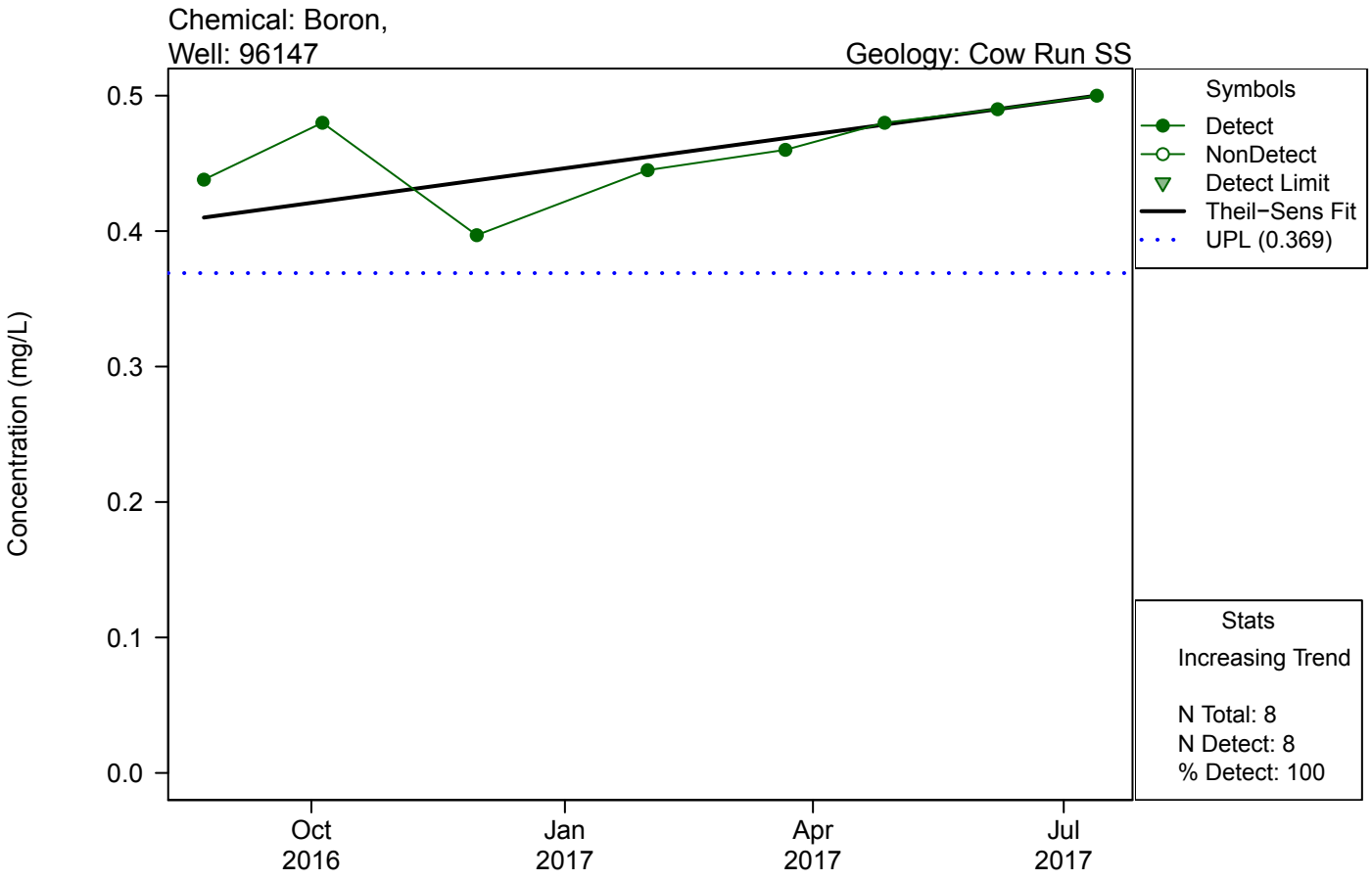




Unit: Fly Ash Reservoir

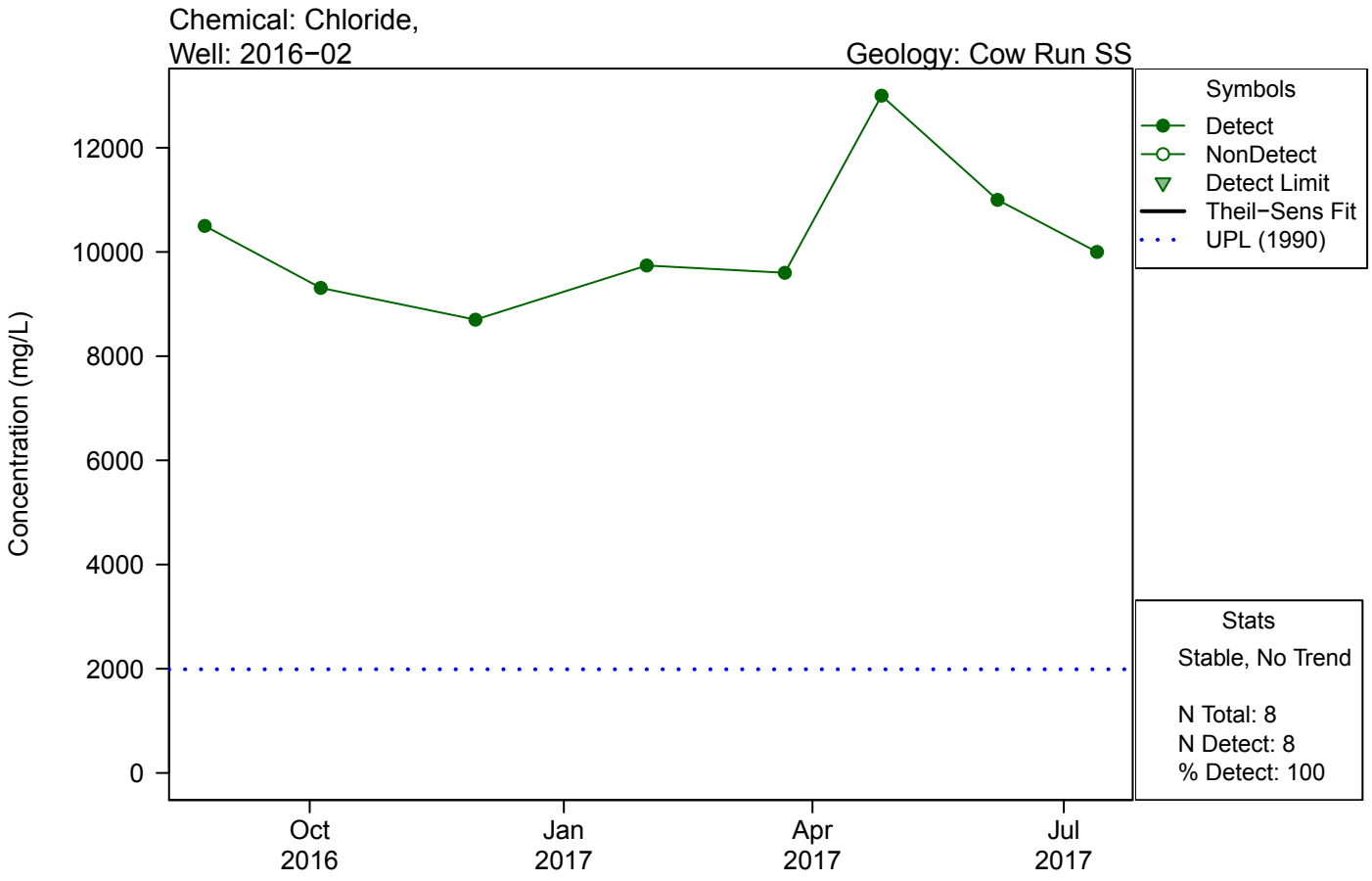
Figure A-4: Trend Analysis of Downgradient Wells with Exceedances

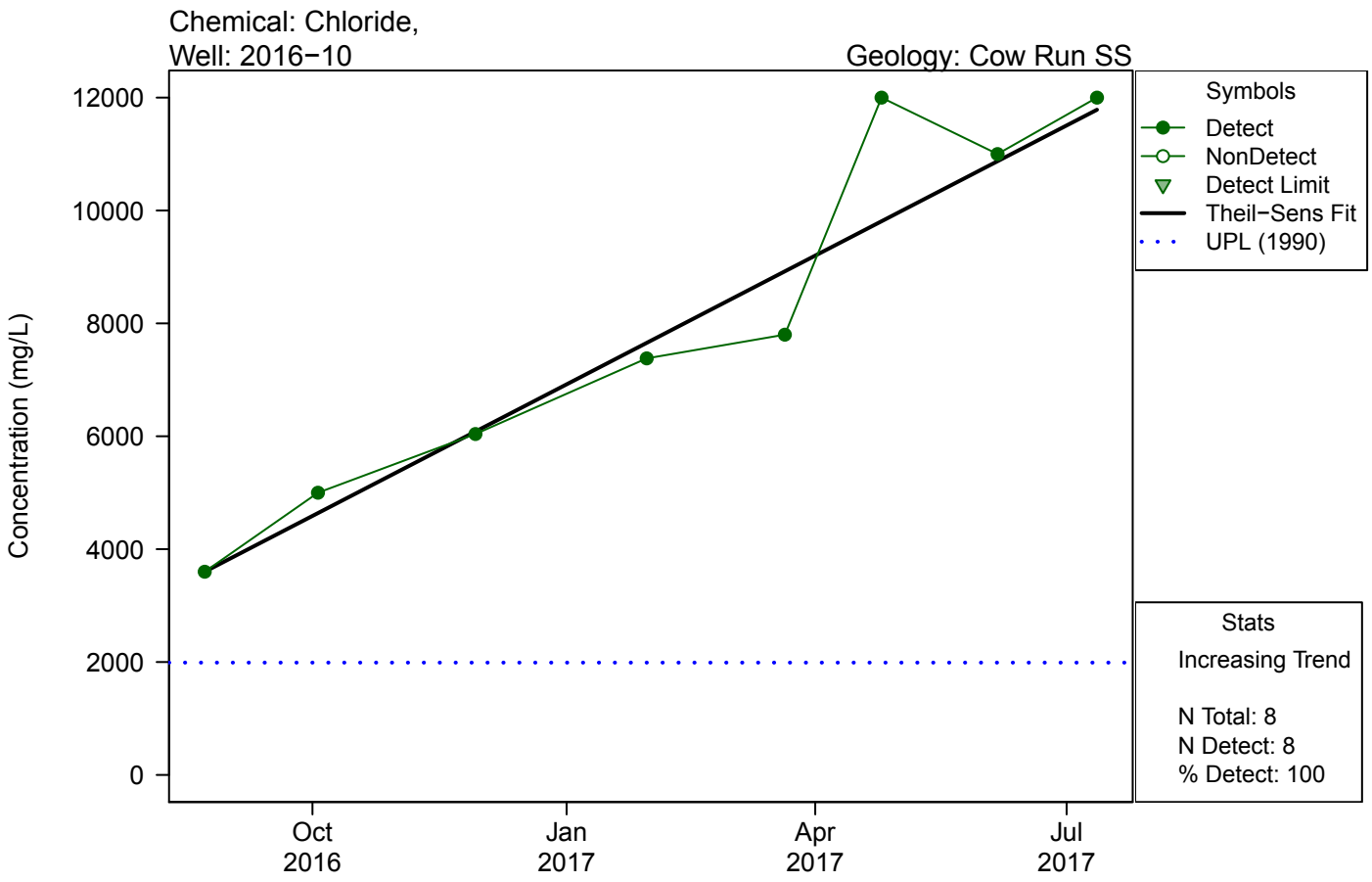




Unit: Fly Ash Reservoir

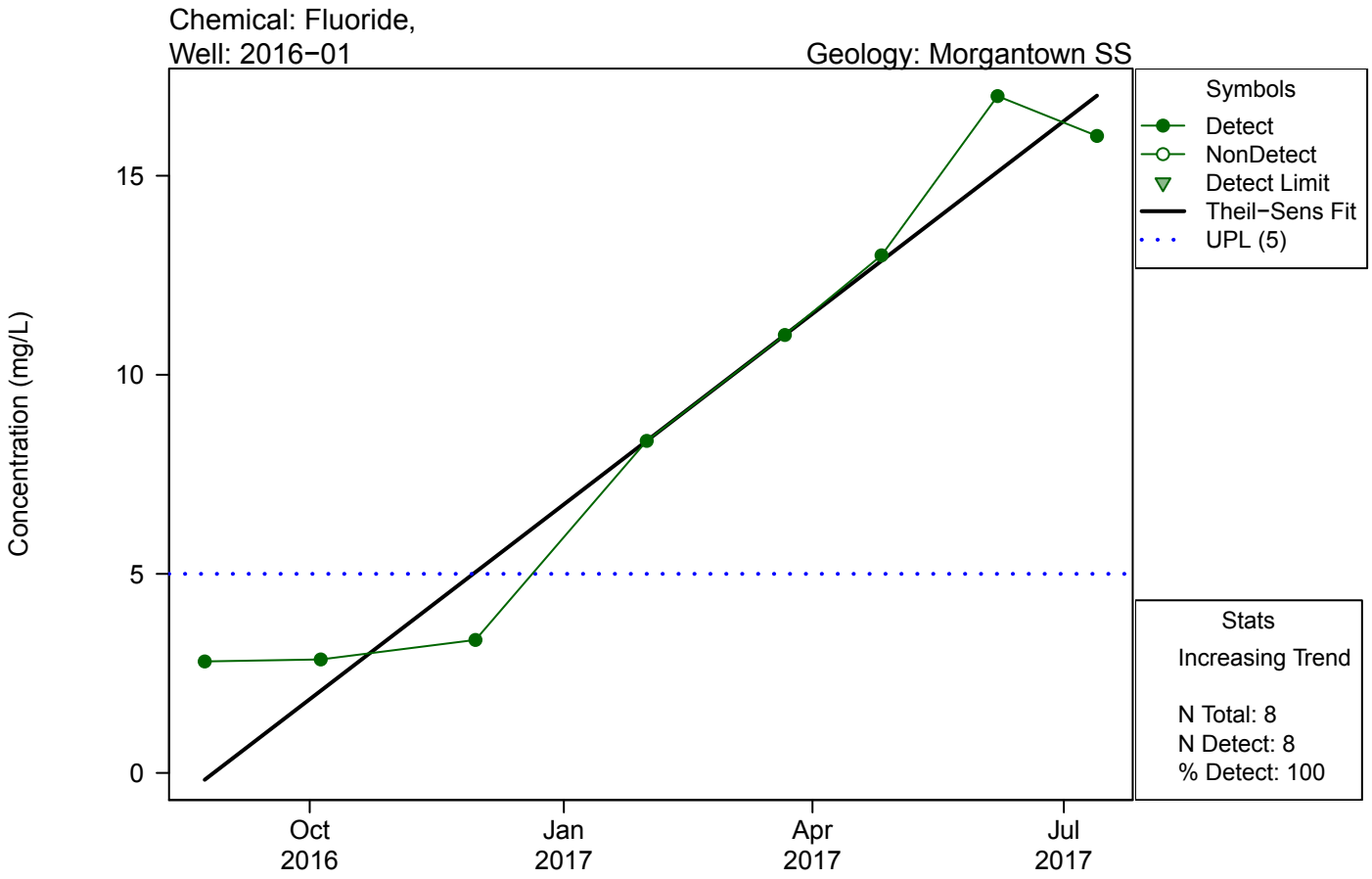
Figure A-4: Trend Analysis of Downgradient Wells with Exceedances

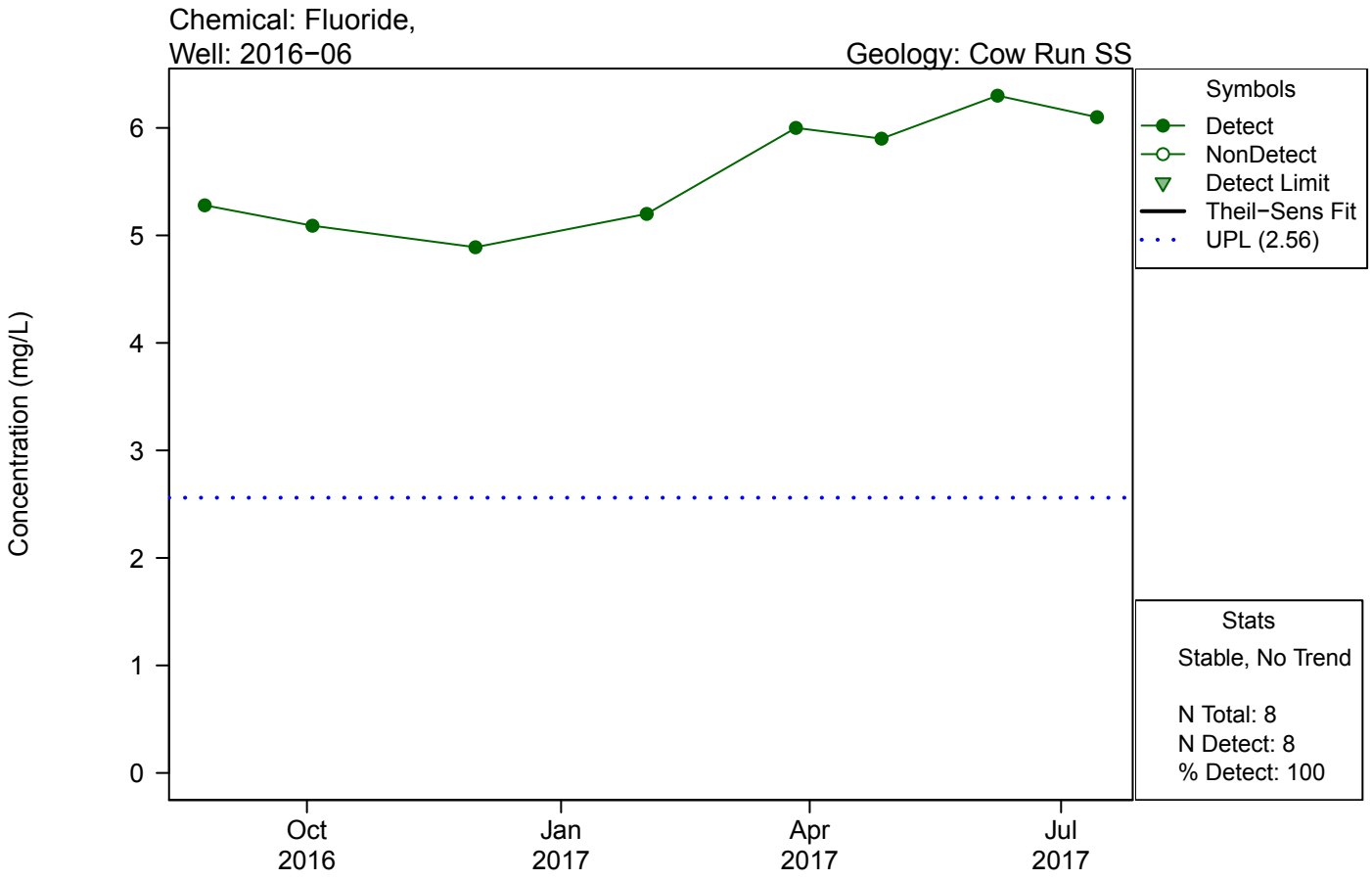




Unit: Fly Ash Reservoir

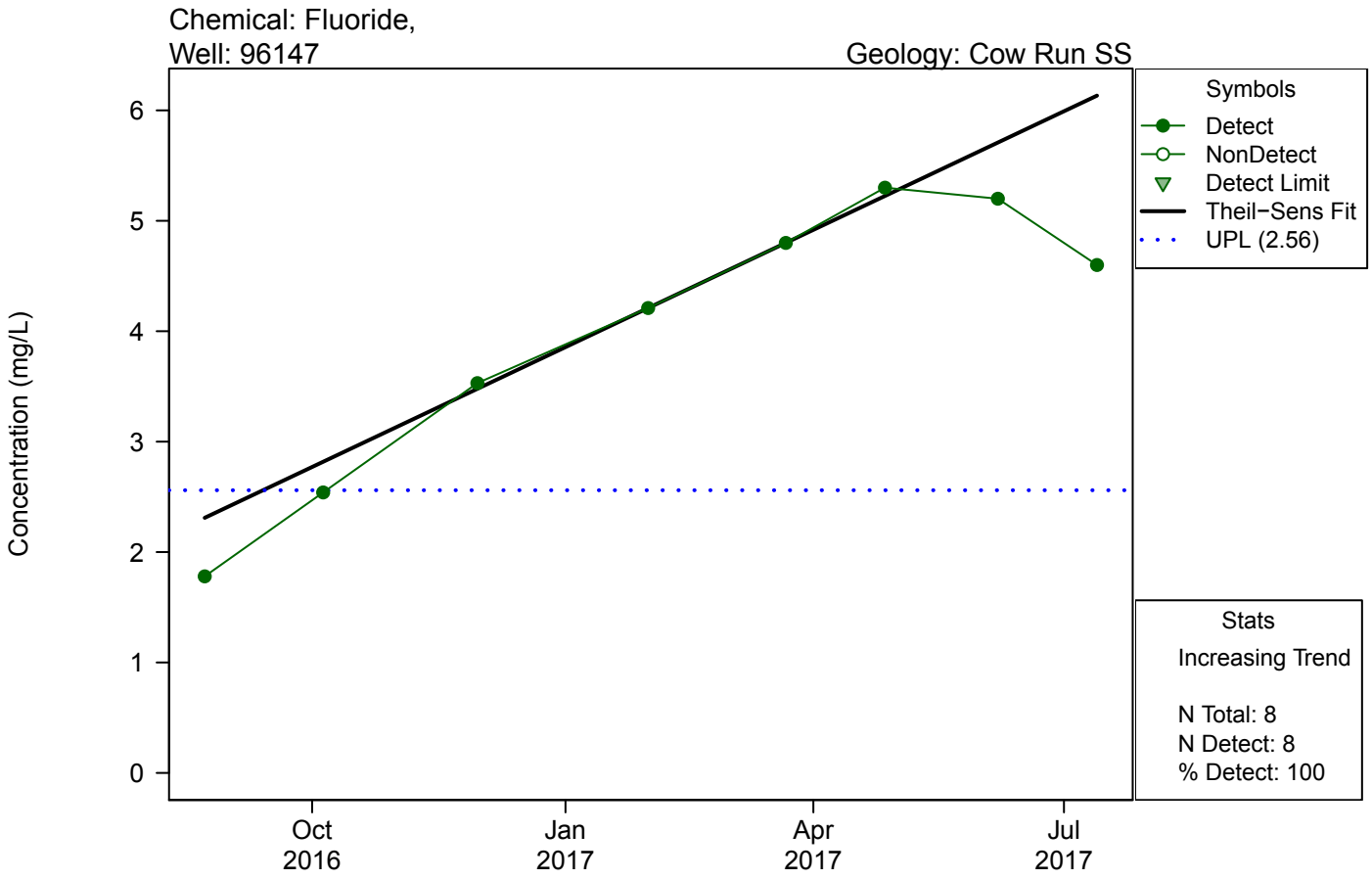
Figure A-4: Trend Analysis of Downgradient Wells with Exceedances

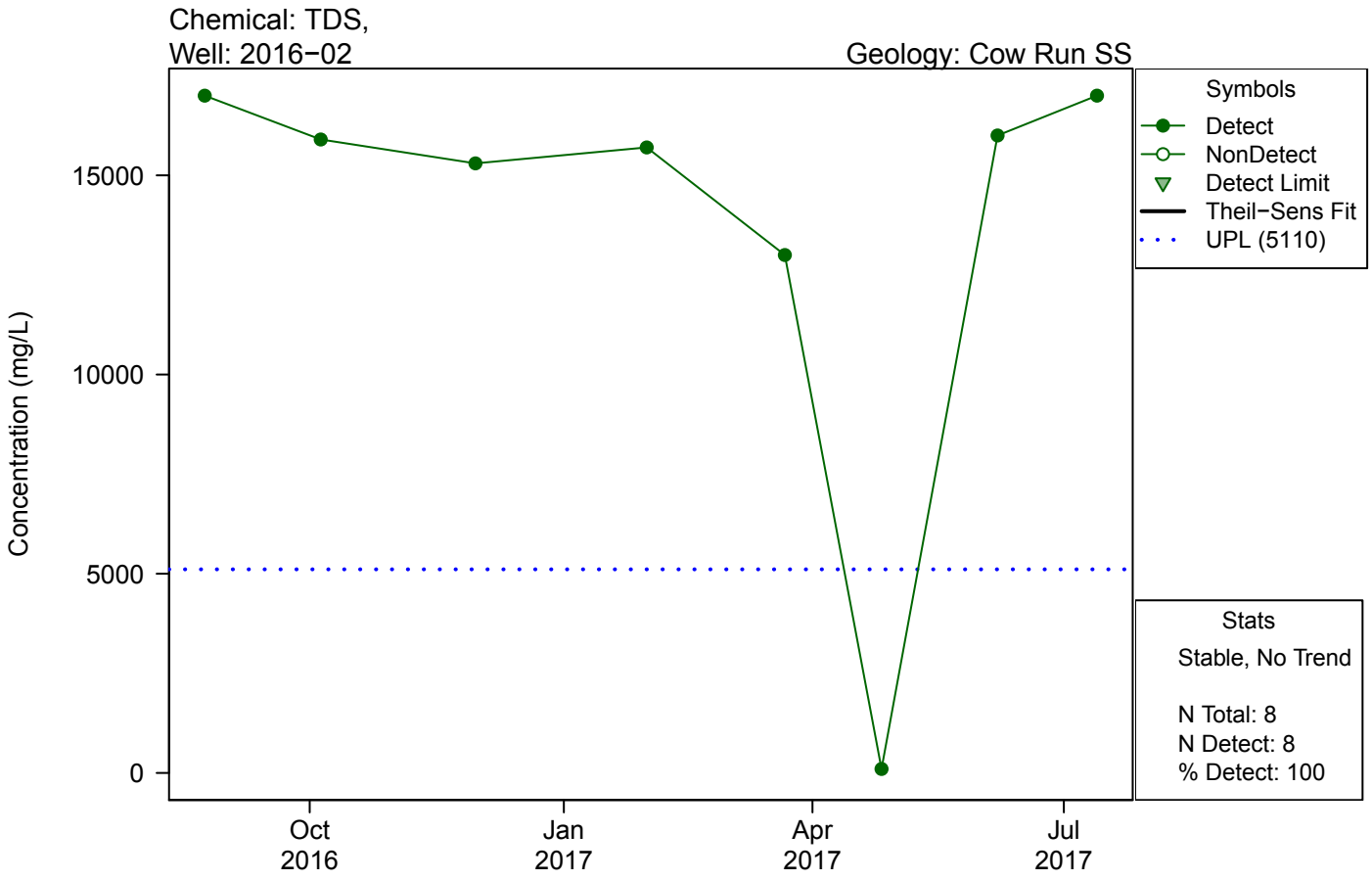




Unit: Fly Ash Reservoir

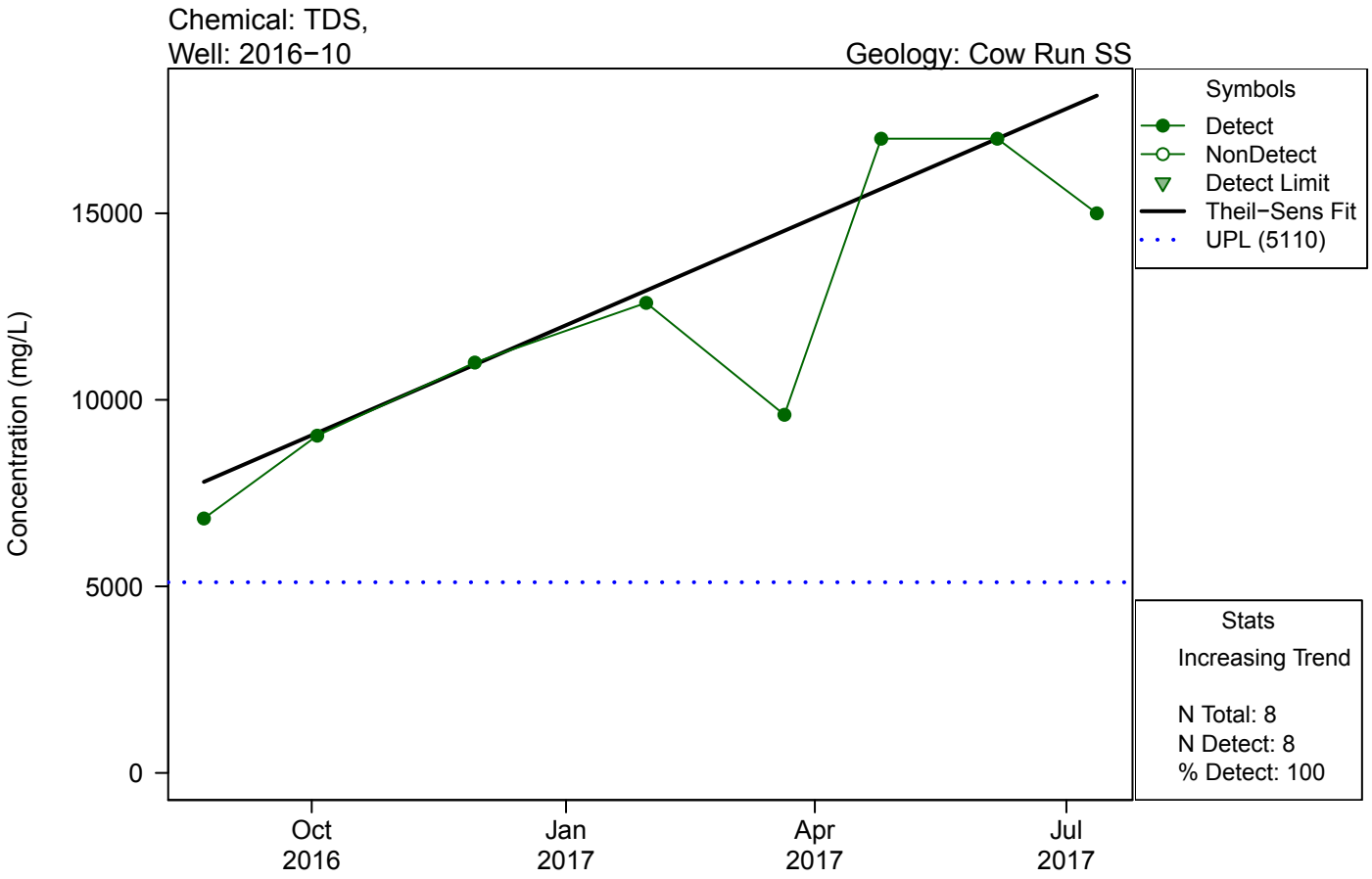
Figure A-4: Trend Analysis of Downgradient Wells with Exceedances





Unit: Fly Ash Reservoir

Figure A-4: Trend Analysis of Downgradient Wells with Exceedances



Appendix B
Analytical Summary

Appendix B
Analytical Data Summary
Gavin Power, LLC
Fly Ash Reservoir

		FEDERAL	FEDERAL	FEDERAL	FEDERAL	FEDERAL
Sample Date		6/8/2016	8/23/2016	8/23/2016	8/23/2016	8/23/2016
Sample Type		N	N	N	N	N
Location ID		2016-05	2016-09	2016-10	2016-11	96147
Sample ID		2016-05-20170608-02	2016-09-20160823-01	2016-10-20160823-01	2016-11-20160823-01	96147-20160823-01
Analyte	Unit					
Antimony	mg/L		0.00076	0.00027	0.00533	0.00017
Arsenic	mg/L		0.0117	0.00323	0.0038	0.00241
Barium	mg/L		0.684	0.235	0.154	0.77
Beryllium	mg/L		8.5E-05	2E-05	1E-05	0.000155
Boron	mg/L		0.093	0.449	0.278	0.438
Cadmium	mg/L		1E-05	4E-05	0.0002	0.00067
Calcium	mg/L		78.6	179	10.3	31.1
Chloride	mg/L		1500	3600	403	3240
Chromium	mg/L		0.0455	0.0007	0.0349	0.0013
Cobalt	mg/L		0.00056	0.000699	0.000731	0.00113
Combined Radium 226 +228	pCi/L		1.924	2.85	2.62	3.94
Fluoride	mg/L		1.67	0.66	2.21	1.78
Lead	mg/L		0.00215	0.00143	0.00261	0.00737
Lithium	mg/L		0.561	0.138	0.593	0.077
Mercury	mg/L		1.2E-05	4E-06	8E-06	4E-05
Molybdenum	mg/L		0.18	0.0367	0.223	0.00729
pH, Field	pH units	7.88				
pH, Field	SU		12.49	9.79	12.23	7.79
Selenium	mg/L		0.0042	0.001	0.0054	0.0002
Sulfate	mg/L		77.1	874	529	25.3
Thallium	mg/L		7E-05	7E-05	0.000266	8E-05
Total dissolved solids	mg/L		4820	6820	3060	5760

Notes:
FD = Field Duplicate Sample
N = Normal Sample

Appendix B
Analytical Data Summary
Gavin Power, LLC
Fly Ash Reservoir

		FEDERAL	FEDERAL	FEDERAL	FEDERAL	FEDERAL
Sample Date		8/23/2016	8/23/2016	8/23/2016	8/23/2016	8/24/2016
Sample Type		N	N	N	N	N
Location ID		96153R	96154R	96156	MW-20	2016-01
Sample ID		96153-R-20160823-01	96154-R-20160823-01	96156-20160823-01	MW-20-20160823-01	2016-01-20160824-01
Analyte	Unit					
Antimony	mg/L	0.00059	0.00091	0.0001	4E-05	0.00092
Arsenic	mg/L	0.00237	0.00644	0.0141	0.00938	0.0158
Barium	mg/L	0.0315	0.13	16.2	0.0274	0.098
Beryllium	mg/L	0.000515	0.000546	5E-05	0.000234	3E-05
Boron	mg/L	0.448	0.441	0.394	0.126	0.243
Cadmium	mg/L	8E-05	5E-05	0.00022	8E-05	7E-05
Calcium	mg/L	189	9.41	409	495	14.4
Chloride	mg/L	34.3	413	11700	60.1	247
Chromium	mg/L	0.304	0.0022	0.0011	0.0028	0.0014
Cobalt	mg/L	0.0234	0.00204	0.00194	0.128	0.000358
Combined Radium 226 +228	pCi/L	2.434	1.566	75.85	0.684	0.887
Fluoride	mg/L	0.8	3.32	0.33	0.95	2.8
Lead	mg/L	0.00648	0.00565	0.00236	0.000201	0.000671
Lithium	mg/L	0.096	0.08	0.269	0.174	0.435
Mercury	mg/L	8E-06	2.5E-05	2E-06	2E-06	8E-06
Molybdenum	mg/L	0.0126	0.0557	0.00987	0.0089	0.11
pH, Field	pH units					
pH, Field	SU	7.18	9.5	7.07	6.88	12.24
Selenium	mg/L	0.0009	0.001	0.0006	0.0001	0.0011
Sulfate	mg/L	1290	99.2	1.9	1610	333
Thallium	mg/L	5E-05	6.4E-05	0.0001	0.000598	2E-05
Total dissolved solids	mg/L	2300	1940	18300	2660	1840

Notes:
FD = Field Duplicate Sample
N = Normal Sample

Appendix B
Analytical Data Summary
Gavin Power, LLC
Fly Ash Reservoir

		FEDERAL	FEDERAL	FEDERAL	FEDERAL	FEDERAL
Sample Date		8/24/2016	8/24/2016	8/24/2016	8/24/2016	8/24/2016
Sample Type		N	N	N	N	N
Location ID		2016-02	2016-03	2016-04	2016-07	2016-08
Sample ID		2016-02-20160824-01	2016-03-20160824-01	2016-04-20160824-01	2016-07-20160824-01	2016-08-20160824-01
Analyte	Unit					
Antimony	mg/L	0.0003	0.00096	0.00116	0.00126	0.00134
Arsenic	mg/L	0.0149	0.00059	0.00421	0.00772	0.00795
Barium	mg/L	1.06	0.0321	0.117	0.107	0.312
Beryllium	mg/L	5E-05	1E-05	1E-05	0.000368	1E-05
Boron	mg/L	0.396	0.43	0.343	0.313	0.318
Cadmium	mg/L	9E-05	0.00012	5E-05	7E-05	2E-05
Calcium	mg/L	400	149	9.88	13.3	33.8
Chloride	mg/L	10500	21.7	1060	421	452
Chromium	mg/L	0.0013	0.0002	0.0305	0.0015	0.0012
Cobalt	mg/L	0.00279	0.000403	0.000641	0.00105	0.000353
Combined Radium 226 +228	pCi/L	4.82	0.409	1.08	0.427	1.898
Fluoride	mg/L	0.74	0.2	1.28	1.89	1.92
Lead	mg/L	0.00167	0.000324	0.000238	0.00336	0.000143
Lithium	mg/L	0.171	0.03	0.236	0.235	0.665
Mercury	mg/L	4E-06	1.1E-05	1.3E-05	1.2E-05	2.4E-05
Molybdenum	mg/L	0.195	0.0154	0.0864	0.0808	0.121
pH, Field	pH units					
pH, Field	SU	7.18	7.07	8.4	10.86	12.52
Selenium	mg/L	0.0003	0.0002	0.0021	0.0008	0.0028
Sulfate	mg/L	228	446	252	229	133
Thallium	mg/L	0.000956	2E-05	3E-05	8.4E-05	9E-05
Total dissolved solids	mg/L	17000	1090	2630	1740	2480

Notes:
FD = Field Duplicate Sample
N = Normal Sample

Appendix B
Analytical Data Summary
Gavin Power, LLC
Fly Ash Reservoir

		FEDERAL	FEDERAL	FEDERAL	FEDERAL	FEDERAL
Sample Date		8/25/2016	8/25/2016	10/3/2016	10/3/2016	10/3/2016
Sample Type		N	N	N	N	N
Location ID		2016-05	2016-06	2016-03	2016-06	2016-09
Sample ID		2016-05-20160825-01	2016-06-20160825-01	2016-03-20161003-01	2016-06-20161003-01	2016-09-20161003-01
Analyte	Unit					
Antimony	mg/L	0.00015	0.00019	0.00041	0.00025	0.00087
Arsenic	mg/L	0.00078	0.00225	0.00092	0.0023	0.0145
Barium	mg/L	0.052	0.0707	0.0383	0.0649	0.566
Beryllium	mg/L	0.000107	0.000198	7.2E-05	0.000143	3E-05
Boron	mg/L	0.116	0.501	0.35	0.424	0.411
Cadmium	mg/L	3E-05	1E-05	0.0001	2E-05	1E-05
Calcium	mg/L	40.2	5.87	129	5.51	202
Chloride	mg/L	16.3	545	21.8	560	1520
Chromium	mg/L	0.0015	0.0092	0.0002	0.077	0.0371
Cobalt	mg/L	0.00299	0.00208	0.000563	0.00283	0.000324
Combined Radium 226 +228	pCi/L	1.027	0.756	1.295	2.268	2.559
Fluoride	mg/L	0.19	5.28	0.18	5.09	1.58
Lead	mg/L	0.00194	0.00371	0.000456	0.00151	0.000743
Lithium	mg/L	0.019	0.029	0.03	0.024	0.082
Mercury	mg/L	8E-06	5E-06	4E-05	1.1E-05	4E-06
Molybdenum	mg/L	0.00109	0.0595	0.00646	0.0952	0.155
pH, Field	pH units					
pH, Field	SU	7.89	8.51	6.91	8.36	12.6
Selenium	mg/L	0.0005	0.0003	0.0003	0.0002	0.0038
Sulfate	mg/L	138	103	445	96.5	72.2
Thallium	mg/L	2E-05	3E-05	3E-05	2E-05	4E-05
Total dissolved solids	mg/L	474	1560	1080	1560	4480

Notes:
FD = Field Duplicate Sample
N = Normal Sample

Appendix B
Analytical Data Summary
Gavin Power, LLC
Fly Ash Reservoir

		FEDERAL	FEDERAL	FEDERAL	FEDERAL	FEDERAL
Sample Date		10/3/2016	10/3/2016	10/3/2016	10/3/2016	10/3/2016
Sample Type		N	N	N	N	N
Location ID		2016-10	96153R	96154R	96156	9910
Sample ID		2016-10-20161003-01	96153-R-20161003-01	96154-R-20161003-01	96156-20161003-01	9910-20161003-01
Analyte	Unit					
Antimony	mg/L	9E-05	0.00036	0.00098	0.00141	
Arsenic	mg/L	0.00281	0.00142	0.00668	0.0184	
Barium	mg/L	0.183	0.0901	0.115	17.4	
Beryllium	mg/L	2E-05	0.000196	0.000319	0.000129	
Boron	mg/L	0.386	0.423	0.395	0.357	
Cadmium	mg/L	2E-05	0.0001	2E-05	0.00221	
Calcium	mg/L	209	208	5.34	354	
Chloride	mg/L	5000	16.1	452		
Chromium	mg/L	0.0003	0.0027	0.0057	0.0195	
Cobalt	mg/L	0.000869	0.0266	0.00176	0.00371	
Combined Radium 226 +228	pCi/L	2.5	1.963	1.434	41.96	
Fluoride	mg/L	0.5	0.72	3.36		
Lead	mg/L	0.000325	0.00278	0.00371	0.0218	
Lithium	mg/L	0.142	0.081	0.054	0.252	
Mercury	mg/L	2E-06	2E-06	1E-05	9E-05	
Molybdenum	mg/L	0.0128	0.0114	0.102	0.017	
pH, Field	pH units					
pH, Field	SU	7.48	6.99	9.36	6.83	7.58
Selenium	mg/L	0.0002	0.0005	0.001	0.0004	
Sulfate	mg/L	857	1320	87.4		
Thallium	mg/L	5E-05	8E-05	0.000144	0.0002	
Total dissolved solids	mg/L	9040	2160	1550		

Notes:
FD = Field Duplicate Sample
N = Normal Sample

Appendix B
Analytical Data Summary
Gavin Power, LLC
Fly Ash Reservoir

		FEDERAL	FEDERAL	FEDERAL	FEDERAL	FEDERAL
Sample Date		10/5/2016	10/5/2016	10/5/2016	10/5/2016	10/5/2016
Sample Type		N	N	N	N	N
Location ID		2016-01	2016-02	2016-05	2016-07	2016-08
Sample ID		2016-01-20161005-01	2016-02-20161005-01	2016-05-20161005-01	2016-07-20161005-01	2016-08-20161005-01
Analyte	Unit					
Antimony	mg/L	0.00091	0.0001	0.0001	0.00091	0.00083
Arsenic	mg/L	0.0188	0.00732	0.00074	0.00705	0.00691
Barium	mg/L	0.0908	0.606	0.0432	0.141	0.279
Beryllium	mg/L	2E-05	2E-05	6E-05	0.00027	0.000182
Boron	mg/L	0.228	0.355	0.088	0.297	0.286
Cadmium	mg/L	3E-05	0.00032	2E-05	8E-05	3E-05
Calcium	mg/L	18.9	313	35.8	11.5	48.9
Chloride	mg/L	297	9310	17.2	609	645
Chromium	mg/L	0.0023	0.0007	0.0012	0.0022	0.0033
Cobalt	mg/L	0.000396	0.00171	0.00267	0.000905	0.00278
Combined Radium 226 +228	pCi/L	2.58	7.68	0.703	3.077	2.97
Fluoride	mg/L	2.85	0.94	0.19	2.07	1.85
Lead	mg/L	0.000487	0.00154	0.00137	0.00292	0.00216
Lithium	mg/L	0.317	0.141	0.016	0.193	0.6
Mercury	mg/L	7E-06	1E-05	1E-05	1.7E-05	7E-06
Molybdenum	mg/L	0.124	0.107	0.00115	0.0841	0.0735
pH, Field	pH units					
pH, Field	SU	12	7.16	7.93	10.56	12.41
Selenium	mg/L	0.0015	0.0004	0.0005	0.001	0.0022
Sulfate	mg/L	364	351	120	235	126
Thallium	mg/L	4E-05	4E-05	4E-05	9E-05	7E-05
Total dissolved solids	mg/L	1830	15900	406	1850	2660

Notes:
FD = Field Duplicate Sample
N = Normal Sample

Appendix B
Analytical Data Summary
Gavin Power, LLC
Fly Ash Reservoir

		FEDERAL	FEDERAL	FEDERAL	FEDERAL	FEDERAL
Sample Date		10/5/2016	10/5/2016	11/29/2016	11/29/2016	11/29/2016
Sample Type		N	N	N	N	N
Location ID		96147	MW-20	2016-09	2016-10	96153R
Sample ID		96147-20161005-01	MW-20-20161005-01	2016-09-20161129-01	2016-10-20161129-01	96153-R-20161129-01
Analyte	Unit					
Antimony	mg/L	4E-05	4E-05	0.00082	0.0002	0.00024
Arsenic	mg/L	0.00906	0.01	0.0149	0.00304	0.0013
Barium	mg/L	0.929	0.0228	0.49	0.162	0.136
Beryllium	mg/L	0.00926	0.000265	2E-05	5E-05	0.00019
Boron	mg/L	0.48	0.272	0.126	0.438	0.463
Cadmium	mg/L	0.00198	2E-05	4E-05	4E-05	2E-05
Calcium	mg/L	85.6	483	49.7	254	177
Chloride	mg/L	1650	25.2	1490	6040	11.6
Chromium	mg/L	0.0062	0.0018	0.0299	0.00461	0.00261
Cobalt	mg/L	0.0255	0.134	0.000245	0.00198	0.00693
Combined Radium 226 +228	pCi/L	5.469	1.494	1.729	3.15	1.64
Fluoride	mg/L	2.54	1	1.02	0.5	0.67
Lead	mg/L	0.0574	0.00013	0.000281	0.000492	0.00277
Lithium	mg/L	0.075	0.171	0.392	0.189	0.053
Mercury	mg/L	0.00167	2E-06	6E-06	2E-06	1.5E-05
Molybdenum	mg/L	0.00114	0.00543	0.149	0.0278	0.00812
pH, Field	pH units					
pH, Field	SU	7.93	6.52	12.64	8.29	7.35
Selenium	mg/L	0.0013	0.0002	0.0037	0.0005	0.0006
Sulfate	mg/L	82.1	1810	73	897	973
Thallium	mg/L	0.000836	0.00033	3E-05	0.0001	2E-05
Total dissolved solids	mg/L	3840	2710	4180	11000	1700

Notes:
FD = Field Duplicate Sample
N = Normal Sample

Appendix B
Analytical Data Summary
Gavin Power, LLC
Fly Ash Reservoir

		FEDERAL	FEDERAL	FEDERAL	FEDERAL	FEDERAL
Sample Date		11/29/2016	11/29/2016	11/30/2016	11/30/2016	11/30/2016
Sample Type		N	N	N	N	N
Location ID		96154R	96156	2016-01	2016-02	2016-07
Sample ID		96154-R-20161129-01	96156-20161129-01	2016-01-20161130-01	2016-02-20161130-01	2016-07-20161130-01
Analyte	Unit					
Antimony	mg/L	0.00046	0.00208	0.00088	0.0001	0.00079
Arsenic	mg/L	0.00409	0.0398	0.0187	0.012	0.00666
Barium	mg/L	0.219	17.7	0.071	0.807	0.115
Beryllium	mg/L	0.000679	0.0003	3.5E-05	5E-05	0.000183
Boron	mg/L	0.504	0.375	0.263	0.406	0.348
Cadmium	mg/L	4E-05	0.00419	4E-05	5E-05	0.0001
Calcium	mg/L	10.5	399	13.9	348	8.2
Chloride	mg/L	410		294	8700	643
Chromium	mg/L	0.0121	0.0598	0.00159	0.000682	0.00163
Cobalt	mg/L	0.00443	0.00517	0.000326	0.00174	0.000573
Combined Radium 226 +228	pCi/L	2.328		0.562	8	2.17
Fluoride	mg/L	3.4		3.34	0.5	1.94
Lead	mg/L	0.00967	0.0455	0.000718	0.0002	0.00215
Lithium	mg/L	0.04	0.296	0.238	0.177	0.202
Mercury	mg/L	3E-05	2.1E-05	2.4E-05	1.5E-05	8E-06
Molybdenum	mg/L	0.0724	0.0225	0.137	0.203	0.0953
pH, Field	pH units					
pH, Field	SU	8.67	7.23	12.06	7.06	10.61
Selenium	mg/L	0.002	0.001	0.0013	0.0005	0.0007
Sulfate	mg/L	125		317	302	178
Thallium	mg/L	0.000121	0.0002	3E-05	0.0002	4E-05
Total dissolved solids	mg/L	1850		1700	15300	1900

Notes:
FD = Field Duplicate Sample
N = Normal Sample

Appendix B
Analytical Data Summary
Gavin Power, LLC
Fly Ash Reservoir

		FEDERAL	FEDERAL	FEDERAL	FEDERAL	FEDERAL
Sample Date		11/30/2016	11/30/2016	12/1/2016	12/1/2016	12/1/2016
Sample Type		N	N	N	N	N
Location ID		2016-08	96147	2016-03	2016-05	2016-06
Sample ID		2016-08-20161130-01	96147-20161130-01	2016-03-20161201-01	2016-05-20161201-01	2016-06-20161201-01
Analyte	Unit					
Antimony	mg/L	0.00095	5E-05	0.0004	8E-05	0.00023
Arsenic	mg/L	0.00652	0.00467	0.0007	0.00051	0.00195
Barium	mg/L	0.416	0.464	0.0256	0.0382	0.0525
Beryllium	mg/L	0.000123	0.00294	1E-05	3.4E-05	3.4E-05
Boron	mg/L	0.294	0.397	0.361	0.088	0.148
Cadmium	mg/L	5E-05	0.00022	0.00016	1E-05	3E-05
Calcium	mg/L	57	21.5	128	45	4.6
Chloride	mg/L	650	332	22.7	16.9	515
Chromium	mg/L	0.00434	0.00233	0.000162	0.000802	0.0205
Cobalt	mg/L	0.00172	0.00586	0.0005	0.00158	0.00156
Combined Radium 226 +228	pCi/L	2.005	4.8483	0.44	1.429	1.052
Fluoride	mg/L	1.56	3.53	0.16	0.19	4.89
Lead	mg/L	0.00207	0.0332	0.000213	0.000848	0.00039
Lithium	mg/L	0.702	0.03	0.034	0.011	0.027
Mercury	mg/L	3.7E-05	0.00013	3.9E-05	1.7E-05	1.6E-05
Molybdenum	mg/L	0.0982	0.0125	0.00649	0.00231	0.0674
pH, Field	pH units					
pH, Field	SU	12.59	8.01	6.99	7.79	8.36
Selenium	mg/L	0.0019	0.0006	0.0001	0.0002	0.0003
Sulfate	mg/L	120	101	362	116	95.1
Thallium	mg/L	5E-05	0.000267	2E-05	2E-05	2E-05
Total dissolved solids	mg/L	2730	2660	1020	430	1570

Notes:
FD = Field Duplicate Sample
N = Normal Sample

Appendix B
Analytical Data Summary
Gavin Power, LLC
Fly Ash Reservoir

		FEDERAL	FEDERAL	FEDERAL	FEDERAL	FEDERAL
Sample Date		12/1/2016	1/30/2017	1/30/2017	1/30/2017	1/30/2017
Sample Type		N	N	N	N	N
Location ID		MW-20	2016-09	2016-10	2016-11	96154R
Sample ID		MW-20-20161201-01	2016-09-20170130-01	2016-10-20170130-01	2016-11-20170130-01	96154-R-20170130-01
Analyte	Unit					
Antimony	mg/L	2E-05	0.00078	0.00023	0.00068	0.00078
Arsenic	mg/L	0.00917	0.0144	0.00443	0.00586	0.00277
Barium	mg/L	0.0233	0.433	0.339	0.681	0.194
Beryllium	mg/L	0.000276	5E-06	1E-05	9.2E-05	0.000166
Boron	mg/L	0.104	0.131	0.421	0.3	0.454
Cadmium	mg/L	8E-06	1E-05	0.00026	0.00027	4E-05
Calcium	mg/L	465	42.3	344	25	22.1
Chloride	mg/L	16.4	1520	7380	2170	446
Chromium	mg/L	0.00121	0.0256	0.00983	0.00944	0.00249
Cobalt	mg/L	0.143	0.000208	0.00275	0.00238	0.000799
Combined Radium 226 +228	pCi/L	0.866	2.472	2.304	2.041	1.762
Fluoride	mg/L	1	1.39	0.7	2.01	3.33
Lead	mg/L	3E-05	0.000118	0.00257	0.00424	0.0031
Lithium	mg/L	0.188	0.324	0.246	0.086	0.137
Mercury	mg/L	2E-06	5E-06	3E-06	8E-06	1.8E-05
Molybdenum	mg/L	0.00249	0.137	0.0258	0.248	0.0692
pH, Field	pH units					
pH, Field	SU	6.5	12.66	7.68	8.5	9.64
Selenium	mg/L	0.0001	0.0029	0.0003	0.0007	0.0006
Sulfate	mg/L	1610	61.7	834	497	66.8
Thallium	mg/L	9E-05	4E-05	8E-05	0.000105	0.000114
Total dissolved solids	mg/L	2620	3900	12600	4400	1590

Notes:
FD = Field Duplicate Sample
N = Normal Sample

Appendix B
Analytical Data Summary
Gavin Power, LLC
Fly Ash Reservoir

		FEDERAL	FEDERAL	FEDERAL	FEDERAL	FEDERAL
Sample Date		1/30/2017	1/31/2017	1/31/2017	1/31/2017	1/31/2017
Sample Type		N	N	N	N	N
Location ID		96156	2016-01	2016-02	2016-03	2016-04
Sample ID		96156-20170130-01	2016-01-20170131-01	2016-02-20170131-01	2016-03-20170131-01	2016-04-20170131-01
Analyte	Unit					
Antimony	mg/L	0.00022	0.00045	7E-05	0.00026	0.00033
Arsenic	mg/L	0.00202	0.00739	0.00988	0.00063	0.00259
Barium	mg/L	14.8	0.0823	0.752	0.0241	0.065
Beryllium	mg/L	5E-06	0.000134	1E-05	6E-06	2.2E-05
Boron	mg/L	0.379	0.267	0.457	0.416	0.227
Cadmium	mg/L	0.0001	0.00017	9E-06	6E-05	7E-05
Calcium	mg/L	346	15.6	358	134	47.6
Chloride	mg/L	12000	302	9740	867	204
Chromium	mg/L	0.000629	0.00139	0.000832	0.000852	0.00651
Cobalt	mg/L	0.00145	0.000893	0.00114	0.000246	0.000173
Combined Radium 226 +228	pCi/L	122.3	0.938	8.25	1.121	1.328
Fluoride	mg/L	0.5	8.34	0.9	2.33	0.5
Lead	mg/L	0.00115	0.00204	0.00121	0.000105	0.000454
Lithium	mg/L	0.294	0.15	0.221	0.031	0.035
Mercury	mg/L	1.1E-05	3.5E-05	4E-06	1.8E-05	7E-06
Molybdenum	mg/L	0.0054	0.18	0.29	0.00523	0.0728
pH, Field	pH units					
pH, Field	SU	6.77	11.41	7.07	6.93	6.93
Selenium	mg/L	0.0001	0.0009	0.0001	0.0001	0.0007
Sulfate	mg/L	1	273	325	132	326
Thallium	mg/L	3E-05	5E-05	5.6E-05	2E-05	1E-05
Total dissolved solids	mg/L	18100	1500	15700	1990	952

Notes:
FD = Field Duplicate Sample
N = Normal Sample

Appendix B
Analytical Data Summary
Gavin Power, LLC
Fly Ash Reservoir

		FEDERAL	FEDERAL	FEDERAL	FEDERAL	FEDERAL
Sample Date		1/31/2017	1/31/2017	1/31/2017	2/1/2017	2/1/2017
Sample Type		N	N	N	N	N
Location ID		2016-07	2016-08	96147	2016-05	2016-06
Sample ID		2016-07-20170131-01	2016-08-20170131-01	96147-20170131-01	2016-05-20170201-01	2016-06-20170201-01
Analyte	Unit					
Antimony	mg/L	0.00045	0.00078	8E-05	4E-05	0.00026
Arsenic	mg/L	0.0042	0.00489	0.00379	0.00028	0.00214
Barium	mg/L	0.188	0.446	0.372	0.0331	0.0515
Beryllium	mg/L	0.000428	5.9E-05	0.00206	8E-06	6.8E-05
Boron	mg/L	0.365	0.279	0.445	0.11	0.463
Cadmium	mg/L	8E-05	1E-05	0.00018	8E-06	4E-05
Calcium	mg/L	9.9	80.6	18.9	39.7	4.45
Chloride	mg/L	23.6	879	659	11.4	548
Chromium	mg/L	0.00322	0.00374	0.00105	0.000582	0.0625
Cobalt	mg/L	0.00167	0.00095	0.0028	0.000274	0.00106
Combined Radium 226 +228	pCi/L	2.84	2.62	9.87	0.40713	0.604
Fluoride	mg/L	0.18	2.03	4.21	0.18	5.2
Lead	mg/L	0.00336	0.000987	0.0227	0.000206	0.000607
Lithium	mg/L	0.163	0.652	0.034	0.012	0.034
Mercury	mg/L	5E-05	9E-06	0.000206	2E-06	3E-06
Molybdenum	mg/L	0.0689	0.102	0.0179	0.00071	0.0804
pH, Field	pH units					
pH, Field	SU	10.01	12.45	8.1	7.8	8.45
Selenium	mg/L	0.0008	0.0012	0.0003	0.0001	0.0003
Sulfate	mg/L	371	90.4	99.6	132	94.8
Thallium	mg/L	6.1E-05	3E-05	0.000142	3E-05	2E-05
Total dissolved solids	mg/L	1000	2750	3040	388	1540

Notes:
FD = Field Duplicate Sample
N = Normal Sample

Appendix B
Analytical Data Summary
Gavin Power, LLC
Fly Ash Reservoir

		FEDERAL	FEDERAL	FEDERAL	FEDERAL	FEDERAL
Sample Date		3/21/2017	3/21/2017	3/21/2017	3/21/2017	3/21/2017
Sample Type		N	N	N	N	N
Location ID		2016-09	2016-10	2016-11	96153R	96154R
Sample ID		2016-09-20170321-02	2016-10-20170321-02	2016-11-20170321-02	96153-R-20170321-02	96154-R-20170321-02
Analyte	Unit					
Antimony	mg/L					
Arsenic	mg/L					
Barium	mg/L					
Beryllium	mg/L					
Boron	mg/L					
Cadmium	mg/L					
Calcium	mg/L					
Chloride	mg/L					
Chromium	mg/L					
Cobalt	mg/L					
Combined Radium 226 +228	pCi/L					
Fluoride	mg/L					
Lead	mg/L					
Lithium	mg/L					
Mercury	mg/L					
Molybdenum	mg/L					
pH, Field	pH units	12.55	7.31	8.95	6.46	10.67
pH, Field	SU					
Selenium	mg/L					
Sulfate	mg/L					
Thallium	mg/L					
Total dissolved solids	mg/L					

Notes:
FD = Field Duplicate Sample
N = Normal Sample

Appendix B
Analytical Data Summary
Gavin Power, LLC
Fly Ash Reservoir

		FEDERAL	FEDERAL	FEDERAL	FEDERAL	FEDERAL
Sample Date		3/21/2017	3/21/2017	3/21/2017	3/21/2017	3/21/2017
Sample Type		N	N	N	N	N
Location ID		96156	96153R	96154R	2016-09	96156
Sample ID		96156-20170321-02	96153R-20170321-01	96154R-20170321-01	2016-09-20170321-01	96156-20170321-01
Analyte	Unit					
Antimony	mg/L		0.00085 J	0.0014 J	0.0014 J	0.0025
Arsenic	mg/L		0.0044 J	0.0049 J	0.026 J	0.0035 J
Barium	mg/L		0.061 JB	0.28 JB	0.42 JB	16 JB
Beryllium	mg/L		0.012	0.001 U	0.001 U	0.00043 J
Boron	mg/L		0.23	0.49	0.19	0.46
Cadmium	mg/L		0.00036 J	0.001 U	0.001 U	0.00043 J
Calcium	mg/L		210 B	31 B	30 B	380 B
Chloride	mg/L		16	410	1600	13000
Chromium	mg/L		0.0028 J	0.0051 J	0.027 J	0.0011 J
Cobalt	mg/L		0.3	0.00095 J	0.00092 J	0.0021
Combined Radium 226 +228	pCi/L		0.764	1.21	2.69	189
Fluoride	mg/L		2.3	4.2	1.9 J	2.5 U
Lead	mg/L		0.0014 J	0.0021 J	0.0021 J	0.0022 J
Lithium	mg/L		0.18	0.24	0.23	0.22
Mercury	mg/L		0.0002 U	0.0002 U	0.0002 U	0.0002 U
Molybdenum	mg/L		0.0065 J	0.09 J	0.19 J	0.0056 J
pH, Field	pH units	8.93				
pH, Field	SU					
Selenium	mg/L		0.0053 J	0.00096 J	0.0051 J	0.0013 J
Sulfate	mg/L		1200	64	64	50 U
Thallium	mg/L		0.001 U	0.001 U	0.001 U	0.001 U
Total dissolved solids	mg/L		1800	1400	4100	15000

Notes:
FD = Field Duplicate Sample
N = Normal Sample

Appendix B
Analytical Data Summary
Gavin Power, LLC
Fly Ash Reservoir

		FEDERAL	FEDERAL	FEDERAL	FEDERAL	FEDERAL
	Sample Date	3/21/2017	3/21/2017	3/22/2017	3/22/2017	3/22/2017
	Sample Type	N	N	FD	N	N
	Location ID	2016-10	2016-11	2016-02	2016-01	2016-02
	Sample ID	2016-10-20170321-01	2016-11-20170321-01	DUPE032217-20170322-0	2016-01-20170322-02	2016-02-20170322-02
Analyte	Unit					
Antimony	mg/L	0.002 U	0.002 U	0.00057 J		
Arsenic	mg/L	0.0037 J	0.0049 J	0.011 J		
Barium	mg/L	0.17 JB	0.33 JB	0.95 JB		
Beryllium	mg/L	0.001 U	0.001 U	0.001 U		
Boron	mg/L	0.56	0.36	0.54		
Cadmium	mg/L	0.001 U	0.00035 J	0.001 U		
Calcium	mg/L	380 B	28 B	410 B		
Chloride	mg/L	7800	2400	9600		
Chromium	mg/L	0.00071 J	0.037 J	0.0023 J		
Cobalt	mg/L	0.0015	0.00076 J	0.0015		
Combined Radium 226 +228	pCi/L	1.71	1.81	4.46		
Fluoride	mg/L	2.5 U	2.4	0.94 J		
Lead	mg/L	0.00056 J	0.0054 J	0.00053 J		
Lithium	mg/L	0.21	0.08	0.13		
Mercury	mg/L	0.0002 U	0.0002 U	0.0002 U		
Molybdenum	mg/L	0.011 J	0.14 J	0.29 J		
pH, Field	pH units				11.9	7.24
pH, Field	SU					
Selenium	mg/L	0.0015 J	0.003 J	0.0012 J		
Sulfate	mg/L	790	560	330		
Thallium	mg/L	0.001 U	0.001 U	0.001 U		
Total dissolved solids	mg/L	9600	5200	14000		

Notes:
FD = Field Duplicate Sample
N = Normal Sample

Appendix B
Analytical Data Summary
Gavin Power, LLC
Fly Ash Reservoir

	Sample Date	FEDERAL 3/22/2017	FEDERAL 3/22/2017	FEDERAL 3/22/2017	FEDERAL 3/22/2017	FEDERAL 3/22/2017
	Sample Type	N	N	N	N	N
	Location ID	2016-07	2016-08	96147	2016-02	2016-01
	Sample ID	2016-07-20170322-02	2016-08-20170322-02	96147-20170322-02	2016-02 (39)-20170322-0	2016-01-20170322-01
Analyte	Unit					
Antimony	mg/L				0.0016 J	0.0019 J
Arsenic	mg/L				0.012 J	0.0055
Barium	mg/L				1 JB	0.12 JB
Beryllium	mg/L				0.001 U	0.001 U
Boron	mg/L				0.55	0.23
Cadmium	mg/L				0.001 U	0.00052 J
Calcium	mg/L				420 B	5.5 B
Chloride	mg/L				9600	260
Chromium	mg/L				0.00078 J	0.01 J
Cobalt	mg/L				0.0018	0.0018
Combined Radium 226 +228	pCi/L				4.49	0.896
Fluoride	mg/L				0.88 J	11
Lead	mg/L				0.00084 J	0.0062 J
Lithium	mg/L				0.15	0.23 J
Mercury	mg/L				0.0002 U	0.0002 UJ
Molybdenum	mg/L				0.3 J	0.18 J
pH, Field	pH units	9.94	12.65	8.02		
pH, Field	SU					
Selenium	mg/L				0.0025 J	0.0026 J
Sulfate	mg/L				340	220
Thallium	mg/L				0.001 U	0.001 U
Total dissolved solids	mg/L				13000	1300

Notes:
FD = Field Duplicate Sample
N = Normal Sample

Appendix B
Analytical Data Summary
Gavin Power, LLC
Fly Ash Reservoir

		FEDERAL	FEDERAL	FEDERAL	FEDERAL	FEDERAL
Sample Date		3/22/2017	3/22/2017	3/22/2017	3/27/2017	3/27/2017
Sample Type		N	N	N	N	N
Location ID		2016-07	2016-08	96147	2016-03	2016-04
Sample ID		2016-07-20170322-01	2016-08-20170322-01	96147-20170322-01	2016-03-20170327-02	2016-04-20170327-02
Analyte	Unit					
Antimony	mg/L	0.0015 J	0.0012 J	0.00097 J		
Arsenic	mg/L	0.016	0.0054	0.013		
Barium	mg/L	0.83 JB	0.97 JB	0.43 JB		
Beryllium	mg/L	0.0026	0.001 U	0.0032		
Boron	mg/L	0.4	0.22	0.46		
Cadmium	mg/L	0.001 U	0.001 U	0.001 U		
Calcium	mg/L	15 B	190 B	15 B		
Chloride	mg/L	1000	700	600		
Chromium	mg/L	0.063 J	0.011 J	0.077 J		
Cobalt	mg/L	0.016	0.0024	0.017		
Combined Radium 226 +228	pCi/L	4.35	6.4	7.29		
Fluoride	mg/L	2.3	2	4.8		
Lead	mg/L	0.031 J	0.0044 J	0.044 J		
Lithium	mg/L	0.16	0.85	0.082		
Mercury	mg/L	0.0002 U	0.0002 U	0.0002 U		
Molybdenum	mg/L	0.092 J	0.094 J	0.046 J		
pH, Field	pH units				6.93	7.79
pH, Field	SU					
Selenium	mg/L	0.004 J	0.002 J	0.0024 J		
Sulfate	mg/L	120	71	110		
Thallium	mg/L	0.00052 J	0.001 U	0.00085 J		
Total dissolved solids	mg/L	2300	2700	2200		

Notes:
FD = Field Duplicate Sample
N = Normal Sample

Appendix B
Analytical Data Summary
Gavin Power, LLC
Fly Ash Reservoir

		FEDERAL	FEDERAL	FEDERAL	FEDERAL	FEDERAL
Sample Date		3/27/2017	3/27/2017	3/27/2017	3/27/2017	3/27/2017
Sample Type		N	N	N	N	N
Location ID		2016-05	2016-06	2016-05	2016-06	2016-03
Sample ID		2016-05-20170327-02	2016-06-20170327-17	2016-05-20170327-01	2016-06-20170327-01	2016-03-20170327-01
Analyte	Unit					
Antimony	mg/L			0.002 U	0.00047 JB	0.002 U
Arsenic	mg/L			0.005 U	0.0034 J	0.00058 J
Barium	mg/L			0.049 JB	0.068 JB	0.026 JB
Beryllium	mg/L			0.001 U	0.001 U	0.001 U
Boron	mg/L			0.1	0.5	0.43
Cadmium	mg/L			0.001 U	0.00061 J	0.001 U
Calcium	mg/L			66 B	5 B	140 B
Chloride	mg/L			9.2	550	22
Chromium	mg/L			0.0017 JB	0.068 JB	0.00064 JB
Cobalt	mg/L			0.00042 J	0.0019	0.00029 J
Combined Radium 226 +228	pCi/L			0.369 U	0.381	0.456
Fluoride	mg/L			0.2	6	0.21 J
Lead	mg/L			0.00036 J	0.0016 J	0.00026 J
Lithium	mg/L			0.011	0.034	0.029
Mercury	mg/L			0.0002 U	0.0002 U	0.0002 U
Molybdenum	mg/L			0.00064 J	0.091 J	0.0049 J
pH, Field	pH units	7.48	8.44			
pH, Field	SU					
Selenium	mg/L			0.005 U	0.005 U	0.005 U
Sulfate	mg/L			150	110	390
Thallium	mg/L			0.001 U	0.001 U	0.001 U
Total dissolved solids	mg/L			500	1600	1100

Notes:
FD = Field Duplicate Sample
N = Normal Sample

Appendix B
Analytical Data Summary
Gavin Power, LLC
Fly Ash Reservoir

		FEDERAL	FEDERAL	FEDERAL	FEDERAL	FEDERAL
Sample Date		3/27/2017	4/25/2017	4/25/2017	4/25/2017	4/25/2017
Sample Type		N	N	N	N	N
Location ID		2016-04	2016-09	2016-10	2016-11	96153R
Sample ID		2016-04-20170327-01	2016-09-20170425-02	2016-10-20170425-02	2016-11-20170425-02	96153-R-20170425-02
Analyte	Unit					
Antimony	mg/L	0.00067 JB				
Arsenic	mg/L	0.0054				
Barium	mg/L	0.14 JB				
Beryllium	mg/L	0.001 U				
Boron	mg/L	0.27				
Cadmium	mg/L	0.001 U				
Calcium	mg/L	22 B				
Chloride	mg/L	820				
Chromium	mg/L	0.0054 JB				
Cobalt	mg/L	0.00026 J				
Combined Radium 226 +228	pCi/L	1.51				
Fluoride	mg/L	1.4				
Lead	mg/L	0.00043 J				
Lithium	mg/L	0.044				
Mercury	mg/L	0.0002 U				
Molybdenum	mg/L	0.12 J				
pH, Field	pH units		12.44	7.21	8.35	6.19
pH, Field	SU					
Selenium	mg/L	0.0026 J				
Sulfate	mg/L	330				
Thallium	mg/L	0.001 U				
Total dissolved solids	mg/L	1900				

Notes:
FD = Field Duplicate Sample
N = Normal Sample

Appendix B
Analytical Data Summary
Gavin Power, LLC
Fly Ash Reservoir

	Sample Date	FEDERAL 4/25/2017	FEDERAL 4/25/2017	FEDERAL 4/25/2017	FEDERAL 4/25/2017	FEDERAL 4/25/2017
	Sample Type	N	N	N	N	N
	Location ID	96154R	96156	MW-20	96153R	MW-20
	Sample ID	96154-R-20170425-02	96156-20170425-02	MW-20-20170425-02	96153 R-20170425-01	MW20-20170425-01
Analyte	Unit					
Antimony	mg/L				0.002 U	0.002 U
Arsenic	mg/L				0.005 U	0.0048 J
Barium	mg/L				0.027	0.025
Beryllium	mg/L				0.0048	0.00032 J
Boron	mg/L				0.25	0.15 J
Cadmium	mg/L				0.00024 J	0.001 U
Calcium	mg/L				200	500
Chloride	mg/L				20	11
Chromium	mg/L				0.002 U	0.002 U
Cobalt	mg/L				0.29	0.13
Combined Radium 226 +228	pCi/L				0.926	0.594
Fluoride	mg/L				2.3	1.2
Lead	mg/L				0.001 U	0.001 U
Lithium	mg/L				0.2	0.16
Mercury	mg/L				3.2E-07 J	4.3E-07 J
Molybdenum	mg/L				0.0042 J	0.0016 J
pH, Field	pH units	10.32	8.32	6.51		
pH, Field	SU					
Selenium	mg/L				0.0017 J	0.005 U
Sulfate	mg/L				1700	2200
Thallium	mg/L				0.001 U	0.001 U
Total dissolved solids	mg/L				1900 J	2500 J

Notes:
FD = Field Duplicate Sample
N = Normal Sample

Appendix B
Analytical Data Summary
Gavin Power, LLC
Fly Ash Reservoir

		FEDERAL	FEDERAL	FEDERAL	FEDERAL	FEDERAL
Sample Date		4/25/2017	4/25/2017	4/25/2017	4/25/2017	4/25/2017
Sample Type		N	N	N	N	N
Location ID		96154R	2016-09	96156	2016-10	2016-11
Sample ID		96154 R-20170425-01	2016-09-20170425-01	96156-20170425-01	2016-10-20170425-01	2016-11-20170425-01
Analyte	Unit					
Antimony	mg/L	0.0014 J	0.0012 J	0.002 U	0.002 U	0.00081 J
Arsenic	mg/L	0.0093	0.016	0.0042 J	0.0025 J	0.0022 J
Barium	mg/L	0.067	0.52	16	0.17	0.41
Beryllium	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Boron	mg/L	0.5	0.16 J	0.4	0.49	0.35
Cadmium	mg/L	0.001 U	0.001 U	0.00027 J	0.001 U	0.001 U
Calcium	mg/L	2.1	35	380	390	34
Chloride	mg/L	410	2000	17000	12000	2800
Chromium	mg/L	0.002 U	0.025	0.002 U	0.002 U	0.002 U
Cobalt	mg/L	0.00037 J	0.00032 J	0.0016	0.0013	0.0013
Combined Radium 226 +228	pCi/L	0.894	2.29	189	2.19	1.56
Fluoride	mg/L	4.5	2.1 J	5 U	5 U	2.2 J
Lead	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Lithium	mg/L	0.19	0.3	0.25	0.23	0.074
Mercury	mg/L	5.6E-06 J	7.1E-06 J	8.9E-06 J	8E-07	4.1E-06 J
Molybdenum	mg/L	0.093	0.17	0.0073 J	0.015	0.14
pH, Field	pH units					
pH, Field	SU					
Selenium	mg/L	0.005 U	0.0029 J	0.005 U	0.005 U	0.005 U
Sulfate	mg/L	60	88 J	100 U	1100	750
Thallium	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Total dissolved solids	mg/L	1400 J	4300 J	19000 J	17000 J	4900 J

Notes:
FD = Field Duplicate Sample
N = Normal Sample

Appendix B
Analytical Data Summary
Gavin Power, LLC
Fly Ash Reservoir

		FEDERAL	FEDERAL	FEDERAL	FEDERAL	FEDERAL
Sample Date		4/26/2017	4/26/2017	4/26/2017	4/26/2017	4/26/2017
Sample Type		FD	N	N	N	N
Location ID		2016-02	2016-01	2016-02	2016-02	2016-01
Sample ID		DUPE 042617	2016-01-20170426-02	2016-02-20170426-02	2016-02-20170426-01	2016-01-20170426-01
Analyte	Unit					
Antimony	mg/L	0.002 U			0.002 U	0.00085 J
Arsenic	mg/L	0.0093			0.0097	0.0051
Barium	mg/L	0.84			0.83	0.071
Beryllium	mg/L	0.001 U			0.001 U	0.001 U
Boron	mg/L	0.52			0.51	0.26
Cadmium	mg/L	0.001 U			0.001 U	0.001 U
Calcium	mg/L	360			360	4.1
Chloride	mg/L	15000			13000	230
Chromium	mg/L	0.002 U			0.002 U	0.0015 J
Cobalt	mg/L	0.0016			0.0017	0.00066 J
Combined Radium 226 +228	pCi/L	7.99			6.63	1.44
Fluoride	mg/L	5 U			5 U	13 J
Lead	mg/L	0.001 U			0.001 U	0.00093 J
Lithium	mg/L	0.16			0.17	0.23 J
Mercury	mg/L	1.2E-06 J			1.6E-06 J	7.8E-05 J
Molybdenum	mg/L	0.3			0.3	0.18
pH, Field	pH units		10.96	7.09		
pH, Field	SU					
Selenium	mg/L	0.005 U			0.005 U	0.0015 J
Sulfate	mg/L	300			280	180 J
Thallium	mg/L	0.001 U			0.001 U	0.001 U
Total dissolved solids	mg/L	18000 J			100 J	1300 J

Notes:
FD = Field Duplicate Sample
N = Normal Sample

Appendix B
Analytical Data Summary
Gavin Power, LLC
Fly Ash Reservoir

		FEDERAL	FEDERAL	FEDERAL	FEDERAL	FEDERAL
Sample Date		4/27/2017	4/27/2017	4/27/2017	4/27/2017	4/27/2017
Sample Type		N	N	N	N	N
Location ID		2016-03	2016-04	2016-05	2016-06	2016-07
Sample ID		2016-03-20170427-02	2016-04-20170427-02	2016-05-20170427-02	2016-06-20170427-02	2016-07-20170427-02
Analyte	Unit					
Antimony	mg/L					
Arsenic	mg/L					
Barium	mg/L					
Beryllium	mg/L					
Boron	mg/L					
Cadmium	mg/L					
Calcium	mg/L					
Chloride	mg/L					
Chromium	mg/L					
Cobalt	mg/L					
Combined Radium 226 +228	pCi/L					
Fluoride	mg/L					
Lead	mg/L					
Lithium	mg/L					
Mercury	mg/L					
Molybdenum	mg/L					
pH, Field	pH units	6.9	7.82	7.82	8.49	9.44
pH, Field	SU					
Selenium	mg/L					
Sulfate	mg/L					
Thallium	mg/L					
Total dissolved solids	mg/L					

Notes:
FD = Field Duplicate Sample
N = Normal Sample

Appendix B
Analytical Data Summary
Gavin Power, LLC
Fly Ash Reservoir

		FEDERAL	FEDERAL	FEDERAL	FEDERAL	FEDERAL
Sample Date		4/27/2017	4/27/2017	4/27/2017	4/27/2017	4/27/2017
Sample Type		N	N	N	N	N
Location ID		2016-08	96147	2016-08	2016-07	96147
Sample ID		2016-08-20170427-02	96147-20170427-02	2016-08-20170427-01	2016-07-20170427-01	96147-20170427-01
Analyte	Unit					
Antimony	mg/L			0.0051	0.0024	0.0012 J
Arsenic	mg/L			0.0075	0.0034 J	0.0042 J
Barium	mg/L			0.7	0.7	0.18
Beryllium	mg/L			0.001 U	0.00091 J	0.001 U
Boron	mg/L			0.28 B	0.42 B	0.48 B
Cadmium	mg/L			0.001 U	0.001 U	0.001 U
Calcium	mg/L			140	25	11
Chloride	mg/L			890	1900	570
Chromium	mg/L			0.0027	0.011	0.002 U
Cobalt	mg/L			0.00039 J	0.0028	0.00066 J
Combined Radium 226 +228	pCi/L			5.53	12.7	4.65
Fluoride	mg/L			1.8 J	1.6	5.3
Lead	mg/L			0.001 U	0.0054	0.00081 J
Lithium	mg/L			0.75	0.062	0.034
Mercury	mg/L			1E-05 J	0.00012 J	4.9E-05 J
Molybdenum	mg/L			0.12	0.056	0.05
pH, Field	pH units	12.35	7.95			
pH, Field	SU					
Selenium	mg/L			0.0022 J	0.0015 J	0.005 U
Sulfate	mg/L			70	99	110
Thallium	mg/L			0.001 U	0.001 U	0.001 U
Total dissolved solids	mg/L			2900 J	3900 J	2100 J

Notes:
FD = Field Duplicate Sample
N = Normal Sample

Appendix B
Analytical Data Summary
Gavin Power, LLC
Fly Ash Reservoir

		FEDERAL	FEDERAL	FEDERAL	FEDERAL	FEDERAL
Sample Date		4/27/2017	4/27/2017	4/27/2017	4/27/2017	6/6/2017
Sample Type		N	N	N	N	N
Location ID		2016-03	2016-04	2016-05	2016-06	2016-09
Sample ID		2016-03-20170427-01	2016-04-20170427-01	2016-05-20170427-01	2016-06-20170427-01	2016-09-20170606-02
Analyte	Unit					
Antimony	mg/L	0.002 U	0.00087 J	0.00072 J	0.00078 J	
Arsenic	mg/L	0.001 J	0.0044 J	0.005 U	0.0017 J	
Barium	mg/L	0.024	0.16	0.043	0.05	
Beryllium	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	
Boron	mg/L	0.44 B	0.27 B	0.1 JB	0.52 B	
Cadmium	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	
Calcium	mg/L	140	18	53	3.5	
Chloride	mg/L	23	1700	9.6	550	
Chromium	mg/L	0.002 U	0.0027	0.002 U	0.022	
Cobalt	mg/L	0.00055 J	0.001 U	0.00028 J	0.00068 J	
Combined Radium 226 +228	pCi/L	0.541	1.27	0.469 U	0.395	
Fluoride	mg/L	0.19 J	1.2	0.21	5.9	
Lead	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	
Lithium	mg/L	0.034	0.072	0.013	0.032	
Mercury	mg/L	1.1E-05 J	9.3E-06 J	1.7E-06 J	4E-06 J	
Molybdenum	mg/L	0.0043 J	0.11	0.01 U	0.076	
pH, Field	pH units					12.46
pH, Field	SU					
Selenium	mg/L	0.005 U	0.0022 J	0.005 U	0.005 U	
Sulfate	mg/L	420	230	160	110	
Thallium	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	
Total dissolved solids	mg/L	1100 J	3300 J	460 J	1600 J	

Notes:
FD = Field Duplicate Sample
N = Normal Sample

Appendix B
Analytical Data Summary
Gavin Power, LLC
Fly Ash Reservoir

		FEDERAL	FEDERAL	FEDERAL	FEDERAL	FEDERAL
Sample Date		6/6/2017	6/6/2017	6/6/2017	6/6/2017	6/6/2017
Sample Type		N	N	N	N	N
Location ID		2016-10	96153R	96154R	96156	MW-20
Sample ID		2016-10-20170606-02	96153-R-20170606-02	96154-R-20170606-02	96156-20170606-02	MW-20-20170606-02
Analyte	Unit					
Antimony	mg/L					
Arsenic	mg/L					
Barium	mg/L					
Beryllium	mg/L					
Boron	mg/L					
Cadmium	mg/L					
Calcium	mg/L					
Chloride	mg/L					
Chromium	mg/L					
Cobalt	mg/L					
Combined Radium 226 +228	pCi/L					
Fluoride	mg/L					
Lead	mg/L					
Lithium	mg/L					
Mercury	mg/L					
Molybdenum	mg/L					
pH, Field	pH units	7.51	7.2	8.76	7.26	6.52
pH, Field	SU					
Selenium	mg/L					
Sulfate	mg/L					
Thallium	mg/L					
Total dissolved solids	mg/L					

Notes:
FD = Field Duplicate Sample
N = Normal Sample

Appendix B
Analytical Data Summary
Gavin Power, LLC
Fly Ash Reservoir

		FEDERAL	FEDERAL	FEDERAL	FEDERAL	FEDERAL
Sample Date		6/6/2017	6/6/2017	6/6/2017	6/6/2017	6/6/2017
Sample Type		N	N	N	N	N
Location ID		96153R	MW-20	96154R	2016-09	96156
Sample ID		96153R-20170606-01	MW20-20170606-01	96154R-20170606-01	2016-09-20170606-01	96156-20170606-01
Analyte	Unit					
Antimony	mg/L	0.00057 J	0.002 U	0.002 U	0.02 U	0.0017 J
Arsenic	mg/L	0.005 U	0.0086	0.0022 J	0.016 J	0.0043 J
Barium	mg/L	0.037	0.027	0.12	0.53	16
Beryllium	mg/L	0.00038 J	0.00055 J	0.001 UJ	0.001 UJ	0.001 UJ
Boron	mg/L	0.48 B	0.19 B	0.53 B	0.18 B	0.43 B
Cadmium	mg/L	0.001 U	0.001 U	0.001 U	0.01 U	0.00088 J
Calcium	mg/L	72	500	4.8	47	390
Chloride	mg/L	35	6.5	470	1700	12000
Chromium	mg/L	0.002 U	0.0018 J	0.0078 J	0.029 J	0.0077 J
Cobalt	mg/L	0.012	0.13	0.00042 J	0.01 U	0.0015
Combined Radium 226 +228	pCi/L	0.607	0.425	0.655	3.76	138
Fluoride	mg/L	1.4	0.93	4.1	1.8	1.3 U
Lead	mg/L	0.00045 J	0.001 U	0.00077 J	0.001	0.0055
Lithium	mg/L	0.069	0.16	0.048	0.27	0.25
Mercury	mg/L	8.8E-07 J	3.9E-07 J	1.9E-06 J	4.7E-06 J	1.8E-06 J
Molybdenum	mg/L	0.02	0.002 J	0.1	0.17	0.017
pH, Field	pH units					
pH, Field	SU					
Selenium	mg/L	0.0014 J	0.005 U	0.005 U	0.05 U	0.00091 J
Sulfate	mg/L	1000	1700	100	65	25 U
Thallium	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Total dissolved solids	mg/L	1800	2600	1500	4300	21000

Notes:
FD = Field Duplicate Sample
N = Normal Sample

Appendix B
Analytical Data Summary
Gavin Power, LLC
Fly Ash Reservoir

		FEDERAL	FEDERAL	FEDERAL	FEDERAL	FEDERAL
Sample Date		6/6/2017	6/7/2017	6/7/2017	6/7/2017	6/7/2017
Sample Type		N	FD	N	N	N
Location ID		2016-10	2016-02	2016-01	2016-02	2016-03
Sample ID		2016-10-20170606-01	PE -01060717-20170607	2016-01-20170607-02	2016-02-20170607-02	2016-03-20170607-02
Analyte	Unit					
Antimony	mg/L	0.02 U	0.01 U			
Arsenic	mg/L	0.05 U	0.0057			
Barium	mg/L	0.25	0.87			
Beryllium	mg/L	0.001 UJ	0.005 U			
Boron	mg/L	0.57 B	0.57			
Cadmium	mg/L	0.01 U	0.005 U			
Calcium	mg/L	440	400			
Chloride	mg/L	11000	19000			
Chromium	mg/L	0.02 U	0.0012 J			
Cobalt	mg/L	0.0069 J	0.0029			
Combined Radium 226 +228	pCi/L	3.93	5.93			
Fluoride	mg/L	1.3 U	5 U			
Lead	mg/L	0.001 U	0.00048 J			
Lithium	mg/L	0.29	0.17			
Mercury	mg/L	1.4E-06 J	3E-06 J			
Molybdenum	mg/L	0.011 J	0.23			
pH, Field	pH units			11.06	7.21	6.88
pH, Field	SU					
Selenium	mg/L	0.05 U	0.025 U			
Sulfate	mg/L	640	720			
Thallium	mg/L	0.001 U	0.001 U			
Total dissolved solids	mg/L	17000	13000			

Notes:
FD = Field Duplicate Sample
N = Normal Sample

Appendix B
Analytical Data Summary
Gavin Power, LLC
Fly Ash Reservoir

	Sample Date	FEDERAL 6/7/2017	FEDERAL 6/7/2017	FEDERAL 6/7/2017	FEDERAL 6/7/2017	FEDERAL 6/7/2017
	Sample Type	N	N	N	N	N
	Location ID	2016-04	2016-08	96147	2016-02	2016-01
	Sample ID	2016-04-20170607-02	2016-08-20170607-02	96147-20170607-02	2016-02(39)-20170607-0	2016-01-20170607-01
Analyte	Unit					
Antimony	mg/L				0.01 U	0.00068 J
Arsenic	mg/L				0.009 J	0.0043 J
Barium	mg/L				0.88	0.094
Beryllium	mg/L				0.001 U	0.00032 J
Boron	mg/L				0.62	0.3
Cadmium	mg/L				0.005 U	0.0003 J
Calcium	mg/L				380	7.3 J
Chloride	mg/L				11000	220
Chromium	mg/L				0.01 U	0.0037
Cobalt	mg/L				0.0029 J	0.00072 J
Combined Radium 226 +228	pCi/L				5.73	0.578
Fluoride	mg/L				5 U	17
Lead	mg/L				0.00066 J	0.0029
Lithium	mg/L				0.17	0.25 J
Mercury	mg/L				2.2E-06 J	1.9E-05 J
Molybdenum	mg/L				0.28	0.16
pH, Field	pH units	7.8	12.42	8.22		
pH, Field	SU					
Selenium	mg/L				0.025 U	0.00094 J
Sulfate	mg/L				380	160 J
Thallium	mg/L				0.001 U	0.001 U
Total dissolved solids	mg/L				16000	990

Notes:
FD = Field Duplicate Sample
N = Normal Sample

Appendix B
Analytical Data Summary
Gavin Power, LLC
Fly Ash Reservoir

		FEDERAL	FEDERAL	FEDERAL	FEDERAL	FEDERAL
Sample Date		6/7/2017	6/7/2017	6/7/2017	6/7/2017	6/8/2017
Sample Type		N	N	N	N	N
Location ID		2016-08	96147	2016-03	2016-04	2016-06
Sample ID		2016-08-20170607-01	96147-20170607-01	2016-03-20170607-01	2016-04-20170607-01	2016-06-20170608-02
Analyte	Unit					
Antimony	mg/L	0.0013 J	0.0011 J	0.002 U	0.002 U	
Arsenic	mg/L	0.014	0.013	0.00082 J	0.0019 J	
Barium	mg/L	0.76	0.34	0.026	0.41	
Beryllium	mg/L	0.005 U	0.0027 J	0.001 U	0.001 U	
Boron	mg/L	0.32	0.49	0.45	0.36	
Cadmium	mg/L	0.001 U	0.00057 J	0.001 U	0.001 U	
Calcium	mg/L	140	14	150	33	
Chloride	mg/L	1200 J	690 J	22 J	2100 J	
Chromium	mg/L	0.015 J	0.071 J	0.002 U	0.002 U	
Cobalt	mg/L	0.0037	0.018	0.00019 J	0.001 U	
Combined Radium 226 +228	pCi/L	2.43	4.72	0.59	1.19	
Fluoride	mg/L	2.3 J	5.2 J	0.21 J	1.2 J	
Lead	mg/L	0.006	0.051	0.001 U	0.001 U	
Lithium	mg/L	0.64	0.084	0.029	0.066	
Mercury	mg/L	1.4E-05 J	8.4E-05 J	5.8E-06 J	6.6E-06 J	
Molybdenum	mg/L	0.14	0.053	0.004 J	0.051	
pH, Field	pH units					8.39
pH, Field	SU					
Selenium	mg/L	0.0043 J	0.0027 J	0.005 U	0.005 U	
Sulfate	mg/L	89 J	110 J	440 J	190 J	
Thallium	mg/L	0.001 U	0.001	0.001 U	0.001 U	
Total dissolved solids	mg/L	3000	2000	1000	3600	

Notes:
FD = Field Duplicate Sample
N = Normal Sample

Appendix B
Analytical Data Summary
Gavin Power, LLC
Fly Ash Reservoir

		FEDERAL	FEDERAL	FEDERAL	FEDERAL	FEDERAL
Sample Date		6/8/2017	6/8/2017	7/12/2017	7/12/2017	7/12/2017
Sample Type		N	N	N	N	N
Location ID		2016-05	2016-06	2016-09	2016-10	96153R
Sample ID		2016-05-20170608-01	2016-06-20170608-01	2016-09-20170712-02	2016-10-20170712-02	96153-R-20170712-02
Analyte	Unit					
Antimony	mg/L	0.00067 J	0.002 U			
Arsenic	mg/L	0.00088 J	0.0026 J			
Barium	mg/L	0.044 B	0.064 B			
Beryllium	mg/L	0.00067 J	0.00035 J			
Boron	mg/L	0.11	0.52			
Cadmium	mg/L	0.001 U	0.001 U			
Calcium	mg/L	40	4.1			
Chloride	mg/L	14	570			
Chromium	mg/L	0.0033	0.058 J			
Cobalt	mg/L	0.0011	0.0038			
Combined Radium 226 +228	pCi/L	0.385 U	0.385 U			
Fluoride	mg/L	0.22	6.3			
Lead	mg/L	0.0012	0.0013			
Lithium	mg/L	0.012	0.031			
Mercury	mg/L	1E-06 J	2.9E-06 J			
Molybdenum	mg/L	0.0012 J	0.074			
pH, Field	pH units			12.49	7.86	7.49
pH, Field	SU					
Selenium	mg/L	0.005 U	0.005 U			
Sulfate	mg/L	140	120			
Thallium	mg/L	0.001 U	0.001 U			
Total dissolved solids	mg/L	410	1700			

Notes:
FD = Field Duplicate Sample
N = Normal Sample

Appendix B
Analytical Data Summary
Gavin Power, LLC
Fly Ash Reservoir

		FEDERAL	FEDERAL	FEDERAL	FEDERAL	FEDERAL
Sample Date		7/12/2017	7/12/2017	7/12/2017	7/12/2017	7/12/2017
Sample Type		N	N	N	N	N
Location ID		96154R	96156	96153R	96154R	2016-09
Sample ID		96154-R-20170712-02	96156-20170712-02	96153R-20170712-01	96154R-20170712-01	2016-09-20170712-01
Analyte	Unit					
Antimony	mg/L			0.002 U	0.0006 JB	0.001 JB
Arsenic	mg/L			0.005 U	0.0025 J	0.016
Barium	mg/L			0.03	0.11	0.52
Beryllium	mg/L			0.001 U	0.001 U	0.001 U
Boron	mg/L			0.48 B	0.53 B	0.16 B
Cadmium	mg/L			0.001 U	0.001 U	0.001 U
Calcium	mg/L			130	4.3	55
Chloride	mg/L			19	490	1600
Chromium	mg/L			0.002 U	0.0013 J	0.025
Cobalt	mg/L			0.0063	0.00022 J	0.00071 J
Combined Radium 226 +228	pCi/L			0.702	0.577	2.61 J
Fluoride	mg/L			1.2	4.5	1.5 J
Lead	mg/L			0.001 U	0.00048 J	0.00068 J
Lithium	mg/L			0.054	0.049	0.25
Mercury	mg/L			0.0002 U	0.0002 U	0.0002 U
Molybdenum	mg/L			0.0068 J	0.1	0.16
pH, Field	pH units	8.82	8.04			
pH, Field	SU					
Selenium	mg/L			0.001 JB	0.005 U	0.0034 JB
Sulfate	mg/L			1000	100	85
Thallium	mg/L			0.001 U	0.001 U	0.001 U
Total dissolved solids	mg/L			1600 J	1500 J	3900 J

Notes:
FD = Field Duplicate Sample
N = Normal Sample

Appendix B
Analytical Data Summary
Gavin Power, LLC
Fly Ash Reservoir

		FEDERAL	FEDERAL	FEDERAL	FEDERAL	FEDERAL
	Sample Date	7/12/2017	7/12/2017	7/13/2017	7/13/2017	7/13/2017
	Sample Type	N	N	FD	N	N
	Location ID	96156	2016-10	2016-02	2016-01	2016-02
	Sample ID	96156-20170712-01	2016-10-20170712-01	DUPE FAR 071317	2016-01-20170713-02	2016-02-20170713-02
Analyte	Unit					
Antimony	mg/L	0.0012 JB	0.002 U	0.002 U		
Arsenic	mg/L	0.0036 J	0.0039 J	0.012 J		
Barium	mg/L	15	0.24	1.4		
Beryllium	mg/L	0.001 U	0.001 U	0.00039 J		
Boron	mg/L	0.4 B	0.54 B	0.52		
Cadmium	mg/L	0.0015	0.001 U	0.00025 J		
Calcium	mg/L	370	500	490		
Chloride	mg/L	12000	12000	11000		
Chromium	mg/L	0.016	0.0011 J	0.0014 J		
Cobalt	mg/L	0.0017	0.0046	0.0026		
Combined Radium 226 +228	pCi/L	119 J	4.91 J	6.97 J		
Fluoride	mg/L	2.5 U	2.5 U	5 U		
Lead	mg/L	0.0033	0.001 U	0.00088 J		
Lithium	mg/L	0.23	0.29	0.19		
Mercury	mg/L	0.0002 U	0.0002 U	0.0002 U		
Molybdenum	mg/L	0.0086 J	0.016	0.15		
pH, Field	pH units				11.03	7.09
pH, Field	SU					
Selenium	mg/L	0.0011 JB	0.0014 JB	0.0022 J		
Sulfate	mg/L	50 U	670	200		
Thallium	mg/L	0.001 U	0.001 U	0.001 U		
Total dissolved solids	mg/L	15000 J	15000 J	19000 J		

Notes:
FD = Field Duplicate Sample
N = Normal Sample

Appendix B
Analytical Data Summary
Gavin Power, LLC
Fly Ash Reservoir

		FEDERAL	FEDERAL	FEDERAL	FEDERAL	FEDERAL
	Sample Date	7/13/2017	7/13/2017	7/13/2017	7/13/2017	7/14/2017
	Sample Type	N	N	N	N	N
	Location ID	96147	96147	2016-02	2016-01	2016-03
	Sample ID	96147-20170713-01	96147-20170713-02	2016-02 (39)-20170713-0	2016-01-20170713-01	2016-03-20170714-02
Analyte	Unit					
Antimony	mg/L	0.001 J		0.002 U	0.002 U	
Arsenic	mg/L	0.021		0.011 J	0.0061	
Barium	mg/L	0.64		1.4	0.094	
Beryllium	mg/L	0.0075		0.001 U	0.00037 J	
Boron	mg/L	0.5		0.53	0.35	
Cadmium	mg/L	0.00036 J		0.001 U	0.0003 J	
Calcium	mg/L	19		480	8.6	
Chloride	mg/L	460		10000	210	
Chromium	mg/L	0.13		0.002 U	0.0048	
Cobalt	mg/L	0.037		0.0025	0.001	
Combined Radium 226 +228	pCi/L	12 J		7.5 J	0.482	
Fluoride	mg/L	4.6		5 U	16	
Lead	mg/L	0.088		0.00047 J	0.0036	
Lithium	mg/L	0.15		0.19	0.25	
Mercury	mg/L	0.00027		0.0002 U	0.0002 U	
Molybdenum	mg/L	0.04		0.14	0.15	
pH, Field	pH units		7.95			6.93
pH, Field	SU					
Selenium	mg/L	0.0089		0.0016 J	0.0024 J	
Sulfate	mg/L	140		240	150	
Thallium	mg/L	0.0013		0.001 U	0.001 U	
Total dissolved solids	mg/L	1800 J		17000 J	950 J	

Notes:
FD = Field Duplicate Sample
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Appendix B
Analytical Data Summary
Gavin Power, LLC
Fly Ash Reservoir

		FEDERAL	FEDERAL	FEDERAL	FEDERAL	FEDERAL
Sample Date		7/14/2017	7/14/2017	7/14/2017	7/14/2017	7/14/2017
Sample Type		N	N	N	N	N
Location ID		2016-04	2016-05	2016-06	MW-20	MW-20
Sample ID		2016-04-20170714-02	2016-05-20170714-02	2016-06-20170714-02	MW-20-20170714-02	MW20-20170714-01
Analyte	Unit					
Antimony	mg/L					0.002 U
Arsenic	mg/L					0.013
Barium	mg/L					0.029
Beryllium	mg/L					0.00088 J
Boron	mg/L					0.15
Cadmium	mg/L					0.001 U
Calcium	mg/L					500
Chloride	mg/L					8.2 J
Chromium	mg/L					0.0025
Cobalt	mg/L					0.14
Combined Radium 226 +228	pCi/L					0.73
Fluoride	mg/L					0.9
Lead	mg/L					0.00089 J
Lithium	mg/L					0.16
Mercury	mg/L					0.0002 U
Molybdenum	mg/L					0.0027 J
pH, Field	pH units	8.22	8.01	8.28	6.51	
pH, Field	SU					
Selenium	mg/L					0.0015 J
Sulfate	mg/L					1600
Thallium	mg/L					0.001 U
Total dissolved solids	mg/L					2600 J

Notes:
FD = Field Duplicate Sample
N = Normal Sample

Appendix B
Analytical Data Summary
Gavin Power, LLC
Fly Ash Reservoir

		FEDERAL	FEDERAL	FEDERAL	FEDERAL	FEDERAL
Sample Date		7/14/2017	7/14/2017	7/14/2017	7/14/2017	8/10/2017
Sample Type		N	N	N	N	N
Location ID		2016-03	2016-04	2016-05	2016-06	2016-07
Sample ID		2016-03-20170714-01	2016-04-20170714-01	2016-05-20170714-01	2016-06-20170714-01	2016-07-20170810-02
Analyte	Unit					
Antimony	mg/L	0.002 U	0.00097 J	0.002 U	0.002 U	
Arsenic	mg/L	0.00088 J	0.0039 J	0.00079 J	0.0024 J	
Barium	mg/L	0.025	0.24	0.038	0.059	
Beryllium	mg/L	0.001 U	0.00038 J	0.001 U	0.001 U	
Boron	mg/L	0.44	0.3	0.1	0.5	
Cadmium	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	
Calcium	mg/L	140	24	31	4	
Chloride	mg/L	22	1100	16	540	
Chromium	mg/L	0.002 U	0.0016 J	0.0025	0.062	
Cobalt	mg/L	0.00034 J	0.00027 J	0.00088 J	0.0018	
Combined Radium 226 +228	pCi/L	1.02	1.21	0.575	0.651	
Fluoride	mg/L	0.19 J	1.1	0.22	6.1	
Lead	mg/L	0.001 U	0.00055 J	0.00077 J	0.00083 J	
Lithium	mg/L	0.034	0.066	0.014	0.032	
Mercury	mg/L	0.0002 U	0.0002 U	0.0002 U	0.0002 U	
Molybdenum	mg/L	0.0038 J	0.093	0.01 U	0.073	
pH, Field	pH units					9.1
pH, Field	SU					
Selenium	mg/L	0.005 U	0.0032 J	0.005 U	0.001 J	
Sulfate	mg/L	400	290	130	110	
Thallium	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	
Total dissolved solids	mg/L	1000 J	2400 J	400 J	1600 J	

Notes:
FD = Field Duplicate Sample
N = Normal Sample

Appendix B
Analytical Data Summary
Gavin Power, LLC
Fly Ash Reservoir

		FEDERAL
	Sample Date	8/10/2017
	Sample Type	N
	Location ID	2016-07
	Sample ID	2016-07-20170810-01
Analyte	Unit	
Antimony	mg/L	0.0017 JB
Arsenic	mg/L	0.016
Barium	mg/L	1.3
Beryllium	mg/L	0.0028
Boron	mg/L	0.44
Cadmium	mg/L	0.00059 J
Calcium	mg/L	41
Chloride	mg/L	1200
Chromium	mg/L	0.059
Cobalt	mg/L	0.015
Combined Radium 226 +228	pCi/L	8.09 J
Fluoride	mg/L	2.6
Lead	mg/L	0.036 B
Lithium	mg/L	0.19
Mercury	mg/L	0.0002 U
Molybdenum	mg/L	0.11 B
pH, Field	pH units	
pH, Field	SU	
Selenium	mg/L	0.0052
Sulfate	mg/L	77
Thallium	mg/L	0.00066 J
Total dissolved solids	mg/L	2500 J

Notes:
FD = Field Duplicate Sample
N = Normal Sample