Prepared For:

Gavin Power, LLC
Cheshire, Ohio

2017 Annual Groundwater Monitoring and Corrective Action Report

Residual Waste Landfill
Gavin Power Plant
Cheshire, Ohio

31 January 2018

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Gavin Power, LLC

2017 Annual Groundwater Monitoring and Corrective Action Report

Residual Waste Landfill
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 Cheshire, Gallia County, 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 RWL. The report summarizes the activity at the site over the last year and provides a statistical summary of the findings of samples collected on or before October 17, 2017 as required by §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 publicly 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.

The Gavin RWL is located approximately 1.25 miles northwest of the Gavin Plant. This facility is permitted by the Ohio Environmental Protection Agency (OEPA) to accept and dispose of CCR material as a Class 3 Landfill. Approximately 98 percent of this material is Flue Gas Desulfurization (FGD) by-product (consisting of scrubber cake, fly ash and lime) and 2 percent other approved materials (bottom ash, fly ash, lime ball mill rejects, coal pulverizer rejects, and bottom ash pond sediments).

In 1994, the existing RWL was permitted with a capacity of 49 million cubic yards. In 2014, the landfill received a permit to expand horizontally and vertically, under permit to install (PTI) #06-08447. Under the PTI, the capacity will increase by 45.5 million cubic yards for a total of 94.5 million cubic yards. The landfill currently contains approximately 49.2 million cubic yards.

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, 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 underlying the RWL 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. As noted previously, 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 two upgradient wells (94128 and 94139) and five downgradient monitoring wells (2000, 2003, 2016-21, 93108 and 9806) in the Morgantown sandstone, as summarized below in Table 2. Groundwater samples were collected from two upgradient wells (94126 and 93100) and three downgradient wells (2016-20, 94136, and 9801) in the Cow Run sandstone, as summarized below in Table 2.

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 potentiometric contours and groundwater flow directions presented in Figure 2 are also representative of groundwater flow directions in the Morgantown sandstone. The principal direction of groundwater flow in the uppermost aquifer system (Cow Run and Morgantown sandstones) under the RWL is from the northwest, towards the southeast. Based on the average measured hydraulic gradient of 0.03, an assumed porosity of 0.3, and a measured hydraulic conductivity of 2.92×10^{-5} centimeters per second (cm/sec) (Geosyntec 2012), the average groundwater velocity in the uppermost aquifer beneath the RWL is estimated to be approximately 3 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, the well gradient designation (upgradient or downgradient of the CCR unit), and the geologic formation in which it is screened is provided in Table 1. Sampling occurred approximately every other month starting on June 8, 2016. The results for metals represent total recoverable metals.

Each RWL well 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 2002 did not produce enough water to be sampled during any of the sampling events.
- Well 2003 was not sampled during the August or October 2016 sampling events due to insufficient water in the well. The well was not sampled in July 2017 due to a malfunctioning pump, which was repaired. An additional attempt to sample the well was made in August 2017, but there was insufficient water to sample.
- Well 2016-20 was not sampled during the February or March 2017 sampling events due to a pump malfunction, which was repaired prior to the May 2017 sampling event. The well could not be sampled in December 2016, June 2017, or July 2017 due to the well going dry.
- Well 2016-21 was not sampled during the December 2016, February 2017, or March 2017 sampling events due to a malfunctioning pump, which was repaired for subsequent sampling; however, there was insufficient water to sample the well in May 2017, June 2017 or July 2017. An additional attempt was successfully made to sample the well in August 2017, except the sample pH was not measured.
- Well 94125 was not sampled during the August 2016, October 2016, March 2017, April 2017, June 2017, or July 2017 sampling events due to insufficient water to sample.

- Well 9801 was not sampled during the April 2017 sampling event due to a malfunctioning pump, which was repaired for subsequent sampling events.
- Well 9806 was not sampled during the August 2016, October 2016, or July 2017 sampling events due to a malfunctioning pump, which was repaired for subsequent sampling events. An additional attempt to sample the well was made in August 2017, although there was insufficient water to sample.

Upgradient well 94125 is part of the Morgantown sandstone monitoring well network but was not evaluated in this report because there were too few data points to support statistical analysis.

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

	Well	2000	2003	2016-20	2016-21	93100	93108	94126	94128	94136	94139	9801	9806
	Gradient	**DG**	**DG**	**DG**	**DG**	**UG**	**DG**	**UG**	**UG**	**DG**	**UG**	**DG**	**DG**
	Geology	**Morg.**	**Morg.**	**CR**	**Morg.**	**CR**	**Morg.**	**CR**	**Morg.**	**CR**	**Morg.**	**CR**	**Morg.**
Date Sampled	2016-06-08								X				
	2016-08-23					X		X	X		X		
	2016-08-24	X					X			X		X	
	2016-08-25				X								
	2016-08-26			X									
	2016-10-05			X		X		X	X		X		
	2016-10-06	X			X		X			X		X	
	2016-12-01	X	X					X	X	X			
	2016-12-02					X	X				X	X	X
	2017-02-01									X		X	
	2017-02-02	X				X	X	X	X		X		
	2017-02-08		X										X
	2017-03-23	X					X	X	X	X			
	2017-03-27		X										X
	2017-03-29					X					X	X	
	2017-04-28					X				X	X		
	2017-05-01	X	X										X
	2017-05-02						X		X				
	2017-05-17			X				X					
	2017-06-08							X	X				

Well	2000	2003	2016-20	2016-21	93100	93108	94126	94128	94136	94139	9801	9806
Gradient	**DG**	**DG**	**DG**	**DG**	**UG**	**DG**	**UG**	**UG**	**DG**	**UG**	**DG**	**DG**
Geology	**Morg.**	**Morg.**	**CR**	**Morg.**	**CR**	**Morg.**	**CR**	**Morg.**	**CR**	**Morg.**	**CR**	**Morg.**
2017-06-09									X		X	
2017-06-12	X	X			X	X				X		
2017-06-27												X
2017-07-17	X								X		X	
2017-07-18					X	X	X	X		X		
2017-08-10				X								

Note: All samples summarized in this table were collected under Detection Monitoring per §257.94; Morg. = Morgantown SS; CR = Cow Run SS; UG = upgradient; DG = downgradient

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 based on the analytical data for the Appendix III constituents. 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 in Cow Run Sandstone were significantly different for boron, calcium, chloride, pH and total dissolved solids, so individual well analyses were used for these analytes.
- Concentrations in upgradient wells in Cow Run Sandstone were not significantly different for fluoride and sulfate, so a pooled analysis was used for these analytes.
- Concentrations in upgradient wells in Morgantown were significantly different for boron, chloride, fluoride, pH and total dissolved solids, so individual well analyses were used for these analytes.
- Concentrations in upgradient wells for Morgantown were not significantly different for calcium and sulfate, so a pooled analysis was used for these analytes.

Table 3 identifies the statistical analysis that was used for each analyte.

Table 3 Analysis Type for Each Upgradient Dataset

Geology	Analyte	Analysis Type
Cow Run SS	Boron	Individual
Cow Run SS	Calcium	Individual
Cow Run SS	Chloride	Individual
Cow Run SS	Fluoride	Pooled
Cow Run SS	pH	Individual
Cow Run SS	Sulfate	Pooled
Cow Run SS	TDS	Individual
Morgantown SS	Boron	Individual
Morgantown SS	Calcium	Pooled
Morgantown SS	Chloride	Individual
Morgantown SS	Fluoride	Individual
Morgantown SS	pH	Individual
Morgantown SS	Sulfate	Pooled
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. Accordingly and 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 by ERM 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 12 well-analyte combinations for the upgradient dataset (two upgradient monitoring wells and seven constituents for Detection Monitoring (40 CFR §257 Appendix III), two of which used a pooled analysis).

- Twelve well-analyte combinations have 100 percent detects.
- Nine well-analyte combinations follow a normal distribution (using Shapiro-Wilks Normality Test). The remaining well-analyte combinations have no discernible distribution.

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

- There are a total of twelve well-analyte combinations for the upgradient dataset (two upgradient monitoring wells and seven constituents for Detection Monitoring (40 CFR §257 Appendix III), two of which used a pooled analysis).
- Twelve well-analyte combinations have detection rates greater than or equal to 50 percent.
- Ten well-analyte combinations have 100 percent detects.
- Nine well-analyte combinations follow a normal distribution (using Shapiro-Wilks Normality Test). The remaining well-analyte combinations have no discernible distribution.

Although the StAP lists eight detected values as the minimum data requirement, this first annual report uses five detected values as the cutoff for all of the statistical tests. The sample size requirements have been relaxed to allow for the analysis of most datasets at this initial stage of the monitoring program, while the sample sizes are still small. As additional samples are collected and the datasets updated, the minimum requirement will be increased as specified in the StAP.

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 outlier (see Appendix A, Figure A-2) were reviewed by the project hydrogeologist to determine if these data points should be excluded from the dataset. A total of two potential outliers were identified with visual and statistical tests. After further review, none of these were excluded from upper prediction limit (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 of the Mann Kendall trend test results and time series plots can be found in Appendix A, Table A-4 and Figure A-3. The following summarize the results of the trend analysis across the two geologic types:

- There are a total of 24 well-analyte combinations in the upgradient datasets.
- 24 well-analyte combinations meet the data requirements of the trend test.
- 4 well-analyte combinations had a significant increasing trend.
- 2 well-analyte combinations had a significant decreasing trend.
- 18 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.

A total of six 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 18 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 geology and compared to the most recent sample result in downgradient wells. For 4 analytes, the upgradient datasets were pooled prior to UPL calculations, resulting in a single UPL value per analyte. The 10 analytes following individual well analysis 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 (ERM 2017). All final UPL values are shown in Table 4 and Appendix A Table A-5.

Table 4 *Final UPLs for Each Appendix III Analyte and Geologic Unit*

UPL Type	Analyte	Geology	LPL	UPL	Unit
Individual	Boron	Cow Run SS		0.537	mg/L
Individual	Calcium	Cow Run SS		383	mg/L
Individual	Chloride	Cow Run SS		12,700	mg/L
Pooled	Fluoride	Cow Run SS		2.5	mg/L
Individual	pH	Cow Run SS	6.98	8.02	SU
Pooled	Sulfate	Cow Run SS		34.3	mg/L
Individual	TDS	Cow Run SS		19,900	mg/L
Individual	Boron	Morgantown SS		0.603	mg/L
Pooled	Calcium	Morgantown SS		13	mg/L
Individual	Chloride	Morgantown SS		878	mg/L
Individual	Fluoride	Morgantown SS		5.42	mg/L
Individual	pH	Morgantown SS	7.8	8.16	pH units
Pooled	Sulfate	Morgantown SS		75.2	mg/L
Individual	TDS	Morgantown SS		2,490	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. In cases where no sample was collected in August 2017, the most recent sample was used. All downgradient wells were below the UPLs with the following exceptions (Table 5 below, and Appendix A Table A-6).

Table 5 Downgradient Measurements that Exceed the UPL

Analyte	Well	Geology	LPL	UPL	Sample Date	Value	Unit	SSI
Calcium	2016-21	Morgantown SS		13	2017-08-10	24	mg/L	Yes
Fluoride	93108	Morgantown SS		5.42	2017-07-18	5.5	mg/L	Yes
pH	2000	Morgantown SS	7.8	8.16	2017-07-17	8.61	SU	Yes
pH	2016-20	Cow Run SS	6.98	8.02	2017-05-17	8.16	SU	Yes
pH	2016-21	Morgantown SS	7.8	8.16	2016-10-06	11.42	SU	Yes
pH	9806	Morgantown SS	7.8	8.16	2017-06-27	8.4	SU	Yes
Sulfate	2000	Morgantown SS		75.2	2017-07-17	560	mg/L	Yes
Sulfate	2003	Morgantown SS		75.2	2017-06-12	86	mg/L	Yes
Sulfate	2016-20	Cow Run SS		34.3	2017-05-17	450	mg/L	Yes
Sulfate	2016-21	Morgantown SS		75.2	2017-08-10	360	mg/L	Yes
Sulfate	93108	Morgantown SS		75.2	2017-07-18	90	mg/L	Yes
Sulfate	94136	Cow Run SS		34.3	2017-07-17	61	mg/L	Yes
Sulfate	9806	Morgantown SS		75.2	2017-06-27	130	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)).

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 Table A-6 and Figure A-4. Of the wells with SSIs, only 93108 for sulfate had a significantly increasing trend. The remaining wells had either stable concentrations or insufficient data to test for trends.

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 RWL 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) and subsequent investigation at the RWL have demonstrated alternate sources of statistical exceedances in monitoring wells associated with the RWL that have been proven and reported. 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 successfully made by April 15, 2018. In addition, wells that lacked sufficient groundwater for sampling during 2016 and 2017 (e.g., well 94125) will continue to be gauged in 2018, and the need for additional or replacement monitoring wells will be considered.

5.0 REFERENCES

ERM, 2017. Groundwater Monitoring Plan. Bottom Ash Complex, Fly Ash Reservoir, and Residual Waste Landfill. Gavin Plan, Cheshire Ohio.

Geosyntec, 2012. Final Permit-To-Install Application. Expansion of the Gavin Plant Residual Waste Landfill. Hydrogeologic Study Report OAC 3745-30-05(C)(4).

Geosyntec. 2016. *Groundwater Monitoring Well Network Evaluation, Gavin Site – Fly Ash Reservoir, Cheshire, Ohio*.

USEPA. 2009. *Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities.* Unified Guidance. USEPA/530/R/09/007. Office of Resource Conservation and Recovery. Washington, D.C.

Figures

Legend

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

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

Figure 1: Monitoring Well Network Map
Residual Waste Landfill
Gavin Power Plant
Cheshire, Ohio

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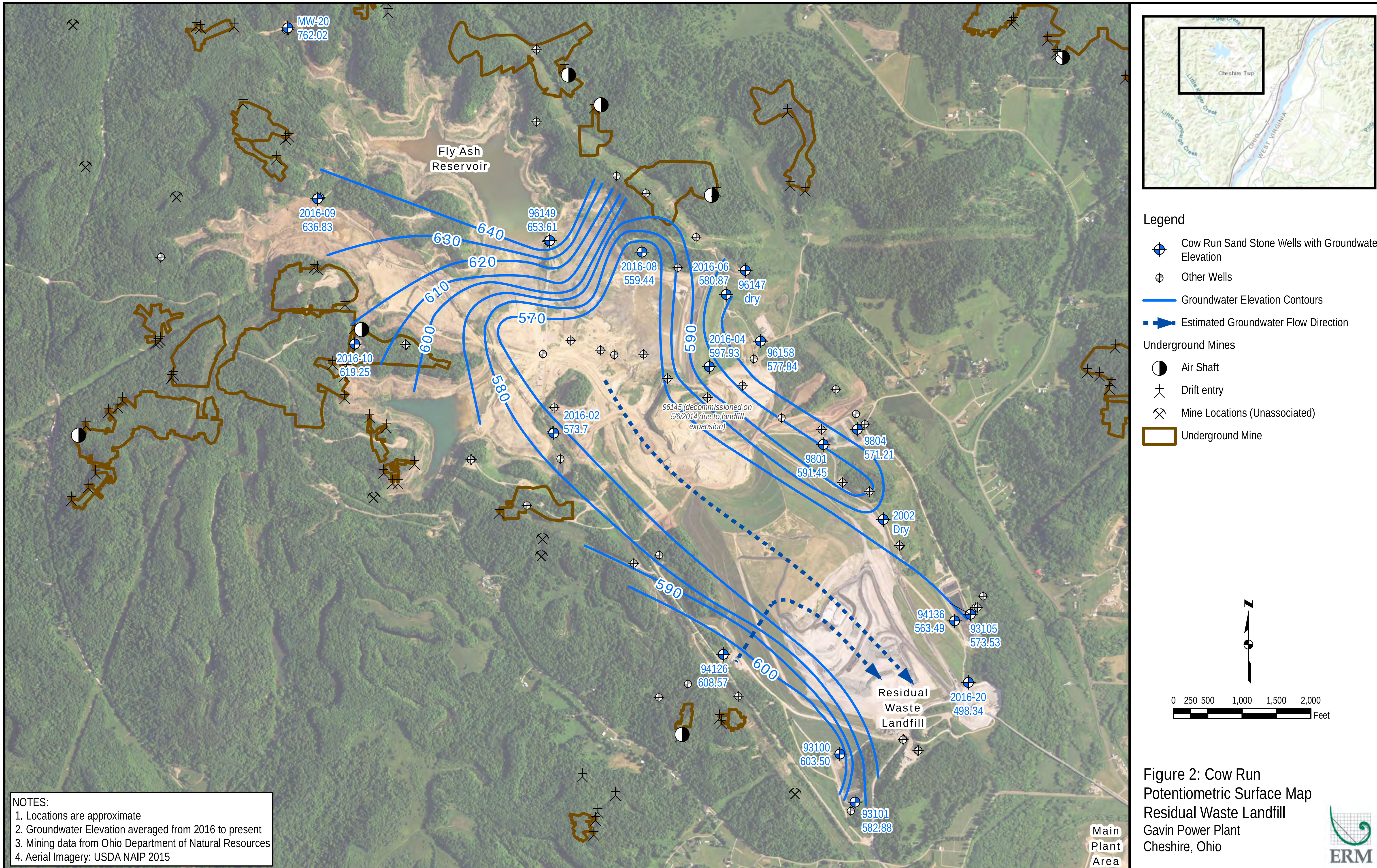

Figure 2: Cow Run Potentiometric Surface Map
Residual Waste Landfill
Gavin Power Plant
Cheshire, Ohio

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Appendix A
Statistical Support

Table A-1
Kruskal-Wallis Test Comparison of Upgradient Wells
Gavin Power, LLC
Residual Waste LF

Analyte	Geology	N	Num Detects	Percent Detects	DF	KW Statistic	p-value	Conclusion	UPL Type
Boron	Cow Run SS	16	16	100%	1	5.85	0.0156	Significant Difference	Individual
Calcium	Cow Run SS	16	16	100%	1	11.3	<0.001	Significant Difference	Individual
Chloride	Cow Run SS	16	16	100%	1	11.4	<0.001	Significant Difference	Individual
Fluoride	Cow Run SS	16	13	81%	1	0.711	0.399	No Significant Difference	Pooled
pH	Cow Run SS	16	16	100%	1	11.3	<0.001	Significant Difference	Individual
Sulfate	Cow Run SS	16	12	75%	1	0.0444	0.833	No Significant Difference	Pooled
TDS	Cow Run SS	16	16	100%	1	11.4	<0.001	Significant Difference	Individual
Boron	Morgantown SS	16	16	100%	1	7.5	0.00617	Significant Difference	Individual
Calcium	Morgantown SS	16	16	100%	1	0.621	0.431	No Significant Difference	Pooled
Chloride	Morgantown SS	16	16	100%	1	11.3	<0.001	Significant Difference	Individual
Fluoride	Morgantown SS	16	16	100%	1	11.3	<0.001	Significant Difference	Individual
pH	Morgantown SS	16	16	100%	1	7.19	0.00732	Significant Difference	Individual
Sulfate	Morgantown SS	16	16	100%	1	3.79	0.0517	No Significant Difference	Pooled
TDS	Morgantown SS	16	16	100%	1	9.05	0.00262	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 A-2
Descriptive Statistics for Upgradient Wells
Gavin Power, LLC
Residual Waste LF

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	93100	mg/L	8	8	100%			0.39	0.441	0.446	0.5	0.0363	8%	Normal
Cow Run SS	Boron	94126	mg/L	8	8	100%			0.333	0.391	0.392	0.44	0.0361	9%	Normal
Cow Run SS	Calcium	93100	mg/L	8	8	100%			14.1	17	17.9	22.2	2.66	15%	Normal
Cow Run SS	Calcium	94126	mg/L	8	8	100%			310	324	332	370	20.5	6%	Normal
Cow Run SS	Chloride	93100	mg/L	8	8	100%			199	2190	1900	2310	704	37%	NDD
Cow Run SS	Chloride	94126	mg/L	8	8	100%			10600	11250	11400	12000	552	5%	Normal
Cow Run SS	Fluoride	Pooled	mg/L	16	13	81%	5	5	0.43	2.175	1.75	2.4	0.828	47%	NDD
Cow Run SS	pH	93100	SU	8	8	100%			7.71	7.835	7.83	7.97	0.0785	1%	Normal
Cow Run SS	pH	94126	SU	8	8	100%			7.11	7.205	7.22	7.36	0.0923	1%	Normal
Cow Run SS	Sulfate	Pooled	mg/L	16	12	75%	0.5	100	1	12.6	18.2	28	17.1	94%	NDD
Cow Run SS	TDS	93100	mg/L	8	8	100%			3420	3615	3680	3980	180	5%	Normal
Cow Run SS	TDS	94126	mg/L	8	8	100%			16000	17950	17700	19000	913	5%	Normal
Morgantown SS	Boron	94128	mg/L	8	8	100%			0.411	0.4445	0.446	0.49	0.0263	6%	Normal
Morgantown SS	Boron	94139	mg/L	8	8	100%			0.456	0.5135	0.507	0.54	0.0349	7%	Normal
Morgantown SS	Calcium	Pooled	mg/L	16	16	100%			5.5	6.7	7.21	13	1.86	26%	NDD
Morgantown SS	Chloride	94128	mg/L	8	8	100%			765	789	797	850	29.6	4%	Normal
Morgantown SS	Chloride	94139	mg/L	8	8	100%			450	501.5	495	520	22.3	5%	Normal
Morgantown SS	Fluoride	94128	mg/L	8	8	100%			2.06	2.445	2.43	2.8	0.307	13%	Normal
Morgantown SS	Fluoride	94139	mg/L	8	8	100%			4.05	4.41	4.48	5.1	0.425	9%	Normal
Morgantown SS	pH	94128	SU	8	8	100%			7.8	7.975	7.95	8	0.066	1%	NDD
Morgantown SS	pH	94139	SU	8	8	100%			7.92	8.135	8.11	8.19	0.0944	1%	NDD
Morgantown SS	Sulfate	Pooled	mg/L	16	16	100%			40.7	52.6	54.2	69	7.63	14%	Normal
Morgantown SS	TDS	94128	mg/L	8	8	100%			1460	1940	1840	2100	238	13%	Normal
Morgantown SS	TDS	94139	mg/L	8	8	100%			1360	1410	1430	1500	52.2	4%	Normal

Notes
Pooled well indicates that the summary statistics were produced for the pooled upgradient wells based on the Kruskal-Wallis test (Table 1).
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 maximum non-detected value
Lognormal: The data fit a lognormal distribution
NDD: no discernable distribution
SU: standard units
TDS:Total dissolved solids

Table A-3
Potential Outliers in Upgradient Wells
Gavin Power, LLC
Residual Waste LF

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
94126	94126-20160823-01	Cow Run SS	8/23/2016	pH	7.36	SU	TRUE	7.36	Individual	Normal		X			X				Retain in dataset
94126	94126-20170323-02	Cow Run SS	3/23/2017	pH	7.35	pH units	TRUE	7.35	Individual	Normal		X			X				Retain in dataset
94126	R-94126-20170323-01	Cow Run SS	3/23/2017	Sulfate	50	mg/L	TRUE	28	Pooled	NDD		X		X					Retain in dataset
93100	93100-20161005-01	Cow Run SS	10/5/2016	TDS	3980	mg/L	TRUE	3980	Individual	Normal		X							Retain in dataset
93100	R-93100-20170329-01	Cow Run SS	3/29/2017	TDS	50	mg/L	TRUE	3900	Individual	Normal		X			X				Retain in dataset
94139	94139-20161202-01	Morgantown SS	12/2/2016	Calcium	7.99	mg/L	TRUE	7.99	Pooled	NDD		X			X				Retain in dataset
94139	R94139-20170612-01	Morgantown SS	6/12/2017	Calcium	1000	mg/L	TRUE	10	Pooled	NDD	X	X	X	X	X	X	0	Based on a dataset going back to 1994 for this well, these values are within ranges seen previously. Additionally, June and July results are similar (9.6 to 13 mg/L)	Retain in dataset
94139	R94139-20170718-01	Morgantown SS	7/18/2017	Calcium	1000	mg/L	TRUE	13	Pooled	NDD	X	X	X	X	X	X	0	Based on a dataset going back to 1994 for this well, these values are within ranges seen previously. Additionally, June and July results are similar (9.6 to 13 mg/L)	Retain in dataset
94128	R94128-20170718-01	Morgantown SS	7/18/2017	Fluoride	0.5	mg/L	TRUE	2.8	Individual	Normal	X								Retain in dataset
94139	R94139-20170428-01	Morgantown SS	4/28/2017	TDS	20	mg/L	TRUE	1500	Individual	Normal	X			X					Retain in dataset

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.
0 indicates that the data point was a statistical and visual outlier but was retained after review by the hydrogeologist

Table A-4
Mann Kendall Test for Trends in Upgradient Wells
Gavin Power, LLC
Residual Waste LF

Analyte	Geology	UPL Type	Well	N	Num Detects	Percent Detects	p-value	tau	Conclusion
Boron	Cow Run SS	Individual	93100	8	8	100%	0.0312	0.643	Increasing Trend
Boron	Cow Run SS	Individual	94126	8	8	100%	0.132	0.445	Stable, No Trend
Calcium	Cow Run SS	Individual	93100	8	8	100%	0.708	-0.109	Stable, No Trend
Calcium	Cow Run SS	Individual	94126	8	8	100%	0.0615	-0.546	Stable, No Trend
Chloride	Cow Run SS	Individual	93100	8	8	100%	0.899	0.0378	Stable, No Trend
Chloride	Cow Run SS	Individual	94126	8	8	100%	0.199	0.386	Stable, No Trend
Fluoride	Cow Run SS	Pooled	93100, 94126	16	13	81%	0.65	0.0862	Stable, No Trend
pH	Cow Run SS	Individual	93100	8	8	100%	0.061	-0.571	Stable, No Trend
pH	Cow Run SS	Individual	94126	8	8	100%	0.0444	-0.593	Decreasing Trend
Sulfate	Cow Run SS	Pooled	93100, 94126	16	12	75%	0.819	0.0437	Stable, No Trend
TDS	Cow Run SS	Individual	93100	8	8	100%	0.524	-0.189	Stable, No Trend
TDS	Cow Run SS	Individual	94126	8	8	100%	0.533	-0.182	Stable, No Trend
Boron	Morgantown SS	Individual	94128	8	8	100%	0.179	0.429	Stable, No Trend
Boron	Morgantown SS	Individual	94139	8	8	100%	0.0561	0.567	Stable, No Trend
Calcium	Morgantown SS	Pooled	94128, 94139	16	16	100%	0.821	0.0426	Stable, No Trend
Chloride	Morgantown SS	Individual	94128	8	8	100%	0.109	0.5	Stable, No Trend
Chloride	Morgantown SS	Individual	94139	8	8	100%	0.17	0.4	Stable, No Trend
Fluoride	Morgantown SS	Individual	94128	8	8	100%	0.0444	0.593	Increasing Trend
Fluoride	Morgantown SS	Individual	94139	8	8	100%	0.0141	0.714	Increasing Trend
pH	Morgantown SS	Individual	94128	8	8	100%	0.533	-0.182	Stable, No Trend
pH	Morgantown SS	Individual	94139	8	8	100%	0.00174	-0.857	Decreasing Trend
Sulfate	Morgantown SS	Pooled	94128, 94139	16	16	100%	0.0235	0.427	Increasing Trend
TDS	Morgantown SS	Individual	94128	8	8	100%	0.901	0.0364	Stable, No Trend
TDS	Morgantown SS	Individual	94139	8	8	100%	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 A-5
Calculated UPLs for Upgradient Datasets
Gavin Power, LLC
Residual Waste LF

Analyte	Geology	UPL Type	Trend	Well	N	Num Detects	Percent Detects	LPL	UPL	units	ND adjustment	Transformation	Alpha	Method	Final LPL	Final UPL
Boron	Cow Run SS	Individual	Increasing Trend	93100	8	8	100%		0.537	mg/L	None	No	0.0025	NP Detrended UPL		X
Boron	Cow Run SS	Individual	Stable, No Trend	94126	8	8	100%		0.481	mg/L	None	No	0.0025	Param Intra 1 of 2		
Calcium	Cow Run SS	Individual	Stable, No Trend	93100	8	8	100%		24.5	mg/L	None	No	0.0025	Param Intra 1 of 2		
Calcium	Cow Run SS	Individual	Stable, No Trend	94126	8	8	100%		383	mg/L	None	No	0.0025	Param Intra 1 of 2		X
Chloride	Cow Run SS	Individual	Stable, No Trend	93100	8	8	100%		2540	mg/L	None	x^4	0.0025	Param Intra 1 of 2		
Chloride	Cow Run SS	Individual	Stable, No Trend	94126	8	8	100%		12700	mg/L	None	No	0.0025	Param Intra 1 of 2		X
Fluoride	Cow Run SS	Pooled	Stable, No Trend	93100, 94126	16	13	81%		2.5	mg/L	None	No	0.00613	NP Inter (normality) 1 of 2		X
pH	Cow Run SS	Individual	Stable, No Trend	93100	8	8	100%	7.64	8.02	SU	None	No	0.00125	Param Intra 1 of 2		X
pH	Cow Run SS	Individual	Decreasing Trend	94126	8	8	100%	6.98	7.28	SU	None	No	0.00125	NP Detrended UPL	X	
Sulfate	Cow Run SS	Pooled	Stable, No Trend	93100, 94126	16	12	75%		34.3	mg/L	Aitchison`s	sqrt(x)	0.0025	Param Inter 1 of 2		X
TDS	Cow Run SS	Individual	Stable, No Trend	93100	8	8	100%		4120	mg/L	None	No	0.0025	Param Intra 1 of 2		
TDS	Cow Run SS	Individual	Stable, No Trend	94126	8	8	100%		19900	mg/L	None	No	0.0025	Param Intra 1 of 2		X
Boron	Morgantown SS	Individual	Stable, No Trend	94128	8	8	100%		0.519	mg/L	None	No	0.0015	Param Intra 1 of 2		
Boron	Morgantown SS	Individual	Stable, No Trend	94139	8	8	100%		0.603	mg/L	None	No	0.0015	Param Intra 1 of 2		X
Calcium	Morgantown SS	Pooled	Stable, No Trend	94128, 94139	16	16	100%		13	mg/L	None	No	0.0059	NP Inter (normality) 1 of 2		X
Chloride	Morgantown SS	Individual	Stable, No Trend	94128	8	8	100%		878	mg/L	None	No	0.0015	Param Intra 1 of 2		X
Chloride	Morgantown SS	Individual	Stable, No Trend	94139	8	8	100%		556	mg/L	None	No	0.0015	Param Intra 1 of 2		
Fluoride	Morgantown SS	Individual	Increasing Trend	94128	8	8	100%		3.07	mg/L	None	No	0.0015	NP Detrended UPL		
Fluoride	Morgantown SS	Individual	Increasing Trend	94139	8	8	100%		5.42	mg/L	None	No	0.0015	NP Detrended UPL		X
pH	Morgantown SS	Individual	Stable, No Trend	94128	8	8	100%	7.8	8	pH units	None	No	0.0429	NP Intra (normality) 1 of 2	X	
pH	Morgantown SS	Individual	Decreasing Trend	94139	8	8	100%	7.95	8.16	pH units	None	No	0.000752	NP Detrended UPL		X
Sulfate	Morgantown SS	Pooled	Increasing Trend	94128, 94139	16	16	100%		75.2	mg/L	None	No	0.0015	NP Detrended UPL		X
TDS	Morgantown SS	Individual	Stable, No Trend	94128	8	8	100%		2490	mg/L	None	No	0.0015	Param Intra 1 of 2		X
TDS	Morgantown SS	Individual	Stable, No Trend	94139	8	8	100%		1570	mg/L	None	No	0.0015	Param Intra 1 of 2		

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 A-6
Comparison of Downgradient wells to UPLs
Gavin Power, LLC
Residual Waste LF

Analyte	Well	Geology	LPL	UPL	units	Recent Date	Observation	Qualifier	Obs > UPL	Notes	Mann Kendall P-value	Mann Kendall tau
Boron	2000	Morgantown SS		0.603	mg/L	7/17/2017	0.35					
Boron	2003	Morgantown SS		0.603	mg/L	6/12/2017	0.51					
Boron	2016-20	Cow Run SS		0.537	mg/L	5/17/2017	0.41					
Boron	2016-21	Morgantown SS		0.603	mg/L	8/10/2017	0.34					
Boron	93108	Morgantown SS		0.603	mg/L	7/18/2017	0.48					
Boron	94136	Cow Run SS		0.537	mg/L	7/17/2017	0.44					
Boron	9801	Cow Run SS		0.537	mg/L	7/17/2017	0.52					
Boron	9806	Morgantown SS		0.603	mg/L	6/27/2017	0.35					
Calcium	2000	Morgantown SS		13	mg/L	7/17/2017	2.6					
Calcium	2003	Morgantown SS		13	mg/L	6/12/2017	12					
Calcium	2016-20	Cow Run SS		383	mg/L	5/17/2017	49					
Calcium	2016-21	Morgantown SS		13	mg/L	8/10/2017	24		X	No Trend Test: Insufficient Data		
Calcium	93108	Morgantown SS		13	mg/L	7/18/2017	6.4					
Calcium	94136	Cow Run SS		383	mg/L	7/17/2017	17					
Calcium	9801	Cow Run SS		383	mg/L	7/17/2017	200					
Calcium	9806	Morgantown SS		13	mg/L	6/27/2017	3.7					
Chloride	2000	Morgantown SS		878	mg/L	7/17/2017	62					
Chloride	2003	Morgantown SS		878	mg/L	6/12/2017	560					
Chloride	2016-20	Cow Run SS		12700	mg/L	5/17/2017	3200					
Chloride	2016-21	Morgantown SS		878	mg/L	8/10/2017	110					
Chloride	93108	Morgantown SS		878	mg/L	7/18/2017	750					
Chloride	94136	Cow Run SS		12700	mg/L	7/17/2017	960					
Chloride	9801	Cow Run SS		12700	mg/L	7/17/2017	9000					
Chloride	9806	Morgantown SS		878	mg/L	6/27/2017	200					
Fluoride	2000	Morgantown SS		5.42	mg/L	7/17/2017	2.2					
Fluoride	2003	Morgantown SS		5.42	mg/L	6/12/2017	2.7					
Fluoride	2016-20	Cow Run SS		2.5	mg/L	5/17/2017	1.2					
Fluoride	2016-21	Morgantown SS		5.42	mg/L	8/10/2017	2.1					
Fluoride	93108	Morgantown SS		5.42	mg/L	7/18/2017	5.5		X	Trend Test: Stable, No Trend	0.061	0.571
Fluoride	94136	Cow Run SS		2.5	mg/L	7/17/2017	1.1					
Fluoride	9801	Cow Run SS		2.5	mg/L	7/17/2017	5	ND				
Fluoride	9806	Morgantown SS		5.42	mg/L	6/27/2017	1.3					
pH	2000	Morgantown SS	7.8	8.16	SU	7/17/2017	8.61		X	Trend Test: Stable, No Trend	0.905	-0.0714
pH	2003	Morgantown SS	7.8	8.16	SU	6/12/2017	7.83					
pH	2016-20	Cow Run SS	6.98	8.02	SU	5/17/2017	8.16		X	No Trend Test: Insufficient Data		
pH	2016-21	Morgantown SS	7.8	8.16	SU	10/6/2016	11.42		X	No Trend Test: Insufficient Data		

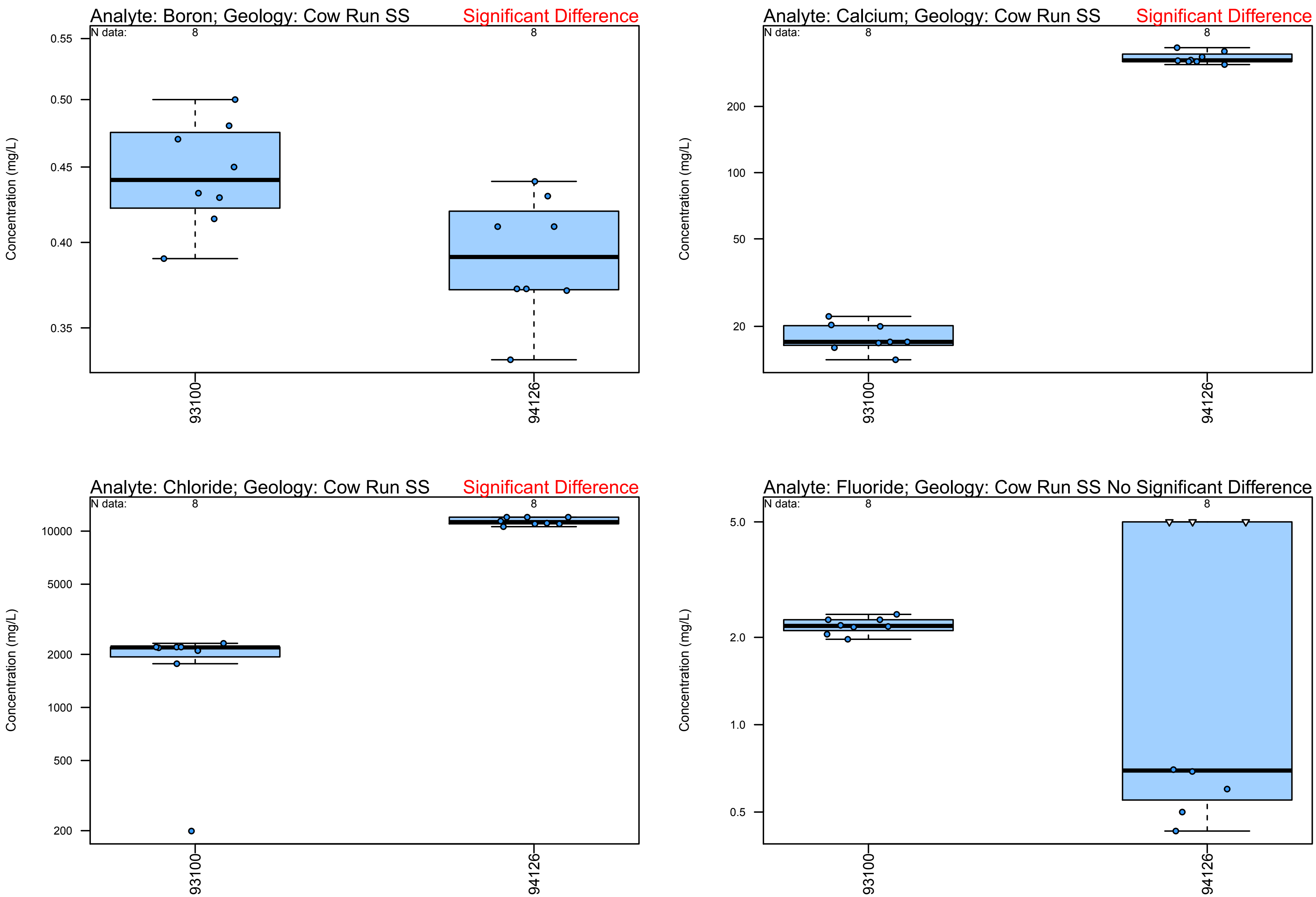
Table A-6
Comparison of Downgradient wells to UPLs
Gavin Power, LLC
Residual Waste LF

Analyte	Well	Geology	LPL	UPL	units	Recent Date	Observation	Qualifier	Obs > UPL	Notes	Mann Kendall P-value	Mann Kendall tau
pH	93108	Morgantown SS	7.8	8.16	SU	7/18/2017	7.84					
pH	94136	Cow Run SS	6.98	8.02	SU	7/17/2017	7.89					
pH	9801	Cow Run SS	6.98	8.02	SU	7/17/2017	7.16					
pH	9806	Morgantown SS	7.8	8.16	SU	6/27/2017	8.4		X	Trend Test: Stable, No Trend	0.077	-0.738
Sulfate	2000	Morgantown SS		75.2	mg/L	7/17/2017	560		X	Trend Test: Stable, No Trend	0.0978	0.491
Sulfate	2003	Morgantown SS		75.2	mg/L	6/12/2017	86		X	Trend Test: Stable, No Trend	0.077	0.738
Sulfate	2016-20	Cow Run SS		34.3	mg/L	5/17/2017	450		X	No Trend Test: Insufficient Data		
Sulfate	2016-21	Morgantown SS		75.2	mg/L	8/10/2017	360		X	No Trend Test: Insufficient Data		
Sulfate	93108	Morgantown SS		75.2	mg/L	7/18/2017	90		X	Trend Test: Increasing Trend	0.0141	0.714
Sulfate	94136	Cow Run SS		34.3	mg/L	7/17/2017	61		X	Trend Test: Stable, No Trend	1	0
Sulfate	9801	Cow Run SS		34.3	mg/L	7/17/2017	100	ND				
Sulfate	9806	Morgantown SS		75.2	mg/L	6/27/2017	130		X	Trend Test: Stable, No Trend	0.166	0.598
TDS	2000	Morgantown SS		2490	mg/L	7/17/2017	1300					
TDS	2003	Morgantown SS		2490	mg/L	6/12/2017	2100					
TDS	2016-20	Cow Run SS		19900	mg/L	5/17/2017	6300					
TDS	2016-21	Morgantown SS		2490	mg/L	8/10/2017	1000					
TDS	93108	Morgantown SS		2490	mg/L	7/18/2017	1800					
TDS	94136	Cow Run SS		19900	mg/L	7/17/2017	1900					
TDS	9801	Cow Run SS		19900	mg/L	7/17/2017	14000					
TDS	9806	Morgantown SS		2490	mg/L	6/27/2017	870					

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)."

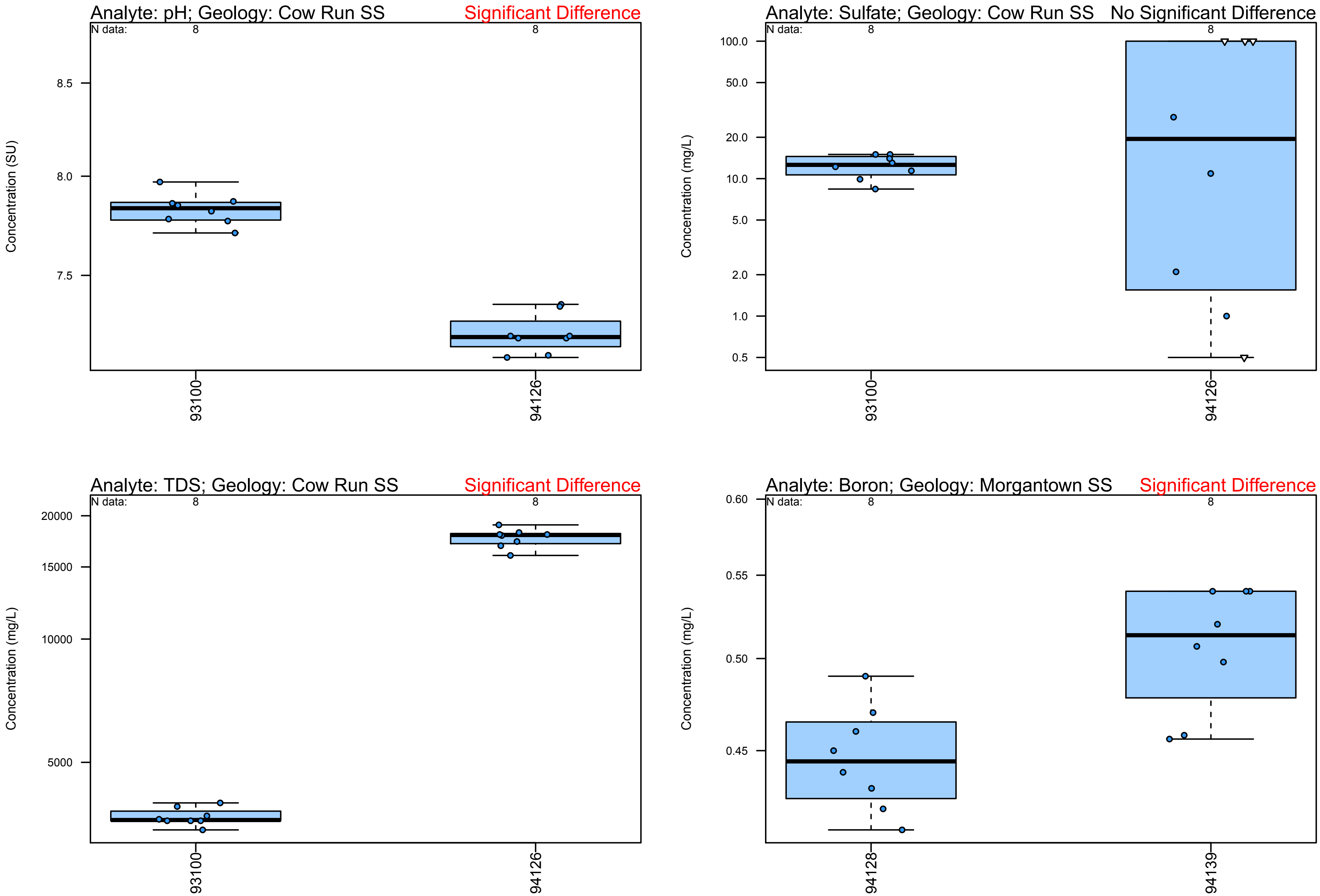
Unit: Residual Waste LF

Figure A-1: Boxplots of Upgradient Wells



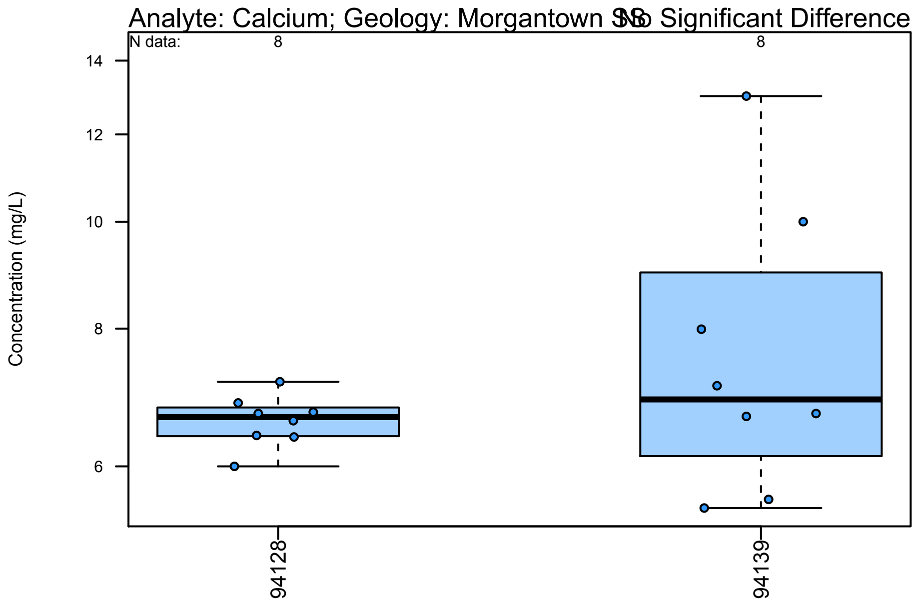
Unit: Residual Waste LF

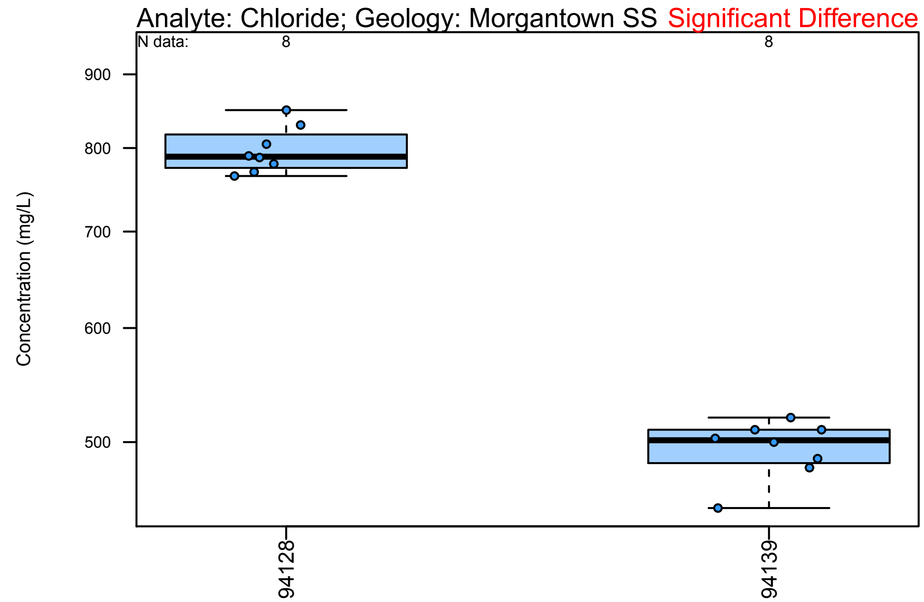
Figure A-1: Boxplots of Upgradient Wells

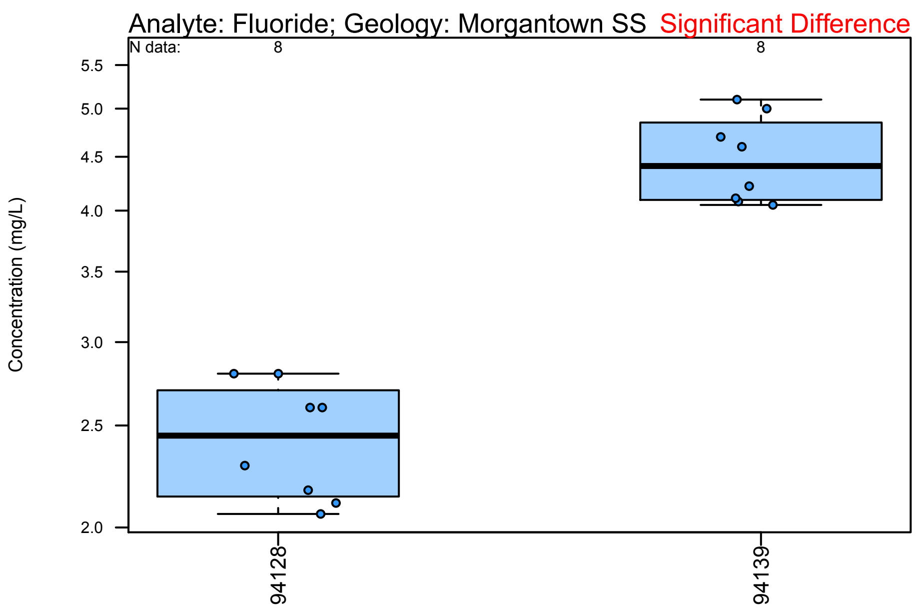


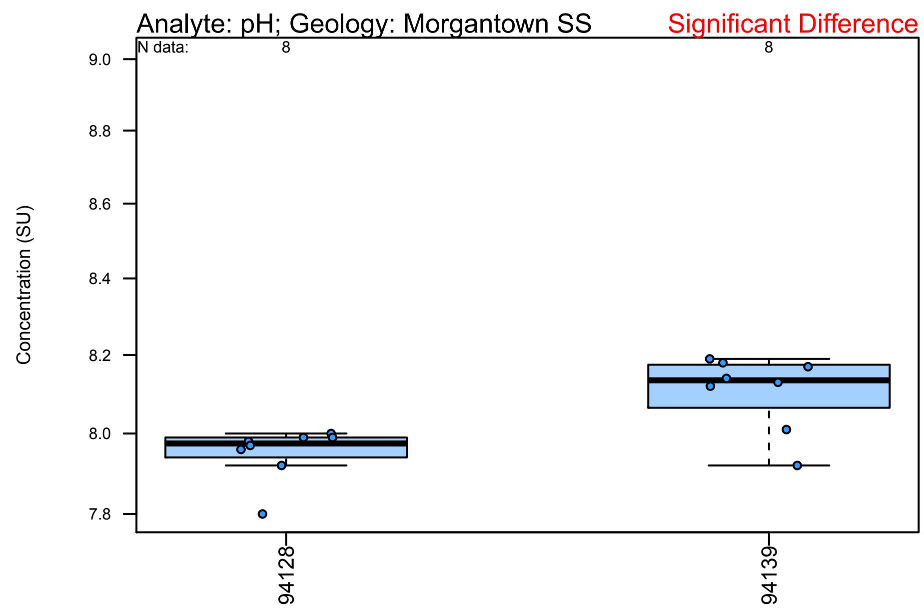
Unit: Residual Waste LF

Figure A-1: Boxplots of Upgradient Wells



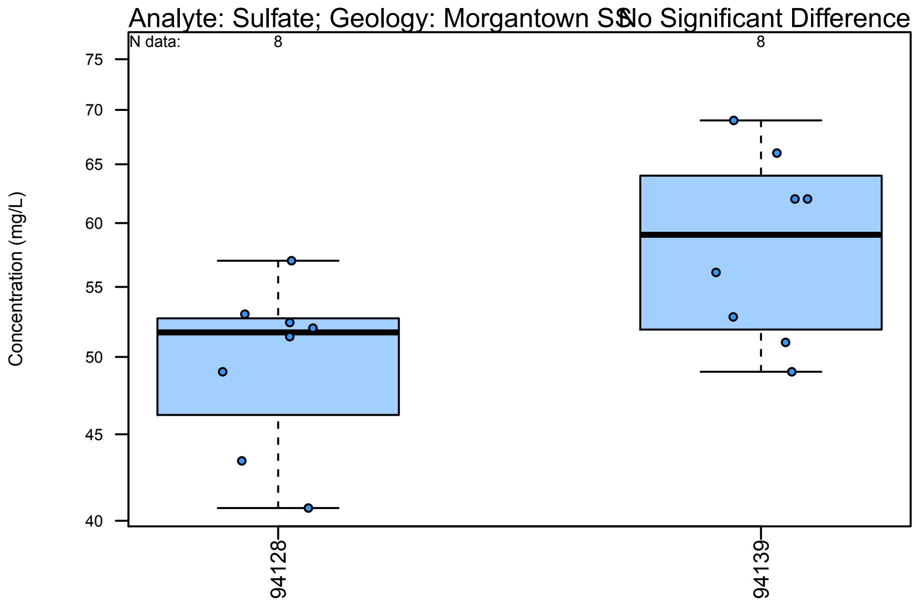


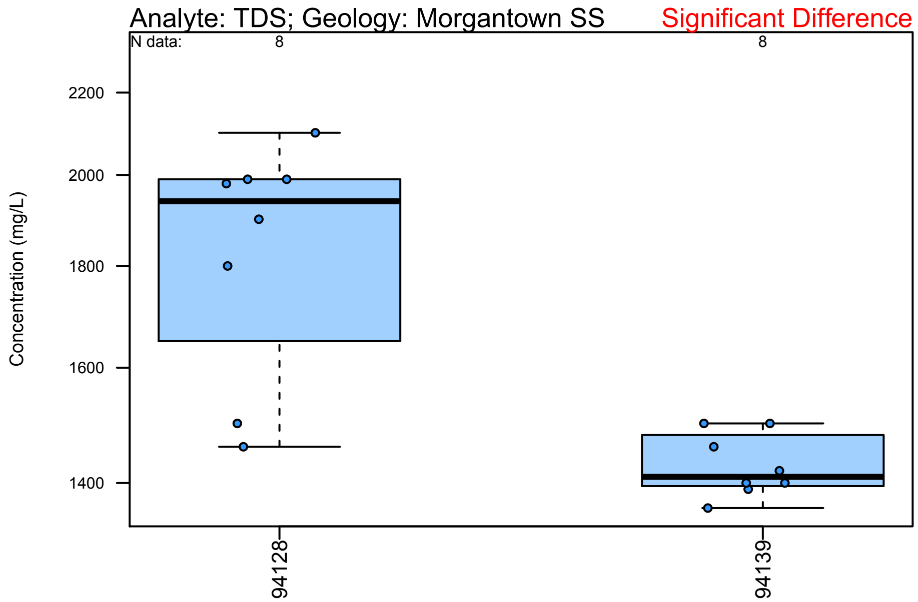




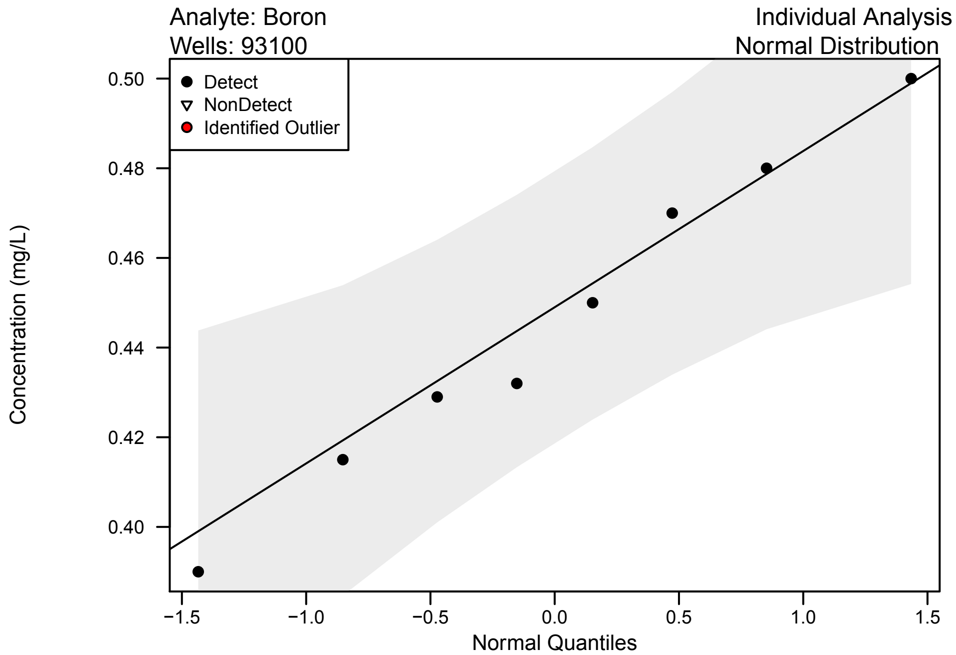
Unit: Residual Waste LF

Figure A-1: Boxplots of Upgradient Wells





Unit: Residual Waste LF
Figure A-2: QQ Plots of Upgradient Wells



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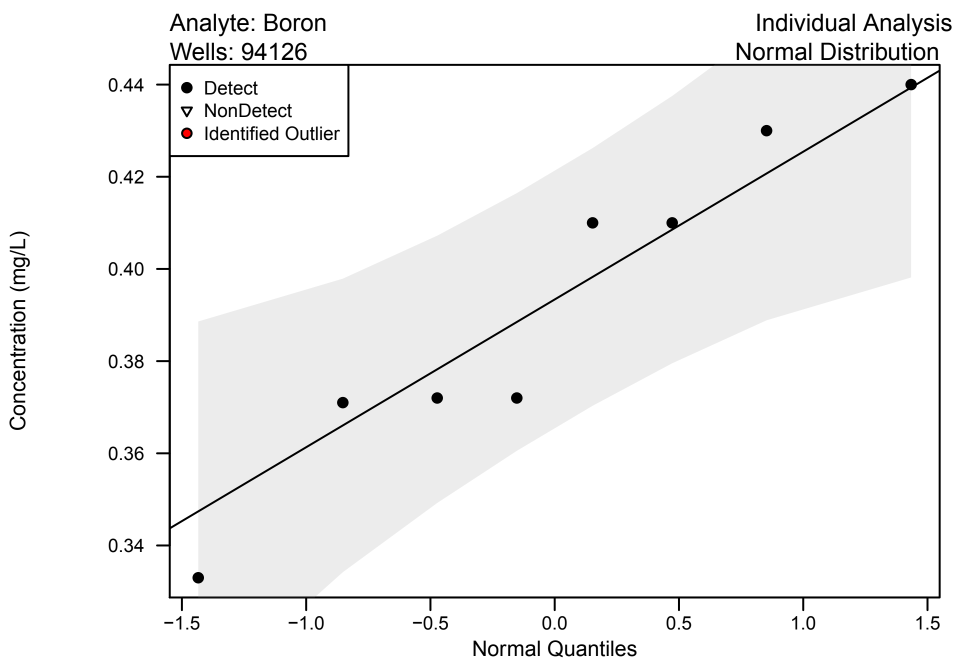
not Lognormal/NDD distribution.



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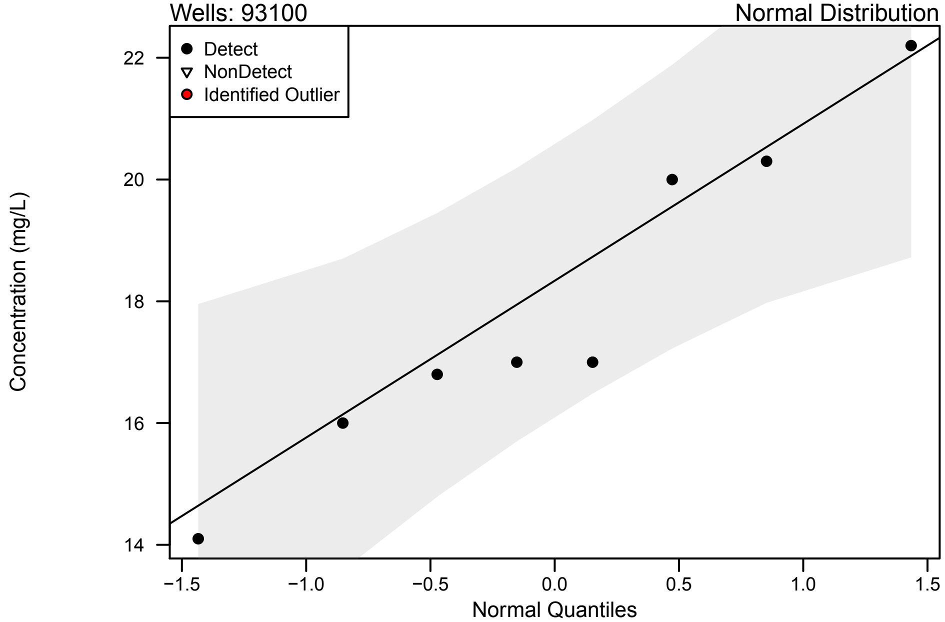
not Lognormal/NDD distribution.

Unit: Residual Waste LF

Figure A-2: QQ Plots of Upgradient Wells

Analyte: Calcium
Wells: 93100

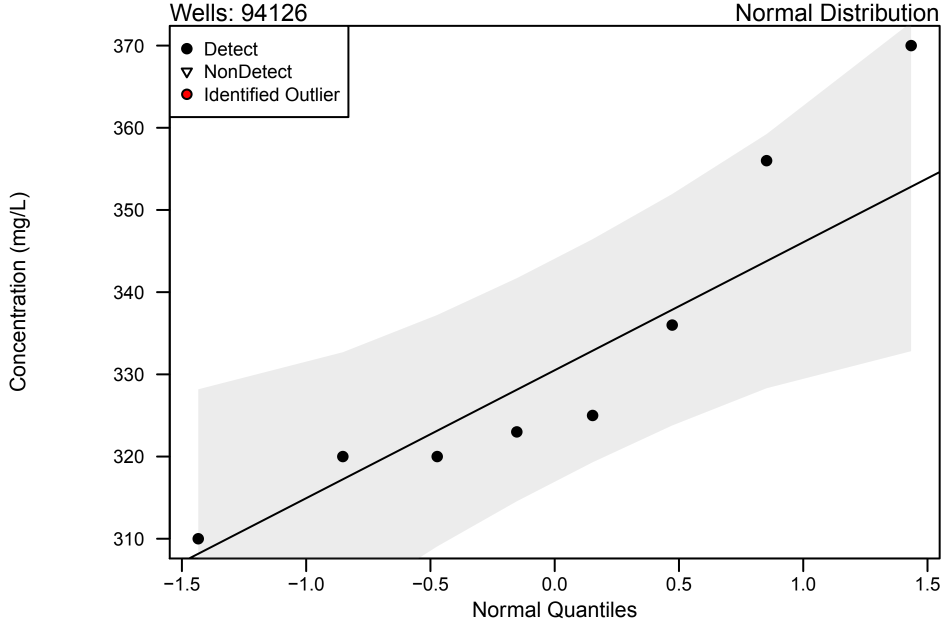
Individual Analysis
Normal Distribution



Intentionally left blank,
not Lognormal/NDD distribution.

Analyte: Calcium
Wells: 94126

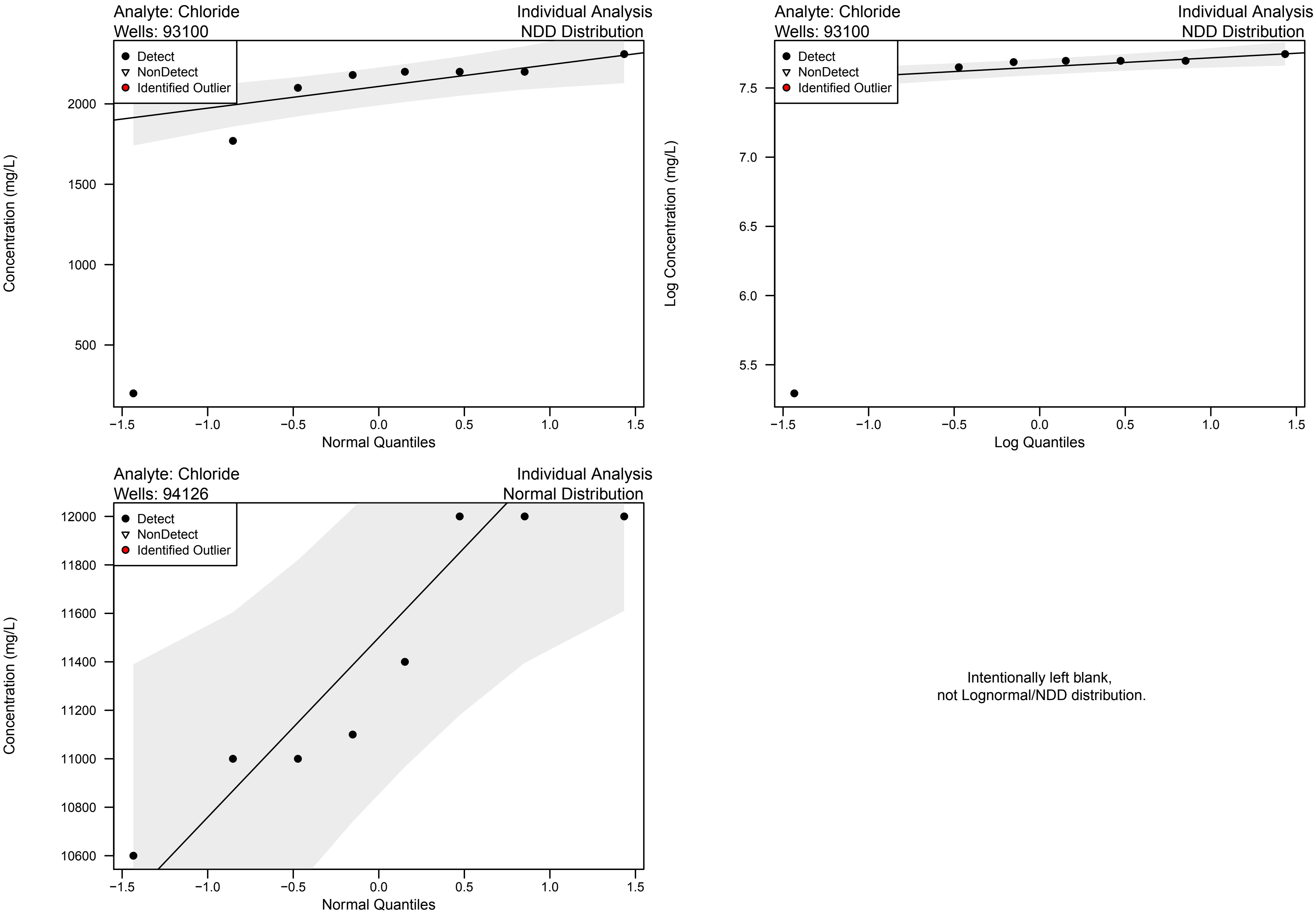
Individual Analysis
Normal Distribution



Intentionally left blank,
not Lognormal/NDD distribution.

Unit: Residual Waste LF

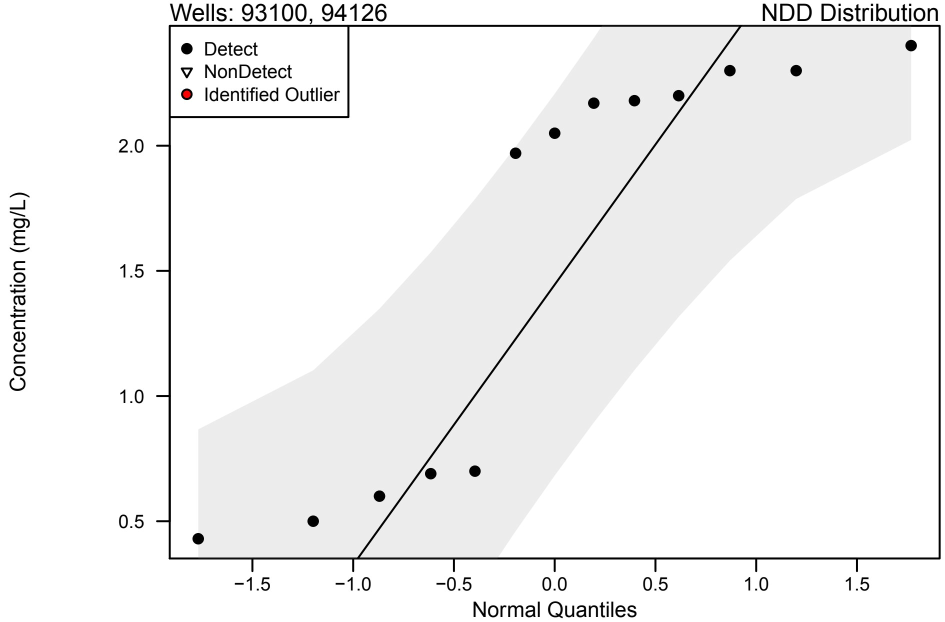
Figure A-2: QQ Plots of Upgradient Wells



Unit: Residual Waste LF
Figure A-2: QQ Plots of Upgradient Wells

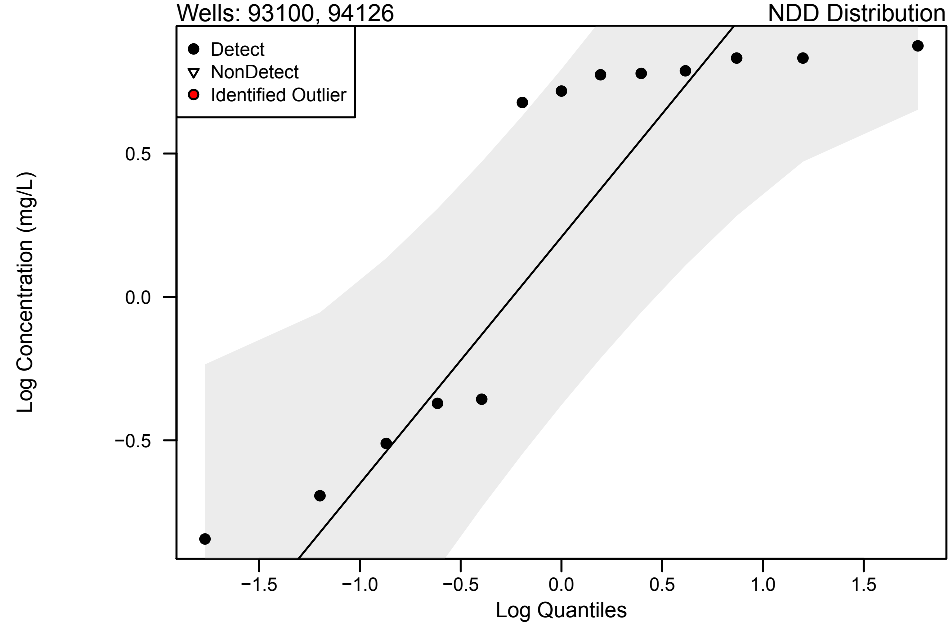
Analyte: Fluoride
Wells: 93100, 94126

Pooled Analysis
NDD Distribution



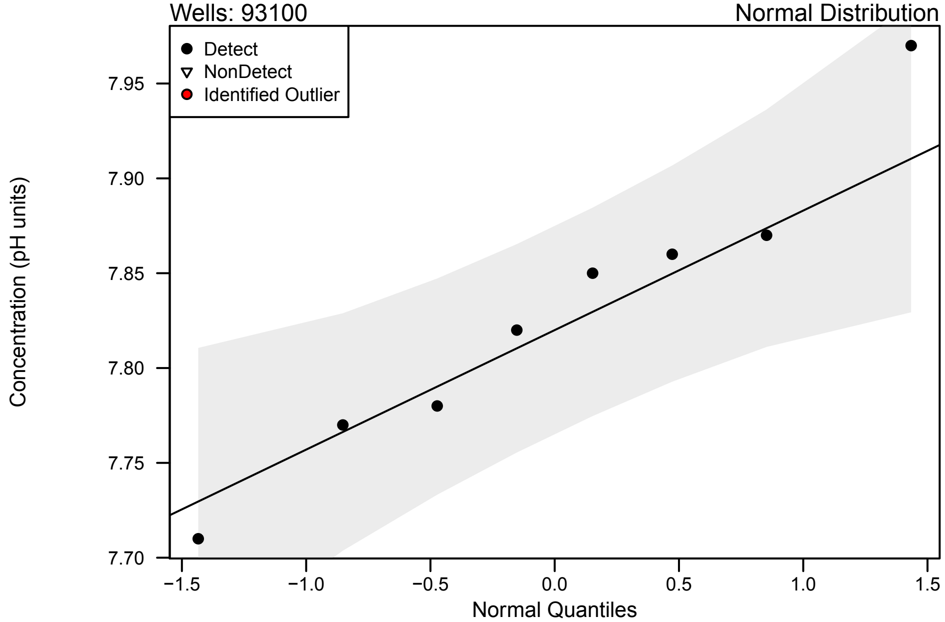
Analyte: Fluoride
Wells: 93100, 94126

Pooled Analysis
NDD Distribution



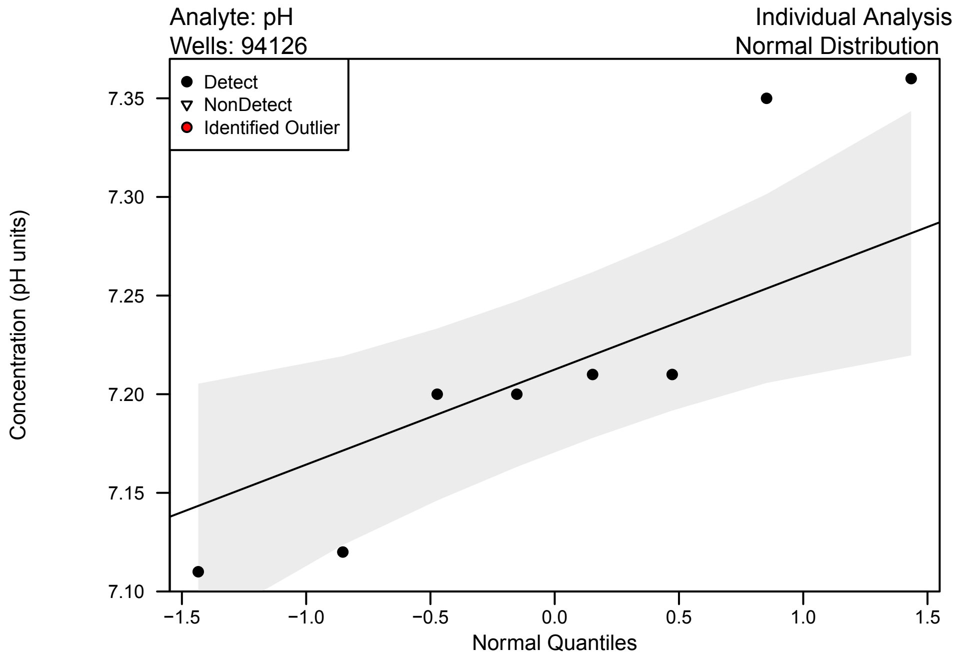
Analyte: pH
Wells: 93100

Individual Analysis
Normal Distribution



Intentionally left blank,
not Lognormal/NDD distribution.

Unit: Residual Waste LF
Figure A-2: QQ Plots of Upgradient Wells



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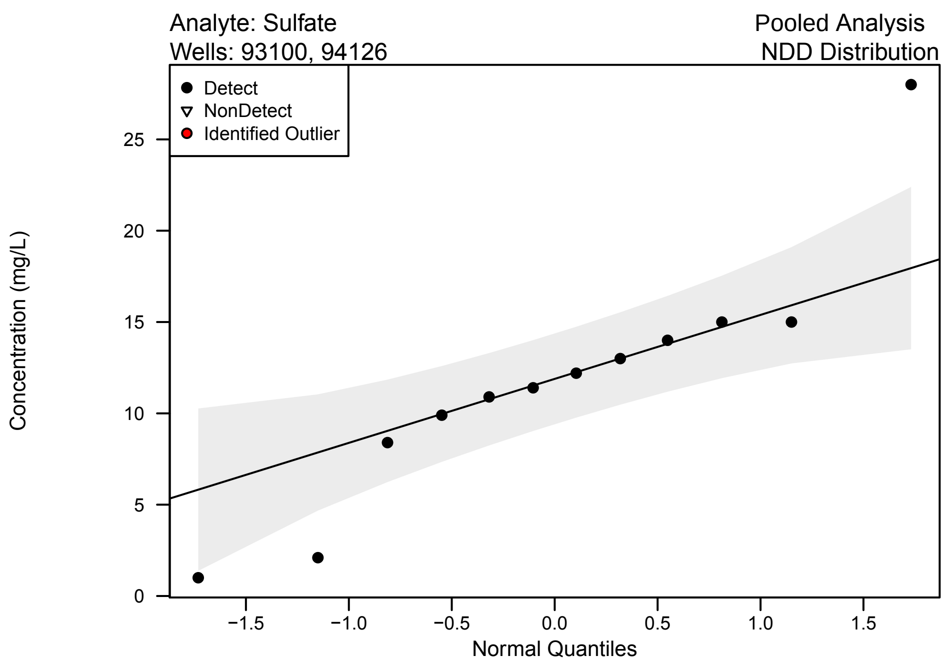
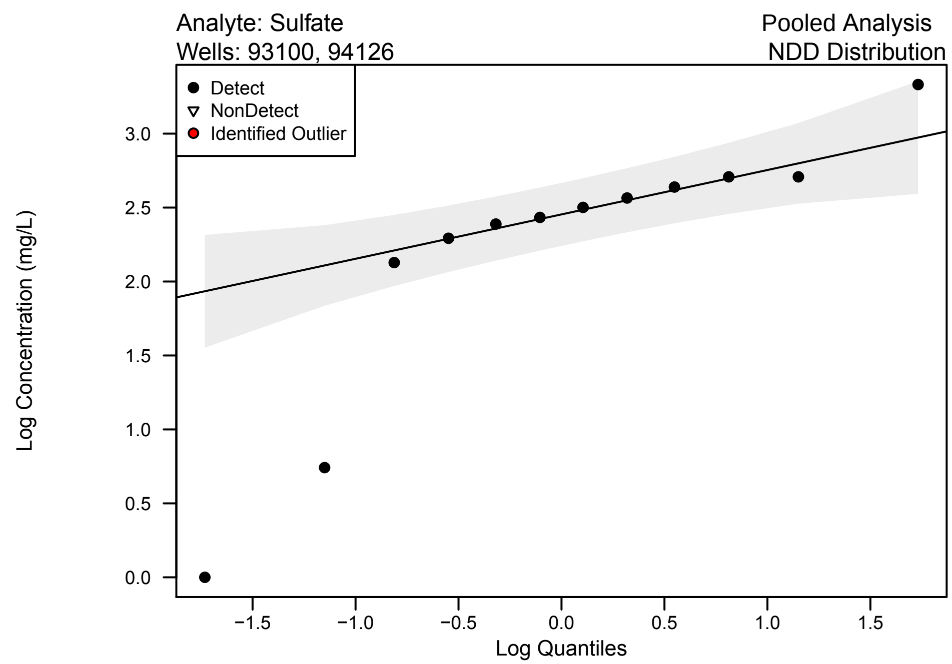
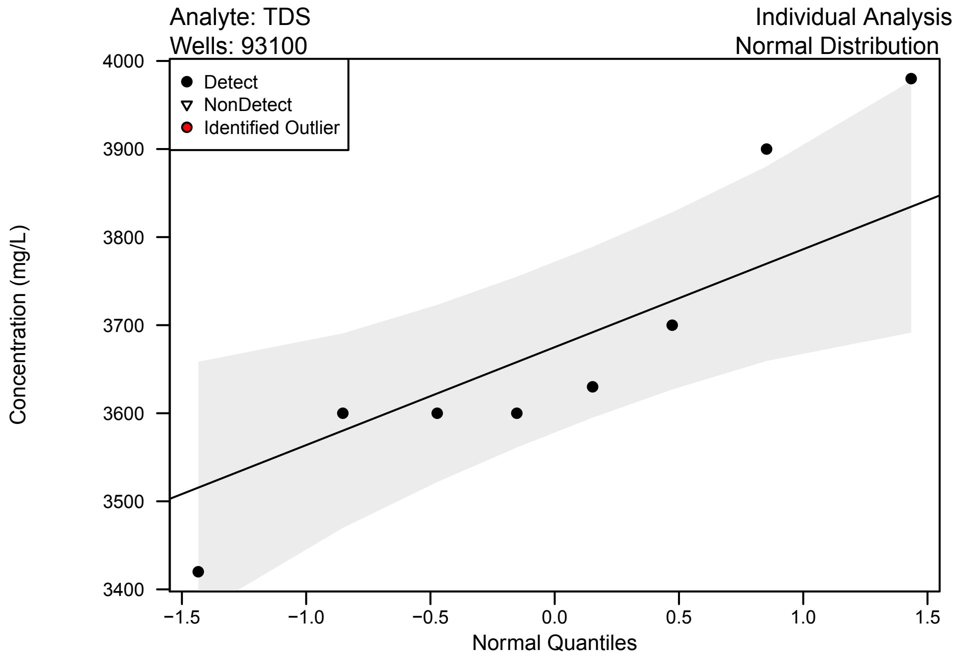




Unit: Residual Waste LF
Figure A-2: QQ Plots of Upgradient Wells



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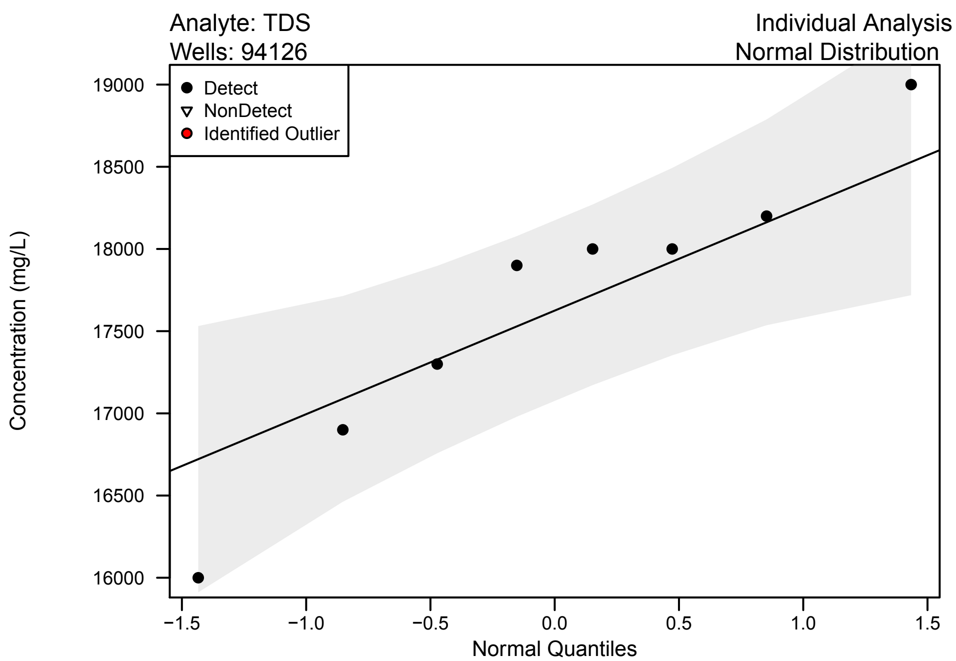
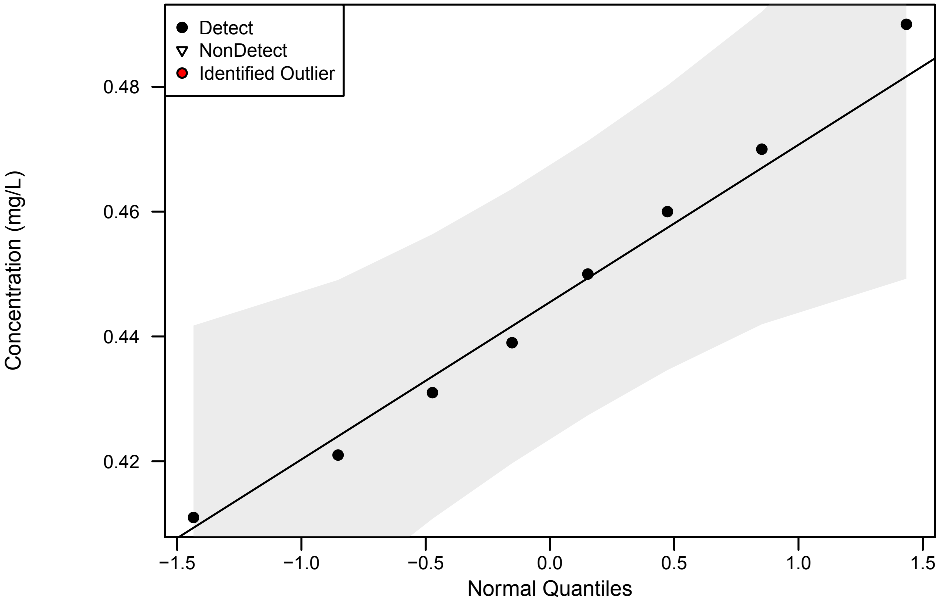
not Lognormal/NDD distribution.



Intentionally left blank,
not Lognormal/NDD distribution.

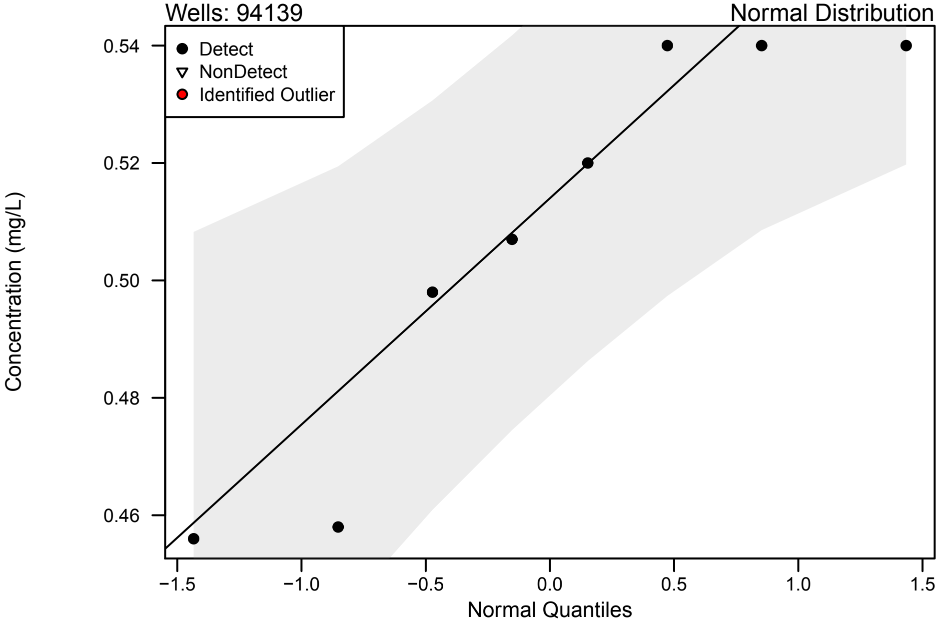
Unit: Residual Waste LF
Figure A-2: QQ Plots of Upgradient Wells

Analyte: Boron | Individual Analysis
Wells: 94128 | Normal Distribution



Intentionally left blank,
not Lognormal/NDD distribution.

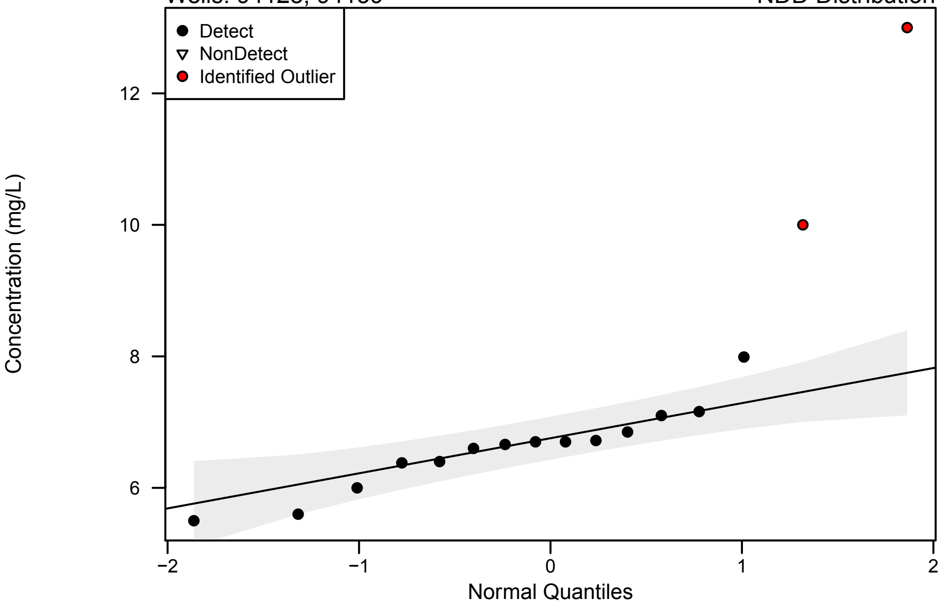
Analyte: Boron | Individual Analysis
Wells: 94139 | Normal Distribution



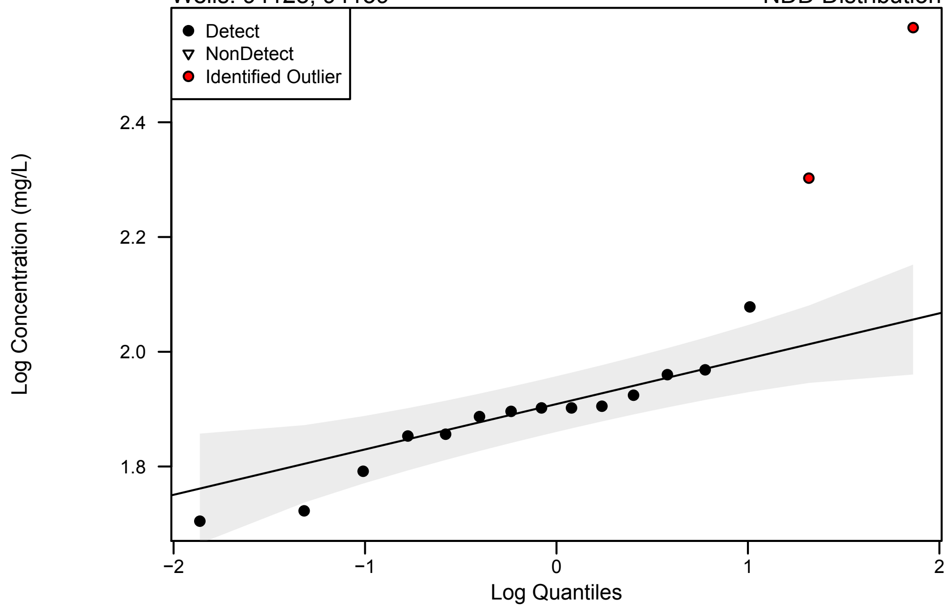
Intentionally left blank,
not Lognormal/NDD distribution.

Unit: Residual Waste LF
Figure A-2: QQ Plots of Upgradient Wells

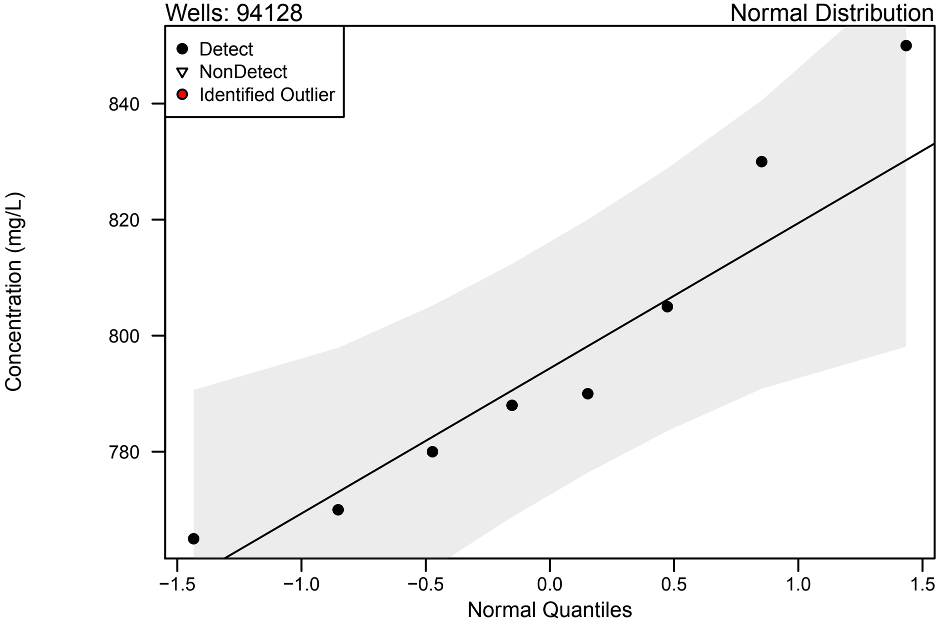
Analyte: Calcium — Pooled Analysis
Wells: 94128, 94139 — NDD Distribution



Analyte: Calcium — Pooled Analysis
Wells: 94128, 94139 — NDD Distribution



Analyte: Chloride — Individual Analysis
Wells: 94128 — Normal Distribution

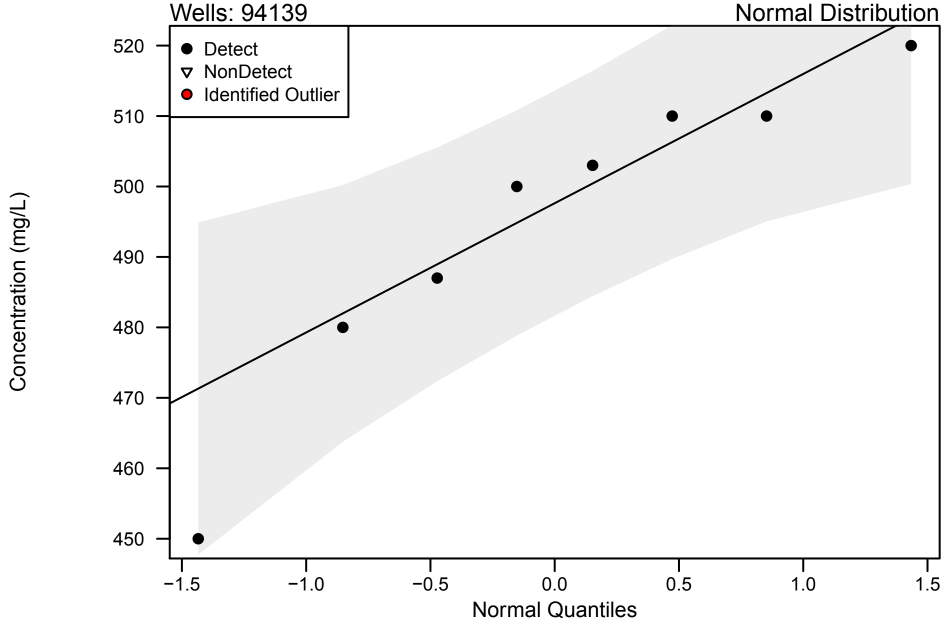


Intentionally left blank,
not Lognormal/NDD distribution.

Unit: Residual Waste LF
Figure A-2: QQ Plots of Upgradient Wells

Analyte: Chloride
Wells: 94139

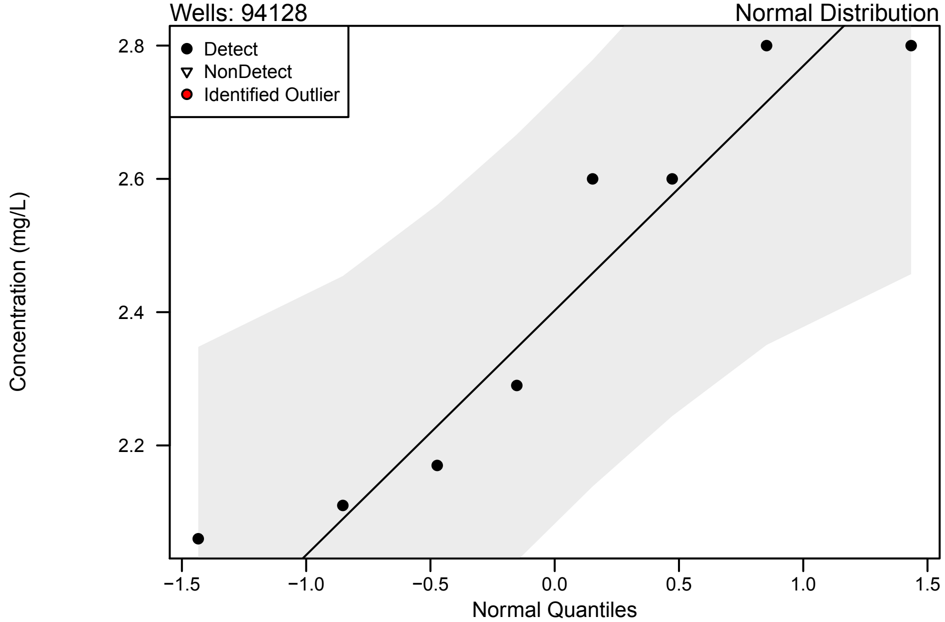
Individual Analysis
Normal Distribution



Intentionally left blank,
not Lognormal/NDD distribution.

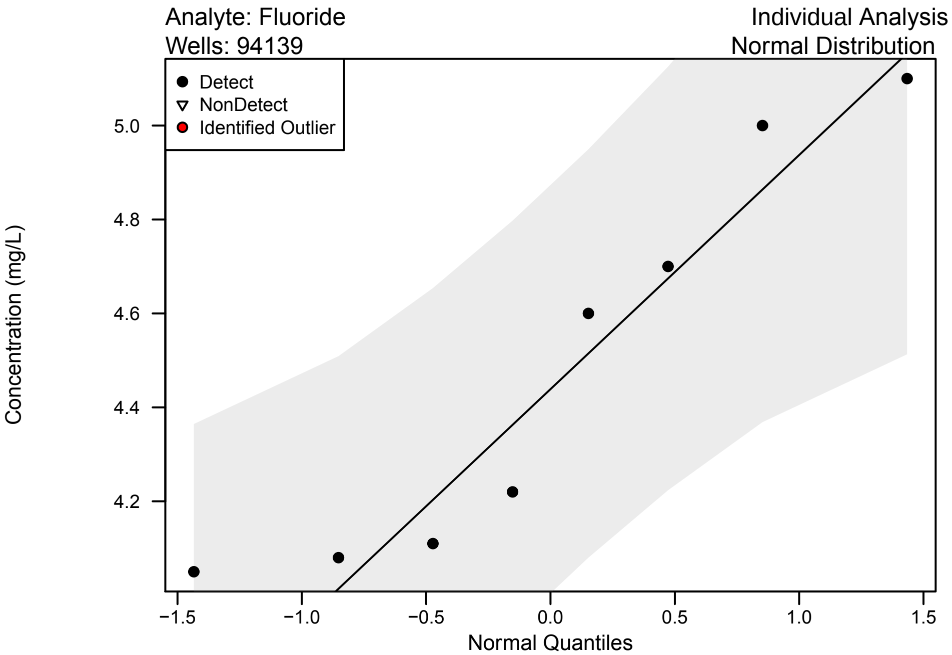
Analyte: Fluoride
Wells: 94128

Individual Analysis
Normal Distribution

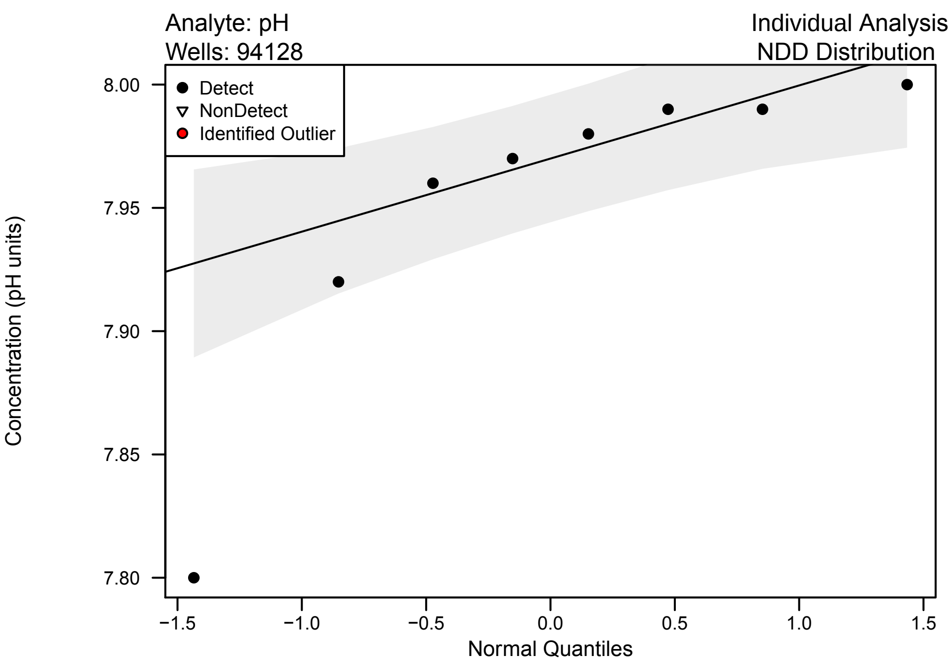


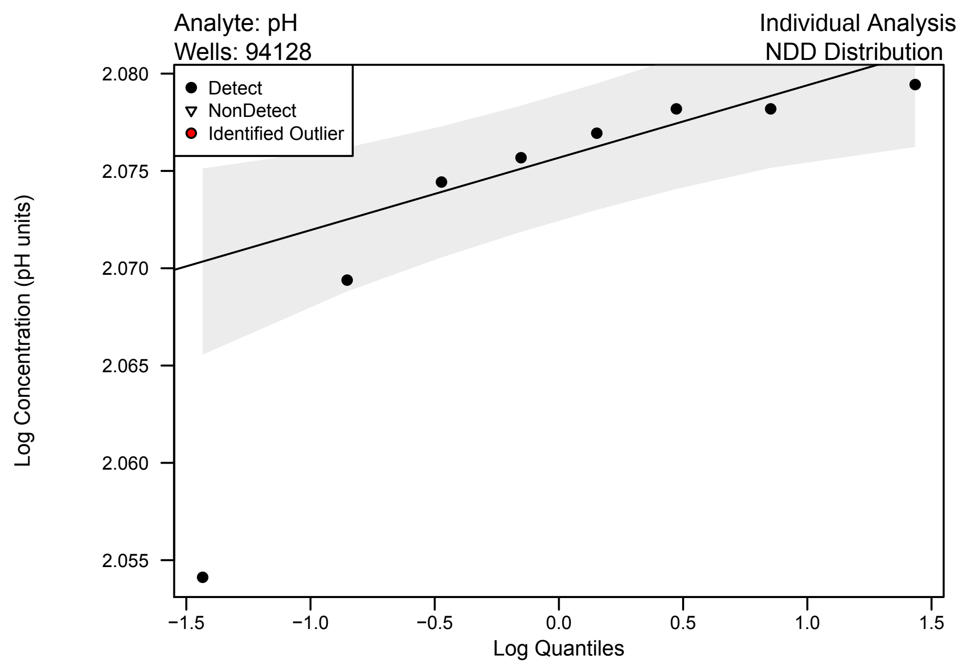
Intentionally left blank,
not Lognormal/NDD distribution.

Unit: Residual Waste LF
Figure A-2: QQ Plots of Upgradient Wells

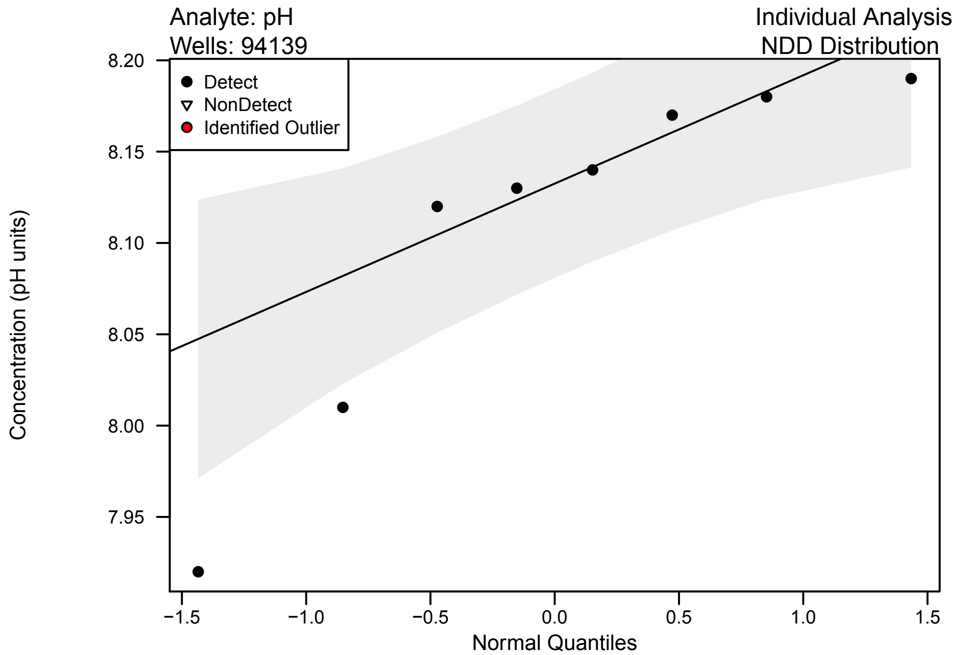


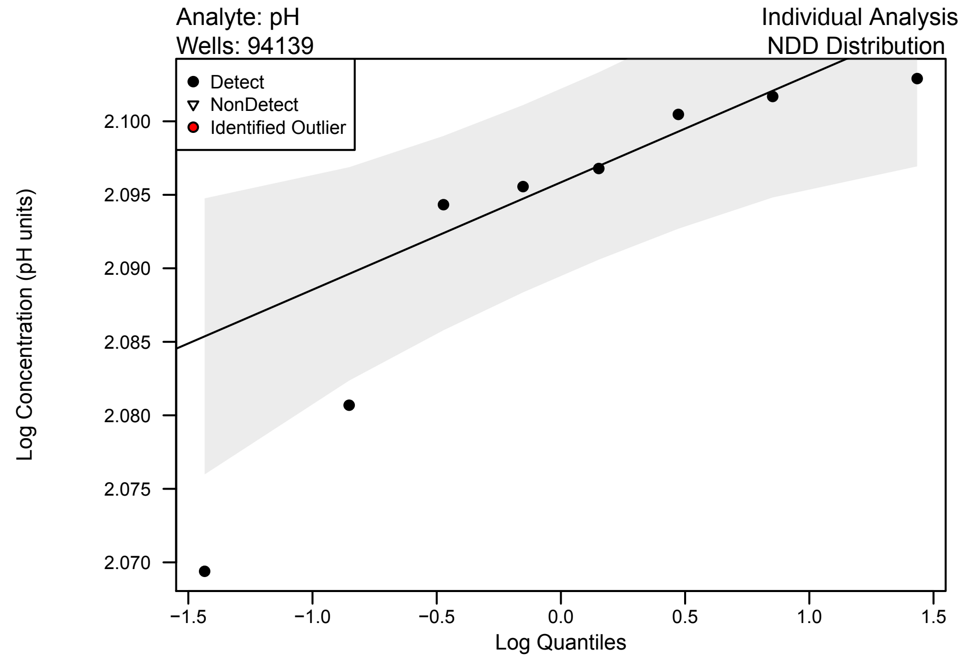
Intentionally left blank,
not Lognormal/NDD distribution.

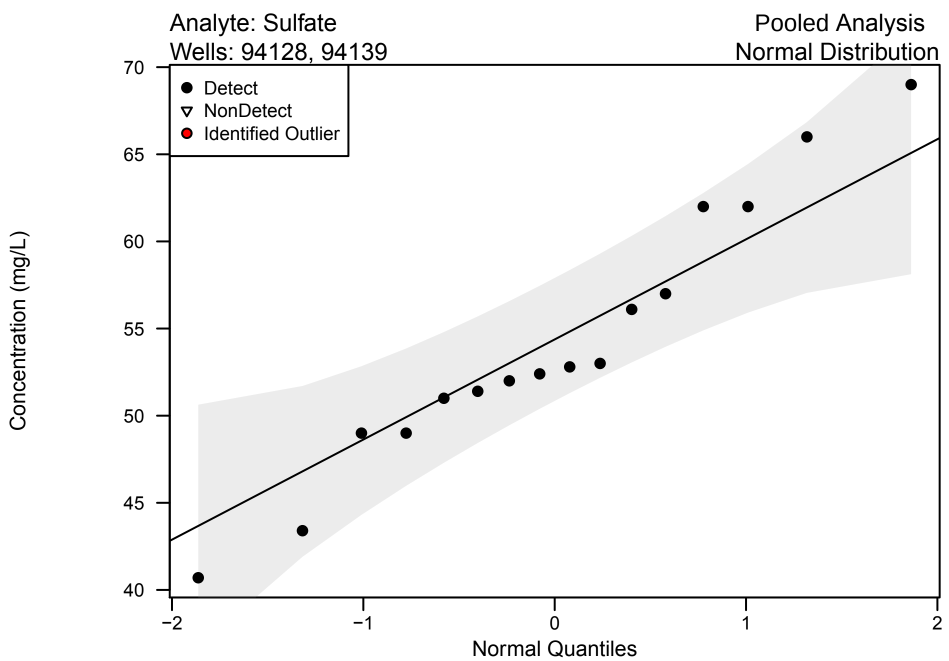




Unit: Residual Waste LF
Figure A-2: QQ Plots of Upgradient Wells

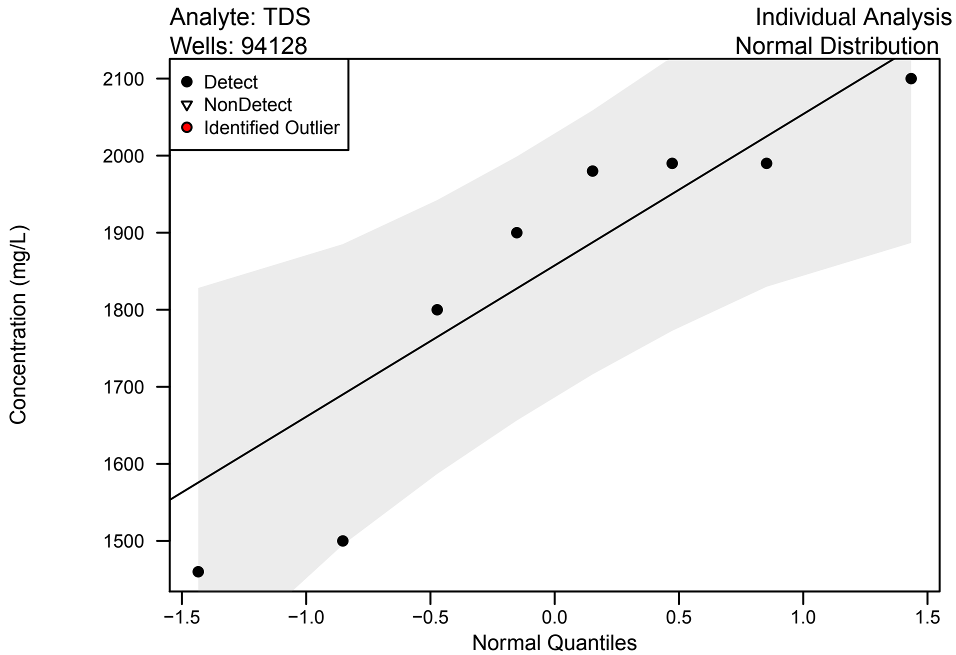




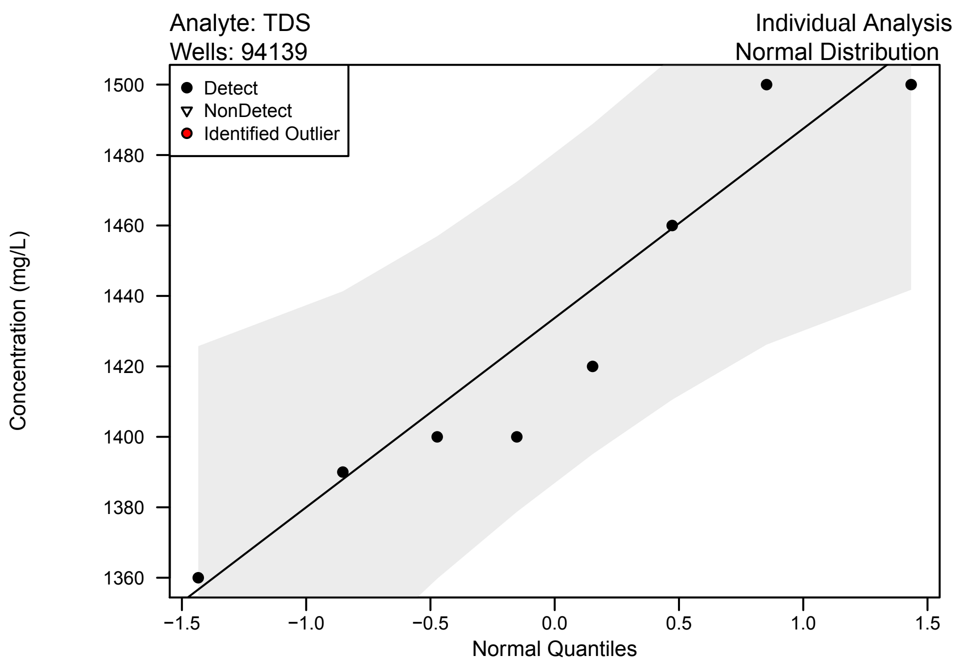


Intentionally left blank,
not Lognormal/NDD distribution.

Unit: Residual Waste LF
Figure A-2: QQ Plots of Upgradient Wells



Intentionally left blank,
not Lognormal/NDD distribution.

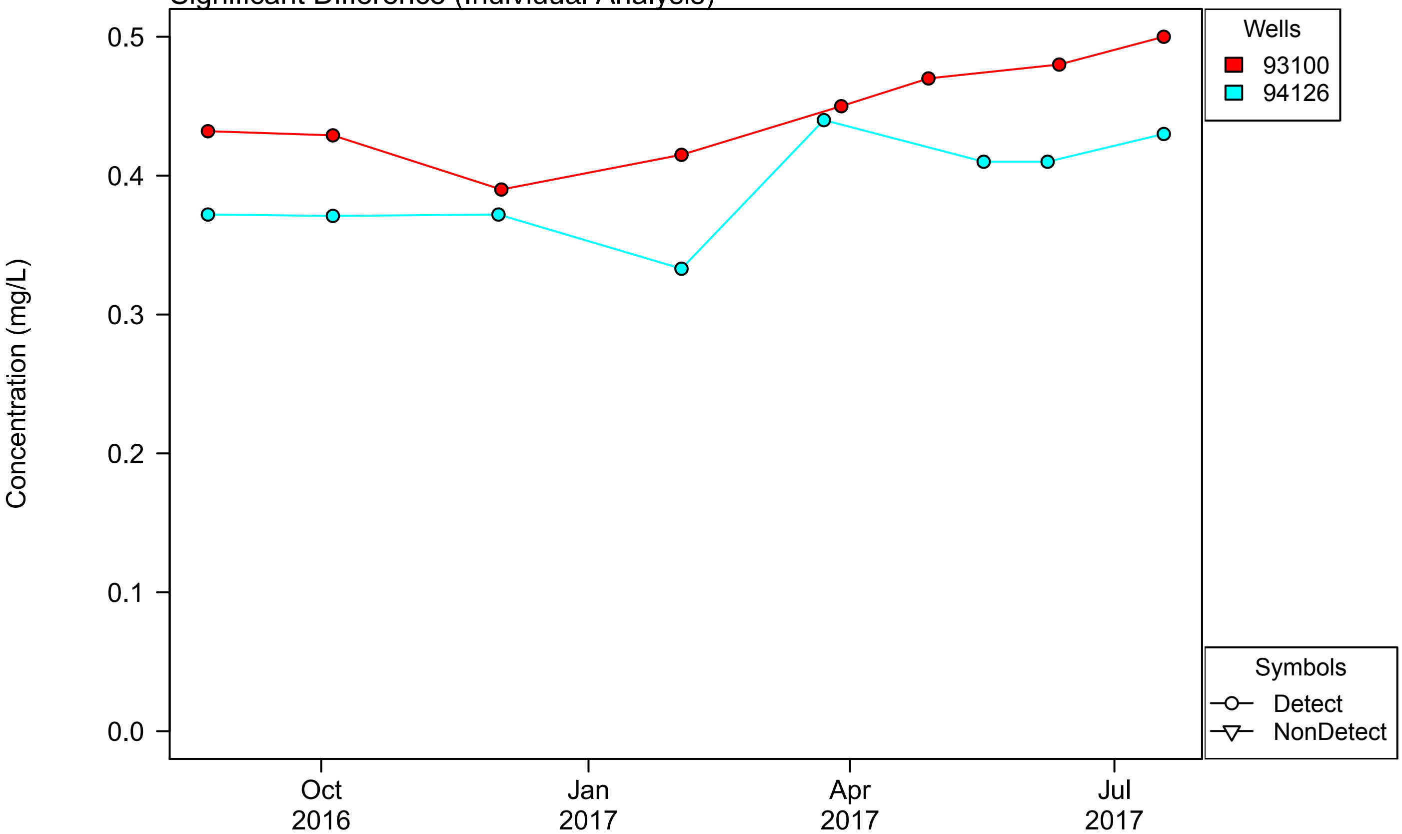


Intentionally left blank,
not Lognormal/NDD distribution.

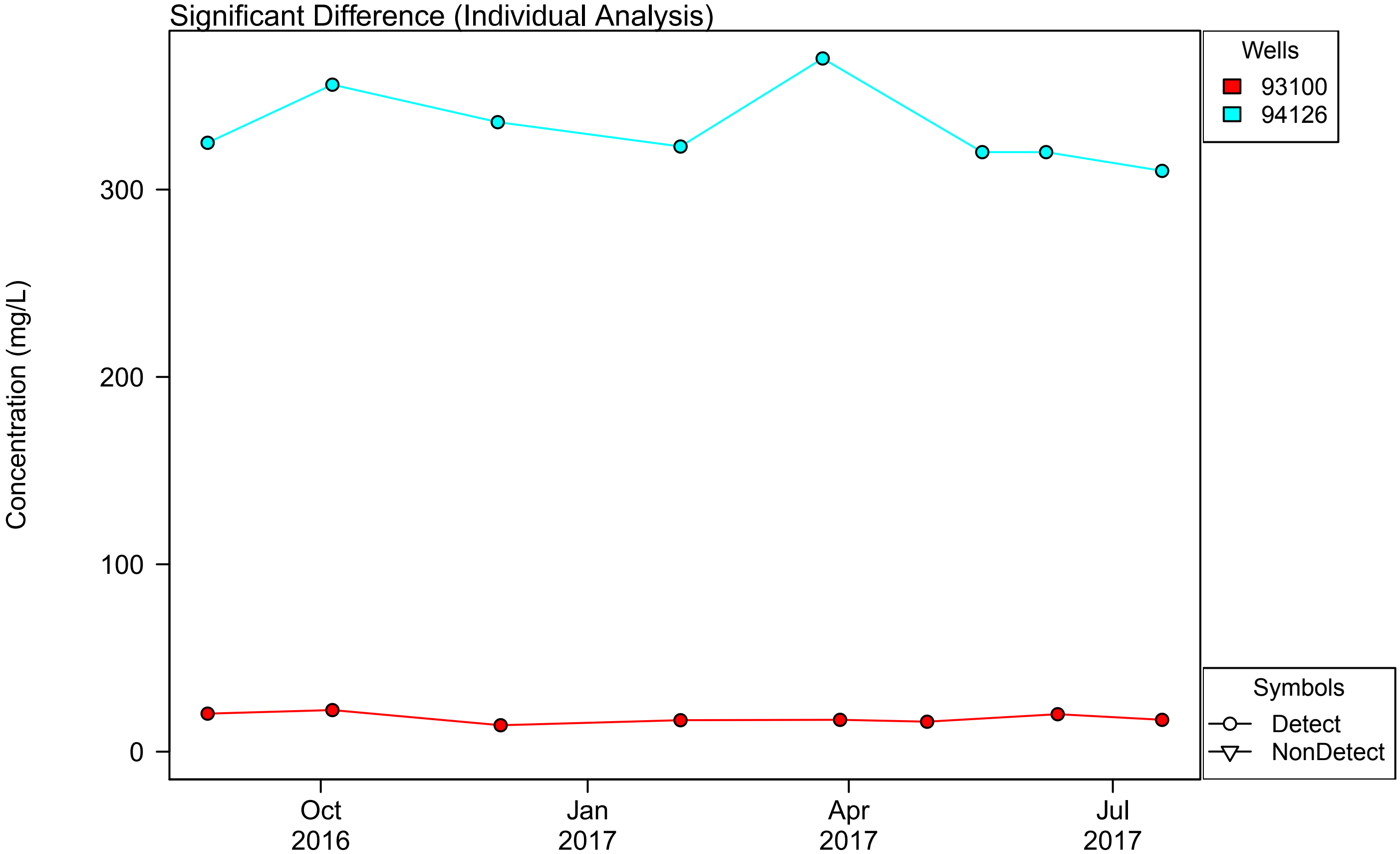
Unit: Residual Waste LF Cow Run SS

Figure A-3: Timeseries of Upgradient Wells

Chemical: Boron
Significant Difference (Individual Analysis)

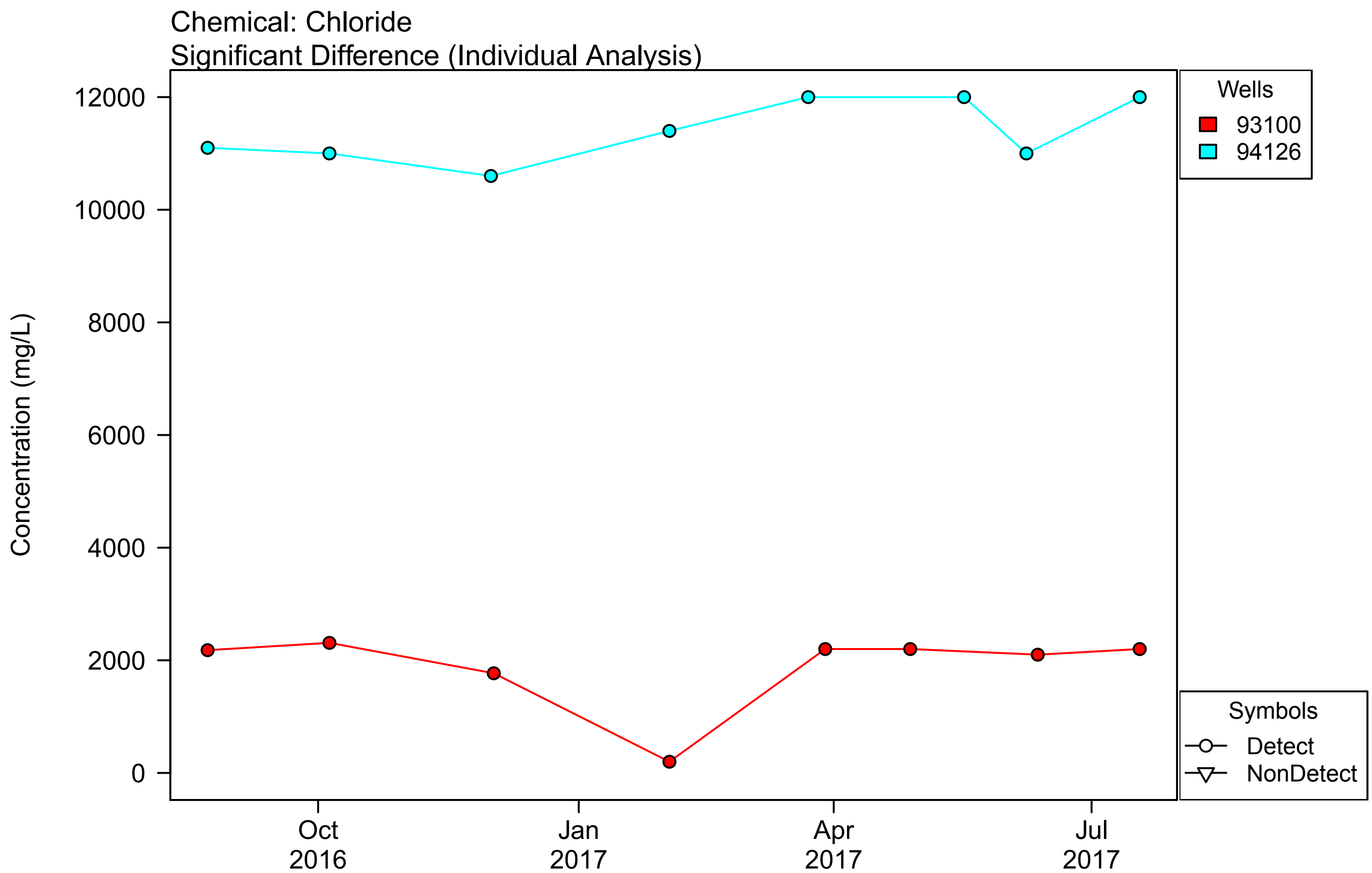


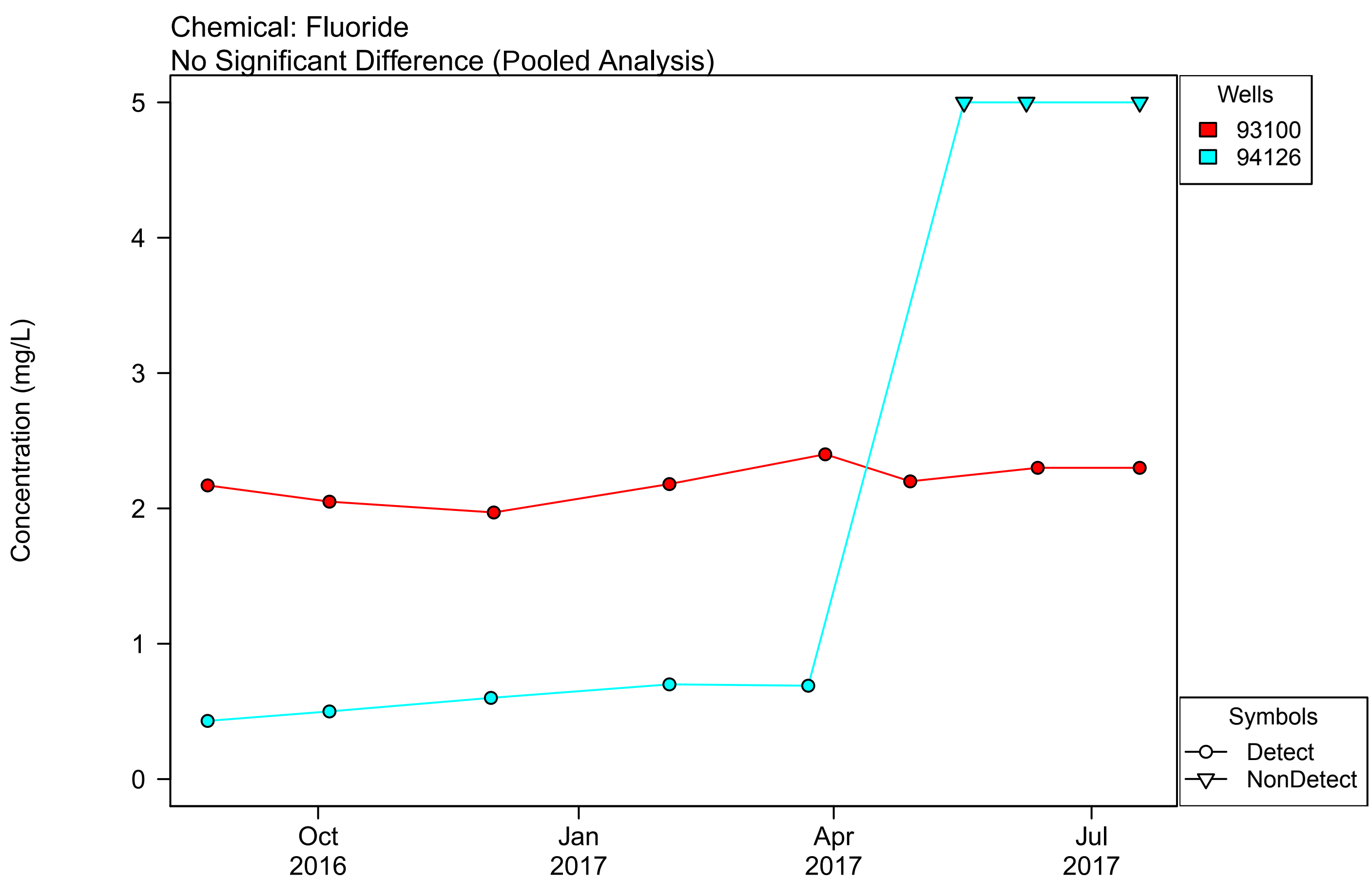
Chemical: Calcium
Significant Difference (Individual Analysis)



Unit: Residual Waste LF Cow Run SS

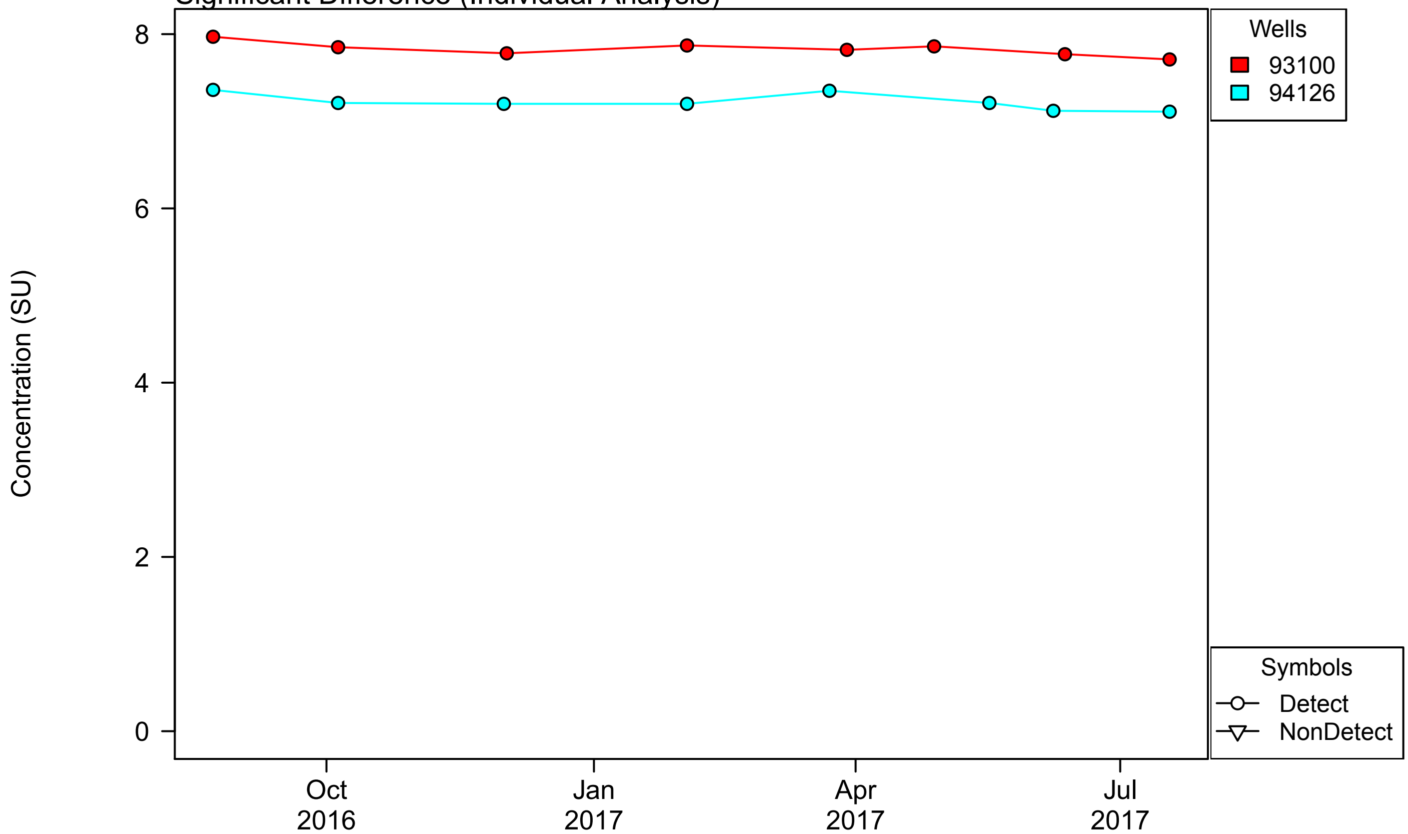
Figure A-3: Timeseries of Upgradient Wells



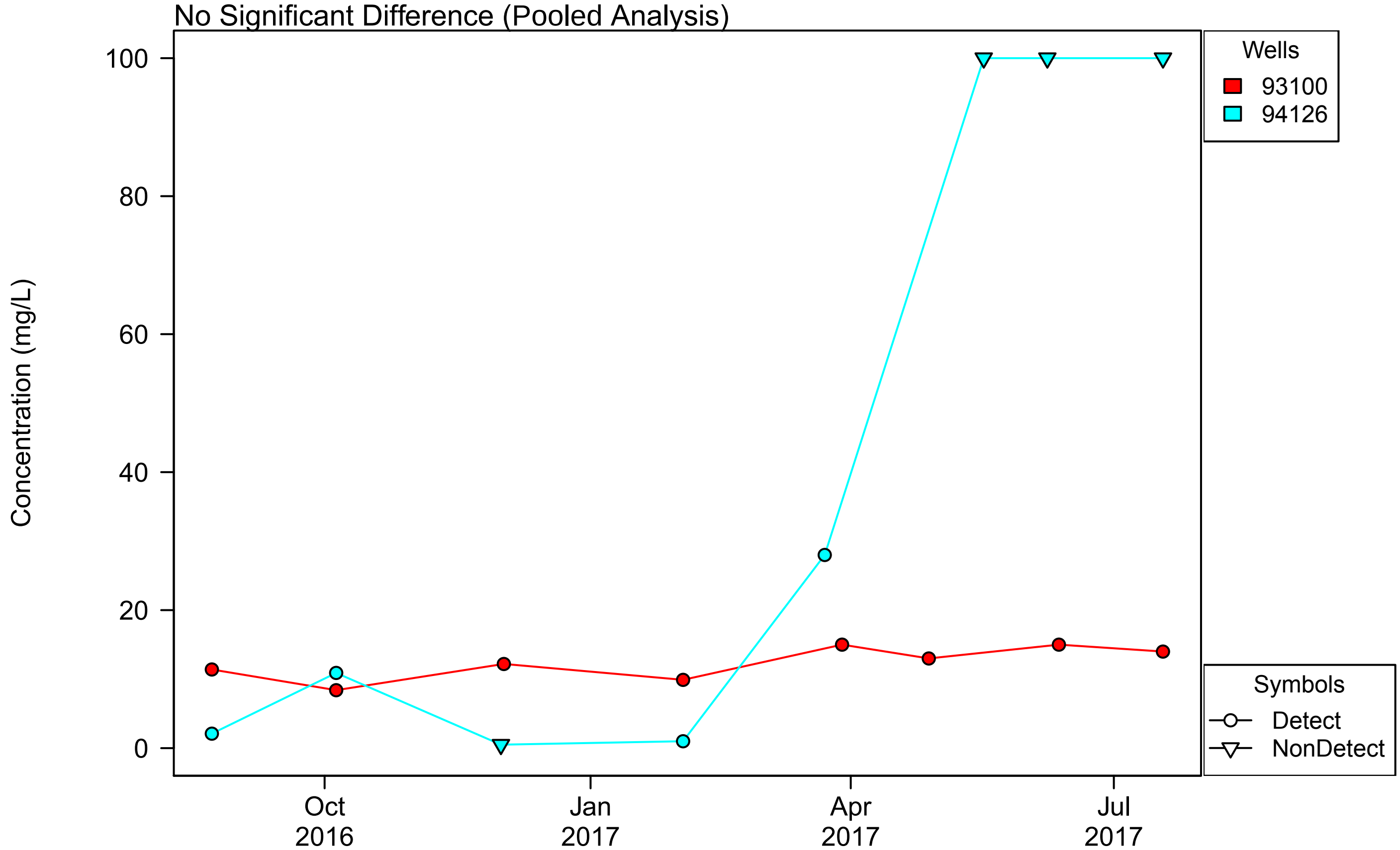


Unit: Residual Waste LF Cow Run SS
Figure A-3: Timeseries of Upgradient Wells

Chemical: pH
Significant Difference (Individual Analysis)

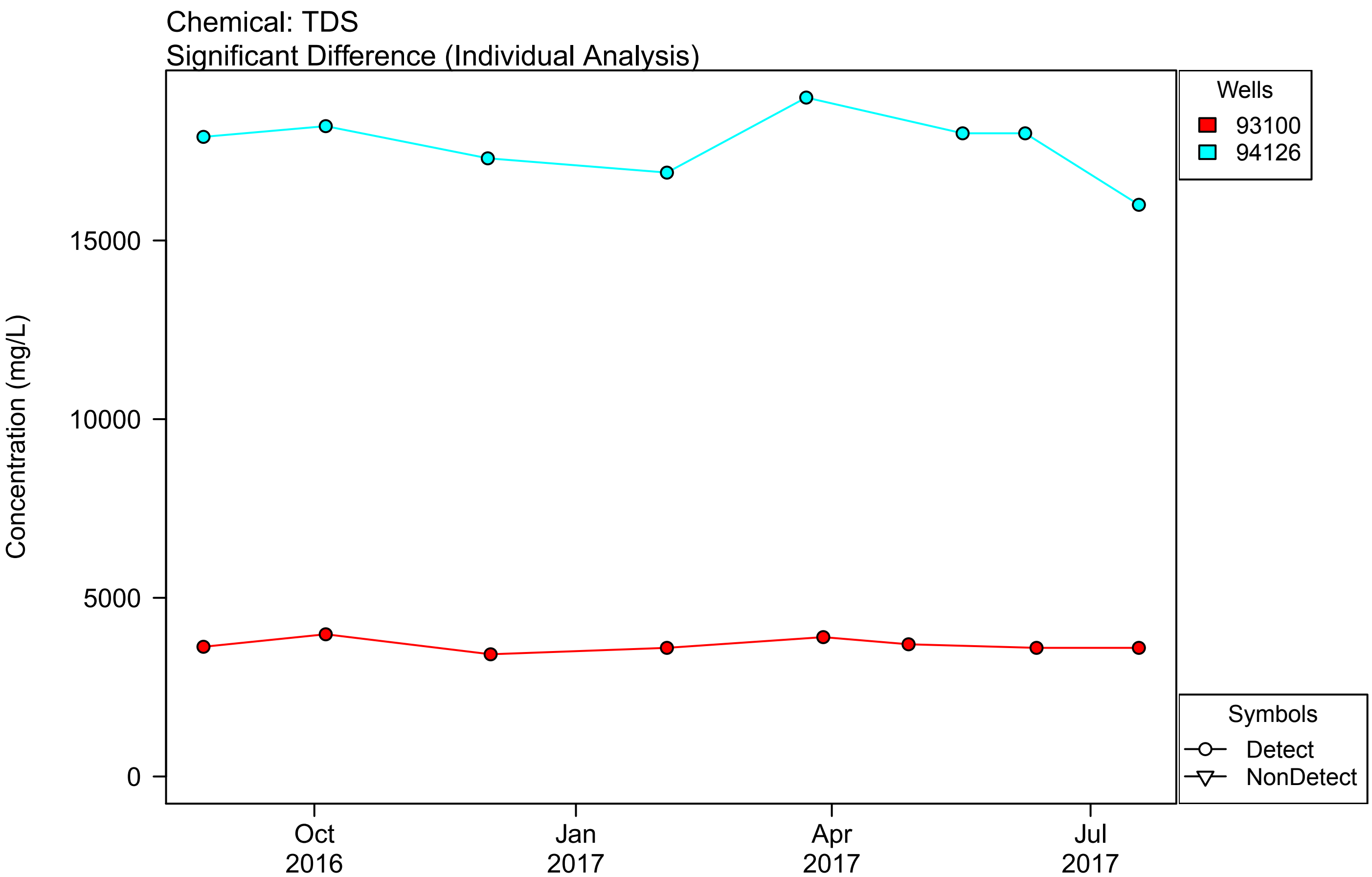


Chemical: Sulfate
No Significant Difference (Pooled Analysis)

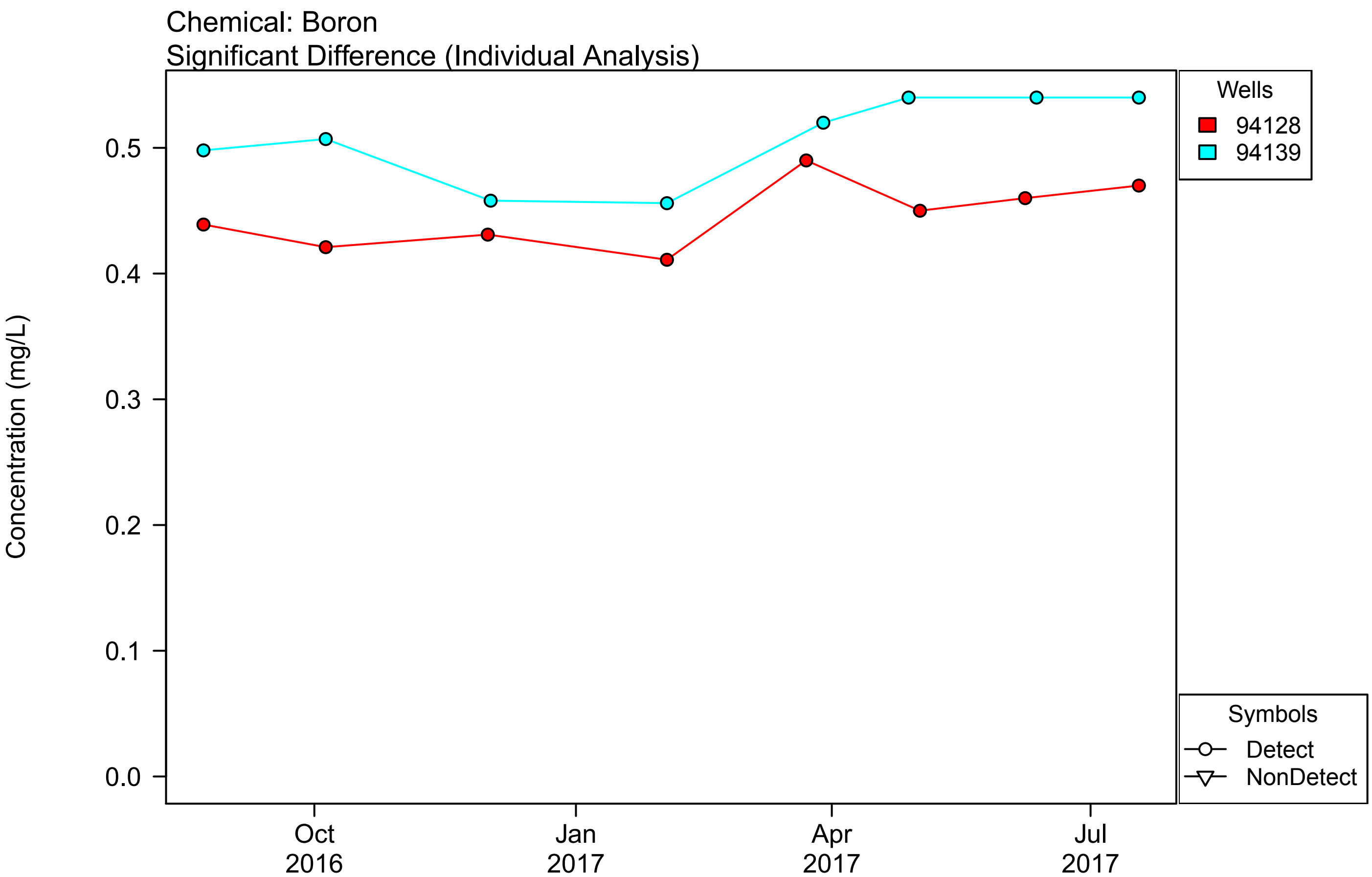


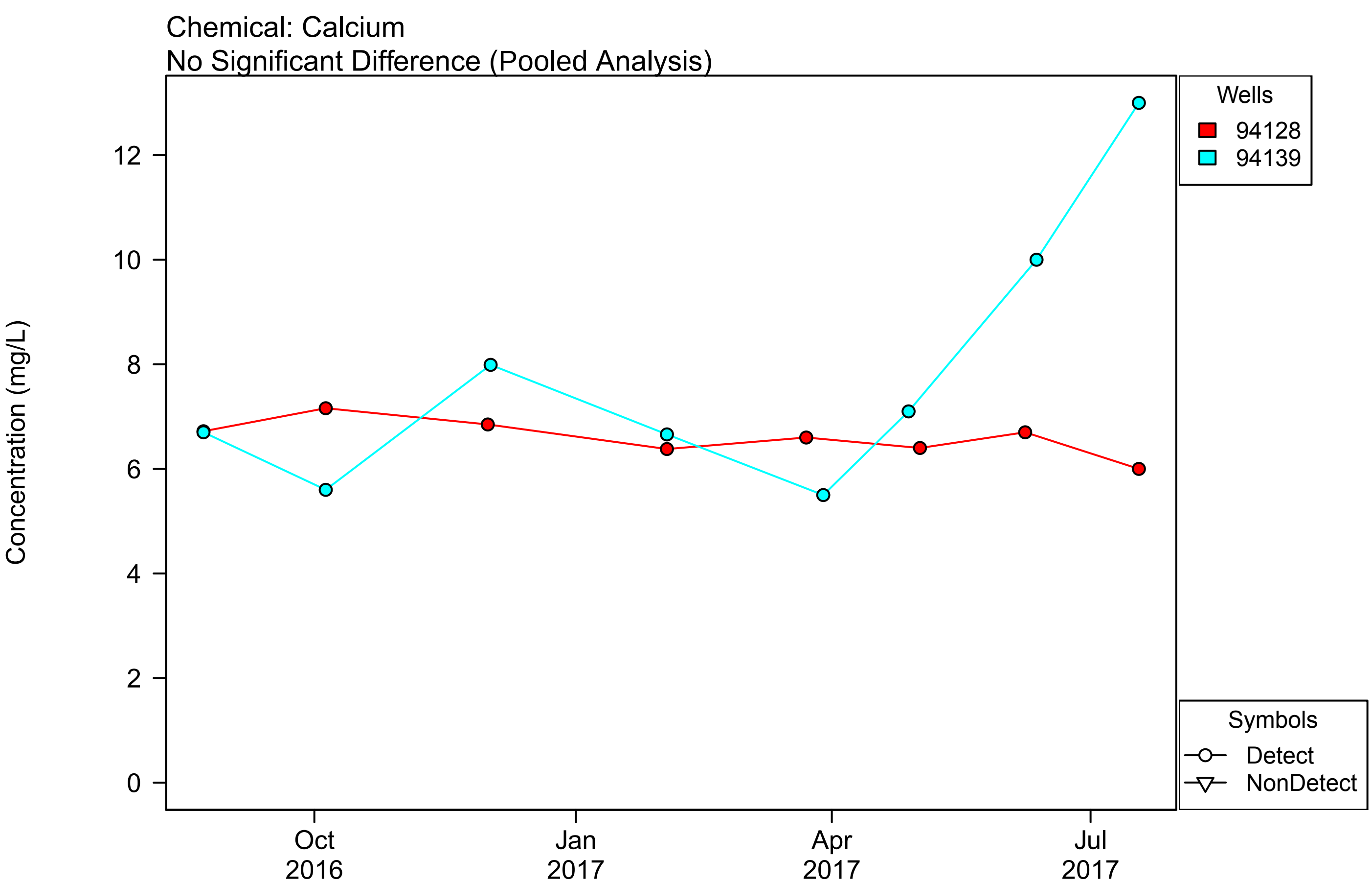
Unit: Residual Waste LF Cow Run SS

Figure A-3: Timeseries of Upgradient Wells



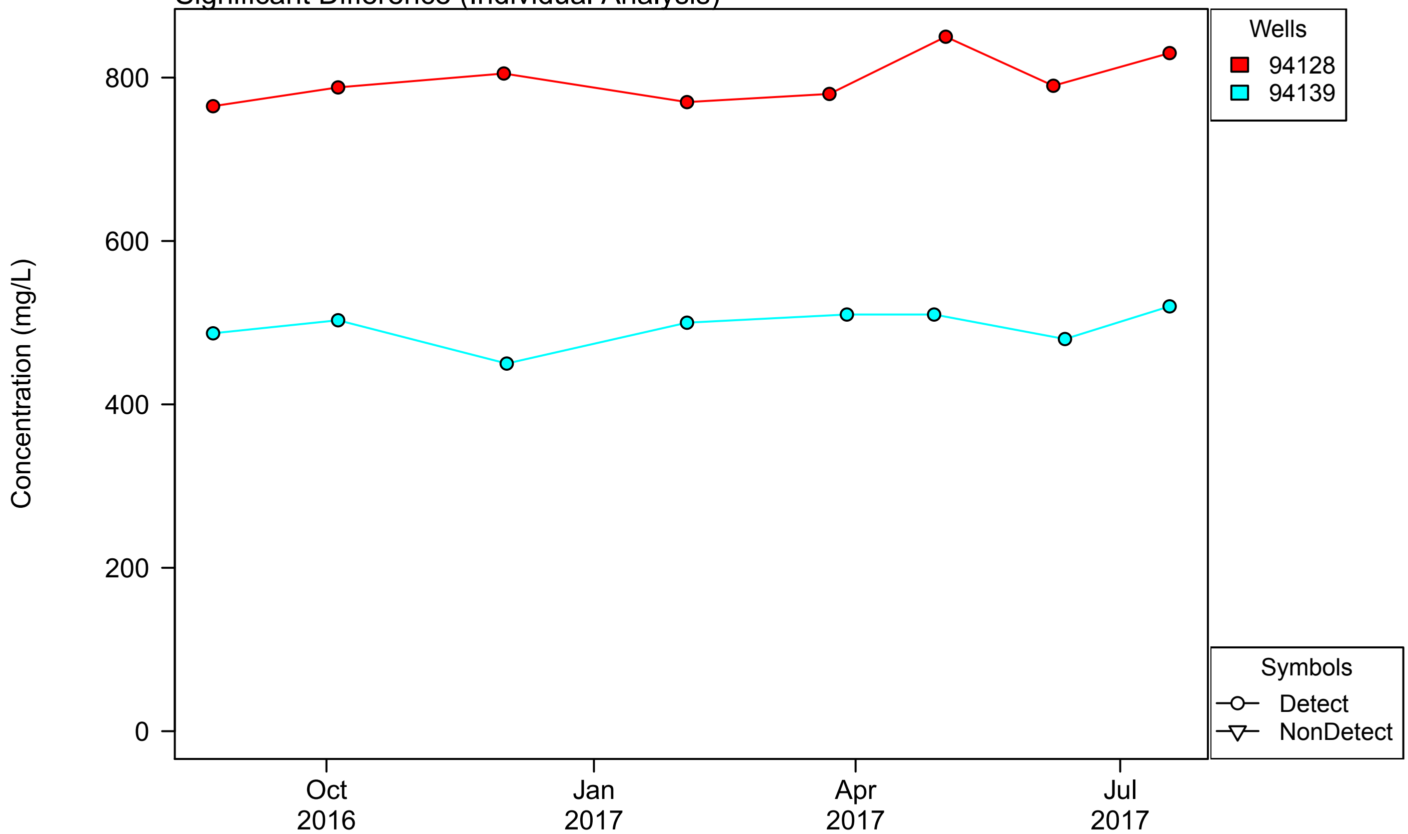
Unit: Residual Waste LF Morgantown SS
Figure A-3: Timeseries of Upgradient Wells



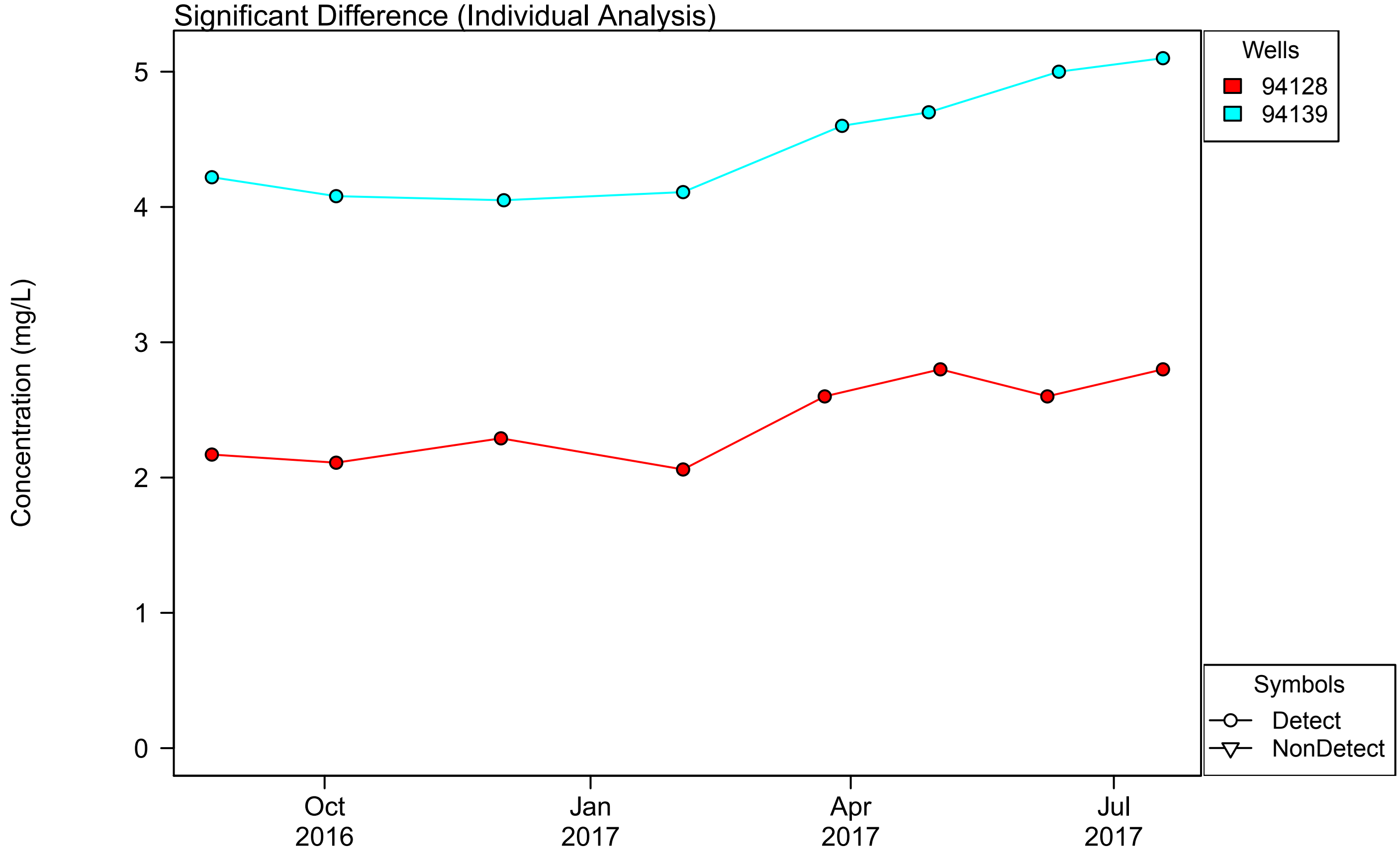


Unit: Residual Waste LF Morgantown SS
Figure A-3: Timeseries of Upgradient Wells

Chemical: Chloride
Significant Difference (Individual Analysis)

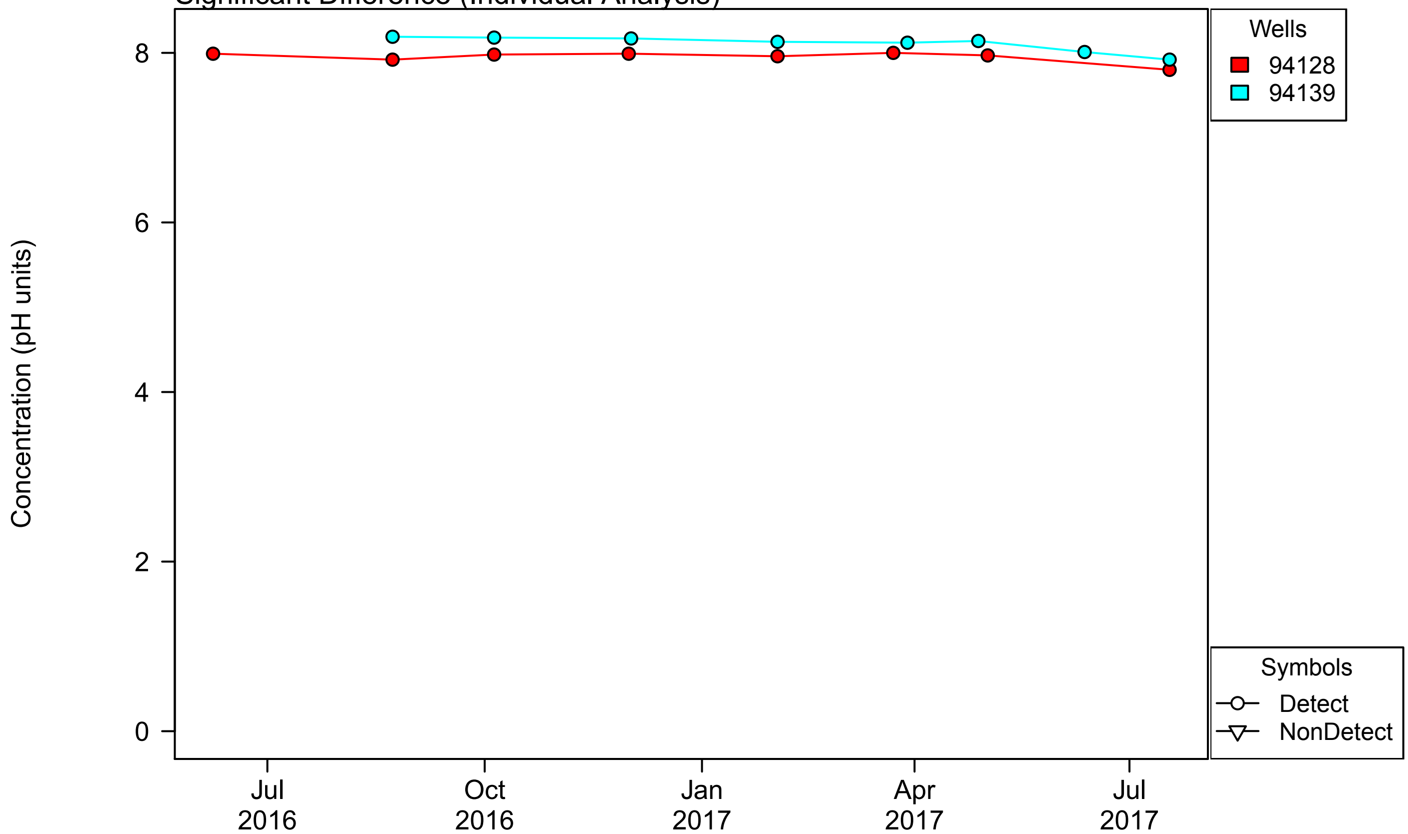


Chemical: Fluoride
Significant Difference (Individual Analysis)

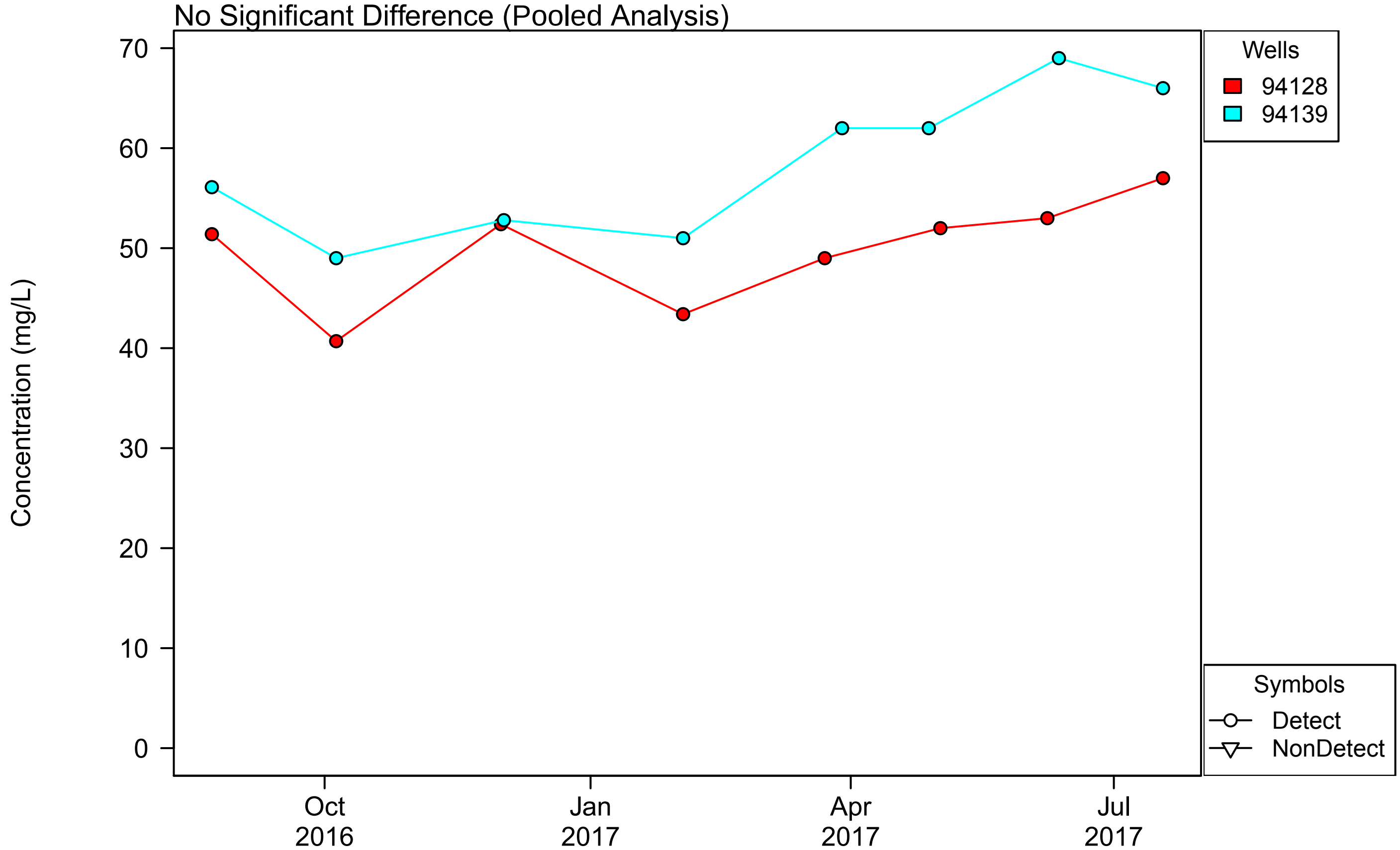


Unit: Residual Waste LF Morgantown SS
Figure A-3: Timeseries of Upgradient Wells

Chemical: pH
Significant Difference (Individual Analysis)

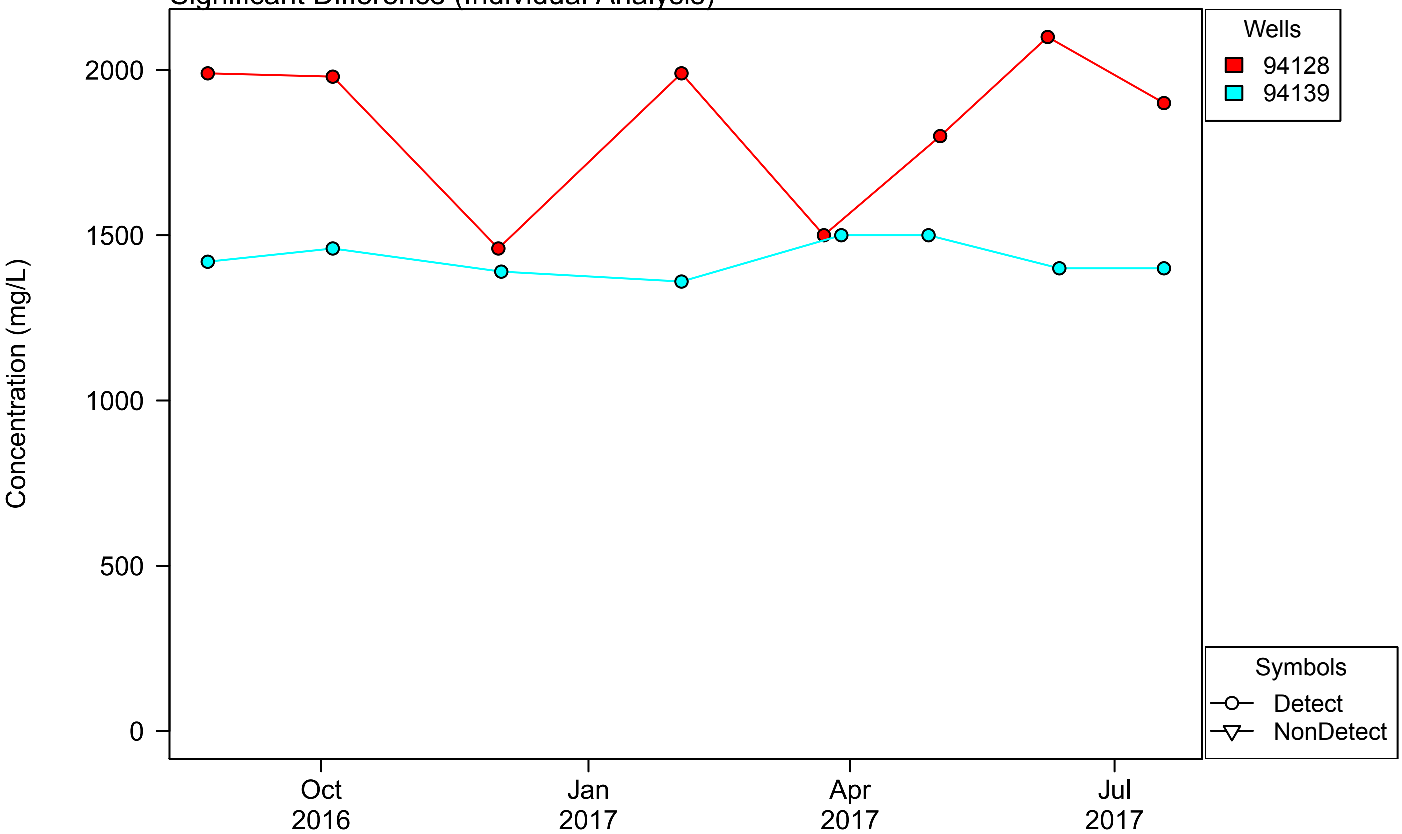


Chemical: Sulfate
No Significant Difference (Pooled Analysis)



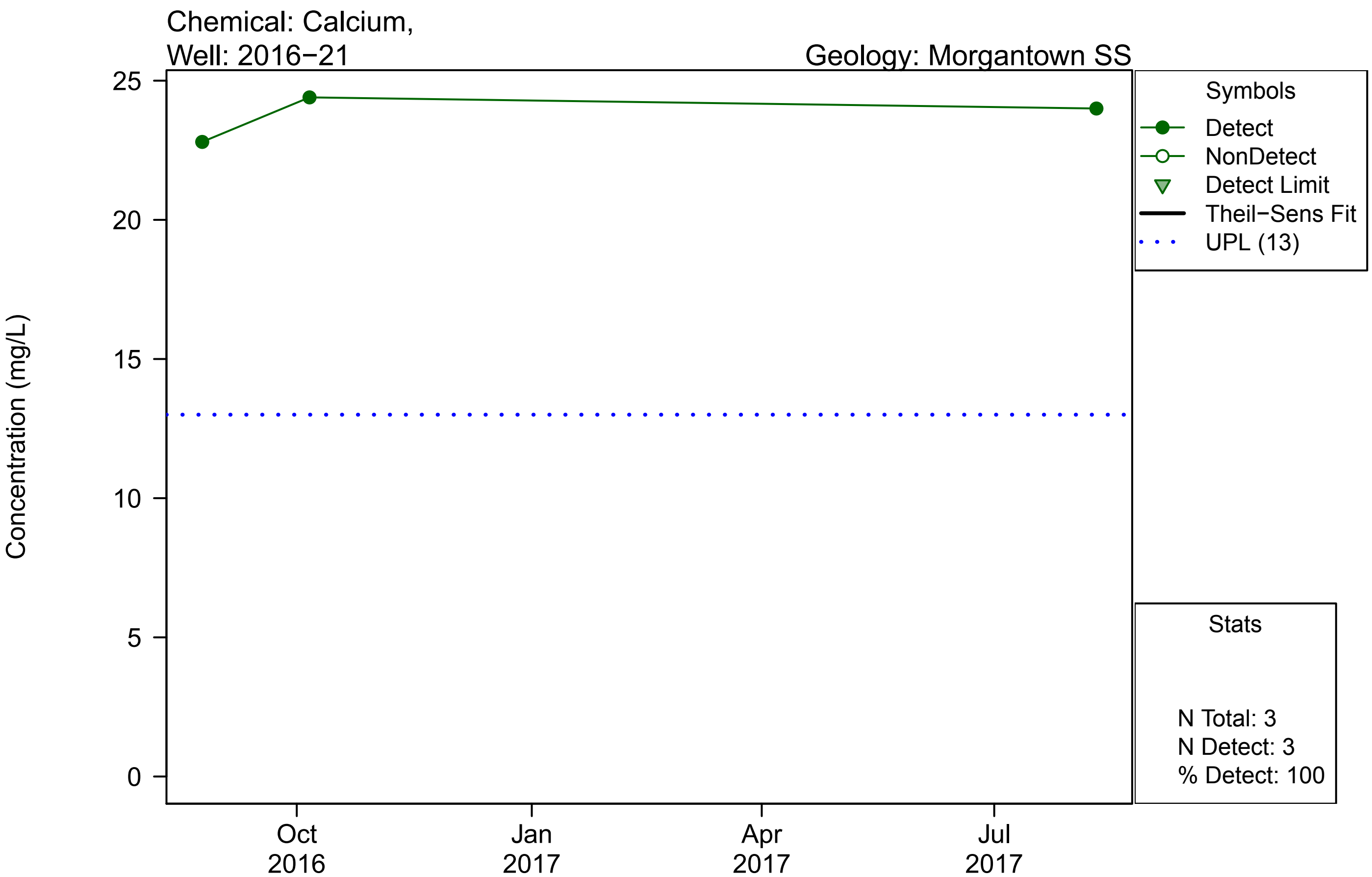
Unit: Residual Waste LF Morgantown SS
Figure A-3: Timeseries of Upgradient Wells

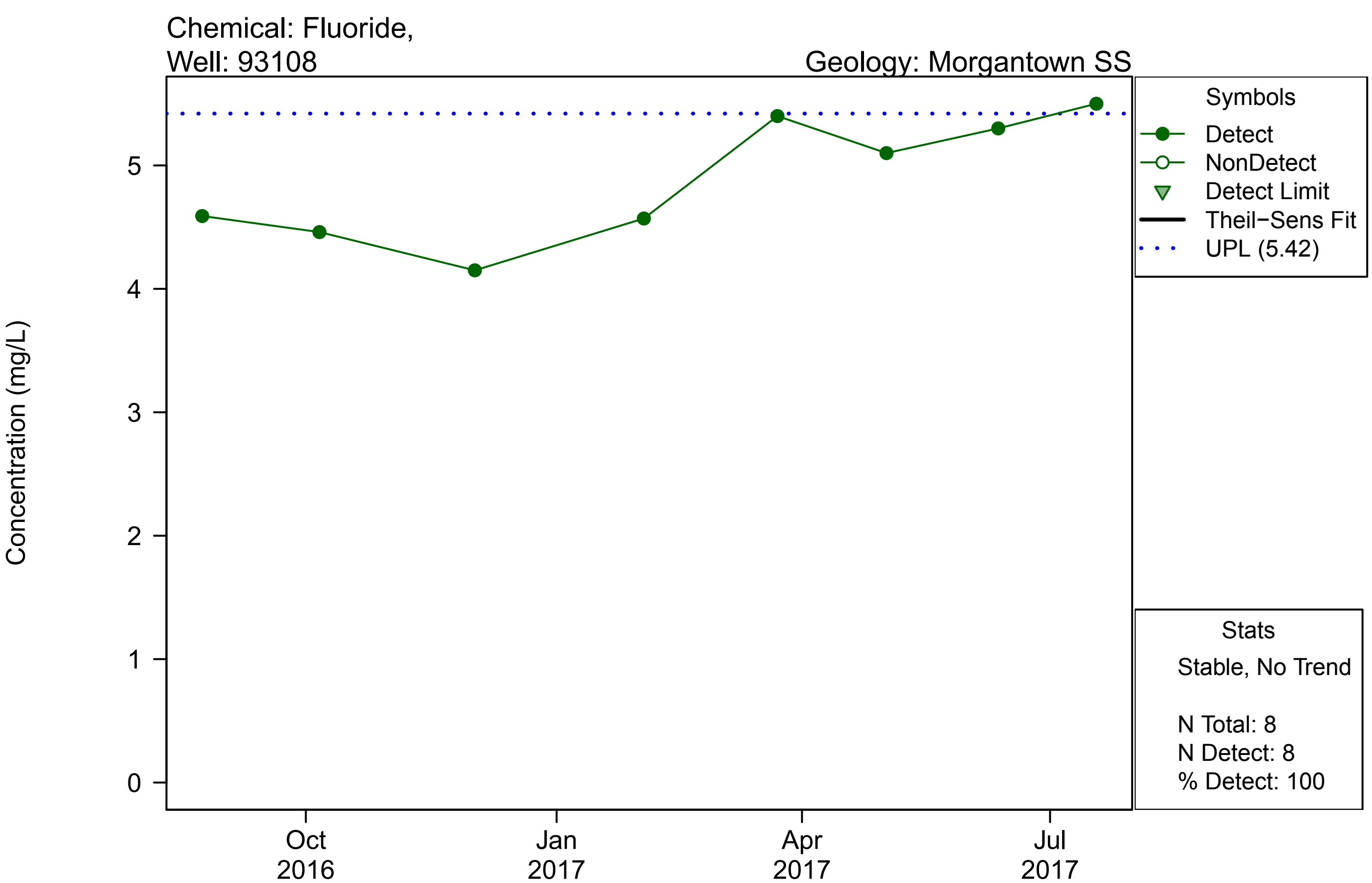
Chemical: TDS
Significant Difference (Individual Analysis)



Unit: Residual Waste LF

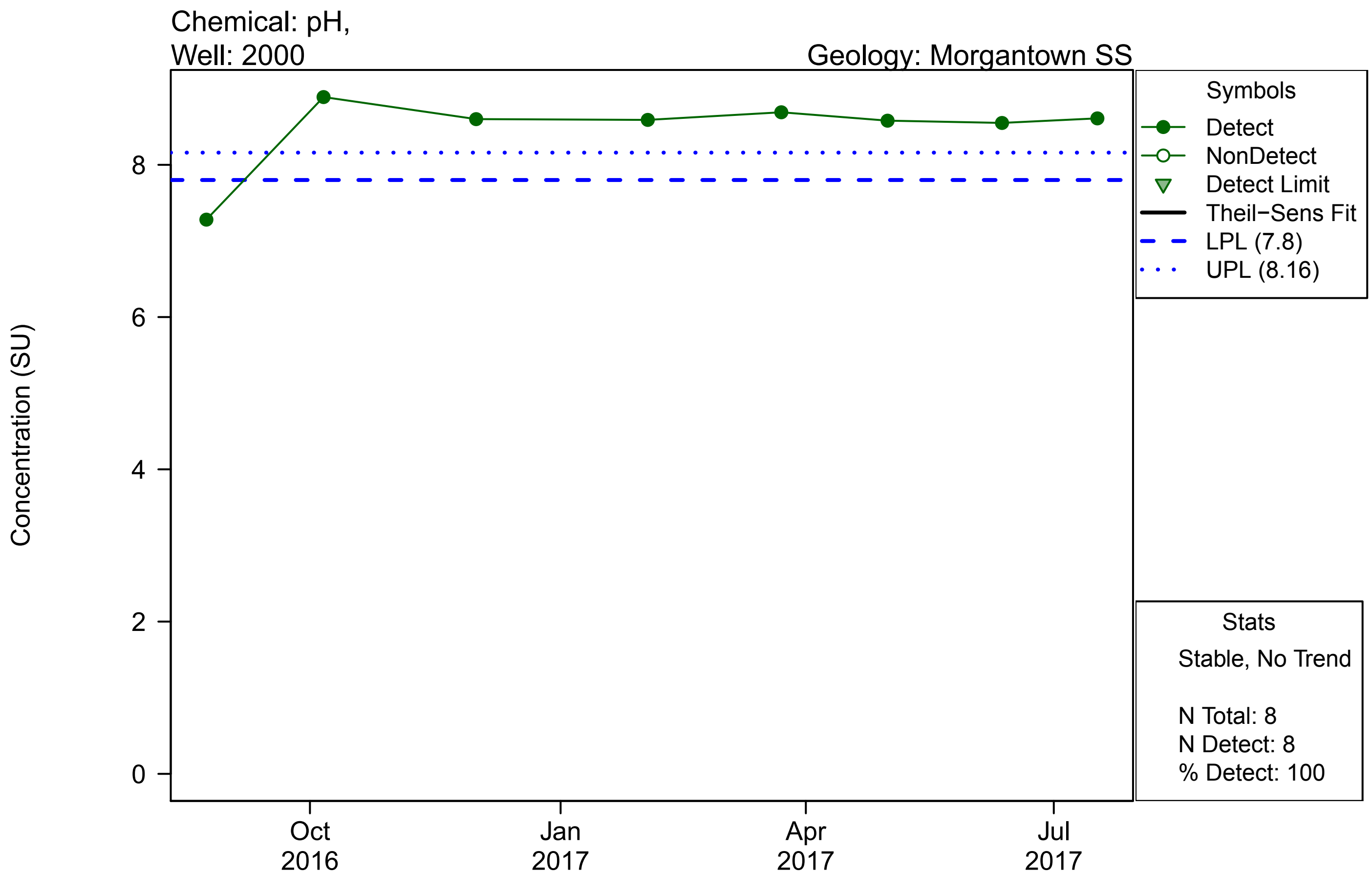
Figure A-4: Trend Analysis of Downgradient Wells with Exceedances

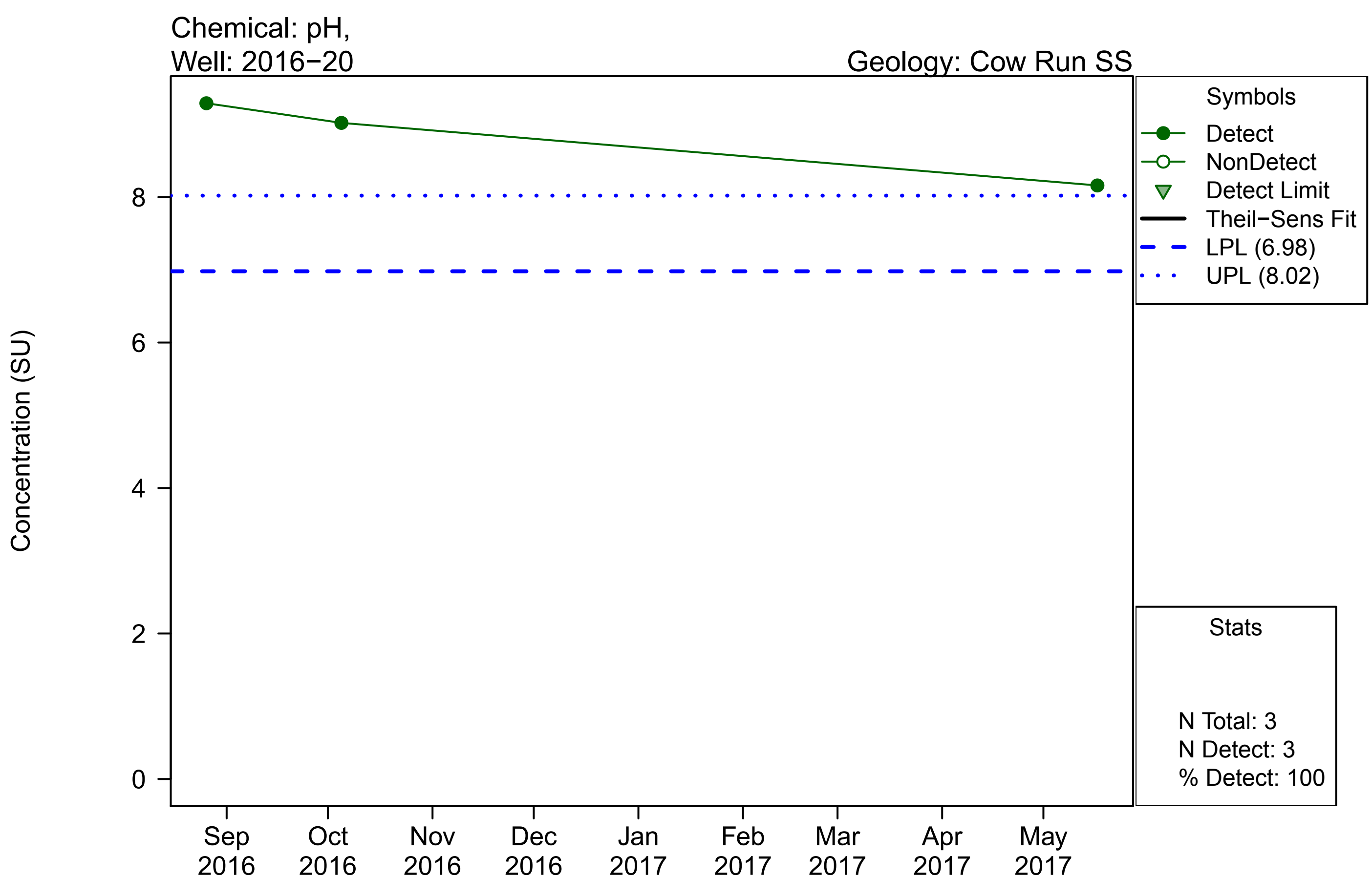




Unit: Residual Waste LF

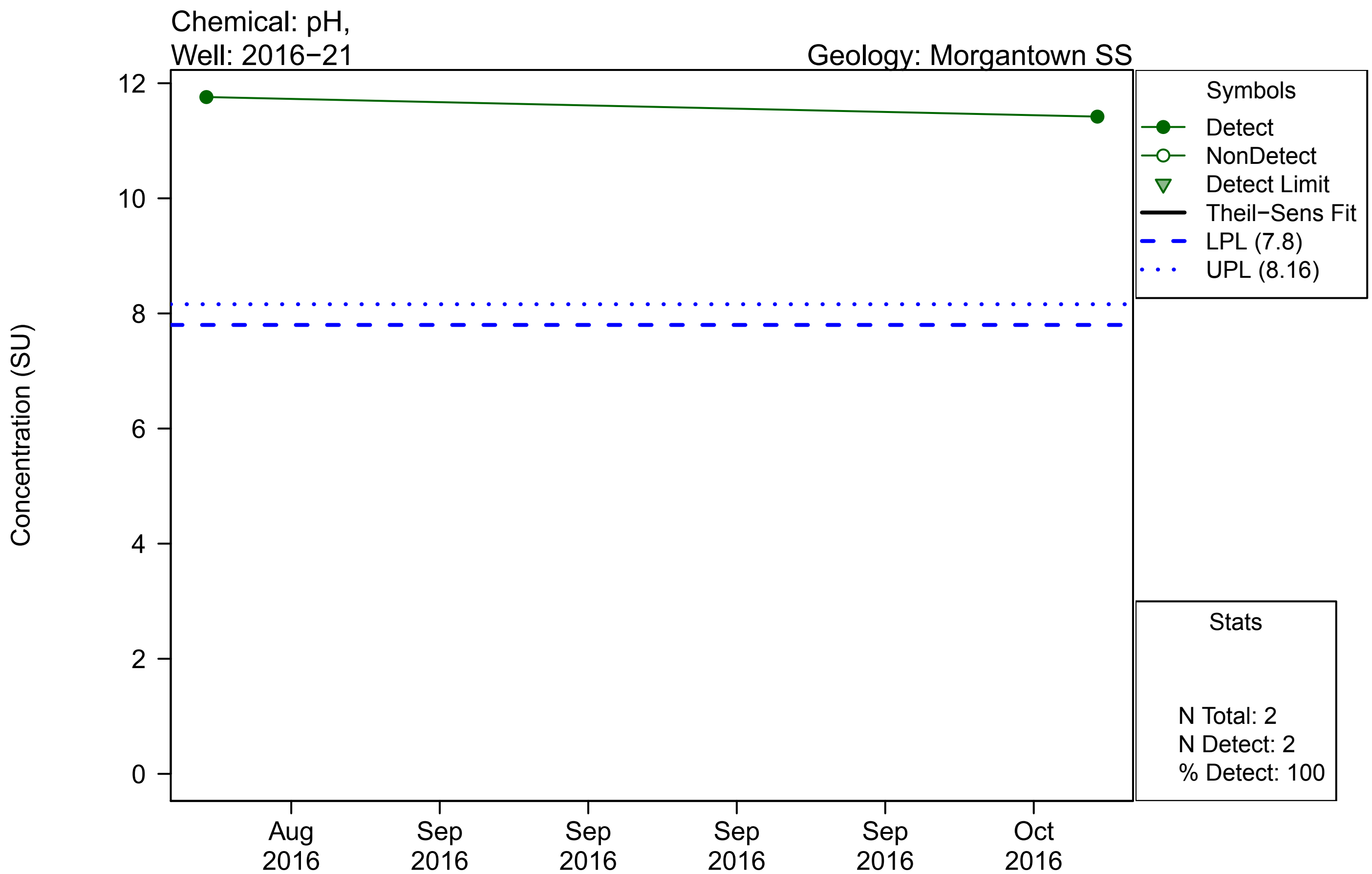
Figure A-4: Trend Analysis of Downgradient Wells with Exceedances

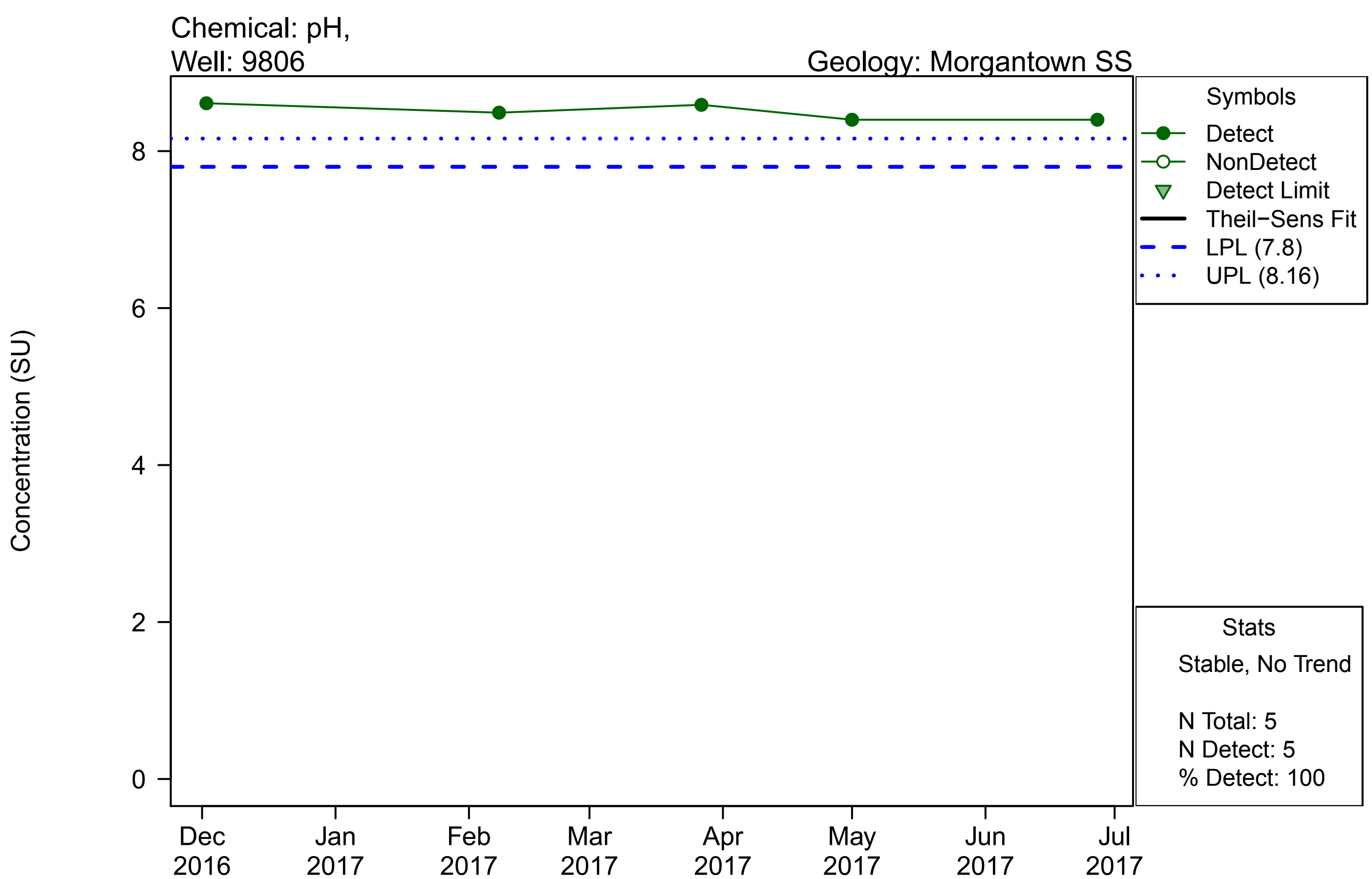




Unit: Residual Waste LF

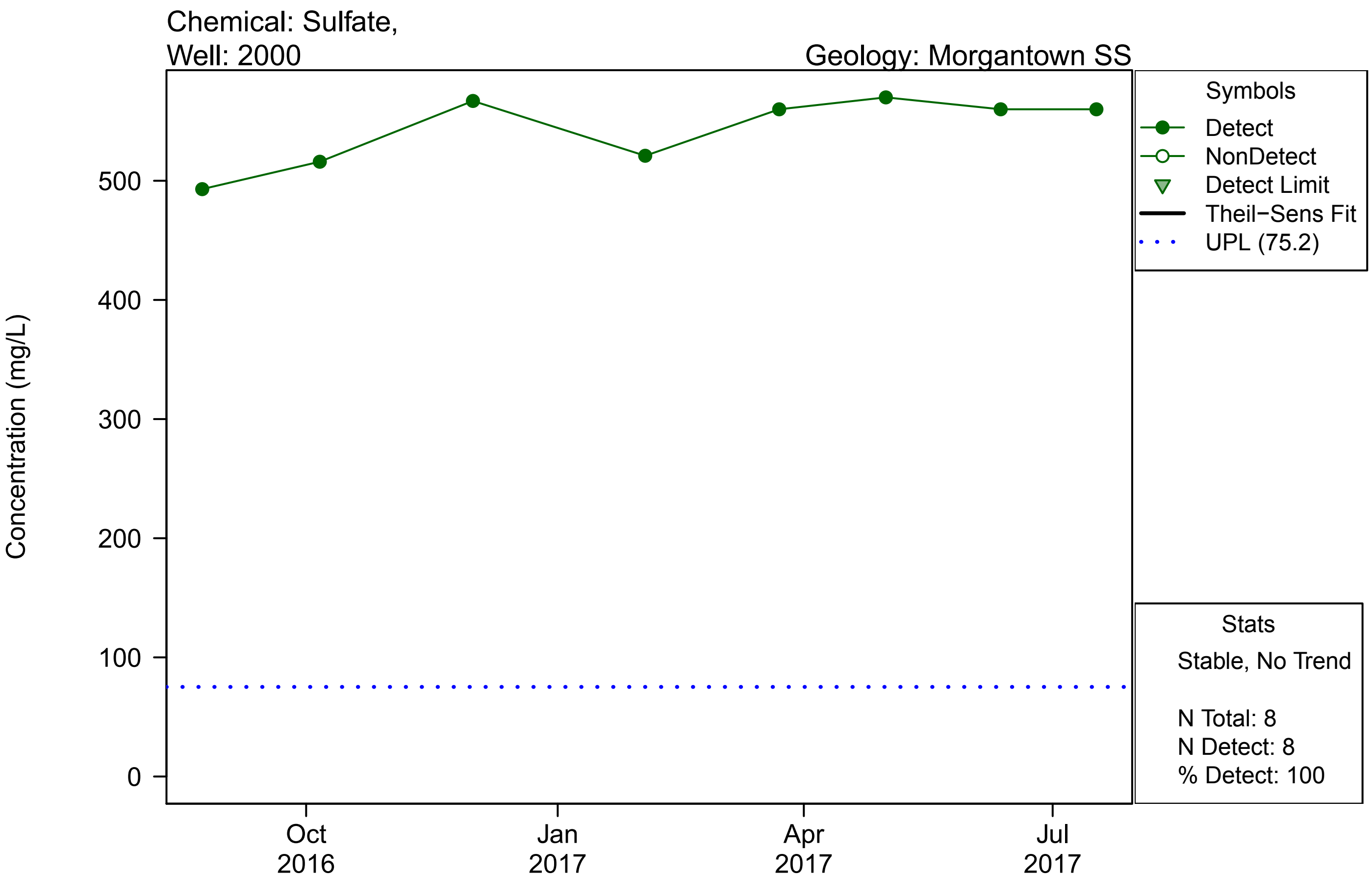
Figure A-4: Trend Analysis of Downgradient Wells with Exceedances

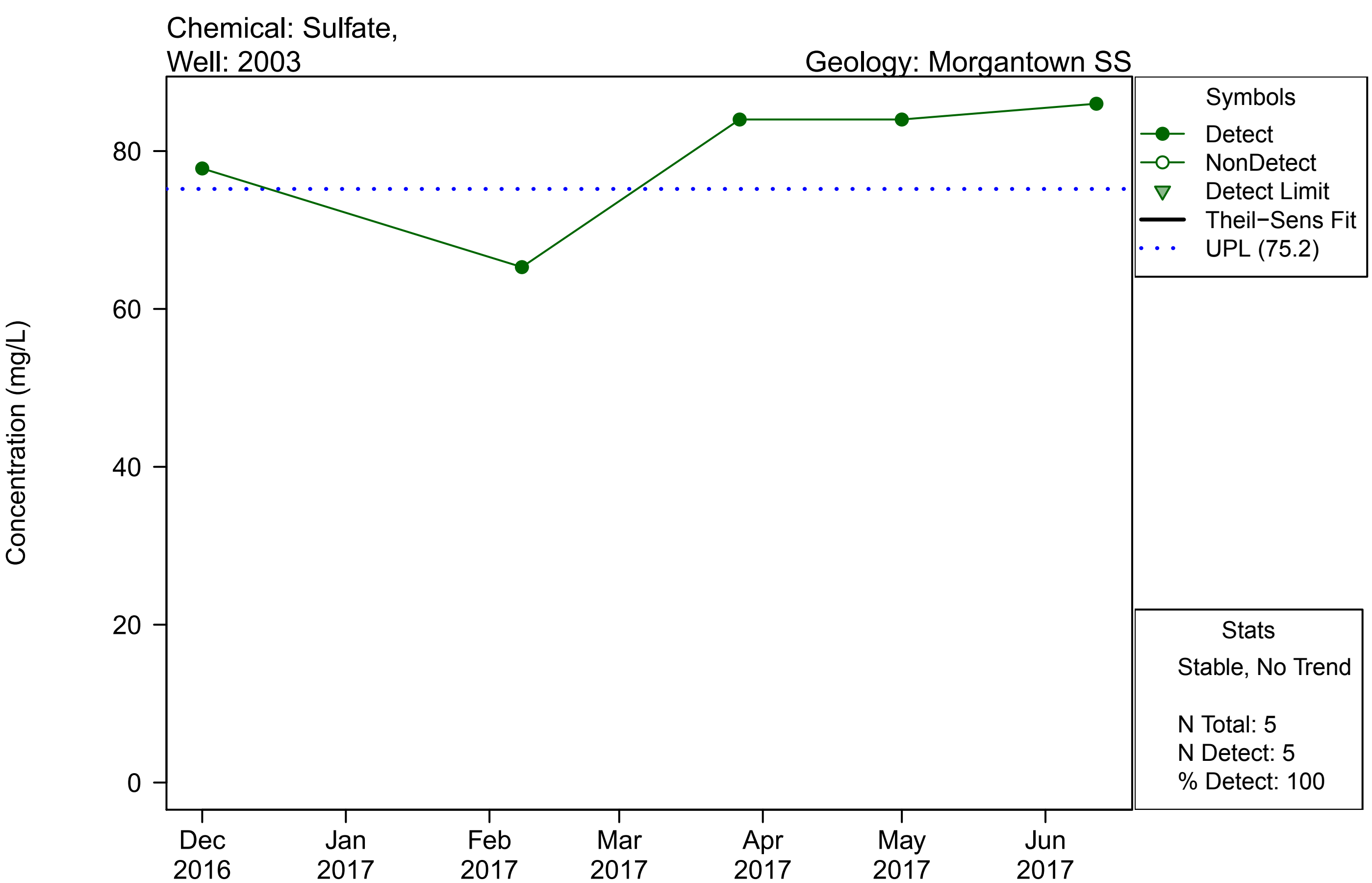




Unit: Residual Waste LF

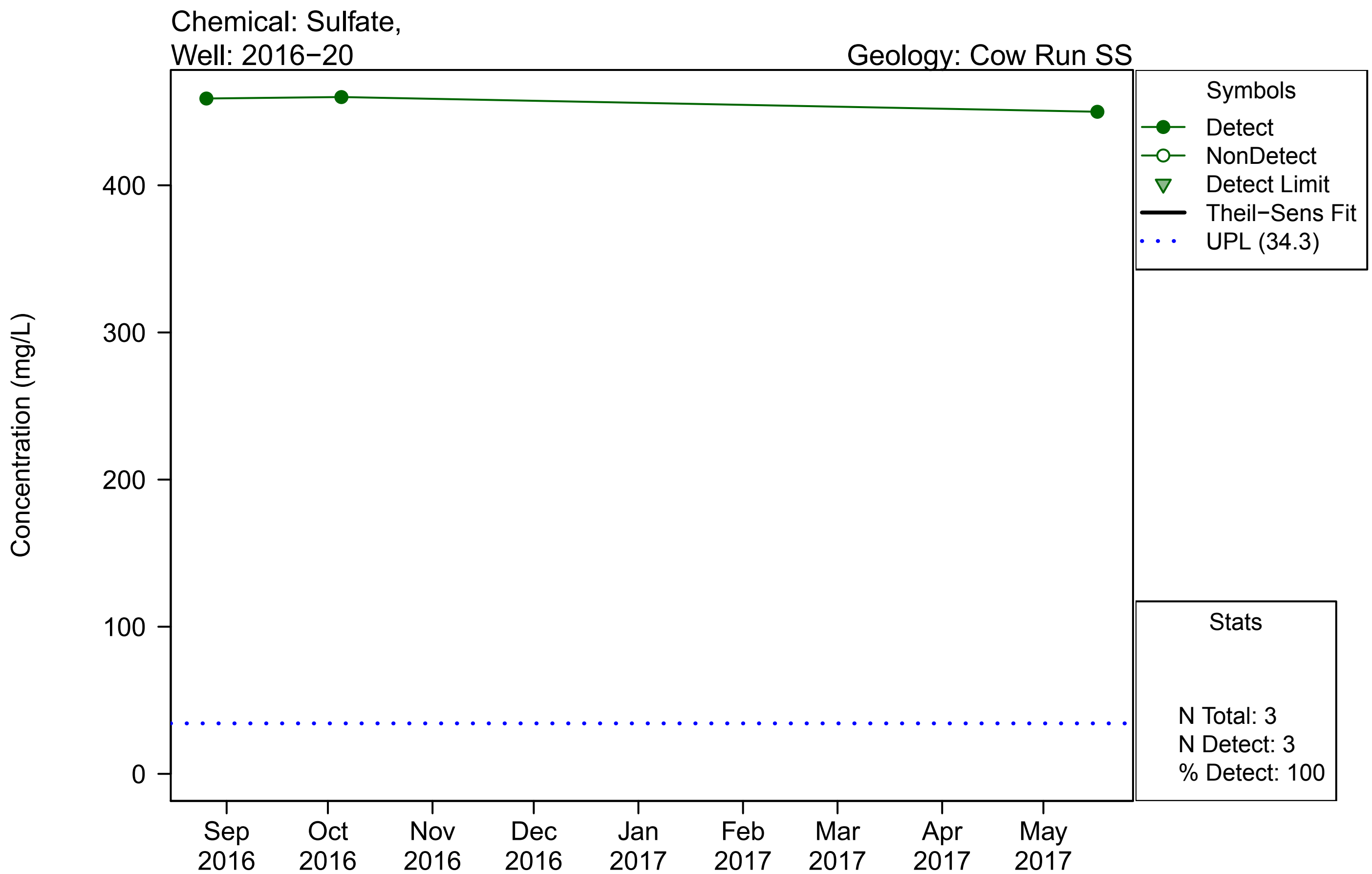
Figure A-4: Trend Analysis of Downgradient Wells with Exceedances

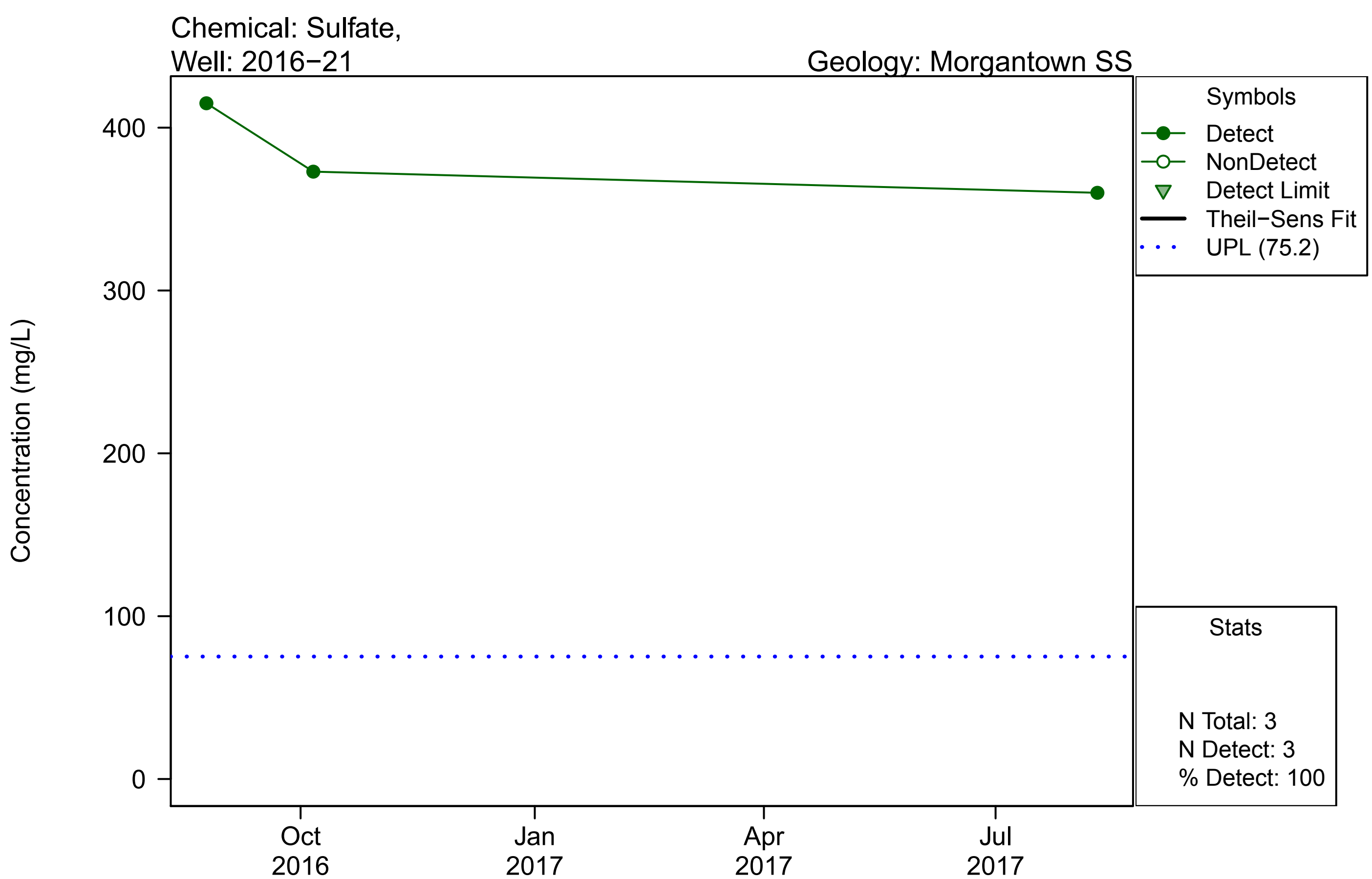




Unit: Residual Waste LF

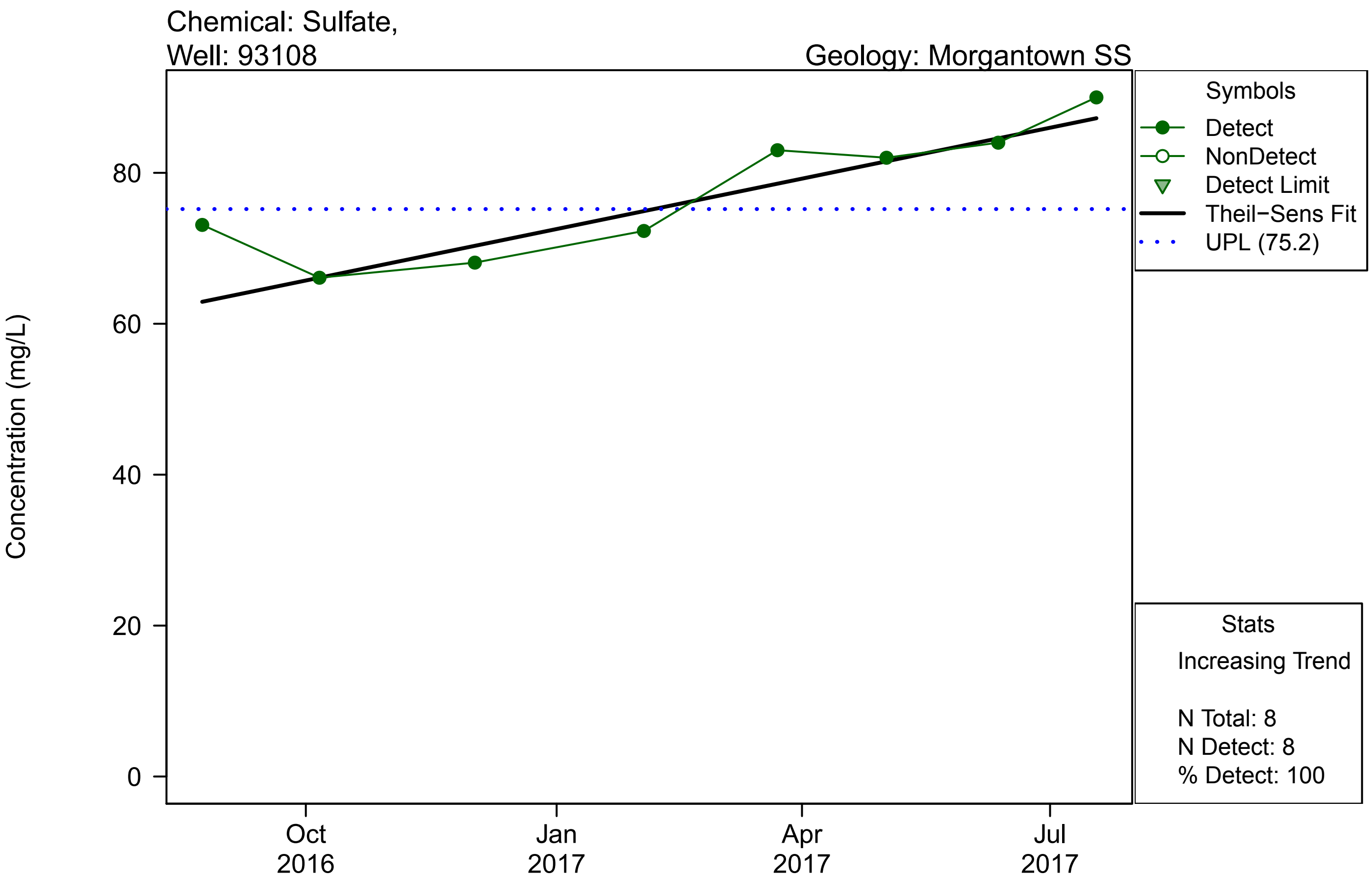
Figure A-4: Trend Analysis of Downgradient Wells with Exceedances

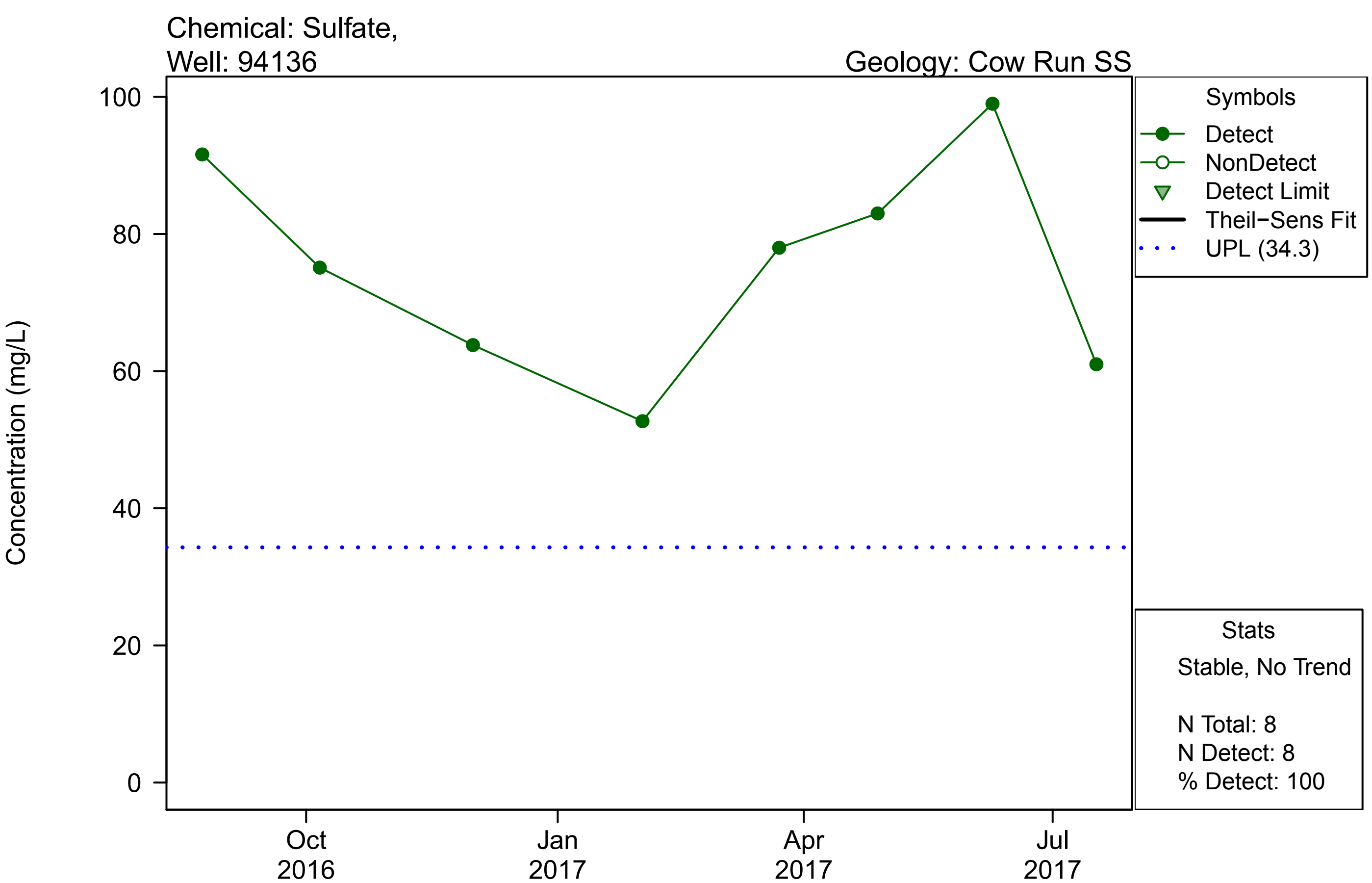




Unit: Residual Waste LF

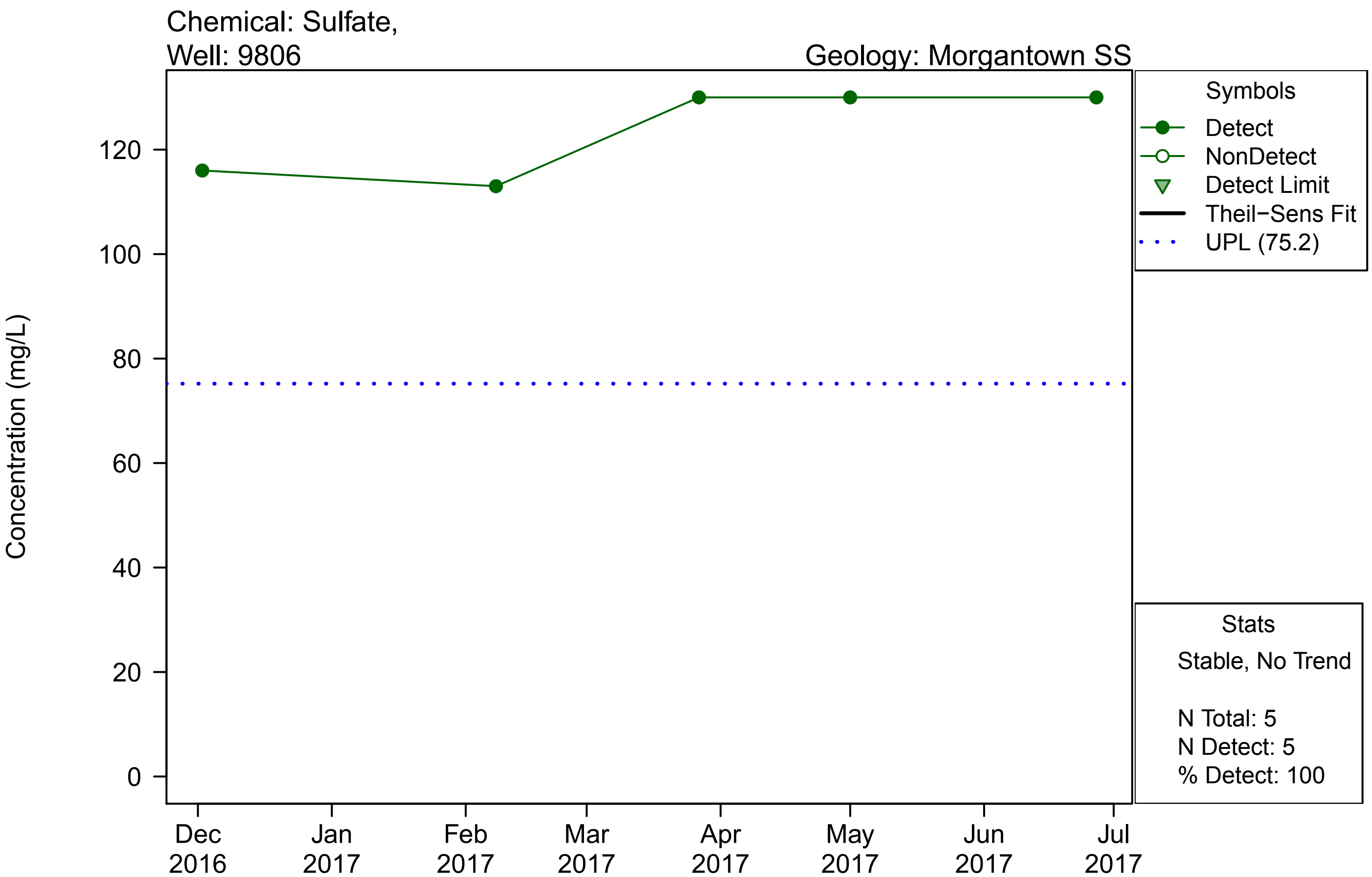
Figure A-4: Trend Analysis of Downgradient Wells with Exceedances





Unit: Residual Waste LF

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



Appendix B
Analytical Summary

Appendix B
Analytical Data Summary
Gavin Power, LLC
Residual Waste Landfill

		FEDERAL	FEDERAL	FEDERAL	FEDERAL	FEDERAL	FEDERAL
	Sample Date	6/8/2016	8/23/2016	8/23/2016	8/23/2016	8/23/2016	8/24/2016
	Sample Type	N	N	N	N	N	N
	Location ID	94128	93100	94126	94128	94139	2000
	Sample ID	94128-20170608-02	93100-20160823-01	94126-20160823-01	94128-20160823-01	94139-20160823-01	2000-20160824-01
Analyte	Unit						
Antimony	mg/L		4E-05	0.0001	7E-05	4E-05	2E-05
Arsenic	mg/L		0.00164	0.00422	0.0226	0.00328	0.0018
Barium	mg/L		0.602	13	0.141	0.0893	0.0244
Beryllium	mg/L		1E-05	5E-05	5E-06	6.5E-05	5E-06
Boron	mg/L		0.432	0.372	0.439	0.498	0.289
Cadmium	mg/L		8E-06	4E-05	4E-06	1E-05	4E-06
Calcium	mg/L		20.3	325	6.72	6.7	2.7
Chloride	mg/L		2180	11100	765	487	83.9
Chromium	mg/L		0.0022	0.0023	0.0003	0.0008	0.0018
Cobalt	mg/L		0.00062	0.00363	0.000105	0.000397	0.00011
Combined Radium 226 +228	pCi/L		2.587	50.95	1.626	16.81	1.348
Fluoride	mg/L		2.17	0.43	2.17	4.22	1.86
Lead	mg/L		0.000244	0.0002	3.5E-05	0.000963	3.9E-05
Lithium	mg/L		0.048	0.2	0.029	0.02	0.02
Mercury	mg/L		2E-06	2E-06	2E-06	2E-06	2E-06
Molybdenum	mg/L		0.087	0.00601	0.45	0.2	0.0389
pH, Field	pH units	7.99					
pH, Field	SU		7.97	7.36	7.92	8.19	7.28
Selenium	mg/L		0.0001	0.0003	3E-05	0.0002	7E-05
Sulfate	mg/L		11.4	2.1	51.4	56.1	493
Thallium	mg/L		2E-05	0.0001	2E-05	1E-05	2E-05
Total dissolved solids	mg/L		3630	17900	1990	1420	1220

Notes:
FD = Field Duplicate Sample
N = Normal Sample
If a sample was analyzed for mercury by both Method 7470 and low-level Method 1631, the low-level Method 1631 result is shown.

Appendix B
Analytical Data Summary
Gavin Power, LLC
Residual Waste Landfill

	Sample Date	FEDERAL 8/24/2016	FEDERAL 8/24/2016	FEDERAL 8/24/2016	FEDERAL 8/24/2016	FEDERAL 8/24/2016	FEDERAL 8/24/2016
	Sample Type	N	N	N	N	N	N
	Location ID	93108	94125	94136	94137	9801	9802
	Sample ID	93108-20160824-01	94125-20160824-01	94136-20160824-01	94137-20160824-01	9801-20160824-01	9802-20160824-01
Analyte	Unit						
Antimony	mg/L	0.0001		2E-05	5E-05	0.0001	3E-05
Arsenic	mg/L	0.00196		0.00037	0.00179	0.00075	0.00091
Barium	mg/L	0.174		0.0865	0.0524	5.16	0.0781
Beryllium	mg/L	4.1E-05		5E-06	5E-06	5E-05	5E-06
Boron	mg/L	0.429		0.405	0.021	0.378	0.172
Cadmium	mg/L	7E-05		6E-06	6E-05	4E-05	2E-05
Calcium	mg/L	6.09		23.2	147	202	29.3
Chloride	mg/L	745		888	27.5	7930	36.1
Chromium	mg/L	0.0086		0.0012	0.0035	0.0045	0.0013
Cobalt	mg/L	0.00113		0.000107	0.0922	0.00173	0.000954
Combined Radium 226 +228	pCi/L	2.68	0	2.592	2.681	8.15	2.763
Fluoride	mg/L	4.59		0.96	0.11	0.87	0.88
Lead	mg/L	0.00206		5.3E-05	0.0002	0.0001	4.4E-05
Lithium	mg/L	0.027		0.028	0.011	0.141	0.015
Mercury	mg/L	5E-06		2E-06	8E-06	2E-06	2E-06
Molybdenum	mg/L	0.254		0.0135	0.00275	0.00533	0.0064
pH, Field	pH units						
pH, Field	SU	7.59		7.54	7.11	6.95	6.94
Selenium	mg/L	0.0002		4E-05	5E-05	0.0003	5E-05
Sulfate	mg/L	73.1		91.6	348	3.4	65.8
Thallium	mg/L	0.000125		1E-05	4E-05	0.0002	5.8E-05
Total dissolved solids	mg/L	1940		1850	958	12600	766

Notes:
FD = Field Duplicate Sample
N = Normal Sample
If a sample was analyzed for mercury by both Method 7470 and low-level Method 1631, the low-level Method 1631 result is shown.

Appendix B
Analytical Data Summary
Gavin Power, LLC
Residual Waste Landfill

		FEDERAL	FEDERAL	FEDERAL	FEDERAL	FEDERAL	FEDERAL
	Sample Date	8/25/2016	8/26/2016	10/5/2016	10/5/2016	10/5/2016	10/5/2016
	Sample Type	N	N	N	N	N	N
	Location ID	2016-21	2016-20	2016-20	93100	94126	94128
	Sample ID	2016-21-20160825-01	2016-20-20160826-01	2016-20-20161005-01	93100-20161005-01	94126-20161005-01	94128-20161005-01
Analyte	Unit						
Antimony	mg/L	0.00047	0.00039	0.00039	6E-05	1E-05	7E-05
Arsenic	mg/L	0.0245	0.0264	0.008	0.00207	0.00524	0.0236
Barium	mg/L	0.0618	0.12	0.213	0.69	12.5	0.141
Beryllium	mg/L	0.000591	0.00281	0.000343	5.3E-05	5E-05	5E-06
Boron	mg/L	0.504	0.326	0.344	0.429	0.371	0.421
Cadmium	mg/L	0.00011	0.00201	0.00027	1E-05	4E-05	4E-06
Calcium	mg/L	22.8	138	34.1	22.2	356	7.16
Chloride	mg/L	62.2	574	1570	2310	11000	788
Chromium	mg/L	0.0075	0.0287	0.0079	0.0049	0.0027	0.0004
Cobalt	mg/L	0.00396	0.0398	0.00486	0.00129	0.00485	0.000124
Combined Radium 226 +228	pCi/L	1.356	4.656	1.7223	1.969	60.9	1.735
Fluoride	mg/L	2.7	1.29	0.95	2.05	0.5	2.11
Lead	mg/L	0.00238	0.0678	0.00995	0.00093	0.0002	4.9E-05
Lithium	mg/L	0.044	0.088	0.051	0.058	0.237	0.35
Mercury	mg/L	3.2E-05	0.000423	2.4E-05	3E-06	2E-06	2E-06
Molybdenum	mg/L	0.0545	0.00943	0.11	0.0889	0.0338	0.441
pH, Field	pH units						
pH, Field	SU	11.76	9.29	9.02	7.85	7.21	7.98
Selenium	mg/L	0.0018	0.0104	0.002	0.0002	0.0003	3E-05
Sulfate	mg/L	415	459	460	8.4	10.9	40.7
Thallium	mg/L	0.000143	0.000318	0.000115	3E-05	0.00098	5E-05
Total dissolved solids	mg/L	1310	1970	3540	3980	18200	1980

Notes:
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N = Normal Sample
If a sample was analyzed for mercury by both Method 7470 and low-level Method 1631, the low-level Method 1631 result is shown.

Appendix B
Analytical Data Summary
Gavin Power, LLC
Residual Waste Landfill

		FEDERAL	FEDERAL	FEDERAL	FEDERAL	FEDERAL	FEDERAL
	Sample Date	10/5/2016	10/6/2016	10/6/2016	10/6/2016	10/6/2016	10/6/2016
	Sample Type	N	N	N	N	N	N
	Location ID	94139	2000	2016-21	93108	94136	94137
	Sample ID	94139-20161005-01	2000-20161006-01	2016-21-20161006-01	93108-20161006-01	94136-20161006-01	94137-20161006-01
Analyte	Unit						
Antimony	mg/L	3E-05	1E-05	0.001	3E-05	3E-05	3E-05
Arsenic	mg/L	0.00322	0.00177	0.0373	0.00153	0.00048	0.00244
Barium	mg/L	0.0852	0.0233	0.113	0.164	0.0894	0.0578
Beryllium	mg/L	2.7E-05	5E-06	0.000923	1E-05	1E-05	5E-06
Boron	mg/L	0.507	0.278	0.429	0.404	0.395	0.017
Cadmium	mg/L	1E-05	5E-06	0.00016	3E-05	6E-06	2E-05
Calcium	mg/L	5.6	2.78	24.4	5.87	22	163
Chloride	mg/L	503	92	65.2	731	927	27.7
Chromium	mg/L	0.0017	0.0033	0.0112	0.0062	0.002	0.0055
Cobalt	mg/L	0.00031	0.000202	0.00519	0.00039	0.00029	0.495
Combined Radium 226 +228	pCi/L	1.634	1.827	1.362	2.059	2.264	2.373
Fluoride	mg/L	4.08	2	2.72	4.46	0.94	0.1
Lead	mg/L	0.00125	9.6E-05	0.00351	0.000516	0.000164	0.000152
Lithium	mg/L	0.026	0.023	0.048	0.028	0.033	0.017
Mercury	mg/L	2E-06	2E-06	5.2E-05	1.5E-05	2E-06	3E-06
Molybdenum	mg/L	0.231	0.0349	0.057	0.267	0.015	0.00353
pH, Field	pH units						
pH, Field	SU	8.18	8.89	11.42	7.87	7.69	6.93
Selenium	mg/L	0.0001	4E-05	0.0033	6E-05	8E-05	9E-05
Sulfate	mg/L	49	516	373	66.1	75.1	330
Thallium	mg/L	1E-05	4E-05	0.00011	4E-05	9.9E-05	4E-05
Total dissolved solids	mg/L	1460	1300	1510	1900	1820	856

Notes:
FD = Field Duplicate Sample
N = Normal Sample
If a sample was analyzed for mercury by both Method 7470 and low-level Method 1631, the low-level Method 1631 result is shown.

Appendix B
Analytical Data Summary
Gavin Power, LLC
Residual Waste Landfill

		FEDERAL	FEDERAL	FEDERAL	FEDERAL	FEDERAL	FEDERAL
	Sample Date	10/6/2016	10/6/2016	12/1/2016	12/1/2016	12/1/2016	12/1/2016
	Sample Type	N	N	N	N	N	N
	Location ID	9801	9802	2000	2003	94126	94128
	Sample ID	9801-20161006-01	9802-20161006-01	2000-20161201-01	2003-20161201-01	94126-20161201-01	94128-20161201-01
Analyte	Unit						
Antimony	mg/L	1E-05	4E-05	3E-05	0.00029	0.0001	6E-05
Arsenic	mg/L	0.00109	0.00072	0.00153	0.00826	0.0043	0.0193
Barium	mg/L	4.84	0.0711	0.019	0.175	13	0.134
Beryllium	mg/L	5E-05	5E-06	5E-06	0.000166	5E-05	5E-06
Boron	mg/L	0.329	0.157	0.296	0.461	0.372	0.431
Cadmium	mg/L	4E-05	1E-05	1E-05	8E-05	4E-05	4E-06
Calcium	mg/L	198	28.7	2.64	8.98	336	6.85
Chloride	mg/L	7950	35.2	96.9	643	10600	805
Chromium	mg/L	0.0024	0.0028	0.0007	0.0011	0.0045	0.0022
Cobalt	mg/L	0.00172	0.00112	4.6E-05	0.00251	0.00369	0.000142
Combined Radium 226 +228	pCi/L	13.99	0.638	0.595	0.975	52.3	1.046
Fluoride	mg/L	0.61	0.8	2.26	2.7	0.6	2.29
Lead	mg/L	0.0001	3.1E-05	4.9E-05	0.00144	0.0001	7.1E-05
Lithium	mg/L	0.142	0.018	0.017	0.024	0.249	0.031
Mercury	mg/L	1.6E-05	2E-06	2E-06	1.7E-05	1.2E-05	9E-06
Molybdenum	mg/L	0.00723	0.00563	0.0331	0.105	0.0099	0.444
pH, Field	pH units						
pH, Field	SU	7.16	7.25	8.6	8.02	7.2	7.99
Selenium	mg/L	0.0003	4E-05	5E-05	0.0013	0.0005	3E-05
Sulfate	mg/L	7.2	57.5	567	77.8	0.5	52.4
Thallium	mg/L	0.0001	8.4E-05	1E-05	4E-05	0.0001	1E-05
Total dissolved solids	mg/L	13000	784	1290	1950	17300	1460

Notes:
FD = Field Duplicate Sample
N = Normal Sample
If a sample was analyzed for mercury by both Method 7470 and low-level Method 1631, the low-level Method 1631 result is shown.

Appendix B
Analytical Data Summary
Gavin Power, LLC
Residual Waste Landfill

	Sample Date	FEDERAL 12/1/2016	FEDERAL 12/1/2016	FEDERAL 12/2/2016	FEDERAL 12/2/2016	FEDERAL 12/2/2016	FEDERAL 12/2/2016
	Sample Type	N	N	N	N	N	N
	Location ID	94136	94137	93100	93108	94125	94139
	Sample ID	94136-20161201-01	94137-20161201-01	93100-20161202-01	93108-20161202-01	94125-20161202-01	94139-20161202-01
Analyte	Unit						
Antimony	mg/L	2E-05	3E-05	5E-05	0.00023	0.0003	6E-05
Arsenic	mg/L	0.00042	0.00211	0.00174	0.0025	0.00689	0.00438
Barium	mg/L	0.102	0.0553	0.468	0.199	1.41	0.0969
Beryllium	mg/L	1E-05	5E-06	1E-05	0.000162	0.000598	7.1E-05
Boron	mg/L	0.349	0.022	0.39	0.391	0.408	0.458
Cadmium	mg/L	6E-06	7E-05	8E-06	0.0003	0.00116	4E-06
Calcium	mg/L	19.2	154	14.1	6.55	410	7.99
Chloride	mg/L	887	27.8	1770	681	11600	450
Chromium	mg/L	0.0013	0.0014	0.00586	0.0263	0.126	0.00236
Cobalt	mg/L	0.00015	0.0503	0.00235	0.00393	0.0138	0.000507
Combined Radium 226 +228	pCi/L	1.642	1.268	1.538	1.229	12.69	1.606
Fluoride	mg/L	1.03	0.12	1.97	4.15	0.5	4.05
Lead	mg/L	0.000142	0.000156	0.000135	0.00639	0.0105	0.000921
Lithium	mg/L	0.035	0.015	0.046	0.033	0.263	0.026
Mercury	mg/L	2E-06	5E-06	2E-06	1E-05	2E-05	1E-05
Molybdenum	mg/L	0.0137	0.00287	0.125	0.237	0.0642	0.214
pH, Field	pH units						
pH, Field	SU	7.72	6.98	7.78	7.96	6.74	8.17
Selenium	mg/L	7E-05	5E-05	0.0003	0.0004	0.0022	0.0002
Sulfate	mg/L	63.8	349	12.2	68.1	83.5	52.8
Thallium	mg/L	1E-05	4E-05	2E-05	0.000159	0.0002	2E-05
Total dissolved solids	mg/L	1840	867	3420	1950	20000	1390

Notes:
FD = Field Duplicate Sample
N = Normal Sample
If a sample was analyzed for mercury by both Method 7470 and low-level Method 1631, the low-level Method 1631 result is shown.

Appendix B
Analytical Data Summary
Gavin Power, LLC
Residual Waste Landfill

	Sample Date	FEDERAL 12/2/2016	FEDERAL 12/2/2016	FEDERAL 12/2/2016	FEDERAL 2/1/2017	FEDERAL 2/1/2017	FEDERAL 2/1/2017
	Sample Type	N	N	N	N	N	N
	Location ID	9801	9802	9806	94136	94137	9801
	Sample ID	9801-20161202-01	9802-20161202-01	9806-20161202-01	94136-20170201-01	94137-20170201-01	9801-20170201-01
Analyte	Unit						
Antimony	mg/L	0.0001	2E-05	0.00011	1E-05	4E-05	0.0001
Arsenic	mg/L	0.00072	0.0012	0.00207	0.00039	0.00138	0.00056
Barium	mg/L	4.63	0.0664	0.0676	0.0877	0.049	4.33
Beryllium	mg/L	5E-05	7E-06	0.000269	5E-06	5E-06	5E-05
Boron	mg/L	0.353	0.178	0.256	0.362	0.037	0.404
Cadmium	mg/L	4E-05	0.0001	0.00037	5E-06	5E-05	4E-05
Calcium	mg/L	184	24.5	5.35	17.7	148	180
Chloride	mg/L	7210	39.1	187	882	27.5	7330
Chromium	mg/L	0.00216	0.00206	0.00653	0.00124	0.00169	0.000768
Cobalt	mg/L	0.000975	0.000847	0.00516	0.000122	0.056	0.000957
Combined Radium 226 +228	pCi/L	7.83	0.832	0.7334	0.665	3.127	9.95
Fluoride	mg/L	0.6	0.8	1.14	0.9	0.11	0.91
Lead	mg/L	0.000354	4.3E-05	0.00481	7.9E-05	7E-05	9E-05
Lithium	mg/L	0.16	0.022	0.022	0.029	0.007	0.159
Mercury	mg/L	1.6E-05	1.1E-05	0.000131	2E-06	2E-06	1E-05
Molybdenum	mg/L	0.00651	0.00543	0.011	0.0133	0.00633	0.0068
pH, Field	pH units						
pH, Field	SU	6.92	7.3	8.61	7.74	7.02	7.03
Selenium	mg/L	0.0003	3E-05	0.0007	5E-05	3E-05	0.0003
Sulfate	mg/L	6.7	60.2	116	52.7	332	3.4
Thallium	mg/L	0.000528	5.8E-05	7E-05	1E-05	0.000166	0.0001
Total dissolved solids	mg/L	12300	796	860	1750	883	11300

Notes:
FD = Field Duplicate Sample
N = Normal Sample
If a sample was analyzed for mercury by both Method 7470 and low-level Method 1631, the low-level Method 1631 result is shown.

Appendix B
Analytical Data Summary
Gavin Power, LLC
Residual Waste Landfill

		FEDERAL	FEDERAL	FEDERAL	FEDERAL	FEDERAL	FEDERAL
	Sample Date	2/1/2017	2/2/2017	2/2/2017	2/2/2017	2/2/2017	2/2/2017
	Sample Type	N	N	N	N	N	N
	Location ID	9802	2000	93100	93108	94126	94128
	Sample ID	9802-20170201-01	2000-20170202-01	93100-20170202-01	93108-20170202-01	94126-20170202-01	94128-20170202-01
Analyte	Unit						
Antimony	mg/L	3E-05	0.0001	5E-05	0.00016	0.0001	6E-05
Arsenic	mg/L	0.00103	0.00192	0.00156	0.00166	0.00442	0.0195
Barium	mg/L	0.069	0.0245	0.521	0.157	10.8	0.131
Beryllium	mg/L	6E-06	5E-06	1E-05	0.000107	5E-05	5E-06
Boron	mg/L	0.242	0.283	0.415	0.411	0.333	0.411
Cadmium	mg/L	5E-05	5E-05	8E-06	0.00019	4E-05	4E-06
Calcium	mg/L	28	2.57	16.8	5.85	323	6.38
Chloride	mg/L	38	96.3	199	688	11400	770
Chromium	mg/L	0.000823	0.00263	0.00582	0.025	0.00257	0.000409
Cobalt	mg/L	0.00108	0.000151	0.00195	0.00262	0.00371	0.000101
Combined Radium 226 +228	pCi/L	0.506	0.701	1.252	0.502	55.57	0.92
Fluoride	mg/L	0.84	2.13	2.18	4.57	0.7	2.06
Lead	mg/L	6E-05	0.000237	0.000189	0.00385	9E-05	2E-05
Lithium	mg/L	0.012	0.014	0.04	0.024	0.228	0.023
Mercury	mg/L	2E-06	2E-06	2E-06	9E-06	2E-06	2E-06
Molybdenum	mg/L	0.00525	0.0345	0.106	0.23	0.0626	0.371
pH, Field	pH units						
pH, Field	SU	7.19	8.59	7.87	7.9	7.2	7.96
Selenium	mg/L	5E-05	3E-05	0.0002	0.0002	0.0003	3E-05
Sulfate	mg/L	58.9	521	9.9	72.3	1	43.4
Thallium	mg/L	5E-05	5.2E-05	4E-05	0.000126	0.0001	2E-05
Total dissolved solids	mg/L	810	1290	3600	1900	16900	1990

Notes:
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If a sample was analyzed for mercury by both Method 7470 and low-level Method 1631, the low-level Method 1631 result is shown.

Appendix B
Analytical Data Summary
Gavin Power, LLC
Residual Waste Landfill

		FEDERAL	FEDERAL	FEDERAL	FEDERAL	FEDERAL	FEDERAL
	Sample Date	2/2/2017	2/6/2017	2/8/2017	2/8/2017	3/23/2017	3/23/2017
	Sample Type	N	N	N	N	FD	N
	Location ID	94139	94125	2003	9806	94126	2000
	Sample ID	94139-20170202-01	94125-20170206-01	2003-20170208-01	9806-20170208-01	DUP-03-20170323-01	2000-20170323-02
Analyte	Unit						
Antimony	mg/L	3E-05	0.0003	0.0002	6E-05	0.002 U	
Arsenic	mg/L	0.00317	0.00276	0.0074	0.00113	0.0058	
Barium	mg/L	0.081	1.22	0.145	0.05	11 B	
Beryllium	mg/L	2E-05	0.0002	0.000162	0.000122	0.001 U	
Boron	mg/L	0.456	0.494	0.462	25	0.46	
Cadmium	mg/L	6E-06	0.00109	6E-05	0.0001	0.001 U	
Calcium	mg/L	6.66	448	8.37	159	370 B	
Chloride	mg/L	500	12500	700	191	12000	
Chromium	mg/L	0.000647	0.195	0.0839	0.00291	0.0046	
Cobalt	mg/L	0.000159	0.0112	0.00382	0.00231	0.0041	
Combined Radium 226 +228	pCi/L	1.196	20.73	1.483	0.711	91.8	
Fluoride	mg/L	4.11	1	2.36	1.08	0.82 J	
Lead	mg/L	0.000319	0.0044	0.00165	0.00227	0.001 U	
Lithium	mg/L	0.014	0.237	0.019	0.249	0.17	
Mercury	mg/L	3E-06	7E-06	2E-06	6E-06	4.5E-07 J	
Molybdenum	mg/L	0.195	0.0534	0.125	0.0107	0.0059 J	
pH, Field	pH units						8.69
pH, Field	SU	8.13	6.81	7.84	8.49		
Selenium	mg/L	3E-05	0.0009	0.0011	0.0003	0.00087 J	
Sulfate	mg/L	51	80.8	65.3	113	8.3 J	
Thallium	mg/L	2E-05	0.0003	3E-05	4E-05	0.001 U	
Total dissolved solids	mg/L	1360	19500	1960	874	18000 J	

Notes:
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If a sample was analyzed for mercury by both Method 7470 and low-level Method 1631, the low-level Method 1631 result is shown.

Appendix B
Analytical Data Summary
Gavin Power, LLC
Residual Waste Landfill

		FEDERAL	FEDERAL	FEDERAL	FEDERAL	FEDERAL	FEDERAL
	Sample Date	3/23/2017	3/23/2017	3/23/2017	3/23/2017	3/23/2017	3/23/2017
	Sample Type	N	N	N	N	N	N
	Location ID	93108	94126	94128	94136	94137	94136
	Sample ID	93108-20170323-02	94126-20170323-02	94128-20170323-02	94136-20170323-02	94137-20170323-02	R-94136-20170323-01
Analyte	Unit						
Antimony	mg/L						0.0017 J
Arsenic	mg/L						0.0012 J
Barium	mg/L						0.11 B
Beryllium	mg/L						0.001 U
Boron	mg/L						0.46
Cadmium	mg/L						0.001 U
Calcium	mg/L						19 B
Chloride	mg/L						910
Chromium	mg/L						0.0019 J
Cobalt	mg/L						0.0004 J
Combined Radium 226 +228	pCi/L						0.398
Fluoride	mg/L						1.2
Lead	mg/L						0.00031 J
Lithium	mg/L						0.026
Mercury	mg/L						0.0002 U
Molybdenum	mg/L						0.02
pH, Field	pH units	8.07	7.35	8	7.81	7.03	
pH, Field	SU						
Selenium	mg/L						0.0012 J
Sulfate	mg/L						78 J
Thallium	mg/L						0.001 U
Total dissolved solids	mg/L						1800 J

Notes:
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If a sample was analyzed for mercury by both Method 7470 and low-level Method 1631, the low-level Method 1631 result is shown.

Appendix B
Analytical Data Summary
Gavin Power, LLC
Residual Waste Landfill

		FEDERAL	FEDERAL	FEDERAL	FEDERAL	FEDERAL	FEDERAL
	Sample Date	3/23/2017	3/23/2017	3/23/2017	3/23/2017	3/23/2017	3/27/2017
	Sample Type	N	N	N	N	N	N
	Location ID	94137	2000	93108	94128	94126	2003
	Sample ID	R-94137-20170323-01	R-2000-20170323-01	R-93108-20170323-01	R-94128-20170323-01	R-94126-20170323-01	2003-20170327-02
Analyte	Unit						
Antimony	mg/L	0.00038 J	0.002 U	0.002 U	0.002 UJ	0.002 U	
Arsenic	mg/L	0.0026 J	0.0042 J	0.0018 J	0.018 J	0.0058	
Barium	mg/L	0.068 B	0.078 B	0.19 B	0.15 JB	11 B	
Beryllium	mg/L	0.001 U	0.00042 J	0.001 U	0.001 UJ	0.001 U	
Boron	mg/L	0.04 J	0.33	0.5	0.49	0.44	
Cadmium	mg/L	0.001 U	0.001 U	0.001 U	0.001 UJ	0.001 U	
Calcium	mg/L	160 B	3.9 B	6 B	6.6 JB	370 B	
Chloride	mg/L	29	96	700	780	12000	
Chromium	mg/L	0.0031	0.06	0.02	0.002 UJ	0.0028	
Cobalt	mg/L	0.12	0.0052	0.002	0.001 UJ	0.0038	
Combined Radium 226 +228	pCi/L	0.411 U	0.497	0.471	0.368 U	83.5	
Fluoride	mg/L	0.14	2.6	5.4	2.6	0.69 J	
Lead	mg/L	0.00019 J	0.0052 J	0.0026 J	0.001 UJ	0.001 U	
Lithium	mg/L	0.0078 J	0.021	0.025	0.026 J	0.16	
Mercury	mg/L	1.5E-06	6.8E-06	3.7E-06	5E-07 U	5.3E-07	
Molybdenum	mg/L	0.0034 J	0.037	0.25	0.39 J	0.0042 J	
pH, Field	pH units						7.94
pH, Field	SU						
Selenium	mg/L	0.00056 J	0.00073 J	0.005 U	0.005 UJ	0.00087 J	
Sulfate	mg/L	360 J	560 J	83 J	49 J	28 J	
Thallium	mg/L	0.001 U	0.001 U	0.001 U	0.001 UJ	0.001 U	
Total dissolved solids	mg/L	890 J	1300 J	1800 J	1500 J	19000 J	

Notes:
FD = Field Duplicate Sample
N = Normal Sample
If a sample was analyzed for mercury by both Method 7470 and low-level Method 1631, the low-level Method 1631 result is shown.

Appendix B
Analytical Data Summary
Gavin Power, LLC
Residual Waste Landfill

		FEDERAL	FEDERAL	FEDERAL	FEDERAL	FEDERAL	FEDERAL
	Sample Date	3/27/2017	3/27/2017	3/27/2017	3/29/2017	3/29/2017	3/29/2017
	Sample Type	N	N	N	N	N	N
	Location ID	9806	2003	9806	93100	94139	9801
	Sample ID	9806-20170327-02	R-2003-20170327-01	R-9806-20170327-01	93100-20170329-02	94139-20170329-02	9801-20170329-02
Analyte	Unit						
Antimony	mg/L		0.0014 JB	0.0003 JB			
Arsenic	mg/L		0.03	0.0011 J			
Barium	mg/L		0.41 B	0.057 B			
Beryllium	mg/L		0.0031	0.001 U			
Boron	mg/L		0.46	0.31			
Cadmium	mg/L		0.001 U	0.001 U			
Calcium	mg/L		12 B	4 B			
Chloride	mg/L		650	200			
Chromium	mg/L		0.11 B	0.004 B			
Cobalt	mg/L		0.023	0.0016			
Combined Radium 226 +228	pCi/L		2.93	0.378			
Fluoride	mg/L		2.9	1.4			
Lead	mg/L		0.031 J	0.0018 J			
Lithium	mg/L		0.084	0.013			
Mercury	mg/L		0.0002 U	0.0002 U			
Molybdenum	mg/L		0.12	0.012			
pH, Field	pH units	8.59			7.82	8.12	7.2
pH, Field	SU						
Selenium	mg/L		0.0068	0.005 U			
Sulfate	mg/L		84 J	130 J			
Thallium	mg/L		0.00031 J	0.001 U			
Total dissolved solids	mg/L		2100 J	890 J			

Notes:
FD = Field Duplicate Sample
N = Normal Sample
If a sample was analyzed for mercury by both Method 7470 and low-level Method 1631, the low-level Method 1631 result is shown.

Appendix B
Analytical Data Summary
Gavin Power, LLC
Residual Waste Landfill

	Sample Date	FEDERAL 3/29/2017	FEDERAL 3/29/2017	FEDERAL 3/29/2017	FEDERAL 3/29/2017	FEDERAL 3/29/2017	FEDERAL 4/28/2017
	Sample Type	N	N	N	N	N	N
	Location ID	9802	94139	93100	9802	9801	93100
	Sample ID	9802-20170329-02	R-94139-20170329-01	R-93100-20170329-01	R-9802-20170329-01	R-9801-20170329-01	93100-20170428-02
Analyte	Unit						
Antimony	mg/L		0.0017 J	0.0012 J	0.00034 J	0.01 U	
Arsenic	mg/L		0.0031 J	0.002 J	0.00094 J	0.025 U	
Barium	mg/L		0.097 B	0.64 B	0.08 B	5 B	
Beryllium	mg/L		0.001 U	0.001 U	0.001 U	0.005 U	
Boron	mg/L		0.52	0.45	0.18	0.42	
Cadmium	mg/L		0.001 U	0.001 U	0.001 U	0.005 U	
Calcium	mg/L		5.5 B	17 B	29 B	180 B	
Chloride	mg/L		510	2200	39	8800	
Chromium	mg/L		0.0017 J	0.0098	0.00081 J	0.0017 J	
Cobalt	mg/L		0.00037 J	0.0012	0.0011	0.0014 J	
Combined Radium 226 +228	pCi/L		0.797	0.869	0.399 U	10.5	
Fluoride	mg/L		4.6	2.4	0.96	1 J	
Lead	mg/L		0.001 J	0.001 J	0.00026 J	0.005 U	
Lithium	mg/L		0.019	0.044	0.014	0.12	
Mercury	mg/L		0.0002 U	0.0002 U	0.0002 U	0.0002 U	
Molybdenum	mg/L		0.22	0.11	0.0051 J	0.0042 J	
pH, Field	pH units	7.24					7.86
pH, Field	SU						
Selenium	mg/L		0.00089 J	0.0007 J	0.005 U	0.025 U	
Sulfate	mg/L		62 J	15 J	70 J	8.6 J	
Thallium	mg/L		0.001 U	0.001 U	0.001 U	0.005 U	
Total dissolved solids	mg/L		1500 J	3900 J	820 J	13000 J	

Notes:
FD = Field Duplicate Sample
N = Normal Sample
If a sample was analyzed for mercury by both Method 7470 and low-level Method 1631, the low-level Method 1631 result is shown.

Appendix B
Analytical Data Summary
Gavin Power, LLC
Residual Waste Landfill

		FEDERAL	FEDERAL	FEDERAL	FEDERAL	FEDERAL	FEDERAL
	Sample Date	4/28/2017	4/28/2017	4/28/2017	4/28/2017	4/28/2017	4/28/2017
	Sample Type	N	N	N	N	N	N
	Location ID	94136	94137	94139	94136	94137	94139
	Sample ID	94136-20170428-02	94137-20170428-02	94139-20170428-02	R94136-20170428-01	R94137-20170428-01	R94139-20170428-01
Analyte	Unit						
Antimony	mg/L				0.002 U	0.002 U	0.002 U
Arsenic	mg/L				0.005 U	0.0012 J	0.0033 J
Barium	mg/L				0.1	0.056	0.092
Beryllium	mg/L				0.001 U	0.001 U	0.001 U
Boron	mg/L				0.43 B	0.028 JB	0.54 B
Cadmium	mg/L				0.001 U	0.001 U	0.001 U
Calcium	mg/L				17	160	7.1
Chloride	mg/L				900	29	510
Chromium	mg/L				0.002 U	0.002 U	0.002 U
Cobalt	mg/L				0.00079 J	0.031	0.001 U
Combined Radium 226 +228	pCi/L				0.584	0.384 U	0.907
Fluoride	mg/L				1.2	0.12 J	4.7
Lead	mg/L				0.001 U	0.001 U	0.001 U
Lithium	mg/L				0.028	0.0096	0.019
Mercury	mg/L				7.2E-06	3.7E-06	2.5E-06
Molybdenum	mg/L				0.015	0.0027 J	0.21
pH, Field	pH units	7.76	6.96	8.14			
pH, Field	SU						
Selenium	mg/L				0.005 U	0.005 U	0.005 U
Sulfate	mg/L				83	360	62
Thallium	mg/L				0.001 U	0.001 U	0.001 U
Total dissolved solids	mg/L				2000 J	920 J	1500 J

Notes:
FD = Field Duplicate Sample
N = Normal Sample
If a sample was analyzed for mercury by both Method 7470 and low-level Method 1631, the low-level Method 1631 result is shown.

Appendix B
Analytical Data Summary
Gavin Power, LLC
Residual Waste Landfill

		FEDERAL	FEDERAL	FEDERAL	FEDERAL	FEDERAL	FEDERAL
	Sample Date	4/28/2017	5/1/2017	5/1/2017	5/1/2017	5/1/2017	5/1/2017
	Sample Type	N	N	N	N	N	N
	Location ID	93100	2000	2003	9806	9806	2003
	Sample ID	R93100-20170428-01	2000-20170501-02	2003-20170501-02	9806-20170501-02	R-9806-20170501-01	R-2003-20170501-01
Analyte	Unit						
Antimony	mg/L	0.002 U				0.00068 J	0.00087 J
Arsenic	mg/L	0.0016 J				0.0015 J	0.019
Barium	mg/L	0.65				0.058	0.39
Beryllium	mg/L	0.001 U				0.00038 J	0.0022
Boron	mg/L	0.47 B				0.32	0.48
Cadmium	mg/L	0.001 U				0.001 U	0.001 U
Calcium	mg/L	16				4.2	15
Chloride	mg/L	2200				200	690
Chromium	mg/L	0.002 U				0.0054	0.058
Cobalt	mg/L	0.00027 J				0.0017	0.014
Combined Radium 226 +228	pCi/L	1.14				0.372 U	0.95
Fluoride	mg/L	2.2				1.3	2.8
Lead	mg/L	0.001 U				0.0028	0.019
Lithium	mg/L	0.047				0.012	0.05
Mercury	mg/L	1.3E-06				0.0002 U	0.0002 U
Molybdenum	mg/L	0.11				0.011	0.1
pH, Field	pH units		8.58	7.87	8.4		
pH, Field	SU						
Selenium	mg/L	0.005 U				0.0011 J	0.0034 J
Sulfate	mg/L	13 J				130	84
Thallium	mg/L	0.001 U				0.001 U	0.001 U
Total dissolved solids	mg/L	3700 J				860 J	2400 J

Notes:
FD = Field Duplicate Sample
N = Normal Sample
If a sample was analyzed for mercury by both Method 7470 and low-level Method 1631, the low-level Method 1631 result is shown.

Appendix B
Analytical Data Summary
Gavin Power, LLC
Residual Waste Landfill

	Sample Date	FEDERAL 5/1/2017	FEDERAL 5/2/2017	FEDERAL 5/2/2017	FEDERAL 5/2/2017	FEDERAL 5/2/2017	FEDERAL 5/2/2017
	Sample Type	N	FD	N	N	N	N
	Location ID	2000	94128	93108	94128	93108	94128
	Sample ID	R-2000-20170501-01	DUPE050217	93108-20170502-02	94128-20170502-02	93108-20170502-01	94128-20170502-01
Analyte	Unit						
Antimony	mg/L	0.002 U	0.002 U			0.002 U	0.002 U
Arsenic	mg/L	0.0017 J	0.017			0.0013 J	0.017
Barium	mg/L	0.022	0.15			0.18	0.15
Beryllium	mg/L	0.001 U	0.001 U			0.001 U	0.001 U
Boron	mg/L	0.33	0.45			0.48	0.45
Cadmium	mg/L	0.001 U	0.001 U			0.001 U	0.001 U
Calcium	mg/L	2.5	6.3			5.9	6.4
Chloride	mg/L	60	840			820	850
Chromium	mg/L	0.0019 J	0.002 U			0.004	0.002 U
Cobalt	mg/L	0.00026 J	0.001 U			0.00037 J	0.001 U
Combined Radium 226 +228	pCi/L	0.339	0.74			0.919	0.804
Fluoride	mg/L	2.2	2.8			5.1	2.8
Lead	mg/L	0.00056 J	0.001 U			0.0007 J	0.001 U
Lithium	mg/L	0.016	0.03			0.025	0.029
Mercury	mg/L	0.0002 U	0.0002 U			0.0002 U	0.0002 U
Molybdenum	mg/L	0.033	0.39			0.24	0.39
pH, Field	pH units			7.99	7.97		
pH, Field	SU						
Selenium	mg/L	0.005 U	0.005 U			0.005 U	0.005 U
Sulfate	mg/L	570	51			82	52
Thallium	mg/L	0.001 U	0.001 U			0.001 U	0.001 U
Total dissolved solids	mg/L	1200 J	1900 J			1900 J	1800 J

Notes:
FD = Field Duplicate Sample
N = Normal Sample
If a sample was analyzed for mercury by both Method 7470 and low-level Method 1631, the low-level Method 1631 result is shown.

Appendix B
Analytical Data Summary
Gavin Power, LLC
Residual Waste Landfill

		FEDERAL	FEDERAL	FEDERAL	FEDERAL	FEDERAL	FEDERAL
	Sample Date	5/17/2017	5/17/2017	5/17/2017	5/17/2017	6/8/2017	6/8/2017
	Sample Type	N	N	N	N	N	N
	Location ID	2016-20	94126	94126	2016-20	94126	94126
	Sample ID	2016-20-20170517-02	94126-20170517-02	94126-20170517-01	2016-20-20170517-01	94126-20170608-02	R94126-20170608-01
Analyte	Unit						
Antimony	mg/L			0.002 U	0.00099 J		0.002 U
Arsenic	mg/L			0.0025 J	0.0055		0.0021 J
Barium	mg/L			11	0.48		11
Beryllium	mg/L			0.001 U	0.001 U		0.001 U
Boron	mg/L			0.41	0.41		0.41
Cadmium	mg/L			0.001 U	0.001 U		0.001 U
Calcium	mg/L			320	49		320
Chloride	mg/L			12000	3200		11000
Chromium	mg/L			0.022	0.004		0.011
Cobalt	mg/L			0.0023	0.0014		0.0022
Combined Radium 226 +228	pCi/L			84.7			77.2
Fluoride	mg/L			5 U	1.2		5 U
Lead	mg/L			0.001 U	0.001		0.00053 J
Lithium	mg/L			0.19	0.06		0.19
Mercury	mg/L			4E-06 B	7.6E-06 B		4.3E-06 JB
Molybdenum	mg/L			0.008 J	0.14		0.004 J
pH, Field	pH units	8.16	7.21			7.12	
pH, Field	SU						
Selenium	mg/L			0.001 J	0.0023 J		0.00095 J
Sulfate	mg/L			100 U	450		100 U
Thallium	mg/L			0.001 U	0.001 U		0.001 U
Total dissolved solids	mg/L			18000 J	6300 J		18000

Notes:
FD = Field Duplicate Sample
N = Normal Sample
If a sample was analyzed for mercury by both Method 7470 and low-level Method 1631, the low-level Method 1631 result is shown.

Appendix B
Analytical Data Summary
Gavin Power, LLC
Residual Waste Landfill

	Sample Date Sample Type Location ID Sample ID	FEDERAL 6/8/2017 N 94128 R94128-20170608-01	FEDERAL 6/9/2017 FD 9801 PE02060917-20170609	FEDERAL 6/9/2017 N 94136 94136-20170609-02	FEDERAL 6/9/2017 N 94137 94137-20170609-02	FEDERAL 6/9/2017 N 9801 9801-20170609-02	FEDERAL 6/9/2017 N 9802 9802-20170609-02
Analyte	Unit						
Antimony	mg/L	0.002 U	0.05 U				
Arsenic	mg/L	0.017	0.13 U				
Barium	mg/L	0.15	4.7 B				
Beryllium	mg/L	0.001 U	0.001 U				
Boron	mg/L	0.46	0.45				
Cadmium	mg/L	0.00035 J	0.025 U				
Calcium	mg/L	6.7	170				
Chloride	mg/L	790	8300				
Chromium	mg/L	0.0028	0.05 U				
Cobalt	mg/L	0.0002 J	0.025 U				
Combined Radium 226 +228	pCi/L	0.639	10.3				
Fluoride	mg/L	2.6	5 U				
Lead	mg/L	0.001 U	0.005 U				
Lithium	mg/L	0.032	0.13				
Mercury	mg/L	9E-07 B	9.9E-07				
Molybdenum	mg/L	0.38 J	0.05 U				
pH, Field	pH units			7.8	7.05	7.21	7.2
pH, Field	SU						
Selenium	mg/L	0.005 U	0.13 U				
Sulfate	mg/L	53	100 U				
Thallium	mg/L	0.001 U	0.005 U				
Total dissolved solids	mg/L	2100	14000				

Notes:
FD = Field Duplicate Sample
N = Normal Sample
If a sample was analyzed for mercury by both Method 7470 and low-level Method 1631, the low-level Method 1631 result is shown.

Appendix B
Analytical Data Summary
Gavin Power, LLC
Residual Waste Landfill

		FEDERAL	FEDERAL	FEDERAL	FEDERAL	FEDERAL	FEDERAL
	Sample Date	6/9/2017	6/9/2017	6/9/2017	6/9/2017	6/12/2017	6/12/2017
	Sample Type	N	N	N	N	FD	N
	Location ID	9802	9801	94137	94136	94139	2000
	Sample ID	R9802-20170609-01	R9801-20170609-01	R94137-20170609-01	R94136-20170609-01	DUP-2-20170612-01	2000-20170612-02
Analyte	Unit						
Antimony	mg/L	0.002 U	0.05 U	0.002 U	0.01 U	0.002 U	
Arsenic	mg/L	0.00083 J	0.13 U	0.0036 J	0.025 U	0.0047 J	
Barium	mg/L	0.086 B	5 B	0.065 B	0.099 B	0.11	
Beryllium	mg/L	0.00035 J	0.001 U	0.001 U	0.001 U	0.001 U	
Boron	mg/L	0.19	0.45	0.039 J	0.54	0.53	
Cadmium	mg/L	0.001 U	0.025 U	0.001 U	0.005 U	0.001 U	
Calcium	mg/L	31 J	190	160	16	9.6	
Chloride	mg/L	38	8100	29	940	480	
Chromium	mg/L	0.0025	0.05 U	0.0049	0.005 J	0.0029	
Cobalt	mg/L	0.00048 J	0.025 U	0.097	0.0014 J	0.00062 J	
Combined Radium 226 +228	pCi/L	0.339 U	11.3	0.433 U	0.528	1.12	
Fluoride	mg/L	0.99	5 U	0.13 J	1.4	5	
Lead	mg/L	0.001 U	0.005 U	0.00053 J	0.001 U	0.0025	
Lithium	mg/L	0.012	0.12	0.0088	0.025	0.018	
Mercury	mg/L	1.8E-07 J	2.2E-06	2.8E-06 J	1.2E-06	3.4E-06 JB	
Molybdenum	mg/L	0.0046 J	0.05 U	0.0031 J	0.017 J	0.19 J	
pH, Field	pH units						8.55
pH, Field	SU						
Selenium	mg/L	0.005 U	0.13 U	0.005 U	0.025 U	0.005 U	
Sulfate	mg/L	72	100 U	360	99	70	
Thallium	mg/L	0.001 U	0.005 U	0.001 U	0.001 U	0.001 U	
Total dissolved solids	mg/L	830	14000	880	2000	1400	

Notes:
FD = Field Duplicate Sample
N = Normal Sample
If a sample was analyzed for mercury by both Method 7470 and low-level Method 1631, the low-level Method 1631 result is shown.

Appendix B
Analytical Data Summary
Gavin Power, LLC
Residual Waste Landfill

		FEDERAL	FEDERAL	FEDERAL	FEDERAL	FEDERAL	FEDERAL
	Sample Date	6/12/2017	6/12/2017	6/12/2017	6/12/2017	6/12/2017	6/12/2017
	Sample Type	N	N	N	N	N	N
	Location ID	2003	93100	93108	94139	94139	93100
	Sample ID	2003-20170612-02	93100-20170612-02	93108-20170612-02	94139-20170612-02	R94139-20170612-01	R93100-20170612-01
Analyte	Unit						
Antimony	mg/L					0.002 U	0.002 U
Arsenic	mg/L					0.0051	0.002 J
Barium	mg/L					0.12	0.65
Beryllium	mg/L					0.00038 J	0.001 U
Boron	mg/L					0.54	0.48
Cadmium	mg/L					0.001 U	0.001 U
Calcium	mg/L					10	20
Chloride	mg/L					480	2100
Chromium	mg/L					0.0052	0.04
Cobalt	mg/L					0.00082 J	0.0099
Combined Radium 226 +228	pCi/L					0.971	1.19
Fluoride	mg/L					5	2.3
Lead	mg/L					0.004	0.00046 J
Lithium	mg/L					0.019	0.043
Mercury	mg/L					3.3E-06 JB	3.5E-06 JB
Molybdenum	mg/L					0.2 J	0.11 J
pH, Field	pH units	7.83	7.77	7.87	8.01		
pH, Field	SU						
Selenium	mg/L					0.00091 J	0.005 U
Sulfate	mg/L					69	15
Thallium	mg/L					0.001 U	0.001 U
Total dissolved solids	mg/L					1400	3600

Notes:
FD = Field Duplicate Sample
N = Normal Sample
If a sample was analyzed for mercury by both Method 7470 and low-level Method 1631, the low-level Method 1631 result is shown.

Appendix B
Analytical Data Summary
Gavin Power, LLC
Residual Waste Landfill

		FEDERAL	FEDERAL	FEDERAL	FEDERAL	FEDERAL	FEDERAL
	Sample Date	6/12/2017	6/12/2017	6/12/2017	6/27/2017	6/27/2017	7/17/2017
	Sample Type	N	N	N	N	N	FD
	Location ID	93108	2000	2003	9806	9806	94136
	Sample ID	R93108-20170612-01	R2000-20170612-01	R-2003-20170612-01	9806-20170627-02	M9806-20170627-01	DUP071717
Analyte	Unit						
Antimony	mg/L	0.002 U	0.002 U	0.00074 J		0.002 U	0.002 U
Arsenic	mg/L	0.0016 J	0.0024 J	0.02		0.001 J	0.005 U
Barium	mg/L	0.18	0.036	0.29		0.041	0.11
Beryllium	mg/L	0.001 U	0.001 U	0.0016		0.001 U	0.001 U
Boron	mg/L	0.46	0.34	0.51		0.35	0.42 JB
Cadmium	mg/L	0.0014	0.001 U	0.001 U		0.001 U	0.001 U
Calcium	mg/L	5.8	3.2	12		3.7	17
Chloride	mg/L	790	79	560		200	950
Chromium	mg/L	0.002 U	0.0081	0.055		0.002 U	0.0032
Cobalt	mg/L	0.00025 J	0.0011	0.013		0.001 U	0.0007 J
Combined Radium 226 +228	pCi/L	0.704	0.539	2.05		0.353	0.521
Fluoride	mg/L	5.3	2.4	2.7		1.3	1.1
Lead	mg/L	0.001 U	0.0011	0.018		0.001 U	0.001 U
Lithium	mg/L	0.029	0.018	0.051		0.012	0.03
Mercury	mg/L	6.4E-07 B	1.8E-06 B	5E-06 JB		0.0002 U	0.0002 U
Molybdenum	mg/L	0.23 J	0.033	0.12 J		0.023	0.015
pH, Field	pH units				8.4		
pH, Field	SU						
Selenium	mg/L	0.005 U	0.005 U	0.0046 J		0.005 U	0.005 U
Sulfate	mg/L	84	560	86		130	60
Thallium	mg/L	0.001 U	0.001 U	0.001 U		0.001 U	0.001 U
Total dissolved solids	mg/L	2000	1300	2100		870	1800 J

Notes:
FD = Field Duplicate Sample
N = Normal Sample
If a sample was analyzed for mercury by both Method 7470 and low-level Method 1631, the low-level Method 1631 result is shown.

Appendix B
Analytical Data Summary
Gavin Power, LLC
Residual Waste Landfill

		FEDERAL	FEDERAL	FEDERAL	FEDERAL	FEDERAL	FEDERAL
	Sample Date	7/17/2017	7/17/2017	7/17/2017	7/17/2017	7/17/2017	7/17/2017
	Sample Type	N	N	N	N	N	N
	Location ID	2000	94136	94137	9801	9802	9802
	Sample ID	2000-20170717-02	94136-20170717-02	94137-20170717-02	9801-20170717-02	9802-20170717-02	R9802-20170717-01
Analyte	Unit						
Antimony	mg/L						0.002 U
Arsenic	mg/L						0.00089 J
Barium	mg/L						0.082
Beryllium	mg/L						0.001 U
Boron	mg/L						0.27 JB
Cadmium	mg/L						0.001 U
Calcium	mg/L						30
Chloride	mg/L						40
Chromium	mg/L						0.0011 J
Cobalt	mg/L						0.00041 J
Combined Radium 226 +228	pCi/L						0.786
Fluoride	mg/L						0.95
Lead	mg/L						0.001 U
Lithium	mg/L						0.014
Mercury	mg/L						0.0002 U
Molybdenum	mg/L						0.0048 J
pH, Field	pH units	8.61	7.89	6.96	7.16	7.11	
pH, Field	SU						
Selenium	mg/L						0.0012 J
Sulfate	mg/L						71
Thallium	mg/L						0.001 U
Total dissolved solids	mg/L						810 J

Notes:
FD = Field Duplicate Sample
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If a sample was analyzed for mercury by both Method 7470 and low-level Method 1631, the low-level Method 1631 result is shown.

Appendix B
Analytical Data Summary
Gavin Power, LLC
Residual Waste Landfill

		FEDERAL	FEDERAL	FEDERAL	FEDERAL	FEDERAL	FEDERAL
	Sample Date	7/17/2017	7/17/2017	7/17/2017	7/17/2017	7/18/2017	7/18/2017
	Sample Type	N	N	N	N	FD	N
	Location ID	9801	94136	94137	2000	93100	93100
	Sample ID	R9801-20170717-01	R94136-20170717-01	R94137-20170717-01	R2000-20170717-01	DUP071817	93100-20170718-02
Analyte	Unit						
Antimony	mg/L	0.004 U	0.002 U	0.002 U	0.002 U	0.002 U	
Arsenic	mg/L	0.01 U	0.005 U	0.0028 J	0.0017 J	0.0019 J	
Barium	mg/L	5.3	0.1	0.059	0.024	0.66	
Beryllium	mg/L	0.002 U	0.001 U	0.001 U	0.001 U	0.001 U	
Boron	mg/L	0.52 JB	0.44 JB	0.072 JB	0.35 JB	0.49 JB	
Cadmium	mg/L	0.002 U	0.001 U	0.001 U	0.001 U	0.001 U	
Calcium	mg/L	200	17	160	2.6	17	
Chloride	mg/L	9000	960	28	62	2200	
Chromium	mg/L	0.0025 J	0.001 J	0.0038	0.0019 J	0.011	
Cobalt	mg/L	0.0011 J	0.00065 J	0.17	0.00042 J	0.0033	
Combined Radium 226 +228	pCi/L	11 J	0.765	0.351 U	0.53	1.32	
Fluoride	mg/L	5	1.1	0.12	2.2	2.3	
Lead	mg/L	0.002 U	0.001 U	0.001 U	0.00058 J	0.001 U	
Lithium	mg/L	0.15	0.029	0.0088	0.016	0.048	
Mercury	mg/L	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	
Molybdenum	mg/L	0.004 J	0.015	0.0026 J	0.032	0.097	
pH, Field	pH units						7.71
pH, Field	SU						
Selenium	mg/L	0.01 U	0.005 U	0.005 U	0.005 U	0.005 U	
Sulfate	mg/L	100 U	61	370	560	14 J	
Thallium	mg/L	0.002 U	0.001 U	0.001 U	0.001 U	0.001 U	
Total dissolved solids	mg/L	14000 J	1900 J	920 J	1300 J	3400 J	

Notes:
FD = Field Duplicate Sample
N = Normal Sample
If a sample was analyzed for mercury by both Method 7470 and low-level Method 1631, the low-level Method 1631 result is shown.

Appendix B
Analytical Data Summary
Gavin Power, LLC
Residual Waste Landfill

		FEDERAL	FEDERAL	FEDERAL	FEDERAL	FEDERAL	FEDERAL
	Sample Date	7/18/2017	7/18/2017	7/18/2017	7/18/2017	7/18/2017	7/18/2017
	Sample Type	N	N	N	N	N	N
	Location ID	93108	94126	94128	94139	93108	94139
	Sample ID	93108-20170718-02	94126-20170718-02	94128-20170718-02	94139-20170718-02	R93108-20170718-01	R94139-20170718-01
Analyte	Unit						
Antimony	mg/L					0.002 U	0.002 U
Arsenic	mg/L					0.0029 J	0.008
Barium	mg/L					0.22	0.29
Beryllium	mg/L					0.00047 J	0.0015
Boron	mg/L					0.48 JB	0.54 JB
Cadmium	mg/L					0.00024 J	0.00034 J
Calcium	mg/L					6.4	13
Chloride	mg/L					750	520
Chromium	mg/L					0.067	0.014
Cobalt	mg/L					0.0059	0.0035
Combined Radium 226 +228	pCi/L					2.09	2.21
Fluoride	mg/L					5.5	5.1
Lead	mg/L					0.0074	0.029
Lithium	mg/L					0.033	0.024
Mercury	mg/L					0.0002 U	0.0002 U
Molybdenum	mg/L					0.24	0.19
pH, Field	pH units	7.84	7.11	7.8	7.92		
pH, Field	SU						
Selenium	mg/L					0.005 U	0.0029 J
Sulfate	mg/L					90	66
Thallium	mg/L					0.00021 J	0.001 U
Total dissolved solids	mg/L					1800 J	1400 J

Notes:
FD = Field Duplicate Sample
N = Normal Sample
If a sample was analyzed for mercury by both Method 7470 and low-level Method 1631, the low-level Method 1631 result is shown.

Appendix B
Analytical Data Summary
Gavin Power, LLC
Residual Waste Landfill

		FEDERAL	FEDERAL	FEDERAL	FEDERAL
	Sample Date	7/18/2017	7/18/2017	7/18/2017	8/10/2017
	Sample Type	N	N	N	N
	Location ID	93100	94128	94126	2016-21
	Sample ID	R93100-20170718-01	R94128-20170718-01	R94126-20170718-01	2017-21-20170810-01
Analyte	Unit				
Antimony	mg/L	0.002 U	0.002 U	0.004 U	0.0036 B
Arsenic	mg/L	0.002 J	0.019	0.0017 J	0.037
Barium	mg/L	0.66	0.15	11	0.035
Beryllium	mg/L	0.001 U	0.001 U	0.002 U	0.001 U
Boron	mg/L	0.5 JB	0.47 JB	0.43 JB	0.34
Cadmium	mg/L	0.001 U	0.001 U	0.002 U	0.001 U
Calcium	mg/L	17	6	310	24
Chloride	mg/L	2200	830	12000	110
Chromium	mg/L	0.011	0.002 U	0.0066	0.0035
Cobalt	mg/L	0.0031	0.001 U	0.0028	0.00088 J
Combined Radium 226 +228	pCi/L	1.41	1.09	82.8 J	6.04
Fluoride	mg/L	2.3	2.8	5	2.1
Lead	mg/L	0.001 U	0.001 U	0.002 U	0.001 U
Lithium	mg/L	0.048	0.032	0.2	0.076
Mercury	mg/L	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Molybdenum	mg/L	0.098	0.39	0.0062 J	0.1 B
pH, Field	pH units				
pH, Field	SU				
Selenium	mg/L	0.005 U	0.005 U	0.01 U	0.0027 J
Sulfate	mg/L	14 J	57	100 U	360
Thallium	mg/L	0.001 U	0.001 U	0.002 U	0.001 U
Total dissolved solids	mg/L	3600 J	1900 J	16000 J	1000

Notes:
FD = Field Duplicate Sample
N = Normal Sample
If a sample was analyzed for mercury by both Method 7470 and low-level Method 1631, the low-level Method 1631 result is shown.