2021 Annual Groundwater Monitoring and Corrective Action Report

Grand River Dam Authority Landfill

Grand River Energy Center

Mayes County, Oklahoma

Solid Waste Permit No. 3549012

Submitted to:

Grand River Dam Authority

Mayes County, Oklahoma

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1.0 INTRODUCTION

This 2021 Annual Groundwater Monitoring and Corrective Action Report (Annual Report) addresses the Grand River Dam Authority (GRDA) Landfill at the Grand River Energy Center (GREC), operated by the GRDA. This Annual Report was developed in accordance with the Oklahoma Administrative Code (OAC) Title 252, Chapter 517: Disposal of Coal Combustion Residuals (CCR) from Electric Utilities Rule (Rule), effective September 15, 2018. Consistent with applicable sections of OAC 252:517-9, the Annual Report documents the status of the groundwater monitoring and corrective action program, summarizes key actions completed during the previous year (2021), evaluates groundwater data collected during the previous year, describes problems encountered and resolutions, and presents key project objectives and corrective actions for the upcoming year (2022).

This Annual Report is being submitted to the Oklahoma Department of Environmental Quality (ODEQ) to satisfy the requirement under OAC 252:517-9-1(e) that the owner or operator of a CCR unit prepare an annual groundwater monitoring and corrective action report. This report will be placed in the GRDA Landfill operating record and on GRDA's publicly accessible CCR Website (https://www.grda.com/ccr-rule-compliance-data-and-information/).

2.0 BACKGROUND

The GREC is an electric power generating facility located approximately 3 miles east of the City of Chouteau, in Mayes County, Oklahoma. The GREC houses two coal-fired boilers (Unit No. 1 and Unit No. 2) and one combined cycle natural gas turbine (Unit No. 3). Unit #1 was retired in December 2020. Unit #2 and Unit #3 are currently operational. The GRDA Landfill is permitted by the ODEQ as a Non-Hazardous Industrial Waste (NHIW) Landfill that is allowed to accept fly ash, bottom ash, and spent powdered activated carbon used to control flue gas emissions generated at the GREC. The GRDA Landfill is situated south of the operational area within the GREC complex (**Figure 1**). The total landfill permit area consists of approximately 116 acres, of which only 47 acres have been utilized for CCR disposal. The landfill is underlain by alluvium deposits that consist of unconsolidated clay, silt, sand and gravel layers. The alluvium overlays sandstone/limestone bedrock.

Sampling and analysis of groundwater at the GRDA Landfill is an on-going activity that has been conducted for at least 27 years. Three of the five groundwater monitoring wells currently used in the monitoring activities (up-gradient well MW93-1 and down-gradient wells MW93-2 and MW93-3) have analytical data sets that extend back to December 1994. The two other down-gradient groundwater monitoring wells (MW03-1 and MW03-2) were installed in 2004 and have analytical data sets extending back to June 2004.

Detection monitoring was conducted under the Updated Groundwater Sampling and Analysis Program (SAP) dated January 3, 2018. As part of the updated SAP, eight independent samples required by OAC 252:517-9-5(b) were collected from May 2018 through December 2018.

Detection monitoring events conducted in 2018, identified and verified statistically significant increases (SSIs) in certain wells. In accordance with OAC 252:517-9-6, an Assessment Monitoring Plan was developed and first submitted to the ODEQ on March 29, 2019. In correspondence dated June 20, 2019, the ODEQ requested changes to the Assessment Monitoring Plan including changing references to the current CCR regulations (OAC 252:517) rather than the historical regulations which required non-CCR constituents (OAC 252:515). The plan was revised and submitted to the ODEQ in August 2019. Subsequent discussions and correspondence with the ODEQ concerning the Assessment Monitoring Plan resulted in the addition of historical select non-CCR regulated constituents (specific conductivity, total alkalinity, and sodium) into GRDA's Appendix A list of constituents. A revised Assessment Monitoring Plan (dated December 2019) which incorporated the additional non-CCR regulated constituents into a site-specific modified Appendix A was prepared and submitted to the ODEQ on January 10, 2020. The Revised Assessment Monitoring Plan was approved by the ODEQ on January 28, 2020.

The GRDA transitioned into assessment monitoring for the second 2019 semi-annual sampling event and statistical analyses were performed on the entire data set comprising Appendix A and B constituents.

The Annual Groundwater Monitoring and Corrective Action Report (Calendar Year 2020) was posted and submitted on January 29, 2020. The report identified several inter- and intra-well exceedances and identified mercury as exceeding the groundwater protection standard (GWPS) in MW93-2 and MW03-2.

3.0 STATUS OF GROUNDWATER MONITORING AND CORRECTIVE ACTION PROGRAM

As stated above, the GRDA transitioned into assessment monitoring for the second 2019 semi-annual sampling event. Assessment monitoring was conducted for all of 2020. Some groundwater concentrations of Appendix B constituents during semi-annual and annual monitoring during 2020 demonstrated SSIs in concentrations and exceedances of GWPS. Based on the results of the 2020 groundwater monitoring, assessment monitoring continued during 2021.

4.0 KEY ACTIONS COMPLETED IN 2021

The following summarizes the communications and key actions completed in 2021:

- On January 29, 2021, GRDA provided notification to ODEQ that several Appendix B constituents demonstrated SSI and/or exceeded he Ground Water Protection Standards (GWPS) established under Subpart (h) of OAC 252:517-9-6.
- On April 2, 2021, Grand River Dam Authority (GRDA) requested a Tier I permit modification to modify the groundwater monitoring system for the Grand River Energy Center (GREC) Coal Combustion Residual (CCR) landfill.
- A semi-annual assessment monitoring event was completed on May 26, 2021, for Appendix A and Appendix B constituents. Statistical evaluation of analytical data from the May 2021 assessment monitoring sampling event was submitted in August 2021.
- In a letter dated August 19, 2021, ODEQ requested additional information to support an alternate source demonstration (ASD).
- On October 11, 2021, GRDA provided additional information to support the request for an ASD determination.
- During a meeting on November 16, 2021, ODEQ requested a Proposed Plan and Schedule, according to the requirements found at OAC 252:517-9-6(g).
- A second semi-annual assessment monitoring event was completed in November 2021 for Appendix A and Appendix B constituents. Statistical evaluation of analytical data from the November 2021 assessment monitoring sampling event is summarized in this report.
- In a letter dated December 3, 2021, GRDA submitted a Proposed Site Characterization Study Plan and Schedule for the Grand River Energy Center Coal Combustion Residuals Landfill.

5.0 GROUNDWATER SAMPLING ACTIVITIES

In accordance with the Revised Assessment Monitoring Plan (approved January 28, 2020), semi-annual assessment monitoring events were conducted at the GRDA landfill on May 26, 2021 and November 16-17, 2021. For each event, groundwater samples were collected from five on-site monitoring wells, one up-gradient/background well (MW93-1) and four down-gradient/compliance wells (MW93-2, MW93-3, MW03-1, and MW03-2). The groundwater monitoring wells were uncapped and allowed to equilibrate for approximately 20 minutes. Static water levels and total monitoring well depths were then measured and recorded to the nearest one-hundredth of a foot using an electronic water level meter. The static water level survey data is presented in **Tables 1 and 2.**

The monitoring wells were then purged and sampled using a peristaltic pump and new dedicated tubing for each monitoring well. Pump tubing was lowered to the approximate midpoint of the monitoring well screen. Purging and sampling procedures followed the United States Environmental Protection Agency (EPA) Region 1 Low Stress (low flow) Purging and Sampling Procedure for the Collection of Groundwater Samples from Monitoring Wells (2017). Groundwater samples were collected into laboratory supplied sample containers and immediately packed on ice in an insulated container. Groundwater samples for metals analysis were collected unfiltered and unpreserved and were analyzed for total recoverable metals.

Groundwater samples (except for pH) were then submitted to Pace Analytical of Mt. Juliet, Tennessee for analysis. Groundwater pH was measured in the field within the 15-minute hold time and under ENERCON's Oklahoma Department of Environmental Quality (ODEQ) field laboratory accreditation. Quality Assurance/Quality Control (QA/QC) samples consisted of one blind-duplicate and one trip blank per event.

Groundwater samples were analyzed for the following constituents:

- Appendix A (modified[1]): boron, calcium, chloride, fluoride, pH, sulfate, total dissolved solids (TDS), specific conductivity, total alkalinity, and sodium; and
- Appendix B: antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, fluoride, lead, lithium, mercury, molybdenum, selenium, thallium, radium 226 and 228 combined.

A summary of groundwater analytical data for the May and November 2021 assessment monitoring events are included as **Table 3**. Laboratory analytical reports are included in **Appendix A**.

5.1 Quality Assurance/Quality Control (QA/QC) Review

Field equipment calibration and sampling records were reviewed to evaluate adherence to the purging and sampling procedures. Review of the field notes indicated field instruments were properly calibrated and wells were properly purged prior to sample collection. The chain of custody forms associated with the laboratory reports were reviewed for information regarding sample dates, sample identification, sample media, and date of submittal to the analytical laboratory. Review of the laboratory analytical report confirmed that the samples were received in good condition at the appropriate temperature, in the proper containers, with the appropriate preservatives, with custody seals intact, and within method-specified holding times. Since duplicate samples were collected as "blind" duplicates, the duplicate sample dates, times, and associated field samples were recorded in the field log and purposefully not recorded on the laboratory chain of custody forms. For the laboratory analytical report, the laboratory inserted arbitrary duplicate sample dates required by the laboratory data management system. The

[1] Specific conductivity, total alkalinity, and sodium are historical non-CCR regulated constituents included in the modified Appendix A list according to the December 2019 Revised Assessment Monitoring Plan.

sample dates recorded in the laboratory analytical summary table reflect the actual duplicate (Dup) sample collection dates. Based on this review, samples were collected and delivered to the analytical laboratory according to environmental sampling protocols.

The blind duplicate samples collected from MW93-3 (May 2021) and MW03-2 (November 2021) were collected and analyzed for Appendix A constituents. The relative percent difference (RPD) between the analytical results from samples MW93-3 and MW03-2 and their respective duplicate samples were calculated. The RPDs ranged from 0 to 12.1 percent for both sampling events, within the typical groundwater RPD review criteria of 25 percent, indicating acceptable field and laboratory precision.

Per the SAP, one trip blank sample per event was analyzed for Appendix A constituents. TDS, chloride, sulfate, boron, and sodium were detected in the trip blank (BLANK) during the May and November 2021 events. The trip blank has no bearing on the analytical results from other samples in the same shipping container for these constituents. As such, no cross-contamination issues are presented by these trip blank detections.

Where applicable, the method detection limit (MDL) and reported detection limit (RDL) values for the groundwater samples were corrected for the dilution factor used in the analysis. The Method and Batch Quality Control analyses were within established criteria for the laboratory methods, except where qualifiers (e.g., J-flags) are presented, thus the analytical results are characterized as accurate and precise.

5.2 Evaluation of 2021 Groundwater Monitoring Data

Groundwater level data collected during the November 2021 groundwater sampling event indicate that groundwater flow in the uppermost aquifer flows from the northwest towards the southeast, generally following the surface terrain. Groundwater velocity can be calculated using the following:

$V = Ki/\Phi$

Where:

K = Hydraulic Conductivity = 1.0×10^{-4} cm/s (Source: 2018 SAP)
i = Hydraulic Gradient = 0.005 ft/ft (Source: November 2021 field data)
Φ = Effective Porosity = 0.2 or 20 % (Source: 2018 SAP)

$$V = \frac{(1.0 \times 10^{-4} \text{ cm/s})(0.005)}{0.2}$$

V = 2.5 feet per year

Historical groundwater flow maps covering the time period from July 2012 through May 2019 were previously submitted to the ODEQ. The data provided shows the fluctuations of the groundwater

levels at each monitoring well and provides an indication of the direction of groundwater flow. The maps were compiled semi-annually and include the elevation of the groundwater at each well, interpolated contours of the top of groundwater elevation across the site, and the direction of groundwater flow. **Figures 1 and 2** show monitoring well locations, groundwater elevations, and groundwater flow directions for May 2021 and November 2021, respectively.

Statistical evaluation of the laboratory analytical results was performed in accordance with OAC 252:517-9-4(g)(3) and the Revised Assessment Monitoring Plan (approved January 28, 2020) utilizing Chemostat Statistical Analysis Software (Version 6.4.0). Statistical analyses were conducted using the Shapiro-Francia Test of Normality, Levene's equal variance test, and ANOVA (Analysis of Variance) to establish assumptions of normality and equal variance of the historical concentration data sets for each constituent. Analyses of the May and November 2021 constituent data sets indicated that assumptions of normality and equal variance were not appropriate for all constituents, and non-parametric prediction intervals were used for inter-well and intra-well comparisons.

Inter-well analyses were conducted to compare constituent concentrations in down-gradient compliance wells (MW93-2, MW93-3, MW03-1, and MW03-2) to the concentrations observed in an up-gradient background well (MW93-1). Inter-well tests assume that concentrations observed in the background well are not impacted by site activities and represent natural groundwater conditions. Background concentrations are established by pooling a statistically significant number of historical data points from the background well to establish a maximum background concentration for each constituent analyzed. A statistically significant increase in concentration occurs if recent detected concentrations exceed the established background concentration. An intra-well exceedance occurs when a pool of recent data demonstrates a statistically significant increasing trend when compared to a pool of historical baseline data from the same well.

Groundwater concentrations are also compared to the site-specific GWPS. The GWPS for each constituent were developed using respective MCLs. If a constituent did not have an MCL or if the background concentration was greater than the MCL, then the statistical background concentration was used as the GWPS. Established background concentrations, GWPS, and results of the statistical analysis are included in **Tables 3 through 5**. A copy of the statistical output is included in **Appendix B**.

5.3 Statistical Analysis of the May 2021 Assessment Monitoring Data

Statistical analysis of the May 2021 and historic data indicated the following:

- Inter-well exceedances (relative to background) were observed for all Appendix A constituents except calcium. Inter-well exceedances for Appendix B constituents were observed for arsenic, barium, fluoride, lithium, mercury, molybdenum, and combined radium.

- Well MW93-2 exhibited inter-well and intra-well exceedances for one Appendix A constituent, sulfate. GWPS are not established for Appendix A constituents. No intra-well exceedances for Appendix B constituents were observed in the compliance wells.
- Concentrations of arsenic (MW93-2), molybdenum (MW93-2), lithium (MW93-3), and mercury (MW03-2) were greater than the GWPS and/or the MCL. Each of these constituents demonstrated an inter-well exceedance (greater than background) but did not demonstrate an intra-well exceedance (increasing trend within the well itself).
- A new maximum concentration of fluoride was observed in the background well.

5.4 Statistical Analysis of the November 2021 Assessment Monitoring Data

Statistical analysis of the November 2021 and historic data indicated the following:

- Inter-well exceedances (relative to background) for several Appendix A and Appendix B constituents were observed in the compliance wells. Exceedances for every Appendix A constituent was observed except for alkalinity and calcium. Exceedances for Appendix B constituents include arsenic, barium, fluoride, lithium, mercury, molybdenum, and combined radium.
- A statistically significant intra-well increase of sulfate (Appendix A) was observed in MW93-2. GWPS are not established for Appendix A constituents.
- The molybdenum concentration in MW93-2 demonstrated an SSI and also exceeded the GWPS.
- The arsenic concentration in MW93-2, mercury concentration in MW03-2, and the lithium concentration in MW93-3 exceeded the GWPS but did not demonstrate an SSI.
- A new maximum concentration of pH and combined radium were observed in the background well.

6.0 PROBLEMS ENCOUNTERED AND RESOLUTIONS

Prior to the November 2021 groundwater sampling event, no Appendix B constituents demonstrated both an SSI and an exceedance of either an MCL or a GWPS. In November 2021, the molybdenum concentration in MW93-2 demonstrated an SSI and also exceeded the GWPS. Arsenic, mercury, and lithium concentrations in MW93-2, MW03-2, and MW93-3, respectively, were also greater than their respective MCL or GWPS but did not demonstrate SSIs.

There are indications that groundwater monitoring data from the some of the monitoring wells may not accurately represent background or down-gradient groundwater conditions due to either monitoring well location or well construction. Well construction diagrams, groundwater parameter data collected during monitoring activities, and groundwater elevation data indicate that MW93-2

and MW93-3 may not be constructed in the naturally occurring alluvial strata or that the well is compromised. Monitoring well MW03-2 may be located in an area where fly ash was used as a beneficial fill material. There are also indications that groundwater conditions in the background well, MW93-1, may not be representative of ambient alluvial groundwater concentrations.

Pursuant to the Oklahoma Administrative Code (OAC) Section 252:517-9-6, if Appendix B constituents are detected at an SSI and are above an MCL or GWPS, the owner must notify ODEQ of the exceedances and submit a plan for site characterization in order to develop appropriate corrective action. An application to modify the groundwater monitoring system including the installation of three new monitoring wells was submitted to ODEQ on April 2, 2021. In a letter dated August 19, 2021, ODEQ denied the request to modify the groundwater monitoring system. According to the ODEQ, upon the notification of an SSI, either a site characterization study/delineation of release or a demonstration of a non-landfill source is required. GRDA submitted a Proposed Site Characterization Study Plan and Schedule for the Grand River Energy Center Coal Combustion Residuals Landfill on December 3, 2021.

7.0 KEY ACTIVITIES FOR THE UPCOMING YEAR

In accordance with the Revised Assessment Monitoring Plan (approved January 28, 2020), the following will be completed in CY2022:

- Semi-annual and annual groundwater monitoring.
- Statistical analysis of the semi-annual and annual groundwater monitoring data; and
- Preparation of semi-annual and annual reports.
- Implementation of the Site Characterization Study Plan in accordance with ODEQ approval.

8.0 PUBLISHED REFERENCES

EPA, 2017. Region 1 Low Stress (low flow) Purging and Sampling Procedure for the Collection of Groundwater Samples from Monitoring Wells. Revision 4. September 19, 2017.

A&M Engineering and Environmental Services, 2018. Groundwater Sampling and Analysis Program for Grand River Dam Authority Landfill. Grand River Energy Center. Mayes County, Oklahoma. Solid Waste Permit No. 3549012. October 16, 2017. Updated January 3, 2018.

A&M Engineering and Environmental Services, 2019. Assessment Monitoring Plan for the Grand River Dam Authority Grand River Energy Center Landfill. Chouteau, Mayes County, Oklahoma. Permit No. 3549012. March 2019. Revised August 2019 and December 2019. Approved January 28, 2020.

A&M Engineering and Environmental Services, 2020. Annual Groundwater Monitoring and Corrective Action Report (Calendar Year 2019). Grand River Dam Authority Landfill. Grand River Energy Center. Mayes County, Oklahoma. Solid Waste Permit No. 3549012. January 31, 2020.

ODEQ, 2020. Letter to GRDA Re: 2019 Annual Groundwater Monitoring and Corrective Action Report (Report), Grand River Dam Authority Landfill. Mayes County, Permit Number 3549012. Dated March 6, 2020.

GRDA, 2020. Letter to ODEQ Re: Addendum to Annual Groundwater Monitoring and Corrective Action Report for Calendar Year 2019. Grand River Dam Authority. Grand River Dam Authority. Grand River Energy Center, Chouteau, Oklahoma. Dated March 6, 2020.

Tables

Table 1 - Static Water Level Survey Data - May 2021

Grand River Dam Authority Landfill

Grand River Energy Center - Mayes County, Oklahoma

Sample Location	Ground Elevation (ft. AMSL)	TOC Elevation (ft. AMSL)	5/26/2021	
			Depth to Groundwater (ft. BTOC)	GW Elevation (ft. AMSL)
MW03-1	602.17	604.99	7.49	597.50
MW03-2	605.54	607.95	13.05	594.90
MW93-1	618.40	620.62	10.14	610.48
MW93-2	606.55	609.85	7.74	602.11
MW93-3	606.22	608.73	13.49	595.24

AMSL - above mean sea level
BTOC - below top of casing
ft - feet

Table 2 - Static Water Level Survey Data - November 2021

Grand River Dam Authority Landfill

Grand River Energy Center - Mayes County, Oklahoma

Sample Location	Ground Elevation (ft. AMSL)	TOC Elevation (ft. AMSL)	11/16/2021	
			Depth to Groundwater (ft. BTOC)	GW Elevation (ft. AMSL)
MW03-1	602.17	604.99	9.33	595.66
MW03-2	605.54	607.95	15.43	592.52
MW93-1	618.40	620.62	10.12	610.50
MW93-2	606.55	609.85	8.25	601.60
MW93-3	606.22	608.73	14.42	594.31

AMSL - above mean sea level

BTOC - below top of casing

ft - feet

Table 3 - Summary of Groundwater Analytical Data - May and November 2021
Grand River Dam Authority Landfill
Grand River Energy Center - Mayes County, Oklahoma

Units		mg/L		mg/L		mg/L		mg/L		mg/L	su		mg/L	umhos/cm		mg/L	mg/L		mg/L		mg/L		mg/L		mg/L		mg/L		mg/L		mg/L		mg/L		mg/L		mg/L		mg/L		mg/L		mg/L		mg/L					
Parameter (Method)		Alkalinity (2320B-2011)		Boron (200.7)		Calcium (200.8)		Chloride (300)		Total Dissolved Solids (2540 C-2011)	pH (4500, field)		Sodium (200.8)	Specific Conductance (120.1)		Sulfate (300)	Fluoride (300)		Antimony (200.8)		Arsenic (200.8)		Barium (200.8)		Beryllium (200.8)		Cadmium (200.8)		Chromium (200.8)		Cobalt (200.8)		Lead (200.8)		Lithium (200.7)		Mercury (245.1)		Molybdenum (200.8)		Radium 226/228 Combined (904/SM 7500 Ra B)		Selenium (200.8)		Thallium (200.8)					
Appendix		A		A		A		A		A	A		A	A		A	A,B		B		B		B		B		B		B		B		B		B		B		B		B					
Background		550		0.499		670		63		1,050	5.58,6.1 7.05,7.17		130	1,888		880	0.243, 0.245		0.01		0.0109		0.0321, 0.0405		0.01		0.00125		0.02		0.01		0.005		0.015		0.000184, 0.0002		0.01		1.19, 2.24		0.005		0.01					
GWPS		NA		NA		NA		NA		NA	NA		NA	NA		NA	4.0		0.01		0.0109		2		0.01		0.005		0.1		0.01		0.005		0.015		0.002		0.01		5		0.05		0.01					
MCL		NC		NC		NC		NC		NC	NC		NC	NC		NC	4.0		0.006		0.010		2		0.004		0.005		0.1		NC		NC		NC		0.002		NC		5		0.05		0.002					
Sample Location	Date Sampled	Result	Q	Result	Q	Result	Q	Result	Q	Result	Result	Q	Result	Result	Q	Result	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Inter-Well SSI	Intra-Well SSI	MCL Exceedance	GWPS Exceedance
MW93-1	05/26/2021	441		0.227		179		12.9		988	6.59		112	1,460		400	**0.245**		<0.00172		0.000268	J	0.0132		<0.000201		<0.000160		<0.00560		<0.000142		<0.000513		<0.00689		<0.000100		<0.000841		0.99		<0.000437		<0.000176			X		
MW93-1	11/17/2021	393		0.322		210		17.7		1,000	**7.17**		90.4	1,680		504	0.168		<0.00500		0.000277	J	0.0173		<0.00100		0.00043	J	<0.0200		<0.00200		<0.00200		<0.0150		<0.000200		<0.00500	J	**2.24**		<0.00200		<0.00100			X		
MW93-2	05/26/2021	201		1.59		189		1,480		7,380	8.74		2,680	13,300		**5,100**	<0.640		<0.00172		0.0148		0.126		<0.000201		<0.000160		<0.00560		0.00023	J	<0.000513		0.0136	J	<0.000100		0.906		3.25		0.000649	J	<0.000176		X	X	X	X
MW93-2 (Dup)	05/26/2021	199		1.59		200		1,670		7,520	8.74		2,670	13,300		**5,600**	0.287		--		--		--		--		--		--		--		--		--		--		--		--		--		--		--		NA	NA	NA	NA
MW93-2	11/17/2021	108		1.71		195		1,800		8,020	8.64		2,560	15,000		**5,940**	0.793	J	<0.00500		0.0266		0.127		<0.00100		0.000207	J	<0.0200		0.000222	J	<0.00200		0.0115	J	<0.000200		**1.660**		3.743		0.00102	J	<0.00100		X	X	X	X
MW93-3	05/26/2021	576		0.0889	J	75.1		232		1,240	6.71		355	2,130		226	0.233		<0.00172		0.000522	J	0.0627		<0.000201		<0.000160		<0.00560		<0.000142		<0.000513		0.127		0.000348		<0.000841		0.42		<0.000437		<0.000176		X		X	
MW93-3	11/17/2021	527		0.0912	B J J4	80.7		183		1,120	6.92	J3	368	2,240		286	0.329		<0.00500		0.00062	J	0.0604		<0.00100		<0.00100		<0.0200		<0.00200		<0.00200		0.124		0.000572		<0.00500		1.783	J	<0.00200		<0.00100		X		X	
MW03-1	05/26/2021	30.2		<0.0396		8.58		1.64		88	5.58		12.4	128		5.27	<0.0640		<0.00172		0.000249	J	0.0293		<0.000201		<0.000160		<0.00560		<0.000142		<0.000513		<0.00689		<0.000100		<0.000841		1.84		<0.000437		<0.000176		X			
MW03-1	11/16/2021	103		<0.0200	J4	27.4		0.704	J	160	7.62		21	279		9.03	0.134	B J	<0.00500		0.00062	J	0.064		<0.00100		<0.00100		<0.0200		0.000164	J	<0.00200		<0.0150		<0.000200		0.00111	J	1.974		<0.00200	J	<0.00100		X			
MW03-2	05/26/2021	220		<0.0396		302		511		1,790	6.54		166	2,620		421	0.09	J	<0.00172		<0.000195		0.0335		<0.000201		<0.000160		<0.00560		<0.000142		<0.000513		0.0112	J	0.00239		<0.000841		0.41		<0.000437		<0.000176		X		X	X
MW03-2	11/17/2021	207		<0.0200	J4	290		482		1,490	6.92	J3	164	2,690		437	0.117	J	<0.00500		<0.00100		0.0329		<0.00100		<0.00100		<0.0200		<0.00200		<0.00200		0.0144	J	0.00215		<0.00500		0.804	J	<0.00200		<0.00100		X	X	X	X
MW03-2 (Dup)	11/17/2021	208		<0.0200	J4	294		501		1,490	7.09		169	2,700		457	0.109	J	--		--		--		--		--		--		--		<0.000142		--		--		--		--		--		--		--		NA	NA	NA	NA
TRIP BLANK	05/26/2021	<8.45		0.0515	J	<0.112		1.15		35	NA		0.993	<10.0	J	3.08	<0.0640		--		--		--		--		--		--		--		--		--		--		--		--		--		--		--					
TRIP BLANK	11/16/2021	<20.0		<0.0200	J4	<1.0		<1.00		<10.0			<2.00	<10.0		<5.00	0.0828	B J	--		--		--		--		--		--		--		--		--		--		--		--		--		--		--					

Shaded analytical results indicate an inter-well increase above background.
Bolded analytical results indicate a statistically significant intra-well increase.
A thick border around an analytical result idicates the concentration was detected at a statistically significant level above the GWPS or the MCL

Background levels represent the maximum concentration observed up to that time in MW93-1. Those with two background levels represent new maximum background concentrations. The first number is the background level for May 2021, and the second number is the background level for November 2021
MCL - Maximum Contaminant Level (MCL) according to 40 CFR 141.62 and 141.66. (ODEQ has not adopted the 83 FR 364.35 July 30, 2018 health-based GWPS for Co, Pb, Li, Mo, Effective August 29, 2018)
A - Appendix A Constituents for Detection Monitoring (modified to included specific conductivity, total alkalinity, and sodium per December 2019 Revised Assessment Monitoring Plan).
B - Appendix B Constituents for Assessment Monitoring
GWPS - 252:517-9-6(h) Groundwater protection standard. The owner or operator of the CCR unit must establish a groundwater protection standard for each constituent in Appendix B to this Chapter detected in the groundwater. The groundwater protection standard shall be:
(1) For constituents for which a MCL has been established under 40 CFR 141.62 and 141.66, the MCL for that constituent;
(2) For constituents for which an MCL has not been established, the background concentration for the constituent; or
(3) For constituents for which the background level is higher than the MCL, the background concentration.
mg/L - milligrams per liter
NC - no concentration established
umhos/cm - micromhos per centimeter
pCi/L - picocuries per liter
SU - standard units
< - less than the laboratory method detection limit (MDL) or for specific conductance, the reported detection limit (RDL)
Q - Qualifiers:
C1: Tracer recovery limits have been exceeded; values are outside upper control limits.
J: The identification of the analyte is acceptable; the reported value is an estimate.
P1: RPD value not applicable for sample concentrations less than 5 times the reporting limit.
U: Below Detectable Limits: Indicates that the analyte was not detected.
V: The sample concentration is too high to evaluate accurate spike recoveries.

Table 4 - Statistical Analysis Summary May 2021 Semi-Annual Event
Grand River Dam Authority Landfill
Grand River Energy Center - Mayes County, Oklahoma

Parameter		Units	BG	GWPS	MCL	Inter-Well/ Background Exceedance	Intra-Well Exceedance	GWPS Exceedance	MCL Exceedance
Alkalinity	A	mg/L	550	NA	NC	MW93-3	--	--	--
Boron	A	mg/L	0.499	NA	NC	MW93-2	--	--	--
Calcium	A	mg/L	670	NA	NC	--	--	--	--
Chloride	A	mg/L	63	NA	NC	MW93-2 MW93-3 MW03-2	--	--	--
Total Dissolved Solids	A	mg/L	1,050	NA	NC	MW93-2 MW93-3 MW03-2	--	--	--
pH	A	su	6.1, 7.05	NA	NC	MW93-2* MW03-1**	--	--	--
Sodium	A	mg/L	130	NA	NC	MW93-3 MW03-2	--	--	--
Specific Conductance	A	umhos/cm	1,888	NA	NC	MW93-2 MW93-3 MW03-2	--	--	--
Sulfate	A	mg/L	880	NA	NC	MW93-2	MW93-2	--	--
Fluoride	A,B	mg/L	0.243	4.0	4.0	MW93-2	MW93-1^	--	--
Antimony	B	mg/L	0.01	0.01	0.006	--	--	--	--
Arsenic	B	mg/L	0.0109	0.0109	0.010	MW93-2	--	MW93-2	MW93-2
Barium	B	mg/L	0.0321	2	2	MW93-2 MW93-3	--	--	--
Beryllium	B	mg/L	0.01	0.01	0.004	--	--	--	--
Cadmium	B	mg/L	0.00125	0.005	0.005	--	--	--	--
Chromium	B	mg/L	0.02	0.1	0.1	--	--	--	--
Cobalt	B	mg/L	0.01	0.01	NC	--	--	--	--
Lead	B	mg/L	0.005	0.005	NC	--	--	--	--
Lithium	B	mg/L	0.015	0.015	NC	MW93-3	--	MW93-3	MW93-3
Mercury	B	mg/L	0.00018	0.002	0.002	MW93-3 MW03-2	--	MW03-2	MW03-2
Molybdenum	B	mg/L	0.01	0.01	NC	MW93-2	--	MW93-2	MW93-2
Radium 226/228 Combined	B	pCi/L	1.19	5	5	MW93-2 MW03-1	--	--	--
Selenium	B	mg/L	0.005	0.05	0.05	--	--	--	--
Thallium	B	mg/L	0.01	0.01	0.002	--	--	--	--

MCL - Maximum Contaminant Level (MCL) according to 40 CFR 141.62 and 141.66. (ODEQ has not adopted the 83 FR 364.35 July 30, 2018 health-based GWPS for Co, Pb, Li, Mo, Effective August 29, 2018)

NA - Not Applicable

NC - No Concentration Established

BG - Background Concentration observed in MW93-1

A - Appendix A Constituents for Detection Monitoring (modified to included specific conductivity, total alkalinity, and sodium per December 2019 Revised Assessment Monitoring Plan).

B - Appendix B Constituents for Assessment Monitoring

GWPS - 252:517-9-6(h) Groundwater protection standard. The owner or operator of the CCR unit must establish a groundwater protection standard for each constituent in Appendix B to this Chapter detected in the groundwater. The groundwater protection standard shall be:

(1) For constituents for which a maximum contaminant level (MCL) has been established under 40 CFR 141.62 and 141.66, the MCL for that constituent;

(2) For constituents for which an MCL has not been established, the background concentration for the constituent; or

(3) For constituents for which the background level is higher than the MCL, the background concentration.

mg/L - milligrams per liter

pCi/L - picocuries per liter

* - Inter-well exceedance for high pH

** - Inter-well exceedance for low pH

^ - Intra-well exceedance observed in the background well

Table 5 - Statistical Analysis Summary November 2021 Semi-Annual Event
Grand River Dam Authority Landfill
Grand River Energy Center - Mayes County, Oklahoma

Parameter		Units	BG	GWPS	MCL	Inter-Well/ Background Exceedance	Intra-Well Exceedance	GWPS Exceedance	MCL Exceedance
Alkalinity	A	mg/L	550	NA	NC	--	--	--	--
Boron	A	mg/L	0.499	NA	NC	MW93-2	--	--	--
Calcium	A	mg/L	670	NA	NC	--	--	--	--
Chloride	A	mg/L	63	NA	NC	MW93-2 MW93-3 MW03-2	--	--	--
Total Dissolved Solids	A	mg/L	1,050	NA	NC	MW93-2 MW93-3 MW03-2		--	--
pH	A	su	6.1, 7.17	NA	NC	MW93-2 MW03-1	MW93-1^	--	--
Sodium	A	mg/L	130	NA	NC	MW93-2 MW93-3 MW03-2	--	--	--
Specific Conductance	A	umhos/cm	1,888	NA	NC	MW93-2 MW93-3 MW03-2	--	--	--
Sulfate	A	mg/L	880	NA	NC	MW93-2	MW93-2	--	--
Fluoride	A,B	mg/L	0.245	4.0	4.0	MW93-2 MW93-3		--	--
Antimony	B	mg/L	0.01	0.01	0.006	--	--	--	--
Arsenic	B	mg/L	0.0109	0.0109	0.010	MW93-2		MW-93-2	MW-93-2
Barium	B	mg/L	0.0405	2	2	MW93-2 MW93-3 MW03-1		--	--
Beryllium	B	mg/L	0.01	0.01	0.004	--	--	--	--
Cadmium	B	mg/L	0.0013	0.005	0.005	--	--	--	--
Chromium	B	mg/L	0.02	0.1	0.1	--	--	--	--
Cobalt	B	mg/L	0.01	0.01	NC	--	--	--	--
Lead	B	mg/L	0.005	0.005	NC	--	--	--	--
Lithium	B	mg/L	0.015	0.015	NC	MW93-3	--	MW-93-3	--
Mercury	B	mg/L	0.0002	0.002	0.002	MW93-3 MW03-2	--	MW-03-2	MW-03-2
Molybdenum	B	mg/L	0.01	0.01	NC	MW93-2	MW93-2	MW93-2	--
Radium 226/228 Combined	B	pCi/L	2.24	5	5	MW93-2	MW93-1^	--	--
Selenium	B	mg/L	0.005	0.05	0.05	--	--	--	--
Thallium	B	mg/L	0.01	0.01	0.002	--	--	--	--

MCL - Maximum Contaminant Level (MCL) according to 40 CFR 141.62 and 141.66. (ODEQ has not adopted the 83 FR
NA - Not Applicable
NC - No Concentration Established
BG - Background Concentration observed in MW93-1
A - Appendix A Constituents for Detection Monitoring (modified to included specific conductivity, total alkalinity, and sodium per December 2019 Revised Assessment Monitoring Plan).
B - Appendix B Constituents for Assessment Monitoring

GWPS - 252:517-9-6(h) Groundwater protection standard. The owner or operator of the CCR unit must establish a groundwater protection standard for each constituent in Appendix B to this Chapter detected in the groundwater. The groundwater protection standard shall be:
(1) For constituents for which a maximum contaminant level (MCL) has been established under 40 CFR 141.62 and 141.66, the MCL for that constituent;
(2) For constituents for which an MCL has not been established, the background concentration for the constituent; or
(3) For constituents for which the background level is higher than the MCL, the background concentration.

mg/L - milligrams per liter
pCi/L - picocuries per liter
* - Inter-well exceedance for high pH
** - Inter-well exceedance for low pH
^ - Intra-well exceedance observed in the background well

Figures

Legend:

- Upgradient (Background) Monitoring Well
- Downgradient (Compliance) Monitoring Wells
- (518.59) Groundwater Elevation in ft above msl
- Apparent Groundwater Flow Direction

N

Not to Scale

ENERCON

Figure 1
Monitoring Well Location and Groundwater Flow Direction
Map May 2021

Project No: GRDA-00014

Grand River Dam Authority
Grand River Energy Center CCR Landfill
Chouteau, Mayes County, Oklahoma
Solid Waste Permit No. 3549012

Legend:

- Upgradient (Background) Monitoring Well
- Downgradient (Compliance) Monitoring Wells
- (518.59) Groundwater Elevation in ft above msl
- Apparent Groundwater Flow Direction

N

Not to Scale

ENERCON

Figure 2
Monitoring Well Location and Groundwater Flow Direction Map November 2021

Project No: GRDA-00014

Grand River Dam Authority
Grand River Energy Center CCR Landfill
Chouteau, Mayes County, Oklahoma
Solid Waste Permit No. 3549012

Appendix A
Laboratory Analytical Reports

ANALYTICAL REPORT

June 16, 2021

Enercon - Oklahoma City, OK

Sample Delivery Group:	L1359363
Samples Received:	05/28/2021
Project Number:	GRDA~00014
Description:	GREC, Chouteau, OK
Site:	GRDA GREC
Report To:	Phillip Kelley 1601 Northwest Expressway Suite 1000 Oklahoma City, OK 73118

Entire Report Reviewed By:

Jordan N Zito
Project Manager

Pace Analytical National
12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

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MW93-1 L1359363-01 WW

Collected by: Matthew Payne | Collected date/time: 05/26/21 15:50 | Received date/time: 05/28/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1681391	1	06/02/21 16:56	06/02/21 17:57	KAB	Mt. Juliet, TN
Wet Chemistry by Method 120.1	WG1682472	1	06/03/21 18:53	06/03/21 18:53	AMH	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG1683923	1	06/07/21 10:15	06/07/21 10:15	ARD	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1685352	1	06/10/21 21:14	06/10/21 21:14	LBR	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1685352	10	06/10/21 21:27	06/10/21 21:27	LBR	Mt. Juliet, TN
Mercury by Method 245.1	WG1681345	1	06/03/21 16:00	06/04/21 09:54	ABL	Mt. Juliet, TN
Metals (ICP) by Method 200.7	WG1686610	1	06/15/21 04:59	06/16/21 02:17	CCE	Mt. Juliet, TN
Metals (ICPMS) by Method 200.8	WG1686616	1	06/11/21 11:07	06/13/21 20:50	LD	Mt. Juliet, TN

MW93-2 L1359363-02 WW

Collected by: Matthew Payne | Collected date/time: 05/26/21 09:30 | Received date/time: 05/28/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1681528	1	06/02/21 12:46	06/02/21 13:47	KAB	Mt. Juliet, TN
Wet Chemistry by Method 120.1	WG1682472	1	06/03/21 18:53	06/03/21 18:53	AMH	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG1683923	1	06/07/21 10:23	06/07/21 10:23	ARD	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1685352	10	06/10/21 21:41	06/10/21 21:41	LBR	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1685352	100	06/10/21 21:54	06/10/21 21:54	LBR	Mt. Juliet, TN
Mercury by Method 245.1	WG1681345	1	06/03/21 16:00	06/04/21 09:56	ABL	Mt. Juliet, TN
Metals (ICP) by Method 200.7	WG1686610	1	06/15/21 04:59	06/16/21 02:21	CCE	Mt. Juliet, TN
Metals (ICPMS) by Method 200.8	WG1686616	1	06/11/21 11:07	06/13/21 20:54	LD	Mt. Juliet, TN
Metals (ICPMS) by Method 200.8	WG1686616	5	06/11/21 11:07	06/13/21 21:22	LD	Mt. Juliet, TN

MW93-3 L1359363-03 WW

Collected by: Matthew Payne | Collected date/time: 05/26/21 11:10 | Received date/time: 05/28/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1681528	1	06/02/21 12:46	06/02/21 13:47	KAB	Mt. Juliet, TN
Wet Chemistry by Method 120.1	WG1682472	1	06/03/21 18:53	06/03/21 18:53	AMH	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG1683926	1	06/07/21 14:10	06/07/21 14:10	ARD	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1685352	1	06/10/21 22:07	06/10/21 22:07	LBR	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1685352	5	06/10/21 22:20	06/10/21 22:20	LBR	Mt. Juliet, TN
Mercury by Method 245.1	WG1681345	1	06/03/21 16:00	06/04/21 09:58	ABL	Mt. Juliet, TN
Metals (ICP) by Method 200.7	WG1686610	1	06/15/21 04:59	06/16/21 02:24	CCE	Mt. Juliet, TN
Metals (ICPMS) by Method 200.8	WG1686616	1	06/11/21 11:07	06/13/21 20:57	LD	Mt. Juliet, TN

MW03-1 L1359363-04 WW

Collected by: Matthew Payne | Collected date/time: 05/26/21 14:05 | Received date/time: 05/28/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1681528	1	06/02/21 12:46	06/02/21 13:47	KAB	Mt. Juliet, TN
Wet Chemistry by Method 120.1	WG1682472	1	06/03/21 18:53	06/03/21 18:53	AMH	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG1683926	1	06/07/21 14:18	06/07/21 14:18	ARD	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1685352	1	06/10/21 23:00	06/10/21 23:00	LBR	Mt. Juliet, TN
Mercury by Method 245.1	WG1681345	1	06/03/21 16:00	06/04/21 10:00	ABL	Mt. Juliet, TN
Metals (ICP) by Method 200.7	WG1686610	1	06/15/21 04:59	06/16/21 02:27	CCE	Mt. Juliet, TN
Metals (ICPMS) by Method 200.8	WG1686616	1	06/11/21 11:07	06/13/21 21:00	LD	Mt. Juliet, TN

MW03-2 L1359363-05 WW

Collected by: Matthew Payne | Collected date/time: 05/26/21 12:30 | Received date/time: 05/28/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1681528	1	06/02/21 12:46	06/02/21 13:47	KAB	Mt. Juliet, TN
Wet Chemistry by Method 120.1	WG1682472	1	06/03/21 18:53	06/03/21 18:53	AMH	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG1683926	1	06/07/21 14:26	06/07/21 14:26	ARD	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1685352	1	06/10/21 23:27	06/10/21 23:27	LBR	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1685352	10	06/10/21 23:40	06/10/21 23:40	LBR	Mt. Juliet, TN
Mercury by Method 245.1	WG1681345	1	06/03/21 16:00	06/04/21 10:02	ABL	Mt. Juliet, TN
Metals (ICP) by Method 200.7	WG1686610	1	06/15/21 04:59	06/16/21 02:30	CCE	Mt. Juliet, TN
Metals (ICPMS) by Method 200.8	WG1686616	1	06/11/21 11:07	06/13/21 21:03	LD	Mt. Juliet, TN

DUPLICATE L1359363-06 WW

Collected by: Matthew Payne | Collected date/time: 05/26/21 00:00 | Received date/time: 05/28/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1681528	1	06/02/21 12:46	06/02/21 13:47	KAB	Mt. Juliet, TN
Wet Chemistry by Method 120.1	WG1682472	1	06/03/21 18:53	06/03/21 18:53	AMH	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG1683926	1	06/07/21 14:33	06/07/21 14:33	ARD	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1685352	1	06/10/21 23:53	06/10/21 23:53	LBR	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1685352	100	06/11/21 00:40	06/11/21 00:40	LBR	Mt. Juliet, TN
Metals (ICP) by Method 200.7	WG1686610	1	06/15/21 04:59	06/16/21 02:33	CCE	Mt. Juliet, TN
Metals (ICPMS) by Method 200.8	WG1686616	1	06/11/21 11:07	06/13/21 21:07	LD	Mt. Juliet, TN
Metals (ICPMS) by Method 200.8	WG1686616	5	06/11/21 11:07	06/13/21 21:26	LD	Mt. Juliet, TN

TRIP BLANK L1359363-07 WW

Collected by: Matthew Payne | Collected date/time: 05/26/21 11:15 | Received date/time: 05/28/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1681528	1	06/02/21 12:46	06/02/21 13:47	KAB	Mt. Juliet, TN
Wet Chemistry by Method 120.1	WG1682472	1	06/03/21 18:53	06/03/21 18:53	AMH	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG1683926	1	06/07/21 15:58	06/07/21 15:58	ARD	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1685352	1	06/11/21 00:53	06/11/21 00:53	LBR	Mt. Juliet, TN
Metals (ICP) by Method 200.7	WG1686610	1	06/15/21 04:59	06/16/21 02:36	CCE	Mt. Juliet, TN
Metals (ICPMS) by Method 200.8	WG1686616	1	06/11/21 11:07	06/13/21 21:10	LD	Mt. Juliet, TN

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Jordan N Zito
Project Manager

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Solids	988		20.0	1	06/02/2021 17:57	WG1681391

Wet Chemistry by Method 120.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	umhos/cm		umhos/cm		date / time	
Specific Conductance	1460		10.0	1	06/03/2021 18:53	WG1682472

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Alkalinity	441		8.45	20.0	1	06/07/2021 10:15	WG1683923

Sample Narrative:

L1359363-01 WG1683923: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Chloride	12.9		0.379	1.00	1	06/10/2021 21:14	WG1685352
Fluoride	0.245		0.0640	0.150	1	06/10/2021 21:14	WG1685352
Sulfate	400		5.94	50.0	10	06/10/2021 21:27	WG1685352

Mercury by Method 245.1

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Mercury	U		0.000100	0.000200	1	06/04/2021 09:54	WG1681345

Metals (ICP) by Method 200.7

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Boron	0.227		0.0396	0.200	1	06/16/2021 02:17	WG1686610
Lithium	U		0.00689	0.0150	1	06/16/2021 02:17	WG1686610

Metals (ICPMS) by Method 200.8

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Antimony	U		0.00172	0.00500	1	06/13/2021 20:50	WG1686616
Arsenic	0.000268	J	0.000195	0.00100	1	06/13/2021 20:50	WG1686616
Barium	0.0132		0.000476	0.00500	1	06/13/2021 20:50	WG1686616
Beryllium	U		0.000201	0.00100	1	06/13/2021 20:50	WG1686616
Cadmium	U		0.000160	0.00100	1	06/13/2021 20:50	WG1686616
Calcium	179		0.112	1.00	1	06/13/2021 20:50	WG1686616
Chromium	U		0.00560	0.0200	1	06/13/2021 20:50	WG1686616
Cobalt	U		0.000142	0.00200	1	06/13/2021 20:50	WG1686616
Lead	U		0.000513	0.00200	1	06/13/2021 20:50	WG1686616
Molybdenum	U		0.000841	0.00500	1	06/13/2021 20:50	WG1686616
Selenium	U		0.000437	0.00200	1	06/13/2021 20:50	WG1686616
Sodium	112		0.513	2.00	1	06/13/2021 20:50	WG1686616
Thallium	U		0.000176	0.00100	1	06/13/2021 20:50	WG1686616

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Solids	7380		200	1	06/02/2021 13:47	WG1681528

Wet Chemistry by Method 120.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	umhos/cm		umhos/cm		date / time	
Specific Conductance	13300		10.0	1	06/03/2021 18:53	WG1682472

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Alkalinity	201		8.45	20.0	1	06/07/2021 10:23	WG1683923

Sample Narrative:

L1359363-02 WG1683923: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Chloride	1480		37.9	100	100	06/10/2021 21:54	WG1685352
Fluoride	U		0.640	1.50	10	06/10/2021 21:41	WG1685352
Sulfate	5100		59.4	500	100	06/10/2021 21:54	WG1685352

Mercury by Method 245.1

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Mercury	U		0.000100	0.000200	1	06/04/2021 09:56	WG1681345

Metals (ICP) by Method 200.7

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Boron	1.59		0.0396	0.200	1	06/16/2021 02:21	WG1686610
Lithium	0.0136	J	0.00689	0.0150	1	06/16/2021 02:21	WG1686610

Metals (ICPMS) by Method 200.8

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Antimony	U		0.00172	0.00500	1	06/13/2021 20:54	WG1686616
Arsenic	0.0148		0.000195	0.00100	1	06/13/2021 20:54	WG1686616
Barium	0.126		0.000476	0.00500	1	06/13/2021 20:54	WG1686616
Beryllium	U		0.000201	0.00100	1	06/13/2021 20:54	WG1686616
Cadmium	U		0.000160	0.00100	1	06/13/2021 20:54	WG1686616
Calcium	189		0.112	1.00	1	06/13/2021 20:54	WG1686616
Chromium	U		0.00560	0.0200	1	06/13/2021 20:54	WG1686616
Cobalt	0.000230	J	0.000142	0.00200	1	06/13/2021 20:54	WG1686616
Lead	U		0.000513	0.00200	1	06/13/2021 20:54	WG1686616
Molybdenum	0.906		0.000841	0.00500	1	06/13/2021 20:54	WG1686616
Selenium	0.000649	J	0.000437	0.00200	1	06/13/2021 20:54	WG1686616
Sodium	2680		2.56	10.0	5	06/13/2021 21:22	WG1686616
Thallium	U		0.000176	0.00100	1	06/13/2021 20:54	WG1686616

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Solids	1240		20.0	1	06/02/2021 13:47	WG1681528

Wet Chemistry by Method 120.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	umhos/cm		umhos/cm		date / time	
Specific Conductance	2130		10.0	1	06/03/2021 18:53	WG1682472

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Alkalinity	576		8.45	20.0	1	06/07/2021 14:10	WG1683926

Sample Narrative:

L1359363-03 WG1683926: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Chloride	232		1.90	5.00	5	06/10/2021 22:20	WG1685352
Fluoride	0.233		0.0640	0.150	1	06/10/2021 22:07	WG1685352
Sulfate	226		2.97	25.0	5	06/10/2021 22:20	WG1685352

Mercury by Method 245.1

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Mercury	0.000348		0.000100	0.000200	1	06/04/2021 09:58	WG1681345

Metals (ICP) by Method 200.7

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Boron	0.0889	J	0.0396	0.200	1	06/16/2021 02:24	WG1686610
Lithium	0.127		0.00689	0.0150	1	06/16/2021 02:24	WG1686610

Metals (ICPMS) by Method 200.8

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Antimony	U		0.00172	0.00500	1	06/13/2021 20:57	WG1686616
Arsenic	0.000522	J	0.000195	0.00100	1	06/13/2021 20:57	WG1686616
Barium	0.0627		0.000476	0.00500	1	06/13/2021 20:57	WG1686616
Beryllium	U		0.000201	0.00100	1	06/13/2021 20:57	WG1686616
Cadmium	U		0.000160	0.00100	1	06/13/2021 20:57	WG1686616
Calcium	75.1		0.112	1.00	1	06/13/2021 20:57	WG1686616
Chromium	U		0.00560	0.0200	1	06/13/2021 20:57	WG1686616
Cobalt	U		0.000142	0.00200	1	06/13/2021 20:57	WG1686616
Lead	U		0.000513	0.00200	1	06/13/2021 20:57	WG1686616
Molybdenum	U		0.000841	0.00500	1	06/13/2021 20:57	WG1686616
Selenium	U		0.000437	0.00200	1	06/13/2021 20:57	WG1686616
Sodium	355		0.513	2.00	1	06/13/2021 20:57	WG1686616
Thallium	U		0.000176	0.00100	1	06/13/2021 20:57	WG1686616

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Solids	88.0		10.0	1	06/02/2021 13:47	WG1681528

Wet Chemistry by Method 120.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	umhos/cm		umhos/cm		date / time	
Specific Conductance	128		10.0	1	06/03/2021 18:53	WG1682472

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Alkalinity	30.2		8.45	20.0	1	06/07/2021 14:18	WG1683926

Sample Narrative:

L1359363-04 WG1683926: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Chloride	1.64		0.379	1.00	1	06/10/2021 23:00	WG1685352
Fluoride	U		0.0640	0.150	1	06/10/2021 23:00	WG1685352
Sulfate	5.27		0.594	5.00	1	06/10/2021 23:00	WG1685352

Mercury by Method 245.1

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Mercury	U		0.000100	0.000200	1	06/04/2021 10:00	WG1681345

Metals (ICP) by Method 200.7

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Boron	U		0.0396	0.200	1	06/16/2021 02:27	WG1686610
Lithium	U		0.00689	0.0150	1	06/16/2021 02:27	WG1686610

Metals (ICPMS) by Method 200.8

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Antimony	U		0.00172	0.00500	1	06/13/2021 21:00	WG1686616
Arsenic	0.000249	J	0.000195	0.00100	1	06/13/2021 21:00	WG1686616
Barium	0.0293		0.000476	0.00500	1	06/13/2021 21:00	WG1686616
Beryllium	U		0.000201	0.00100	1	06/13/2021 21:00	WG1686616
Cadmium	U		0.000160	0.00100	1	06/13/2021 21:00	WG1686616
Calcium	8.58		0.112	1.00	1	06/13/2021 21:00	WG1686616
Chromium	U		0.00560	0.0200	1	06/13/2021 21:00	WG1686616
Cobalt	U		0.000142	0.00200	1	06/13/2021 21:00	WG1686616
Lead	U		0.000513	0.00200	1	06/13/2021 21:00	WG1686616
Molybdenum	U		0.000841	0.00500	1	06/13/2021 21:00	WG1686616
Selenium	U		0.000437	0.00200	1	06/13/2021 21:00	WG1686616
Sodium	12.4		0.513	2.00	1	06/13/2021 21:00	WG1686616
Thallium	U		0.000176	0.00100	1	06/13/2021 21:00	WG1686616

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Solids	1790		25.0	1	06/02/2021 13:47	WG1681528

Wet Chemistry by Method 120.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	umhos/cm		umhos/cm		date / time	
Specific Conductance	2620		10.0	1	06/03/2021 18:53	WG1682472

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Alkalinity	220		8.45	20.0	1	06/07/2021 14:26	WG1683926

Sample Narrative:

L1359363-05 WG1683926: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Chloride	511		3.79	10.0	10	06/10/2021 23:40	WG1685352
Fluoride	0.0900	J	0.0640	0.150	1	06/10/2021 23:27	WG1685352
Sulfate	421		5.94	50.0	10	06/10/2021 23:40	WG1685352

Mercury by Method 245.1

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Mercury	0.00239		0.000100	0.000200	1	06/04/2021 10:02	WG1681345

Metals (ICP) by Method 200.7

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Boron	U		0.0396	0.200	1	06/16/2021 02:30	WG1686610
Lithium	0.0112	J	0.00689	0.0150	1	06/16/2021 02:30	WG1686610

Metals (ICPMS) by Method 200.8

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Antimony	U		0.00172	0.00500	1	06/13/2021 21:03	WG1686616
Arsenic	U		0.000195	0.00100	1	06/13/2021 21:03	WG1686616
Barium	0.0335		0.000476	0.00500	1	06/13/2021 21:03	WG1686616
Beryllium	U		0.000201	0.00100	1	06/13/2021 21:03	WG1686616
Cadmium	U		0.000160	0.00100	1	06/13/2021 21:03	WG1686616
Calcium	302		0.112	1.00	1	06/13/2021 21:03	WG1686616
Chromium	U		0.00560	0.0200	1	06/13/2021 21:03	WG1686616
Cobalt	U		0.000142	0.00200	1	06/13/2021 21:03	WG1686616
Lead	U		0.000513	0.00200	1	06/13/2021 21:03	WG1686616
Molybdenum	U		0.000841	0.00500	1	06/13/2021 21:03	WG1686616
Selenium	U		0.000437	0.00200	1	06/13/2021 21:03	WG1686616
Sodium	166		0.513	2.00	1	06/13/2021 21:03	WG1686616
Thallium	U		0.000176	0.00100	1	06/13/2021 21:03	WG1686616

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Solids	7520		200	1	06/02/2021 13:47	WG1681528

Wet Chemistry by Method 120.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	umhos/cm		umhos/cm		date / time	
Specific Conductance	13300		10.0	1	06/03/2021 18:53	WG1682472

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Alkalinity	199		8.45	20.0	1	06/07/2021 14:33	WG1683926

Sample Narrative:

L1359363-06 WG1683926: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Chloride	1670		37.9	100	100	06/11/2021 00:40	WG1685352
Fluoride	0.287		0.0640	0.150	1	06/10/2021 23:53	WG1685352
Sulfate	5600		59.4	500	100	06/11/2021 00:40	WG1685352

Metals (ICP) by Method 200.7

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Boron	1.59		0.0396	0.200	1	06/16/2021 02:33	WG1686610

Metals (ICPMS) by Method 200.8

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Calcium	200		0.112	1.00	1	06/13/2021 21:07	WG1686616
Sodium	2670		2.56	10.0	5	06/13/2021 21:26	WG1686616

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Solids	35.0		10.0	1	06/02/2021 13:47	WG1681528

Wet Chemistry by Method 120.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	umhos/cm		umhos/cm		date / time	
Specific Conductance	ND		10.0	1	06/03/2021 18:53	WG1682472

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Alkalinity	U		8.45	20.0	1	06/07/2021 15:58	WG1683926

Sample Narrative:

L1359363-07 WG1683926: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Chloride	1.15		0.379	1.00	1	06/11/2021 00:53	WG1685352
Fluoride	U		0.0640	0.150	1	06/11/2021 00:53	WG1685352
Sulfate	3.08	J	0.594	5.00	1	06/11/2021 00:53	WG1685352

Metals (ICP) by Method 200.7

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Boron	0.0515	J	0.0396	0.200	1	06/16/2021 02:36	WG1686610

Metals (ICPMS) by Method 200.8

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Calcium	U		0.112	1.00	1	06/13/2021 21:10	WG1686616
Sodium	0.993	J	0.513	2.00	1	06/13/2021 21:10	WG1686616

Method Blank (MB)

(MB) R3663413-1 06/02/21 17:57

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Dissolved Solids	U		10.0	10.0

L1359363-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1359363-01 06/02/21 17:57 • (DUP) R3663413-3 06/02/21 17:57

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	988	1010	1	2.20		5

L1359451-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1359451-04 06/02/21 17:57 • (DUP) R3663413-4 06/02/21 17:57

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	950	992	1	4.33		5

Laboratory Control Sample (LCS)

(LCS) R3663413-2 06/02/21 17:57

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800	8580	97.5	77.4-123	

Method Blank (MB)

(MB) R3663389-1 06/02/21 13:47

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Dissolved Solids	U		10.0	10.0

L1358905-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1358905-02 06/02/21 13:47 • (DUP) R3663389-3 06/02/21 13:47

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	647	685	1	5.80	J3	5

L1358905-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1358905-03 06/02/21 13:47 • (DUP) R3663389-4 06/02/21 13:47

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	743	779	1	4.73		5

Laboratory Control Sample (LCS)

(LCS) R3663389-2 06/02/21 13:47

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800	8490	96.5	77.4-123	

Method Blank (MB)

(MB) R3663007-1 06/03/21 18:53

Analyte	MB Result umhos/cm	MB Qualifier	MB MDL umhos/cm	MB RDL umhos/cm
Specific Conductance	U		10.0	10.0

L1359363-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1359363-01 06/03/21 18:53 • (DUP) R3663007-3 06/03/21 18:53

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	1460	1460	1	0.000		20

L1359587-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1359587-05 06/03/21 18:53 • (DUP) R3663007-4 06/03/21 18:53

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	13900	13900	1	0.000		20

Laboratory Control Sample (LCS)

(LCS) R3663007-2 06/03/21 18:53

Analyte	Spike Amount umhos/cm	LCS Result umhos/cm	LCS Rec. %	Rec. Limits %	LCS Qualifier
Specific Conductance	268	267	99.7	85.0-115	

Method Blank (MB)

(MB) R3664060-1 06/07/21 07:37

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Alkalinity	U		8.45	20.0

Sample Narrative:

BLANK: Endpoint pH 4.5

L1359255-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1359255-01 06/07/21 07:50 • (DUP) R3664060-2 06/07/21 08:00

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity	197	189	1	4.39		20

Sample Narrative:

OS: Endpoint pH 4.5 Headspace

DUP: Endpoint pH 4.5

L1359312-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1359312-04 06/07/21 09:59 • (DUP) R3664060-4 06/07/21 10:07

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity	531	526	1	1.01		20

Sample Narrative:

OS: Endpoint pH 4.5 Headspace

DUP: Endpoint pH 4.5

Laboratory Control Sample (LCS)

(LCS) R3664060-3 06/07/21 09:11

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Alkalinity	100	96.3	96.3	90.0-110	

Sample Narrative:

LCS: Endpoint pH 4.5

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Method Blank (MB)

(MB) R3664177-1 06/07/21 12:10

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Alkalinity	U		8.45	20.0

Sample Narrative:

BLANK: Endpoint pH 4.5

L1359061-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1359061-03 06/07/21 12:37 • (DUP) R3664177-2 06/07/21 12:46

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity	120	121	1	0.666		20

Sample Narrative:

OS: Endpoint pH 4.5 Headspace

DUP: Endpoint pH 4.5

L1359527-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1359527-01 06/07/21 15:00 • (DUP) R3664177-4 06/07/21 15:09

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity	262	256	1	2.24		20

Sample Narrative:

OS: Endpoint pH 4.5 Headspace

DUP: Endpoint pH 4.5

Laboratory Control Sample (LCS)

(LCS) R3664177-3 06/07/21 13:43

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Alkalinity	100	102	102	90.0-110	

Sample Narrative:

LCS: Endpoint pH 4.5

Method Blank (MB)

(MB) R3666212-1 06/10/21 16:51

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Chloride	U		0.379	1.00
Fluoride	U		0.0640	0.150
Sulfate	U		0.594	5.00

L1359269-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1359269-01 06/10/21 18:12 • (DUP) R3666212-3 06/10/21 18:25

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	U	U	10	0.000		20
Fluoride	U	U	10	0.000		20
Sulfate	883	884	10	0.101		20

L1359363-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1359363-04 06/10/21 23:00 • (DUP) R3666212-6 06/10/21 23:13

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	1.64	1.73	1	5.06		20
Fluoride	U	U	1	0.000		20
Sulfate	5.27	5.11	1	2.96		20

Laboratory Control Sample (LCS)

(LCS) R3666212-2 06/10/21 17:05

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	40.0	40.3	101	90.0-110	
Fluoride	8.00	8.22	103	90.0-110	
Sulfate	40.0	40.8	102	90.0-110	

L1359289-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1359289-01 06/10/21 19:04 • (MS) R3666212-4 06/10/21 19:16 • (MSD) R3666212-5 06/10/21 19:29

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chloride	50.0	0.884	53.2	52.0	105	102	1	80.0-120			2.19	20
Fluoride	5.00	0.106	5.14	5.00	101	97.9	1	80.0-120			2.67	20
Sulfate	50.0	352	404	397	103	90.7	1	80.0-120	E	E	1.60	20

L1359363-07 Original Sample (OS) • Matrix Spike (MS)

(OS) L1359363-07 06/11/21 00:53 • (MS) R3666212-7 06/11/21 01:06

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chloride	50.0	1.15	52.3	102	1	80.0-120	
Fluoride	5.00	U	5.23	105	1	80.0-120	
Sulfate	50.0	3.08	54.5	103	1	80.0-120	

Method Blank (MB)

(MB) R3663224-1 06/04/21 09:31

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Mercury	U		0.000100	0.000200

Laboratory Control Sample (LCS)

(LCS) R3663224-2 06/04/21 09:33

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Mercury	0.00300	0.00281	93.6	85.0-115	

L1356964-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1356964-01 06/04/21 09:35 • (MS) R3663224-3 06/04/21 09:37 • (MSD) R3663224-4 06/04/21 09:39

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Mercury	0.00300	U	0.00272	0.00254	90.6	84.7	1	70.0-130			6.64	20

L1359769-11 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1359769-11 06/04/21 09:41 • (MS) R3663224-5 06/04/21 09:48 • (MSD) R3663224-6 06/04/21 09:50

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Mercury	0.00300	U	0.00285	0.00286	95.1	95.3	1	70.0-130			0.238	20

Method Blank (MB)

(MB) R3667753-1 06/16/21 01:37

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Boron	U		0.0396	0.200
Lithium	U		0.00689	0.0150

Laboratory Control Sample (LCS)

(LCS) R3667753-2 06/16/21 01:40

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Boron	1.00	1.01	101	85.0-115	
Lithium	1.00	0.903	90.3	85.0-115	

L1359385-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1359385-01 06/16/21 01:43 • (MS) R3667753-4 06/16/21 01:49 • (MSD) R3667753-5 06/16/21 01:52

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Boron	1.00	69.0	68.4	68.2	0.000	0.000	1	70.0-130	E V	E V	0.248	20
Lithium	1.00	0.0239	1.08	1.07	105	105	1	70.0-130			0.0707	20

L1359391-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1359391-01 06/16/21 01:55 • (MS) R3667753-6 06/16/21 01:57 • (MSD) R3667753-7 06/16/21 02:00

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Boron	1.00	0.162	1.08	1.07	91.6	90.5	1	70.0-130			1.02	20
Lithium	1.00	U	0.909	0.908	90.9	90.8	1	70.0-130			0.0270	20

Method Blank (MB)

(MB) R3666655-1 06/13/21 19:34

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Antimony	U		0.00172	0.00500
Arsenic	U		0.000195	0.00100
Barium	U		0.000476	0.00500
Beryllium	U		0.000201	0.00100
Cadmium	U		0.000160	0.00100
Calcium	U		0.112	1.00
Chromium	U		0.00560	0.0200
Cobalt	U		0.000142	0.00200
Lead	U		0.000513	0.00200
Molybdenum	U		0.000841	0.00500
Selenium	U		0.000437	0.00200
Sodium	U		0.513	2.00
Thallium	U		0.000176	0.00100

Laboratory Control Sample (LCS)

(LCS) R3666655-2 06/13/21 19:37

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Antimony	0.0500	0.0494	98.8	85.0-115	
Arsenic	0.0500	0.0471	94.2	85.0-115	
Barium	0.0500	0.0469	93.7	85.0-115	
Beryllium	0.0500	0.0454	90.8	85.0-115	
Cadmium	0.0500	0.0488	97.6	85.0-115	
Calcium	5.00	4.84	96.8	85.0-115	
Chromium	0.0500	0.0472	94.4	85.0-115	
Cobalt	0.0500	0.0479	95.9	85.0-115	
Lead	0.0500	0.0480	95.9	85.0-115	
Molybdenum	0.0500	0.0473	94.6	85.0-115	
Selenium	0.0500	0.0531	106	85.0-115	
Sodium	5.00	5.05	101	85.0-115	
Thallium	0.0500	0.0457	91.5	85.0-115	

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL).
J	The identification of the analyte is acceptable; the reported value is an estimate.
J3	The associated batch QC was outside the established quality control range for precision.
V	The sample concentration is too high to evaluate accurate spike recoveries.

ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO000356
Kentucky [1 6]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

Company Name/Address:
Enercon - Oklahoma City, OK

1601 Northwest Expressway
Suite 1000
Oklahoma Citv. OK 73118

Billing Information:
Accounts Payable - Lisa Hedrick
1601 NW Expressway
Ste.1000
Oklahoma City, OK 73118

Pres Chk

Report to:
Phillip Kelley

Email To:
pkelley@enercon.com;ccurrent@enercon.com

Project Description:
GREC, Chouteau, OK

City/State Collected: Chouteau, OK

Please Circle: PT MT (CT) ET

Phone: **405-722-7693**

Client Project #
GRDA~00014

Lab Project #
ENERCOOK-GRDA

Collected by (print):
Matthew Payne

Site/Facility ID #
GRDA GREC

P.O. #

Collected by (signature):
Matthew Payne

Immediately Packed on Ice N ___ Y ✓

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed
Standard TAT

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	ALK 125mlHDPE-NoPres	Cl, F, SO4 125mlHDPE-NoPres	RA-226,RA-228 1L-HDPE-Add HNO3	SPCON,TDS 250mlHDPE-NoPres	Tot. Rec. Metals 250mlHDPE-HNO3					Remarks	Sample # (lab only)
									E7		E7						
MW93-1	Grab	DW	NA	5/26/2021	1550	5	X	X	X	X	X						-01
MW93-2		DW		5/27/2021	0930	5	X	X	X	X	X						-02
MW93-3		DW		5/27/2021	1110	5	X	X	X	X	X						-03
MW03-1		DW		5/26/2021	1405	5	X	X	X	X	X						-04
MW03-2	↓	DW	↓	5/26/2021	1230	5	X	X	X	X	X						-05
		DW				5	X	X	X	X	X						
		DW				5	X	X	X	X	X						

Analysis / Container / Preservative

Chain of Custody Page 1 of 2

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SDG # L1359363

Table #

Acctnum: **ENERCOOK**
Template: **T167834**
Prelogin: **P847668**
PM: **104 - Jason Romer**
PB: JR 5/14/21
Shipped Via: **FedEX Ground**

* Matrix:
SS - Soil **AIR** - Air **F** - Filter
GW - Groundwater **B** - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:200.7 = B,Li 200.8 = Ca,Na,Sb,As,Ba,Be,Cd,Cr,Co,Pb,Mo,Se,Tl

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: __NP ✓Y __N
COC Signed/Accurate: ✓Y __N
Bottles arrive intact: ✓Y __N
Correct bottles used: ✓Y __N
Sufficient volume sent: ✓Y __N
If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: ✓Y __N
RAD Screen <0.5 mR/hr: ✓Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / (No) HCL / MeoH TBR	If preservation required by Login: Date/Time
Matthew Payne	5/27/2021	1340	E.K Davis		
E. Davis	5/27/21	17:00		Temp: .7-.2=.5 °C Acpt	Bottles Received: 33
			Received for lab by: (Signature)	Date: 5/28/21	Time: 0800

Hold: | Condition: NCF / (OK)

Company Name/Address:
Enercon - Oklahoma City, OK

1601 Northwest Expressway
Suite 1000
Oklahoma Citv. OK 73118

Billing Information:
Accounts Payable - Lisa Hedrick
1601 NW Expressway
Ste.1000
Oklahoma City, OK 73118

Pres Chk

Report to:
Phillip Kelley

Email To:
pkelley@enercon.com;ccurrent@enercon.com

Project Description:
GREC, Chouteau, OK

City/State Collected: Chouteau, OK

Please Circle: PT MT CT ET

Phone: **405-722-7693**

Client Project #
GRDA~00014

Lab Project #
ENERCOOK-GRDA

Collected by (print):
Matthew Payne

Site/Facility ID #
GRDA GREC

P.O. #

Collected by (signature):
Matthew Payne

Immediately
Packed on Ice N ___ Y ✓

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed
Standard TAT

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	ALK 125mlHDPE-NoPres	Cl, F, SO4 125mlHDPE-NoPres	Metals 250mlHDPE-HNO3	SPCON,TDS 250mlHDPE-NoPres							Remarks	Sample # (lab only)
DUPLICATE	Grab	WW	NA	—	—	4	X	X	X	X								-06
		WW				4	X	X	X	X								
TRIP BLANK	Grab	WW	NA	5/26/2021	1115	4	X	X	X	X								-07

Chain of Custody Page 2 of 2

Pace Analytical®

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SDG # L1359363

Table #

Acctnum: **ENERCOOK**
Template: **T169670**
Prelogin: **P847667**
PM: **104 - Jason Romer**
PB: dg 5/14/21

Shipped Via: **FedEX Ground**

* Matrix:
SS - Soil **AIR** - Air **F** - Filter
GW - Groundwater **B** - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:200.7 = B 200.8 = Ca,Na

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: __NP ✓Y __N
COC Signed/Accurate: ✓Y __N
Bottles arrive intact: ✓Y __N
Correct bottles used: ✓Y __N
Sufficient volume sent: ✓Y __N
If Applicable
VOA Zero Headspace: ✓Y __N
Preservation Correct/Checked: ✓Y __N
RAD Screen <0.5 mR/hr: ✓Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Matthew Payne	5/27/2021	1340	E. Davis
E. Davis	5/27/21	17:00	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

Trip Blank Received: Yes / No
HCL / MeoH
TBR

Temp: .7-2=5 °C Bottles Received: 33

Date: 5/28/21 Time: 0800

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

ANALYTICAL REPORT

June 25, 2021

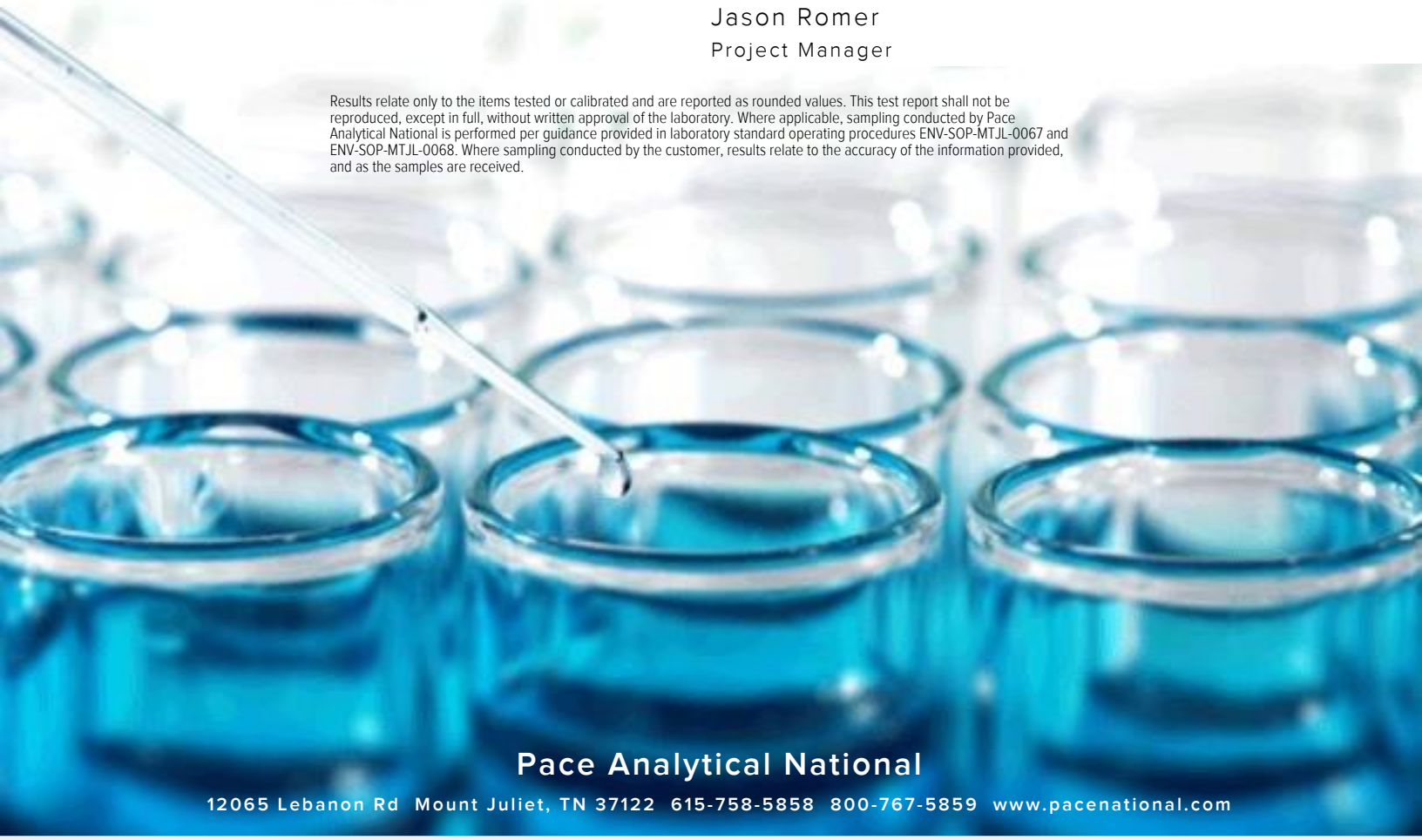
Enercon - Oklahoma City, OK

Sample Delivery Group:	L1359368
Samples Received:	05/28/2021
Project Number:	GRDA~00014
Description:	GREC, Chouteau, OK
Site:	GRDA GREC
Report To:	Phillip Kelley 1601 Northwest Expressway Suite 1000 Oklahoma City, OK 73118

Entire Report Reviewed By:

Jason Romer
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.



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MW93-1 L1359368-01 DW

Collected by: Matthew Payne | Collected date/time: 05/26/21 15:50 | Received date/time: 05/28/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904	WG1689759	1	06/17/21 14:51	06/23/21 14:45	JMR	Mt. Juliet, TN
Radiochemistry by Method SM 7500 Ra B	WG1681396	1	06/03/21 13:01	06/19/21 08:00	SNR	Mt. Juliet, TN

MW93-2 L1359368-02 DW

Collected by: Matthew Payne | Collected date/time: 05/27/21 09:30 | Received date/time: 05/28/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904	WG1689759	1	06/17/21 14:51	06/23/21 14:45	JMR	Mt. Juliet, TN
Radiochemistry by Method SM 7500 Ra B	WG1681396	1	06/03/21 13:01	06/19/21 09:00	SNR	Mt. Juliet, TN

MW93-3 L1359368-03 DW

Collected by: Matthew Payne | Collected date/time: 05/27/21 11:10 | Received date/time: 05/28/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904	WG1689759	1	06/17/21 14:51	06/23/21 14:45	JMR	Mt. Juliet, TN
Radiochemistry by Method SM 7500 Ra B	WG1681396	1	06/03/21 13:01	06/19/21 10:00	SNR	Mt. Juliet, TN

MW03-1 L1359368-04 DW

Collected by: Matthew Payne | Collected date/time: 05/26/21 14:05 | Received date/time: 05/28/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904	WG1689759	1	06/17/21 14:51	06/23/21 14:45	JMR	Mt. Juliet, TN
Radiochemistry by Method SM 7500 Ra B	WG1681396	1	06/03/21 13:01	06/19/21 11:01	SNR	Mt. Juliet, TN

MW03-2 L1359368-05 DW

Collected by: Matthew Payne | Collected date/time: 05/26/21 12:30 | Received date/time: 05/28/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904	WG1689759	1	06/17/21 14:51	06/23/21 14:45	JMR	Mt. Juliet, TN
Radiochemistry by Method SM 7500 Ra B	WG1681396	1	06/03/21 13:01	06/19/21 12:01	SNR	Mt. Juliet, TN

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All radiochemical sample results for solids are reported on a dry weight basis with the exception of tritium, carbon-14 and radon, unless wet weight was requested by the client. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Jason Romer
Project Manager

Radiochemistry by Method 904

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.951		0.384	0.664	06/23/2021 14:45	WG1689759
(T) Barium	*94.8*			*62.0-143*	*06/23/2021 14:45*	WG1689759
(T) Yttrium	*97.2*			*79.0-136*	*06/23/2021 14:45*	WG1689759

Radiochemistry by Method SM 7500 Ra B

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.0415	J	0.124	0.114	06/19/2021 08:00	WG1681396
(T) Barium	*95.5*			*63.0-143*	*06/19/2021 08:00*	WG1681396

Radiochemistry by Method 904

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	2.69		0.392	0.628	06/23/2021 14:45	WG1689759
(T) Barium	*102*			*62.0-143*	*06/23/2021 14:45*	WG1689759
(T) Yttrium	*105*			*79.0-136*	*06/23/2021 14:45*	WG1689759

Radiochemistry by Method SM 7500 Ra B

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.555		0.200	0.109	06/19/2021 09:00	WG1681396
(T) Barium	*110*			*63.0-143*	*06/19/2021 09:00*	WG1681396

Radiochemistry by Method 904

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-228	0.0669	U	0.330	0.598	06/23/2021 14:45	WG1689759
(T) Barium	*103*			*62.0-143*	*06/23/2021 14:45*	WG1689759
(T) Yttrium	*94.4*			*79.0-136*	*06/23/2021 14:45*	WG1689759

Radiochemistry by Method SM 7500 Ra B

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.356		0.201	0.134	06/19/2021 10:00	WG1681396
(T) Barium	*81.6*			*63.0-143*	*06/19/2021 10:00*	WG1681396

Radiochemistry by Method 904

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	1.83		0.360	0.592	06/23/2021 14:45	WG1689759
(T) Barium	*95.7*			*62.0-143*	*06/23/2021 14:45*	WG1689759
(T) Yttrium	*103*			*79.0-136*	*06/23/2021 14:45*	WG1689759

Radiochemistry by Method SM 7500 Ra B

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.0132	J	0.113	0.109	06/19/2021 11:01	WG1681396
(T) Barium	*102*			*63.0-143*	*06/19/2021 11:01*	WG1681396

Radiochemistry by Method 904

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-228	0.0172	U	0.407	0.731	06/23/2021 14:45	WG1689759
(T) Barium	*105*			*62.0-143*	*06/23/2021 14:45*	WG1689759
(T) Yttrium	*90.1*			*79.0-136*	*06/23/2021 14:45*	WG1689759

Radiochemistry by Method SM 7500 Ra B

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.389		0.185	0.115	06/19/2021 12:01	WG1681396
(T) Barium	*94.9*			*63.0-143*	*06/19/2021 12:01*	WG1681396

Method Blank (MB)

(MB) R3672100-1 06/23/21 14:45

Analyte	MB Result pCi/l	MB Qualifier	MB MDA pCi/l
Radium-228	-0.365	U	0.454
(T) Barium	*91.7*		
(T) Yttrium	*99.5*		

L1365182-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1365182-03 06/23/21 14:45 • (DUP) R3672100-5 06/23/21 14:45

Analyte	Original Result pCi/l	DUP Result pCi/l	Dilution	DUP RPD %	DUP RER	DUP Qualifier	DUP RPD Limits %	DUP RER Limit
Radium-228	0.476	0.274	1	53.8	0.440	U	20	2
(T) Barium	*98.0*	*105*						
(T) Yttrium	*98.4*	*104*						

Laboratory Control Sample (LCS)

(LCS) R3672100-2 06/23/21 14:45

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Radium-228	5.00	5.73	115	80.0-120	
(T) Barium			*100*		
(T) Yttrium			*95.9*		

L1365182-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1365182-03 06/23/21 14:45 • (MS) R3672100-3 06/23/21 14:45 • (MSD) R3672100-4 06/23/21 14:45

Analyte	Spike Amount pCi/l	Original Result pCi/l	MS Result pCi/l	MSD Result pCi/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	MS RER	RPD Limits %
Radium-228	10.0	0.476	11.9	13.2	114	127	1	70.0-130			10.3		20
(T) Barium		*98.0*			*94.5*	*102*							
(T) Yttrium		*98.4*			*97.9*	*95.1*							

Method Blank (MB)

(MB) R3667850-1 06/15/21 00:48

Analyte	MB Result pCi/l	MB Qualifier	MB MDA pCi/l
Radium-226	0.0521	J	0.0615
(T) Barium	*95.0*		

L1359628-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1359628-01 06/15/21 12:51 • (DUP) R3667850-5 06/15/21 04:49

Analyte	Original Result pCi/l	DUP Result pCi/l	Dilution	DUP RPD %	DUP RER	DUP Qualifier	DUP RPD Limits %	DUP RER Limit
Radium-226	0.0660	0.372	1	140	1.13		20	2
(T) Barium	*84.7*	*75.8*						

Laboratory Control Sample (LCS)

(LCS) R3667850-2 06/15/21 01:48

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Radium-226	5.01	4.81	96.0	90.0-110	
(T) Barium			*83.1*		

L1359334-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1359334-01 06/15/21 11:51 • (MS) R3667850-3 06/15/21 02:49 • (MSD) R3667850-4 06/15/21 03:49

Analyte	Spike Amount pCi/l	Original Result pCi/l	MS Result pCi/l	MSD Result pCi/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	MS RER	RPD Limits %
Radium-226	10.0	-0.0156	8.24	8.06	82.4	80.6	1	80.0-120			2.23		20
(T) Barium		*89.4*			*88.4*	*82.8*							

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDA	Minimum Detectable Activity.
Rec.	Recovery.
RER	Replicate Error Ratio.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(T)	Tracer - A radioisotope of known concentration added to a solution of chemically equivalent radioisotopes at a known concentration to assist in monitoring the yield of the chemical separation.
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
J	The identification of the analyte is acceptable; the reported value is an estimate.
U	Below Detectable Limits: Indicates that the analyte was not detected.

ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO000356
Kentucky [1 6]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

Company Name/Address:
Enercon - Oklahoma City, OK

1601 Northwest Expressway
Suite 1000
Oklahoma Citv. OK 73118

Billing Information:
Accounts Payable - Lisa Hedrick
1601 NW Expressway
Ste.1000
Oklahoma City, OK 73118

Report to: Phillip Kelley

Email To: pkelley@enercon.com;ccurrent@enercon.com

Project Description: GREC, Chouteau, OK

City/State Collected: Chouteau, OK

Please Circle: PT MT CT ET

Phone: 405-722-7693

Client Project # GRDA~00014

Lab Project # ENERCOOK-GRDA

Collected by (print): Matthew Payne

Collected by (signature): Matthew Payne

Immediately Packed on Ice N ___ Y ✓

Site/Facility ID # GRDA GREC

P.O. #

Quote #

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Date Results Needed: Standard TAT

Analysis / Container / Preservative

Pres Chk

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	ALK 125mlHDPE-NoPres	Cl, F, SO4 125mlHDPE-NoPres	RA-226,RA-228 1L-HDPE-Add HNO3	SPCON,TDS 250mlHDPE-NoPres	Tot. Rec. Metals 250mlHDPE-HNO3	Remarks	Sample # (lab only)
MW93-1	Grab	DW	NA	5/26/2021	1550	5	X	X	X	X	X		-01
MW93-2		DW		5/27/2021	0930	5	X	X	X	X	X		-02
MW93-3		DW		5/27/2021	1110	5	X	X	X	X	X		-03
MW03-1		DW		5/26/2021	1405	5	X	X	X	X	X		-04
MW03-2		DW		5/26/2021	1230	5	X	X	X	X	X		-05
		DW				5	X	X	X	X	X		
		DW				5	X	X	X	X	X		

Chain of Custody Page 1 of 1

Pace Analytical®

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Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

SDG # L1359368

Table #

Acctnum: ENERCOOK
Template: T167834
Prelogin: P847668
PM: 104 - Jason Romer
PB: 05/14/21

Shipped Via: FedEx Ground

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:200.7 = B,Li 200.8 = Ca,Na,Sb,As,Ba,Be,Cd,Cr,Co,Pb,Mo,Se,Tl

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: __NP ✓Y __N
COC Signed/Accurate: ✓Y __N
Bottles arrive intact: ✓Y __N
Correct bottles used: ✓Y __N
Sufficient volume sent: ✓Y __N
If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: __Y __N
RAD Screen <0.5 mR/hr: ✓Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	If preservation required by Login: Date/Time
Matthew Payne	5/27/2021	1340	E. Davis		
E. Davis	5/27/21	17:00		Temp: .7-2.5 °C Bottles Received: 33	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 5/28/21 Time: 0800	Hold: Condition: NCF / OK

Chain of Custody Page 1 of 1

Pace Analytical®

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Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

Company Name/Address:
Enercon - Oklahoma City, OK

1601 Northwest Expressway
Suite 1000
Oklahoma Citv. OK 73118

Billing Information:
Accounts Payable - Lisa Hedrick
1601 NW Expressway
Ste.1000
Oklahoma City, OK 73118

Pres Chk

Report to: Phillip Kelley

Email To: pkelley@enercon.com;ccurrent@enercon.com

Project Description: GREC, Chouteau, OK

City/State Collected: Chouteau, OK

Please Circle: PT MT CT ET

Phone: 405-722-7693

Client Project # GRDA~00014

Lab Project # ENERCOOK-GRDA

Collected by (print): Matthew Payne

Site/Facility ID # GRDA GREC

P.O. #

Collected by (signature): Matthew Payne

Immediately Packed on Ice N ___ Y ___

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed: Standard TAT

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	ALK 125mlHDPE-NoPres	Cl, F, SO4 125mlHDPE-NoPres	Metals 250mlHDPE-HNO3	SPCON,TDS 250mlHDPE-NoPres	Remarks	Sample # (lab only)
DUPLICATE	Grab	WW	NA	—	—	4	X	X	X	X		
		WW				4	X	X	X	X		
TRIP BLANK	Grab	WW	NA	5/26/2021	1115	4	X	X	X	X		

SDG # L1359368

Table #

Acctnum: ENERCOOK

Template: T169670

Prelogin: P847667

PM: 104 - Jason Romer

PB: eg 5/14/21

Shipped Via: FedEX Ground

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks: 200.7 = B 200.8 = Ca,Na

pH _____ Temp _____

Flow _____ Other _____

Sample Receipt Checklist

COC Seal Present/Intact:	NP	Y / N
COC Signed/Accurate:		Y / N
Bottles arrive intact:		Y / N
Correct bottles used:		Y / N
Sufficient volume sent:		Y / N
If Applicable		
VOA Zero Headspace:		Y / N
Preservation Correct/Checked:		Y / N
RAD Screen <0.5 mR/hr:		Y / N

Samples returned via: __ UPS __ FedEx __ Courier _____

Tracking #

	Date:	Time:
Relinquished by : (Signature) Matthew Payne	5/27/2021	1340
Relinquished by : (Signature) E. Davis	5/27/21	17:00
Relinquished by : (Signature)	Date:	Time:

Received by: (Signature) E. Davis

Received by: (Signature)

Received for lab by: (Signature)

Trip Blank Received: Yes / No HCL / MeoH TBR

Temp: .7-2=5 °C

Bottles Received: 33

Date: 5/28/21 Time: 0800

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

ANALYTICAL REPORT

December 16, 2021

Enercon - Oklahoma City, OK

Sample Delivery Group:	L1434059
Samples Received:	11/20/2021
Project Number:	GRDA~00014
Description:	GREC, Chouteau, OK

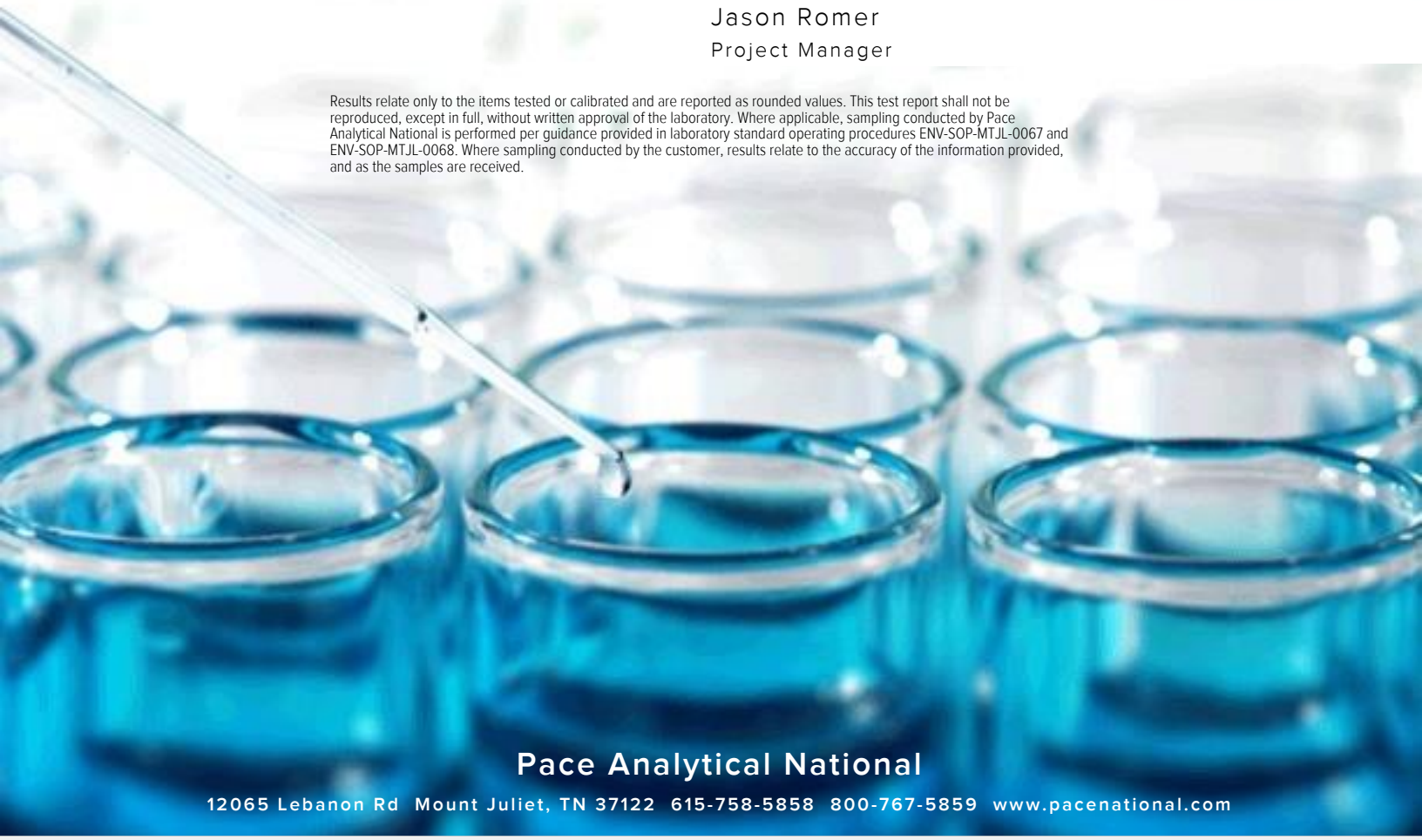
Report To:

Rusty Lynch
1601 Northwest Expressway
Suite 1000
Oklahoma City, OK 73118

Entire Report Reviewed By:

Jason Romer
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.



Pace Analytical National
12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

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MW93-1 L1434059-01 WW

Collected by: J.P. Kelley | Collected date/time: 11/17/21 16:05 | Received date/time: 11/20/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1779770	1	11/24/21 12:42	11/24/21 13:49	BRG	Mt. Juliet, TN
Wet Chemistry by Method 120.1	WG1780193	1	11/26/21 11:33	11/26/21 11:33	ARD	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG1780269	1	11/28/21 07:06	11/28/21 07:06	ARD	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1788367	1	12/14/21 03:10	12/14/21 03:10	ELN	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1788367	10	12/14/21 03:49	12/14/21 03:49	ELN	Mt. Juliet, TN
Mercury by Method 245.1	WG1778220	1	11/24/21 10:08	11/26/21 11:15	ABL	Mt. Juliet, TN
Metals (ICP) by Method 200.7	WG1788282	1	12/13/21 10:24	12/14/21 13:14	KMG	Mt. Juliet, TN
Metals (ICPMS) by Method 200.8	WG1786551	1	12/11/21 07:52	12/11/21 15:21	LD	Mt. Juliet, TN
Metals (ICPMS) by Method 200.8	WG1786551	1	12/11/21 07:52	12/12/21 18:08	LD	Mt. Juliet, TN

MW93-2 L1434059-02 WW

Collected by: J.P. Kelley | Collected date/time: 11/17/21 14:07 | Received date/time: 11/20/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1779773	1	11/24/21 14:19	11/24/21 17:19	MMF	Mt. Juliet, TN
Wet Chemistry by Method 120.1	WG1780193	1	11/26/21 11:33	11/26/21 11:33	ARD	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG1780269	1	11/28/21 07:28	11/28/21 07:28	ARD	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1788367	10	12/14/21 04:02	12/14/21 04:02	ELN	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1788367	100	12/14/21 04:15	12/14/21 04:15	ELN	Mt. Juliet, TN
Mercury by Method 245.1	WG1778220	1	11/24/21 10:08	11/26/21 11:18	ABL	Mt. Juliet, TN
Metals (ICP) by Method 200.7	WG1788282	1	12/13/21 10:24	12/14/21 13:17	KMG	Mt. Juliet, TN
Metals (ICPMS) by Method 200.8	WG1786551	1	12/11/21 07:52	12/11/21 15:24	LD	Mt. Juliet, TN
Metals (ICPMS) by Method 200.8	WG1786551	1	12/11/21 07:52	12/12/21 18:11	LD	Mt. Juliet, TN
Metals (ICPMS) by Method 200.8	WG1786551	5	12/11/21 07:52	12/12/21 18:29	LD	Mt. Juliet, TN

MW93-3 L1434059-03 WW

Collected by: J.P. Kelley | Collected date/time: 11/17/21 12:36 | Received date/time: 11/20/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1779770	1	11/24/21 12:42	11/24/21 13:49	BRG	Mt. Juliet, TN
Wet Chemistry by Method 120.1	WG1780193	1	11/26/21 11:33	11/26/21 11:33	ARD	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG1780269	1	11/28/21 07:33	11/28/21 07:33	ARD	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1788367	1	12/14/21 04:28	12/14/21 04:28	ELN	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1788367	5	12/14/21 04:41	12/14/21 04:41	ELN	Mt. Juliet, TN
Mercury by Method 245.1	WG1778220	1	11/24/21 10:08	11/26/21 11:20	ABL	Mt. Juliet, TN
Metals (ICP) by Method 200.7	WG1788362	1	12/14/21 00:26	12/14/21 12:16	RDS	Mt. Juliet, TN
Metals (ICPMS) by Method 200.8	WG1786551	1	12/11/21 07:52	12/11/21 15:27	LD	Mt. Juliet, TN
Metals (ICPMS) by Method 200.8	WG1786551	1	12/11/21 07:52	12/12/21 18:15	LD	Mt. Juliet, TN

MW03-1 L1434059-04 WW

Collected by: J.P. Kelley | Collected date/time: 11/16/21 17:05 | Received date/time: 11/20/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1779132	1	11/23/21 12:58	11/23/21 17:00	VRP	Mt. Juliet, TN
Wet Chemistry by Method 120.1	WG1780193	1	11/26/21 11:33	11/26/21 11:33	ARD	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG1780269	1	11/28/21 07:37	11/28/21 07:37	ARD	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1786880	1	12/10/21 00:37	12/10/21 00:37	ELN	Mt. Juliet, TN
Mercury by Method 245.1	WG1778220	1	11/24/21 10:08	11/26/21 11:23	ABL	Mt. Juliet, TN
Metals (ICP) by Method 200.7	WG1788362	1	12/14/21 00:26	12/14/21 12:24	RDS	Mt. Juliet, TN
Metals (ICPMS) by Method 200.8	WG1786551	1	12/11/21 07:52	12/11/21 15:30	LD	Mt. Juliet, TN
Metals (ICPMS) by Method 200.8	WG1786551	1	12/11/21 07:52	12/12/21 18:18	LD	Mt. Juliet, TN

MW03-2 L1434059-05 WW

Collected by: J.P. Kelley | Collected date/time: 11/17/21 10:30 | Received date/time: 11/20/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1779770	1	11/24/21 12:42	11/24/21 13:49	BRG	Mt. Juliet, TN
Wet Chemistry by Method 120.1	WG1780193	1	11/26/21 11:33	11/26/21 11:33	ARD	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG1780269	1	11/28/21 07:43	11/28/21 07:43	ARD	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1788367	1	12/14/21 04:54	12/14/21 04:54	ELN	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1788367	10	12/14/21 05:06	12/14/21 05:06	ELN	Mt. Juliet, TN
Mercury by Method 245.1	WG1780293	1	11/26/21 09:25	11/28/21 09:23	MRW	Mt. Juliet, TN
Metals (ICP) by Method 200.7	WG1788362	1	12/14/21 00:26	12/14/21 12:27	RDS	Mt. Juliet, TN
Metals (ICPMS) by Method 200.8	WG1786551	1	12/11/21 07:52	12/11/21 15:34	LD	Mt. Juliet, TN
Metals (ICPMS) by Method 200.8	WG1786551	1	12/11/21 07:52	12/12/21 18:21	LD	Mt. Juliet, TN

DUPLICATE L1434059-06 WW

Collected by: J.P. Kelley | Collected date/time: 11/17/21 00:00 | Received date/time: 11/20/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1779770	1	11/24/21 12:42	11/24/21 13:49	BRG	Mt. Juliet, TN
Wet Chemistry by Method 120.1	WG1780193	1	11/26/21 11:33	11/26/21 11:33	ARD	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG1780269	1	11/28/21 07:47	11/28/21 07:47	ARD	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1788367	1	12/14/21 05:19	12/14/21 05:19	ELN	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1788367	10	12/14/21 05:32	12/14/21 05:32	ELN	Mt. Juliet, TN
Metals (ICP) by Method 200.7	WG1788362	1	12/14/21 00:26	12/14/21 12:29	RDS	Mt. Juliet, TN
Metals (ICPMS) by Method 200.8	WG1786551	1	12/11/21 07:52	12/11/21 15:37	LD	Mt. Juliet, TN

TRIP BLANK L1434059-07 WW

Collected by: J.P. Kelley | Collected date/time: 11/16/21 16:00 | Received date/time: 11/20/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1779122	1	11/23/21 12:55	11/23/21 15:05	VRP	Mt. Juliet, TN
Wet Chemistry by Method 120.1	WG1780193	1	11/26/21 11:33	11/26/21 11:33	ARD	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG1780270	1	11/28/21 06:33	11/28/21 06:33	ARD	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1786880	1	12/10/21 00:50	12/10/21 00:50	ELN	Mt. Juliet, TN
Metals (ICP) by Method 200.7	WG1788362	1	12/14/21 00:26	12/14/21 12:32	RDS	Mt. Juliet, TN
Metals (ICPMS) by Method 200.8	WG1787398	1	12/10/21 12:51	12/11/21 10:46	JPD	Mt. Juliet, TN

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Jason Romer
Project Manager

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Solids	1000		13.3	1	11/24/2021 13:49	WG1779770

Wet Chemistry by Method 120.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	umhos/cm		umhos/cm		date / time	
Specific Conductance	1680		10.0	1	11/26/2021 11:33	WG1780193

Sample Narrative:

L1434059-01 WG1780193: at 25C

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Alkalinity	393		8.45	20.0	1	11/28/2021 07:06	WG1780269

Sample Narrative:

L1434059-01 WG1780269: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Chloride	17.7		0.379	1.00	1	12/14/2021 03:10	WG1788367
Fluoride	0.168		0.0640	0.150	1	12/14/2021 03:10	WG1788367
Sulfate	504		5.94	50.0	10	12/14/2021 03:49	WG1788367

Mercury by Method 245.1

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Mercury	U		0.000100	0.000200	1	11/26/2021 11:15	WG1778220

Metals (ICP) by Method 200.7

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Boron	0.322		0.0396	0.200	1	12/14/2021 13:14	WG1788282
Lithium	U		0.00689	0.0150	1	12/14/2021 13:14	WG1788282

Metals (ICPMS) by Method 200.8

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Antimony	U		0.00172	0.00500	1	12/11/2021 15:21	WG1786551
Arsenic	0.000277	J	0.000195	0.00100	1	12/11/2021 15:21	WG1786551
Barium	0.0173		0.000476	0.00500	1	12/11/2021 15:21	WG1786551
Beryllium	U		0.000201	0.00100	1	12/12/2021 18:08	WG1786551
Cadmium	0.000430	J	0.000160	0.00100	1	12/11/2021 15:21	WG1786551
Calcium	210		0.112	1.00	1	12/11/2021 15:21	WG1786551
Chromium	U		0.00560	0.0200	1	12/11/2021 15:21	WG1786551
Cobalt	U		0.000142	0.00200	1	12/11/2021 15:21	WG1786551
Lead	U		0.000513	0.00200	1	12/11/2021 15:21	WG1786551
Molybdenum	U		0.000841	0.00500	1	12/11/2021 15:21	WG1786551
Selenium	U		0.000437	0.00200	1	12/11/2021 15:21	WG1786551
Sodium	90.4		0.513	2.00	1	12/11/2021 15:21	WG1786551
Thallium	U		0.000176	0.00100	1	12/11/2021 15:21	WG1786551

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Solids	8020		200	1	11/24/2021 17:19	WG1779773

Wet Chemistry by Method 120.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	umhos/cm		umhos/cm		date / time	
Specific Conductance	15000		10.0	1	11/26/2021 11:33	WG1780193

Sample Narrative:

L1434059-02 WG1780193: at 25C

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Alkalinity	108		8.45	20.0	1	11/28/2021 07:28	WG1780269

Sample Narrative:

L1434059-02 WG1780269: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Chloride	1800		37.9	100	100	12/14/2021 04:15	WG1788367
Fluoride	0.793	J	0.640	1.50	10	12/14/2021 04:02	WG1788367
Sulfate	5940		59.4	500	100	12/14/2021 04:15	WG1788367

Mercury by Method 245.1

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Mercury	U		0.000100	0.000200	1	11/26/2021 11:18	WG1778220

Metals (ICP) by Method 200.7

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Boron	1.71		0.0396	0.200	1	12/14/2021 13:17	WG1788282
Lithium	0.0115	J	0.00689	0.0150	1	12/14/2021 13:17	WG1788282

Metals (ICPMS) by Method 200.8

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Antimony	U		0.00172	0.00500	1	12/11/2021 15:24	WG1786551
Arsenic	0.0266		0.000195	0.00100	1	12/11/2021 15:24	WG1786551
Barium	0.127		0.000476	0.00500	1	12/11/2021 15:24	WG1786551
Beryllium	U		0.000201	0.00100	1	12/12/2021 18:11	WG1786551
Cadmium	0.000207	J	0.000160	0.00100	1	12/11/2021 15:24	WG1786551
Calcium	195		0.112	1.00	1	12/11/2021 15:24	WG1786551
Chromium	U		0.00560	0.0200	1	12/11/2021 15:24	WG1786551
Cobalt	0.000222	J	0.000142	0.00200	1	12/11/2021 15:24	WG1786551
Lead	U		0.000513	0.00200	1	12/11/2021 15:24	WG1786551
Molybdenum	1.66		0.000841	0.00500	1	12/11/2021 15:24	WG1786551
Selenium	0.00102	J	0.000437	0.00200	1	12/11/2021 15:24	WG1786551
Sodium	2560		2.56	10.0	5	12/12/2021 18:29	WG1786551
Thallium	U		0.000176	0.00100	1	12/11/2021 15:24	WG1786551

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Solids	1120	J3	20.0	1	11/24/2021 13:49	WG1779770

Wet Chemistry by Method 120.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	umhos/cm		umhos/cm		date / time	
Specific Conductance	2240		10.0	1	11/26/2021 11:33	WG1780193

Sample Narrative:

L1434059-03 WG1780193: at 25C

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Alkalinity	527		8.45	20.0	1	11/28/2021 07:33	WG1780269

Sample Narrative:

L1434059-03 WG1780269: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Chloride	183		1.90	5.00	5	12/14/2021 04:41	WG1788367
Fluoride	0.329		0.0640	0.150	1	12/14/2021 04:28	WG1788367
Sulfate	286		2.97	25.0	5	12/14/2021 04:41	WG1788367

Mercury by Method 245.1

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Mercury	0.000572		0.000100	0.000200	1	11/26/2021 11:20	WG1778220

Metals (ICP) by Method 200.7

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Boron	0.0912	B J J4	0.0396	0.200	1	12/14/2021 12:16	WG1788362
Lithium	0.124		0.00689	0.0150	1	12/14/2021 12:16	WG1788362

Metals (ICPMS) by Method 200.8

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Antimony	U		0.00172	0.00500	1	12/11/2021 15:27	WG1786551
Arsenic	0.000620	J	0.000195	0.00100	1	12/11/2021 15:27	WG1786551
Barium	0.0604		0.000476	0.00500	1	12/11/2021 15:27	WG1786551
Beryllium	U		0.000201	0.00100	1	12/12/2021 18:15	WG1786551
Cadmium	U		0.000160	0.00100	1	12/11/2021 15:27	WG1786551
Calcium	80.7		0.112	1.00	1	12/11/2021 15:27	WG1786551
Chromium	U		0.00560	0.0200	1	12/11/2021 15:27	WG1786551
Cobalt	U		0.000142	0.00200	1	12/11/2021 15:27	WG1786551
Lead	U		0.000513	0.00200	1	12/11/2021 15:27	WG1786551
Molybdenum	U		0.000841	0.00500	1	12/11/2021 15:27	WG1786551
Selenium	U		0.000437	0.00200	1	12/11/2021 15:27	WG1786551
Sodium	368		0.513	2.00	1	12/11/2021 15:27	WG1786551
Thallium	U		0.000176	0.00100	1	12/11/2021 15:27	WG1786551

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Solids	160		10.0	1	11/23/2021 17:00	WG1779132

Wet Chemistry by Method 120.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	umhos/cm		umhos/cm		date / time	
Specific Conductance	279		10.0	1	11/26/2021 11:33	WG1780193

Sample Narrative:

L1434059-04 WG1780193: at 25C

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Alkalinity	103		8.45	20.0	1	11/28/2021 07:37	WG1780269

Sample Narrative:

L1434059-04 WG1780269: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Chloride	0.704	J	0.379	1.00	1	12/10/2021 00:37	WG1786880
Fluoride	0.134	B J	0.0640	0.150	1	12/10/2021 00:37	WG1786880
Sulfate	9.03		0.594	5.00	1	12/10/2021 00:37	WG1786880

Mercury by Method 245.1

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Mercury	U		0.000100	0.000200	1	11/26/2021 11:23	WG1778220

Metals (ICP) by Method 200.7

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Boron	U	J4	0.0396	0.200	1	12/14/2021 12:24	WG1788362
Lithium	U		0.00689	0.0150	1	12/14/2021 12:24	WG1788362

Metals (ICPMS) by Method 200.8

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Antimony	U		0.00172	0.00500	1	12/11/2021 15:30	WG1786551
Arsenic	0.000620	J	0.000195	0.00100	1	12/11/2021 15:30	WG1786551
Barium	0.0640		0.000476	0.00500	1	12/11/2021 15:30	WG1786551
Beryllium	U		0.000201	0.00100	1	12/12/2021 18:18	WG1786551
Cadmium	U		0.000160	0.00100	1	12/11/2021 15:30	WG1786551
Calcium	27.4		0.112	1.00	1	12/11/2021 15:30	WG1786551
Chromium	U		0.00560	0.0200	1	12/11/2021 15:30	WG1786551
Cobalt	0.000164	J	0.000142	0.00200	1	12/11/2021 15:30	WG1786551
Lead	U		0.000513	0.00200	1	12/11/2021 15:30	WG1786551
Molybdenum	0.00111	J	0.000841	0.00500	1	12/11/2021 15:30	WG1786551
Selenium	U		0.000437	0.00200	1	12/11/2021 15:30	WG1786551
Sodium	21.0		0.513	2.00	1	12/11/2021 15:30	WG1786551
Thallium	U		0.000176	0.00100	1	12/11/2021 15:30	WG1786551

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dissolved Solids	1490	J3	20.0	1	11/24/2021 13:49	WG1779770

Wet Chemistry by Method 120.1

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	2690		10.0	1	11/26/2021 11:33	WG1780193

Sample Narrative:

L1434059-05 WG1780193: at 25C

Wet Chemistry by Method 2320 B-2011

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Alkalinity	207		8.45	20.0	1	11/28/2021 07:43	WG1780269

Sample Narrative:

L1434059-05 WG1780269: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 300.0

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Chloride	482		3.79	10.0	10	12/14/2021 05:06	WG1788367
Fluoride	0.117	J	0.0640	0.150	1	12/14/2021 04:54	WG1788367
Sulfate	437		5.94	50.0	10	12/14/2021 05:06	WG1788367

Mercury by Method 245.1

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Mercury	0.00215		0.000100	0.000200	1	11/28/2021 09:23	WG1780293

Metals (ICP) by Method 200.7

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Boron	U	J4	0.0396	0.200	1	12/14/2021 12:27	WG1788362
Lithium	0.0144	J	0.00689	0.0150	1	12/14/2021 12:27	WG1788362

Metals (ICPMS) by Method 200.8

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Antimony	U		0.00172	0.00500	1	12/11/2021 15:34	WG1786551
Arsenic	U		0.000195	0.00100	1	12/11/2021 15:34	WG1786551
Barium	0.0329		0.000476	0.00500	1	12/11/2021 15:34	WG1786551
Beryllium	U		0.000201	0.00100	1	12/12/2021 18:21	WG1786551
Cadmium	U		0.000160	0.00100	1	12/11/2021 15:34	WG1786551
Calcium	290		0.112	1.00	1	12/11/2021 15:34	WG1786551
Chromium	U		0.00560	0.0200	1	12/11/2021 15:34	WG1786551
Cobalt	U		0.000142	0.00200	1	12/11/2021 15:34	WG1786551
Lead	U		0.000513	0.00200	1	12/11/2021 15:34	WG1786551
Molybdenum	U		0.000841	0.00500	1	12/11/2021 15:34	WG1786551
Selenium	U		0.000437	0.00200	1	12/11/2021 15:34	WG1786551
Sodium	164		0.513	2.00	1	12/11/2021 15:34	WG1786551
Thallium	U		0.000176	0.00100	1	12/11/2021 15:34	WG1786551

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Solids	1490		20.0	1	11/24/2021 13:49	WG1779770

Wet Chemistry by Method 120.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	umhos/cm		umhos/cm		date / time	
Specific Conductance	2700		10.0	1	11/26/2021 11:33	WG1780193

Sample Narrative:

L1434059-06 WG1780193: at 25C

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Alkalinity	208		8.45	20.0	1	11/28/2021 07:47	WG1780269

Sample Narrative:

L1434059-06 WG1780269: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Chloride	501		3.79	10.0	10	12/14/2021 05:32	WG1788367
Fluoride	0.109	J	0.0640	0.150	1	12/14/2021 05:19	WG1788367
Sulfate	457		5.94	50.0	10	12/14/2021 05:32	WG1788367

Metals (ICP) by Method 200.7

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Boron	U	J4	0.0396	0.200	1	12/14/2021 12:29	WG1788362

Metals (ICPMS) by Method 200.8

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Calcium	294		0.112	1.00	1	12/11/2021 15:37	WG1786551
Sodium	169		0.513	2.00	1	12/11/2021 15:37	WG1786551

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Solids	ND		10.0	1	11/23/2021 15:05	WG1779122

Wet Chemistry by Method 120.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	umhos/cm		umhos/cm		date / time	
Specific Conductance	ND		10.0	1	11/26/2021 11:33	WG1780193

Sample Narrative:

L1434059-07 WG1780193: at 25C

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Alkalinity	U		8.45	20.0	1	11/28/2021 06:33	WG1780270

Sample Narrative:

L1434059-07 WG1780270: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Chloride	U		0.379	1.00	1	12/10/2021 00:50	WG1786880
Fluoride	0.0828	B J	0.0640	0.150	1	12/10/2021 00:50	WG1786880
Sulfate	U		0.594	5.00	1	12/10/2021 00:50	WG1786880

Metals (ICP) by Method 200.7

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Boron	U	J4	0.0396	0.200	1	12/14/2021 12:32	WG1788362

Metals (ICPMS) by Method 200.8

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Calcium	U		0.112	1.00	1	12/11/2021 10:46	WG1787398
Sodium	U		0.513	2.00	1	12/11/2021 10:46	WG1787398

Method Blank (MB)

(MB) R3734196-1 11/23/21 15:05

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Dissolved Solids	U		10.0	10.0

L1431982-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1431982-01 11/23/21 15:05 • (DUP) R3734196-3 11/23/21 15:05

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	784	787	1	0.340		5

L1433510-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1433510-02 11/23/21 15:05 • (DUP) R3734196-4 11/23/21 15:05

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	710	715	1	0.702		5

Laboratory Control Sample (LCS)

(LCS) R3734196-2 11/23/21 15:05

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800	8730	99.2	77.4-123	

Method Blank (MB)

(MB) R3734200-1 11/23/21 17:00

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Dissolved Solids	U		10.0	10.0

L1433506-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1433506-01 11/23/21 17:00 • (DUP) R3734200-3 11/23/21 17:00

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	924	943	1	2.00		5

L1433506-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1433506-06 11/23/21 17:00 • (DUP) R3734200-4 11/23/21 17:00

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	900	915	1	1.62		5

Laboratory Control Sample (LCS)

(LCS) R3734200-2 11/23/21 17:00

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800	8570	97.4	77.4-123	

Method Blank (MB)

(MB) R3734301-1 11/24/21 13:49

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Dissolved Solids	U		10.0	10.0

L1434059-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1434059-03 11/24/21 13:49 • (DUP) R3734301-3 11/24/21 13:49

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	1120	1270	1	12.6	J3	5

L1434059-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1434059-05 11/24/21 13:49 • (DUP) R3734301-4 11/24/21 13:49

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	1490	1640	1	9.97	J3	5

Laboratory Control Sample (LCS)

(LCS) R3734301-2 11/24/21 13:49

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800	8110	92.2	77.4-123	

Method Blank (MB)

(MB) R3734915-1 11/24/21 17:19

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Dissolved Solids	U		10.0	10.0

L1433314-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1433314-05 11/24/21 17:19 • (DUP) R3734915-3 11/24/21 17:19

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	847	904	1	6.55	J3	5

L1433314-07 Original Sample (OS) • Duplicate (DUP)

(OS) L1433314-07 11/24/21 17:19 • (DUP) R3734915-4 11/24/21 17:19

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	683	707	1	3.45		5

Laboratory Control Sample (LCS)

(LCS) R3734915-2 11/24/21 17:19

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800	8380	95.2	77.4-123	

Method Blank (MB)

(MB) R3734083-1 11/26/21 11:33

Analyte	MB Result umhos/cm	MB Qualifier	MB MDL umhos/cm	MB RDL umhos/cm
Specific Conductance	U		10.0	10.0

Sample Narrative:
BLANK: at 25C

L1433001-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1433001-01 11/26/21 11:33 • (DUP) R3734083-3 11/26/21 11:33

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	1580	1580	1	0.570		20

Sample Narrative:
OS: at 25C
DUP: at 25C

L1435299-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1435299-01 11/26/21 11:33 • (DUP) R3734083-4 11/26/21 11:33

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	52.7	52.5	1	0.380		20

Sample Narrative:
OS: at 25C
DUP: at 25C

Laboratory Control Sample (LCS)

(LCS) R3734083-2 11/26/21 11:33

Analyte	Spike Amount umhos/cm	LCS Result umhos/cm	LCS Rec. %	Rec. Limits %	LCS Qualifier
Specific Conductance	268	278	104	85.0-115	

Sample Narrative:
LCS: at 25C

Method Blank (MB)

(MB) R3734370-2 11/28/21 05:24

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Alkalinity	U		8.45	20.0

Sample Narrative:

BLANK: Endpoint pH 4.5

L1432723-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1432723-01 11/28/21 05:35 • (DUP) R3734370-3 11/28/21 05:40

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity	87.9	84.0	1	4.61		20

Sample Narrative:

OS: Endpoint pH 4.5 Headspace

DUP: Endpoint pH 4.5

L1433940-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1433940-01 11/28/21 06:43 • (DUP) R3734370-4 11/28/21 06:47

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity	234	236	1	1.06		20

Sample Narrative:

OS: Endpoint pH 4.5 Headspace

DUP: Endpoint pH 4.5

Laboratory Control Sample (LCS)

(LCS) R3734370-1 11/28/21 05:19

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Alkalinity	100	99.7	99.7	90.0-110	

Sample Narrative:

LCS: Endpoint pH 4.5

Method Blank (MB)

(MB) R3734376-2 11/28/21 06:30

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Alkalinity	U		8.45	20.0

Sample Narrative:

BLANK: Endpoint pH 4.5

L1434421-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1434421-01 11/28/21 06:43 • (DUP) R3734376-3 11/28/21 06:49

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity	341	340	1	0.368		20

Sample Narrative:

OS: Endpoint pH 4.5 Headspace

DUP: Endpoint pH 4.5

L1435299-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1435299-01 11/28/21 08:26 • (DUP) R3734376-4 11/28/21 08:30

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity	10.2	9.62	1	6.22	J	20

Sample Narrative:

OS: Endpoint pH 4.5 Headspace

DUP: Endpoint pH 4.5

Laboratory Control Sample (LCS)

(LCS) R3734376-1 11/28/21 06:24

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Alkalinity	100	95.3	95.3	90.0-110	

Sample Narrative:

LCS: Endpoint pH 4.5

Method Blank (MB)

(MB) R3739417-1 12/09/21 12:13

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Chloride	U		0.379	1.00
Fluoride	0.0716	J	0.0640	0.150
Sulfate	U		0.594	5.00

L1433078-09 Original Sample (OS) • Duplicate (DUP)

(OS) L1433078-09 12/09/21 21:22 • (DUP) R3739417-3 12/09/21 21:35

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	U	U	1	0.000		20
Sulfate	U	U	1	0.000		20

L1434480-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1434480-01 12/10/21 01:03 • (DUP) R3739417-6 12/10/21 01:42

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	15.9	16.5	1	3.46		20

Laboratory Control Sample (LCS)

(LCS) R3739417-2 12/09/21 12:26

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	40.0	37.9	94.8	90.0-110	
Fluoride	8.00	7.74	96.7	90.0-110	
Sulfate	40.0	37.4	93.5	90.0-110	

L1433078-10 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1433078-10 12/09/21 21:48 • (MS) R3739417-4 12/09/21 22:01 • (MSD) R3739417-5 12/09/21 22:14

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chloride	50.0	U	49.5	50.8	99.1	102	1	80.0-120			2.53	20
Sulfate	50.0	U	48.7	50.1	97.4	100	1	80.0-120			2.87	20

L1434480-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1434480-01 12/10/21 01:03 • (MS) R3739417-7 12/10/21 01:55

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chloride	50.0	15.9	63.7	95.7	1	80.0-120	

Method Blank (MB)

(MB) R3741121-1 12/13/21 21:11

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Chloride	U		0.379	1.00
Fluoride	U		0.0640	0.150
Sulfate	U		0.594	5.00

L1433582-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1433582-02 12/13/21 23:37 • (DUP) R3741121-3 12/13/21 23:50

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	U	U	1	0.000		20
Fluoride	U	U	1	0.000		20
Sulfate	0.613	U	1	0.000		20

L1434066-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1434066-06 12/14/21 06:49 • (DUP) R3741121-6 12/14/21 07:02

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	1.75	1.72	1	1.45		20

Laboratory Control Sample (LCS)

(LCS) R3741121-2 12/13/21 21:24

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	40.0	39.5	98.8	90.0-110	
Fluoride	8.00	8.18	102	90.0-110	
Sulfate	40.0	39.8	99.5	90.0-110	

L1433582-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1433582-03 12/14/21 00:03 • (MS) R3741121-4 12/14/21 00:42 • (MSD) R3741121-5 12/14/21 00:55

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chloride	50.0	463	497	494	68.5	62.5	1	80.0-120	E V	E V	0.605	20
Fluoride	5.00	0.0877	5.07	5.14	99.7	101	1	80.0-120			1.35	20
Sulfate	50.0	1340	1370	1350	66.8	30.3	1	80.0-120	E V	E V	1.34	20

L1434066-06 Original Sample (OS) • Matrix Spike (MS)

(OS) L1434066-06 12/14/21 06:49 • (MS) R3741121-7 12/14/21 07:15

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chloride	50.0	1.75	53.4	103	1	80.0-120	

Method Blank (MB)

(MB) R3734088-1 11/26/21 10:13

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Mercury	U		0.000100	0.000200

Laboratory Control Sample (LCS)

(LCS) R3734088-2 11/26/21 10:15

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Mercury	0.00300	0.00319	106	85.0-115	

Method Blank (MB)

(MB) R3734447-1 11/28/21 08:53

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Mercury	U		0.000100	0.000200

Laboratory Control Sample (LCS)

(LCS) R3734447-2 11/28/21 08:55

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Mercury	0.00300	0.00312	104	85.0-115	

L1433429-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1433429-01 11/28/21 08:57 • (MS) R3734447-3 11/28/21 09:00 • (MSD) R3734447-4 11/28/21 09:02

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Mercury	0.00300	U	0.00308	0.00309	103	103	1	70.0-130			0.362	20

Method Blank (MB)

(MB) R3740608-1 12/14/21 12:26

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Boron	U		0.0396	0.200
Lithium	U		0.00689	0.0150

Laboratory Control Sample (LCS)

(LCS) R3740608-2 12/14/21 12:28

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Boron	1.00	0.998	99.8	85.0-115	
Lithium	1.00	1.01	101	85.0-115	

L1433978-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1433978-01 12/14/21 12:31 • (MS) R3740608-4 12/14/21 12:36 • (MSD) R3740608-5 12/14/21 12:39

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Boron	1.00	U	0.993	1.01	99.3	101	1	70.0-130			1.80	20
Lithium	1.00	U	0.995	1.00	99.5	100	1	70.0-130			0.886	20

L1440498-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1440498-01 12/14/21 12:41 • (MS) R3740608-6 12/14/21 12:44 • (MSD) R3740608-7 12/14/21 12:47

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Boron	1.00	3.04	4.03	4.03	98.6	99.0	1	70.0-130			0.0990	20
Lithium	1.00	U	1.00	1.00	100	100	1	70.0-130			0.00687	20

Method Blank (MB)

(MB) R3740616-1 12/14/21 11:53

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Boron	0.411		0.0396	0.200
Lithium	U		0.00689	0.0150

Laboratory Control Sample (LCS)

(LCS) R3740616-2 12/14/21 11:55

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Boron	1.00	1.30	130	85.0-115	J4
Lithium	1.00	0.925	92.5	85.0-115	

L1434795-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1434795-01 12/14/21 11:58 • (MS) R3740616-4 12/14/21 12:03 • (MSD) R3740616-5 12/14/21 12:06

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Lithium	1.00	0.0181	0.957	0.950	93.9	93.2	1	70.0-130			0.704	20

L1434797-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1434797-01 12/14/21 12:08 • (MS) R3740616-6 12/14/21 12:11 • (MSD) R3740616-7 12/14/21 12:13

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Lithium	1.00	0.0152	0.958	0.953	94.3	93.8	1	70.0-130			0.571	20

Method Blank (MB)

(MB) R3739754-1 12/11/21 14:35

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Antimony	U		0.00172	0.00500
Arsenic	U		0.000195	0.00100
Barium	U		0.000476	0.00500
Cadmium	U		0.000160	0.00100
Calcium	U		0.112	1.00
Chromium	U		0.00560	0.0200
Cobalt	U		0.000142	0.00200
Lead	U		0.000513	0.00200
Molybdenum	U		0.000841	0.00500
Selenium	U		0.000437	0.00200
Sodium	U		0.513	2.00
Thallium	U		0.000176	0.00100

Method Blank (MB)

(MB) R3739767-1 12/12/21 17:24

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Beryllium	U		0.000201	0.00100

Laboratory Control Sample (LCS)

(LCS) R3739754-2 12/11/21 14:38

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Antimony	0.0500	0.0479	95.7	85.0-115	
Arsenic	0.0500	0.0470	93.9	85.0-115	
Barium	0.0500	0.0462	92.4	85.0-115	
Cadmium	0.0500	0.0492	98.4	85.0-115	
Calcium	5.00	4.82	96.4	85.0-115	
Chromium	0.0500	0.0487	97.5	85.0-115	
Cobalt	0.0500	0.0489	97.8	85.0-115	
Lead	0.0500	0.0470	94.0	85.0-115	
Molybdenum	0.0500	0.0474	94.8	85.0-115	
Selenium	0.0500	0.0485	97.0	85.0-115	
Sodium	5.00	4.63	92.7	85.0-115	
Thallium	0.0500	0.0458	91.6	85.0-115	

Laboratory Control Sample (LCS)

(LCS) R3739767-2 12/12/21 17:28

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Beryllium	0.0500	0.0469	93.8	85.0-115	

L1427646-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1427646-01 12/11/21 14:41 • (MS) R3739754-4 12/11/21 14:48 • (MSD) R3739754-5 12/11/21 14:51

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Antimony	0.0500	0.114	0.169	0.171	108	113	1	70.0-130			1.24	20
Arsenic	0.0500	U	0.0483	0.0475	96.6	95.0	1	70.0-130			1.60	20
Barium	0.0500	0.0108	0.0588	0.0569	96.0	92.2	1	70.0-130			3.23	20
Cadmium	0.0500	U	0.0492	0.0479	98.3	95.8	1	70.0-130			2.59	20
Calcium	5.00	19.3	24.8	25.1	110	116	1	70.0-130			1.22	20
Chromium	0.0500	U	0.0493	0.0484	98.5	96.8	1	70.0-130			1.80	20
Cobalt	0.0500	U	0.0489	0.0477	97.7	95.4	1	70.0-130			2.41	20
Lead	0.0500	U	0.0468	0.0461	93.7	92.2	1	70.0-130			1.64	20
Molybdenum	0.0500	U	0.0500	0.0501	100	100	1	70.0-130			0.273	20
Selenium	0.0500	U	0.0485	0.0480	96.9	96.1	1	70.0-130			0.904	20
Sodium	5.00	66.7	74.6	76.9	158	203	1	70.0-130	V	V	3.02	20
Thallium	0.0500	U	0.0460	0.0440	92.0	88.0	1	70.0-130			4.45	20

L1427656-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1427656-01 12/11/21 14:54 • (MS) R3739754-6 12/11/21 14:58 • (MSD) R3739754-7 12/11/21 15:01

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Antimony	0.0500	0.297	0.443	0.478	293	363	1	70.0-130	V	V	7.67	20
Arsenic	0.0500	0.000554	0.0473	0.0480	93.5	94.9	1	70.0-130			1.50	20
Barium	0.0500	0.0249	0.0673	0.0701	84.8	90.5	1	70.0-130			4.13	20
Cadmium	0.0500	U	0.0488	0.0489	97.6	97.8	1	70.0-130			0.244	20
Calcium	5.00	18.3	22.3	22.1	79.9	75.2	1	70.0-130			1.06	20
Chromium	0.0500	U	0.0487	0.0498	97.4	99.6	1	70.0-130			2.22	20
Cobalt	0.0500	0.000232	0.0485	0.0493	96.6	98.1	1	70.0-130			1.56	20
Lead	0.0500	0.00136	0.0472	0.0478	91.8	92.8	1	70.0-130			1.09	20
Molybdenum	0.0500	U	0.0490	0.0480	98.0	95.9	1	70.0-130			2.18	20
Selenium	0.0500	U	0.0483	0.0467	96.6	93.5	1	70.0-130			3.25	20
Sodium	5.00	33.2	35.9	37.8	53.5	91.9	1	70.0-130	V		5.21	20
Thallium	0.0500	U	0.0426	0.0426	85.1	85.2	1	70.0-130			0.0650	20

L1427646-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1427646-01 12/12/21 17:31 • (MS) R3739767-4 12/12/21 17:38 • (MSD) R3739767-5 12/12/21 17:41

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Beryllium	0.0500	U	0.0475	0.0464	95.0	92.8	1	70.0-130			2.32	20

L1427656-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1427656-01 12/12/21 17:44 • (MS) R3739767-6 12/12/21 17:47 • (MSD) R3739767-7 12/12/21 17:51

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Beryllium	0.0500	U	0.0464	0.0467	92.8	93.4	1	70.0-130			0.657	20

Method Blank (MB)

(MB) R3739593-1 12/11/21 09:44

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Calcium	U		0.112	1.00
Sodium	U		0.513	2.00

Laboratory Control Sample (LCS)

(LCS) R3739593-2 12/11/21 09:48

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Calcium	5.00	4.72	94.4	85.0-115	
Sodium	5.00	4.80	95.9	85.0-115	

L1431061-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1431061-01 12/11/21 09:55 • (MS) R3739593-4 12/11/21 09:58 • (MSD) R3739593-5 12/11/21 10:02

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Calcium	5.00	229	231	234	40.6	94.9	1	70.0-130	V		1.17	20
Sodium	5.00	28.2	32.5	33.7	86.0	109	1	70.0-130			3.48	20

L1440131-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1440131-02 12/11/21 10:05 • (MS) R3739593-6 12/11/21 10:08 • (MSD) R3739593-7 12/11/21 10:12

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Calcium	5.00	258	258	246	0.000	0.000	1	70.0-130	V	V	4.81	20
Sodium	5.00	638	633	602	0.000	0.000	1	70.0-130	V	V	4.95	20

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
B	The same analyte is found in the associated blank.
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL).
J	The identification of the analyte is acceptable; the reported value is an estimate.
J3	The associated batch QC was outside the established quality control range for precision.
J4	The associated batch QC was outside the established quality control range for accuracy.
V	The sample concentration is too high to evaluate accurate spike recoveries.

ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO000356
Kentucky [1 6]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

Company Name/Address:
Enercon - Oklahoma City, OK

1601 Northwest Expressway
Suite 1000
Oklahoma Citv. OK 73118

Billing Information:
Accounts Payable - Lisa Hedrick
1601 NW Expressway
Ste.1000
Oklahoma City, OK 73118

Report to:
Phillip Kelley

Email To: rlynch@enercon.com
pkelley@enercon.com;ccurrent@enercon.com

Project Description:
GREC, Chouteau, OK

City/State Collected: Chouteau, OK

Please Circle: PT MT CT ET

Phone: **405-722-7693**

Client Project #
GRDA~00014

Lab Project #
ENERCOOK-GRDA

Collected by (print): J.P. Kelley

Site/Facility ID #

P.O. #

Collected by (signature):

Immediately Packed on Ice N ___ Y ___

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed

Analysis / Container / Preservative

Chain of Custody Page 1 of 2

Pace Analytical®

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Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

SDG # L1434059

Ta K135

Acctnum: ENERCOOK

Template: T167834

Prelogin: P886106

PM: 104 - Jason Romer

PB: BF 11/18/21

Shipped Via: FedEX Ground

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Pres Chk	ALK 125mlHDPE-NoPres	Cl, F, SO4 125mlHDPE-NoPres	RA-226,RA-228 1L-HDPE-Add HNO3	SPCON,TDS 250mlHDPE-NoPres	Tot. Rec. Metals 250mlHDPE-HNO3	Remarks	Sample # (lab only)
MW93-1	G	DW	—	11/17/21	1605	5		X	X	X	X	X		-01
MW93-2	G	DW	—	11/17/21	1407	5		X	X	X	X	X		-02
MW93-3	G	DW	—	11/17/21	1236	5		X	X	X	X	X		-03
MW03-1	G	DW	—	11/16/21	1705	5		X	X	X	X	X		-04
MW03-2	G	DW	—	11/17/21	1030	5		X	X	X	X	X		-05
~~MW21-1~~		DW				5		X	X	X	X	X		-06
		DW				5		X	X	X	X	X		
		DW				5		X	X	X	X	X		

* Matrix:
SS - Soil **AIR** - Air **F** - Filter
GW - Groundwater **B** - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:200.7 = B,Li 200.8 = Ca,Na,Sb,As,Ba,Be,Cd,Cr,Co,Pb,Mo,Se,Tl

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: __NP Y N
COC Signed/Accurate: Y N
Bottles arrive intact: Y N
Correct bottles used: Y N
Sufficient volume sent: Y N
If Applicable
VOA Zero Headspace: Y N
Preservation Correct/Checked: Y N
RAD Screen <0.5 mR/hr: Y N

	Date:	Time:		
Relinquished by : (Signature)	11/12/21	1650	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR
Relinquished by : (Signature)	11/19/21	17:00	Received by: (Signature)	Temp NSA 3°C 1.8 to 1.8 Bottles Received: 33
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 11/20/21 Time: 0900

If preservation required by Login: Date/Time

Hold: Condition: NCF / OK

Company Name/Address:
Enercon - Oklahoma City, OK

1601 Northwest Expressway
Suite 1000
Oklahoma Citv. OK 73118

Billing Information:
Accounts Payable - Lisa Hedrick
1601 NW Expressway
Ste.1000
Oklahoma City, OK 73118

Pres Chk

Email To: rlynch@enercon.com
pkelley@enercon.com;ccurrent@enercon.com

Report to:
Phillip Kelley

Project Description:
GREC, Chouteau, OK

City/State Collected: Chouteau, OK

Please Circle: PT MT CT ET

Phone: **405-722-7693**

Client Project #
GRDA~00014

Lab Project #
ENERCOOK-GRDA

Collected by (print):
J.P. Kelley

Collected by (signature):
Immediately Packed on Ice N ___ Y X

Site/Facility ID #

P.O. #

Quote #

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Date Results Needed

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	ALK 125mlHDPE-NoPres	Cl, F, SO4 125mlHDPE-NoPres	Metals 250mlHDPE-HNO3	SPCON,TDS 250mlHDPE-NoPres	Remarks	Sample # (lab only)
DUPLICATE	G	WW	—	11/17/21	—	4	X	X	X	X		-06
		WW				4	X	X	X	X		
TRIP BLANK	—	WW	—	11/16/21	1600	4	X	X	X	X		-07

Analysis / Container / Preservative

Chain of Custody Page 2 of 2

Pace Analytical®

12065 Lebanon Rd Mount Juliet, TN 37122
Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

SDG # L1434059

Table #

Acctnum: **ENERCOOK**
Template: **T169670**
Prelogin: **P886107**
PM: **104 - Jason Romer**
PB: Bf 11/18/21
Shipped Via: **FedEX Ground**

* Matrix:
SS - Soil **AIR** - Air **F** - Filter
GW - Groundwater **B** - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:200.7 = B 200.8 = Ca,Na

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: __NP __Y __N
COC Signed/Accurate: __Y __N
Bottles arrive intact: __Y __N
Correct bottles used: __Y __N
Sufficient volume sent: __Y __N
If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: __Y __N
RAD Screen <0.5 mR/hr: __Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	11/16/21	1650	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
E. Davis	11/19/21	17:00	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

Trip Blank Received: Yes / No
HCL / MeoH
TBR

Temp: NS °C Bottles Received: 33
1.8+0=1.8

Date: 11/20/21 Time: 0900

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

ANALYTICAL REPORT

December 17, 2021

Enercon - Oklahoma City, OK

Sample Delivery Group:	L1434062
Samples Received:	11/20/2021
Project Number:	GRDA~00014
Description:	GREC, Chouteau, OK

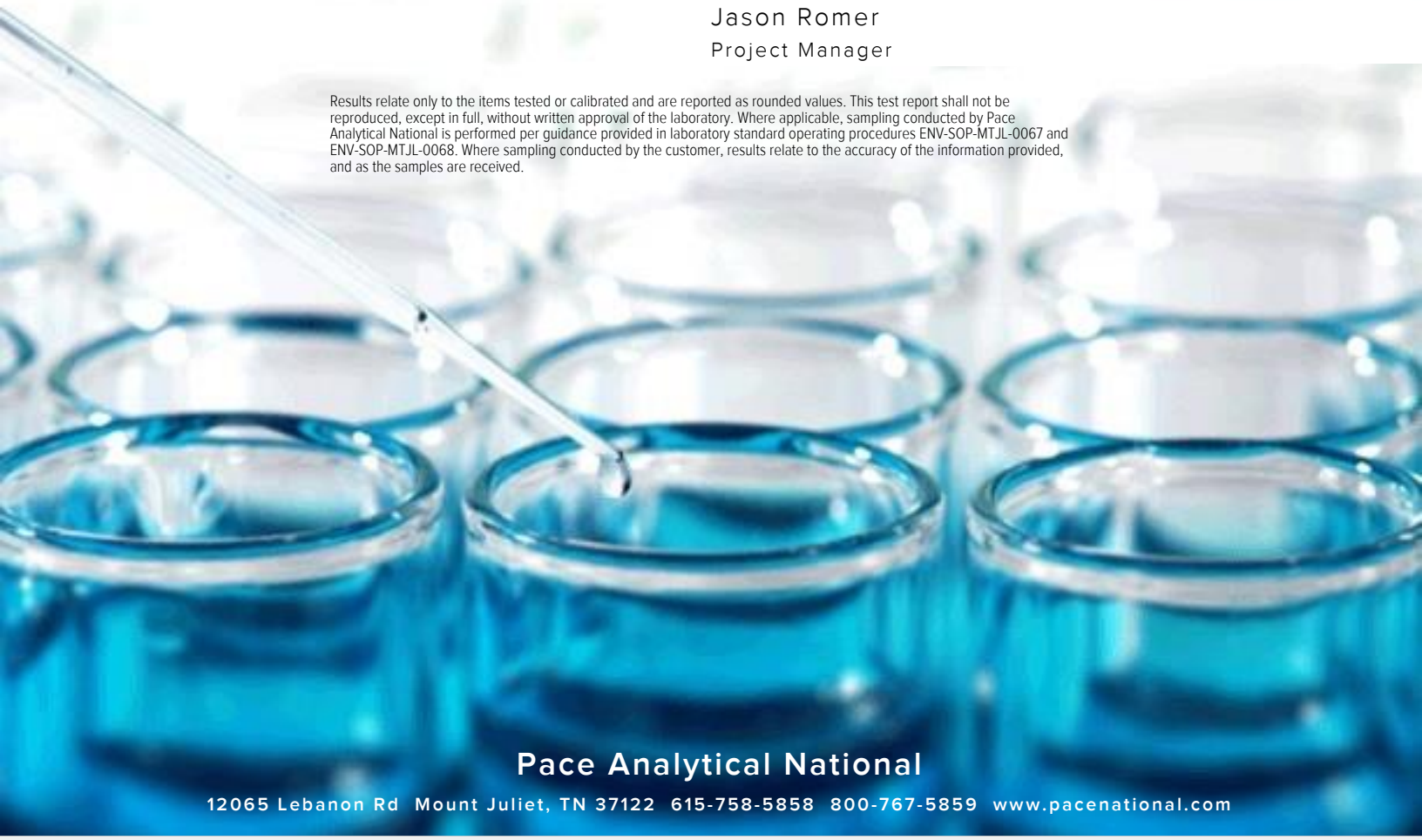
Report To:

Rusty Lynch
1601 Northwest Expressway
Suite 1000
Oklahoma City, OK 73118

Entire Report Reviewed By:

Jason Romer
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.



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MW93-1 L1434062-01 DW

Collected by: J.P. Kelley | Collected date/time: 11/17/21 16:05 | Received date/time: 11/20/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904	WG1781906	1	12/02/21 13:30	12/15/21 14:30	JMR	Mt. Juliet, TN
Radiochemistry by Method SM 7500 Ra B	WG1781038	1	12/06/21 15:04	12/08/21 22:50	RRE	Mt. Juliet, TN

MW93-2 L1434062-02 DW

Collected by: J.P. Kelley | Collected date/time: 11/17/21 14:07 | Received date/time: 11/20/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904	WG1781906	1	12/02/21 13:30	12/15/21 14:30	JMR	Mt. Juliet, TN
Radiochemistry by Method SM 7500 Ra B	WG1781038	1	12/06/21 15:04	12/08/21 22:50	RRE	Mt. Juliet, TN

MW93-3 L1434062-03 DW

Collected by: J.P. Kelley | Collected date/time: 11/17/21 12:36 | Received date/time: 11/20/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904	WG1781906	1	12/02/21 13:30	12/15/21 14:30	JMR	Mt. Juliet, TN
Radiochemistry by Method SM 7500 Ra B	WG1781038	1	12/06/21 15:04	12/08/21 23:50	RRE	Mt. Juliet, TN

MW03-1 L1434062-04 DW

Collected by: J.P. Kelley | Collected date/time: 11/16/21 17:05 | Received date/time: 11/20/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904	WG1781906	1	12/02/21 13:30	12/15/21 14:30	JMR	Mt. Juliet, TN
Radiochemistry by Method SM 7500 Ra B	WG1781038	1	12/06/21 15:04	12/08/21 23:50	RRE	Mt. Juliet, TN

MW03-2 L1434062-05 DW

Collected by: J.P. Kelley | Collected date/time: 11/17/21 10:30 | Received date/time: 11/20/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904	WG1781906	1	12/02/21 13:30	12/15/21 14:30	JMR	Mt. Juliet, TN
Radiochemistry by Method SM 7500 Ra B	WG1781038	1	12/06/21 15:04	12/08/21 23:50	RRE	Mt. Juliet, TN

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All radiochemical sample results for solids are reported on a dry weight basis with the exception of tritium, carbon-14 and radon, unless wet weight was requested by the client. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Jason Romer
Project Manager

Radiochemistry by Method 904

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	2.24		0.388	0.627	12/15/2021 14:30	WG1781906
(T) Barium	*102*			*62.0-143*	*12/15/2021 14:30*	WG1781906
(T) Yttrium	*105*			*79.0-136*	*12/15/2021 14:30*	WG1781906

Radiochemistry by Method SM 7500 Ra B

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	-0.0299	U	0.0586	0.189	12/08/2021 22:50	WG1781038
(T) Barium	*90.5*			*63.0-143*	*12/08/2021 22:50*	WG1781038

Radiochemistry by Method 904

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	3.26		0.434	0.679	12/15/2021 14:30	WG1781906
(T) Barium	*106*			*62.0-143*	*12/15/2021 14:30*	WG1781906
(T) Yttrium	*98.3*			*79.0-136*	*12/15/2021 14:30*	WG1781906

Radiochemistry by Method SM 7500 Ra B

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.483		0.268	0.292	12/08/2021 22:50	WG1781038
(T) Barium	*103*			*63.0-143*	*12/08/2021 22:50*	WG1781038

Radiochemistry by Method 904

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	1.41		0.393	0.665	12/15/2021 14:30	WG1781906
(T) Barium	*104*			*62.0-143*	*12/15/2021 14:30*	WG1781906
(T) Yttrium	*107*			*79.0-136*	*12/15/2021 14:30*	WG1781906

Radiochemistry by Method SM 7500 Ra B

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.373		0.218	0.183	12/08/2021 23:50	WG1781038
(T) Barium	*93.4*			*63.0-143*	*12/08/2021 23:50*	WG1781038

Radiochemistry by Method 904

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	1.27		0.426	0.73	12/15/2021 14:30	WG1781906
(T) Barium	*108*			*62.0-143*	*12/15/2021 14:30*	WG1781906
(T) Yttrium	*104*			*79.0-136*	*12/15/2021 14:30*	WG1781906

Radiochemistry by Method SM 7500 Ra B

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.704		0.329	0.27	12/08/2021 23:50	WG1781038
(T) Barium	*80.0*			*63.0-143*	*12/08/2021 23:50*	WG1781038

Radiochemistry by Method 904

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-228	0.383	J	0.387	0.688	12/15/2021 14:30	WG1781906
(T) Barium	*100*			*62.0-143*	*12/15/2021 14:30*	WG1781906
(T) Yttrium	*102*			*79.0-136*	*12/15/2021 14:30*	WG1781906

Radiochemistry by Method SM 7500 Ra B

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.421		0.246	0.2	12/08/2021 23:50	WG1781038
(T) Barium	*82.8*			*63.0-143*	*12/08/2021 23:50*	WG1781038

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Method Blank (MB)

(MB) R3742030-1 12/15/21 14:30

Analyte	MB Result pCi/l	MB Qualifier	MB Uncertainty + / - pCi/l	MB MDA pCi/l
Radium-228	0.300	J	0.225	0.398
(T) Barium	*99.2*		*99.2*	
(T) Yttrium	*99.4*		*99.4*	

L1433589-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1433589-01 12/15/21 14:30 • (DUP) R3742030-5 12/15/21 14:30

Analyte	Original Result pCi/l	Original Uncertainty + / -	Original MDA pCi/l	DUP Result pCi/l	DUP Uncertainty + / -	DUP MDA pCi/l	Dilution	DUP RPD %	DUP RER	DUP Qualifier	DUP RPD Limits %	DUP RER Limit
Radium-228	0.281	0.288	0.55	1.67	0.841	0.55	1	142	1.56		20	2
(T) Barium	*96.8*			*103*	*103*							
(T) Yttrium	*102*			*100*	*100*							

Laboratory Control Sample (LCS)

(LCS) R3742030-2 12/15/21 14:30

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Radium-228	5.00	4.99	99.8	80.0-120	
(T) Barium			*102*		
(T) Yttrium			*96.9*		

L1434067-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1434067-01 12/15/21 14:30 • (MS) R3742030-3 12/15/21 14:30 • (MSD) R3742030-4 12/15/21 14:30

Analyte	Spike Amount pCi/l	Original Result pCi/l	MS Result pCi/l	MSD Result pCi/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	MS RER	RPD Limits %
Radium-228	16.7	1.12	21.0	18.3	119	103	1	70.0-130			14.0		20
(T) Barium		*106*			*105*	*102*							
(T) Yttrium		*105*			*96.6*	*97.8*							

Method Blank (MB)

(MB) R3738757-1 12/08/21 21:49

Analyte	MB Result	MB Qualifier	MB Uncertainty	MB MDA
	pCi/l		+ / -	pCi/l
Radium-226	0.0164	U	0.0717	0.158
(T) Barium	*83.8*		*83.8*	

L1434065-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1434065-01 12/08/21 23:50 • (DUP) R3738757-5 12/08/21 22:50

Analyte	Original Result	Original Uncertainty	Original MDA	DUP Result	DUP Uncertainty	DUP MDA	Dilution	DUP RPD	DUP RER	DUP Qualifier	DUP RPD Limits	DUP RER Limit
	pCi/l	+ / -	pCi/l	pCi/l	+ / -	pCi/l		%			%	
Radium-226	0.000	0.154	0.308	0.153	0.180	0.308	1	200	0.647	J	20	2
(T) Barium	*95.5*			*88.5*	*88.5*							

Laboratory Control Sample (LCS)

(LCS) R3738757-2 12/08/21 21:49

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	pCi/l	pCi/l	%	%	
Radium-226	5.01	5.26	105	90.0-110	
(T) Barium			*94.3*		

L1436009-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1436009-01 12/09/21 01:50 • (MS) R3738757-3 12/08/21 21:49 • (MSD) R3738757-4 12/08/21 22:50

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	MS RER	RPD Limits
	pCi/l	pCi/l	pCi/l	pCi/l	%	%		%			%		%
Radium-226	10.0	0.208	9.68	9.22	94.8	90.1	1	80.0-120			4.94		20
(T) Barium		*126*			*96.3*	*103*							

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDA	Minimum Detectable Activity.
Rec.	Recovery.
RER	Replicate Error Ratio.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(T)	Tracer - A radioisotope of known concentration added to a solution of chemically equivalent radioisotopes at a known concentration to assist in monitoring the yield of the chemical separation.
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
J	The identification of the analyte is acceptable; the reported value is an estimate.
U	Below Detectable Limits: Indicates that the analyte was not detected.

ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO000356
Kentucky [1 6]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

Company Name/Address:
Enercon - Oklahoma City, OK

1601 Northwest Expressway
Suite 1000
Oklahoma Citv. OK 73118

Billing Information:
Accounts Payable - Lisa Hedrick
1601 NW Expressway
Ste.1000
Oklahoma City, OK 73118

Pres Chk

Report to:
Phillip Kelley

Email To: rlynch@enercon.com
~~pkelley@enercon.com~~;ccurrent@enercon.com

Project Description:
GREC, Chouteau, OK

City/State Collected: Chouteau, OK

Please Circle: PT MT CT ET

Phone: 405-722-7693

Client Project #
GRDA~00014

Lab Project #
ENERCOOK-GRDA

Collected by (print):
J.P. Kelley

Site/Facility ID #

P.O. #

Collected by (signature):

Immediately Packed on Ice N ___ Y ___

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	ALK 125mlHDPE-NoPres	Cl, F, SO4 125mlHDPE-NoPres	RA-226,RA-228 1L-HDPE-Add HNO3	SPCON,TDS 250mlHDPE-NoPres	Tot. Rec. Metals 250mlHDPE-HNO3					Remarks	Sample # (lab only)
							Analysis / Container / Preservative		22		22						
MW93-1	G	DW	—	11/17/21	1605	5	X	X	X	X	X						-01
MW93-2	G	DW	—	11/17/21	1407	5	X	X	X	X	X						-02
MW93-3	G	DW	—	11/17/21	1236	5	X	X	X	X	X						-03
MW03-1	G	DW	—	11/16/21	1705	5	X	X	X	X	X						-04
MW03-2	G	DW	—	11/17/21	1030	5	X	X	X	X	X						-05
~~MW21-1~~		DW				5	X	X	X	X	X						JPK
		DW				5	X	X	X	X	X						
		DW				5	X	X	X	X	X						

Chain of Custody Page 1 of 2

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SDG # L1434062

Ta K135

Acctnum: ENERCOOK

Template: T167834

Prelogin: P886106

PM: 104 - Jason Romer

PB: BF 11/18/21

Shipped Via: FedEX Ground

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks: 200.7 = B,Li 200.8 = Ca,Na,Sb,As,Ba,Be,Cd,Cr,Co,Pb,Mo,Se,Tl

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: __NP Y N
COC Signed/Accurate: Y N
Bottles arrive intact: Y N
Correct bottles used: Y N
Sufficient volume sent: Y N
If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: Y N
RAD Screen <0.5 mR/hr: Y N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR
	11/18/21	1650		
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: NSA 3°C 1.8±0=1.8 Bottles Received: 33
	11/19/21	17:00		
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 11/20/21 Time: 0900

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

Appendix B
Statistical Output

Concentrations (ppb)

Parameter: Alkalinity

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Measurements: 298
Total Non-Detect: 0
Percent Non-Detects: 0%
Total Background Measurements: 74
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
MW#93-1	74	0 (0%)	12/15/1994	367	367
			12/14/1995	334	334
			3/6/1996	384	384
			4/25/1996	363	363
			10/2/1996	365	365
			12/10/1996	346	346
			3/11/1997	350	350
			4/15/1997	330	330
			8/14/1997	400	400
			12/4/1997	380	380
			3/31/1998	360	360
			6/23/1998	390	390
			8/11/1998	389	389
			12/8/1998	376	376
			3/9/1999	340	340
			6/8/1999	395	395
			8/19/1999	400	400
			12/14/1999	360	360
			3/7/2000	384	384
			6/23/2000	364	364
			12/12/2000	450	450
			3/27/2001	362	362
			6/28/2001	340	340
			9/10/2001	326	326
			12/18/2001	326	326
			3/19/2002	330	330
			6/26/2002	350	350
			9/18/2002	353	353
			12/11/2002	344	344
			3/13/2003	320	320
			6/25/2003	336	336
			9/26/2003	320	320
			12/10/2003	324	324
			3/9/2004	329	329
			6/24/2004	348	348
			9/15/2004	332	332
			12/15/2004	327	327
			3/16/2005	340	340
			6/15/2005	330	330
			9/21/2005	347	347
			12/21/2005	340	340
			3/15/2006	320	320
			6/21/2006	314	314
			12/20/2006	300	300
			6/12/2007	310	310

			12/17/2007	330	330
			6/11/2008	370	370
			12/3/2008	344	344
			6/17/2009	350	350
			12/9/2009	370	370
			6/17/2010	380	380
			12/22/2010	370	370
			6/29/2011	366	366
			12/7/2011	370	370
			6/6/2012	384	384
			12/12/2012	330	330
			6/19/2013	360	360
			12/11/2013	358	358
			6/11/2014	342	342
			12/3/2014	368	368
			6/17/2015	380	380
			12/1/2015	383	383
			6/22/2016	390	390
			12/20/2016	395.4	395.4
			6/6/2017	398	398
			11/7/2017	394	394
			2/27/2018	384	384
			9/27/2018	360	360
			5/7/2019	550	550
			11/21/2019	480	480
			6/25/2020	542	542
			11/17/2020	473	473
			5/26/2021	441	441
			11/17/2021	393	393

There are 4 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
MW#93-2	75	0 (0%)	12/15/1994	170	170
			12/14/1995	191	191
			3/6/1996	308	308
			4/25/1996	340	340
			10/2/1996	340	340
			12/10/1996	270	270
			3/11/1997	210	210
			4/15/1997	220	220
			8/14/1997	240	240
			12/4/1997	200	200
			3/31/1998	184	184
			6/23/1998	250	250
			8/11/1998	208	208
			12/8/1998	200	200
			3/9/1999	224	224
			6/8/1999	220	220
			8/19/1999	226	226
			12/14/1999	240	240
			3/7/2000	244	244
			6/23/2000	264	264
			12/12/2000	220	220
			3/27/2001	215	215
			6/28/2001	240	240

			9/10/2001	208	208
			12/18/2001	235	235
			3/19/2002	263	263
			6/26/2002	290	290
			9/18/2002	256	256
			12/11/2002	249	249
			3/13/2003	240	240
			6/25/2003	246	246
			9/26/2003	250	250
			12/10/2003	200	200
			3/9/2004	280	280
			6/24/2004	329	329
			9/15/2004	272	272
			12/15/2004	288	288
			3/16/2005	240	240
			6/15/2005	246	246
			9/21/2005	228	228
			12/21/2005	232	232
			3/15/2006	250	250
			6/21/2006	290	290
			12/20/2006	356	356
			2/21/2007	340	340
			6/12/2007	312	312
			12/17/2007	210	210
			6/11/2008	240	240
			12/3/2008	280	280
			6/17/2009	250	250
			12/9/2009	236	236
			6/17/2010	252	252
			12/22/2010	240	240
			6/29/2011	266	266
			12/7/2011	288	288
			6/6/2012	256	256
			12/12/2012	248	248
			6/19/2013	364	364
			12/11/2013	328	328
			6/11/2014	342	342
			12/3/2014	296	296
			6/17/2015	384	384
			12/1/2015	226	226
			6/22/2016	176	176
			12/20/2016	162.2	162.2
			6/6/2017	246	246
			11/7/2017	430	430
			2/27/2018	282	282
			9/27/2018	270	270
			5/7/2019	360	360
			11/21/2019	360	360
			6/25/2020	261	261
			11/16/2020	266	266
			5/26/2021	201	201
			11/17/2021	108	108
MW#93-3	74	0 (0%)	12/15/1994	240	240
			12/14/1995	206	206
			3/6/1996	226	226
			4/25/1996	228	228

10/2/1996	240	240
12/10/1996	225	225
3/11/1997	210	210
4/15/1997	200	200
8/14/1997	255	255
12/4/1997	140	140
3/31/1998	240	240
6/23/1998	225	225
8/11/1998	224	224
12/8/1998	214	214
3/9/1999	234	234
6/8/1999	236	236
8/19/1999	260	260
12/14/1999	300	300
3/7/2000	264	264
6/23/2000	244	244
12/12/2000	320	320
3/27/2001	254	254
6/28/2001	255	255
9/10/2001	332	332
12/18/2001	230	230
3/19/2002	255	255
6/26/2002	250	250
9/18/2002	268	268
12/11/2002	268	268
3/13/2003	247	247
6/25/2003	252	252
9/26/2003	244	244
12/10/2003	271	271
3/9/2004	284	284
6/24/2004	309	309
9/15/2004	264	264
12/15/2004	254	254
3/16/2005	290	290
6/15/2005	268	268
9/21/2005	264	264
12/21/2005	246	246
3/15/2006	227	227
6/21/2006	253	253
12/20/2006	250	250
6/12/2007	280	280
12/17/2007	290	290
6/11/2008	300	300
12/3/2008	226	226
6/17/2009	240	240
12/9/2009	214	214
6/17/2010	296	296
12/22/2010	230	230
6/29/2011	256	256
12/7/2011	244	244
6/6/2012	288	288
12/12/2012	226	226
6/19/2013	316	316
12/11/2013	262	262
6/11/2014	338	338
12/3/2014	262	262
6/17/2015	388	388

			5/25/2016	440	440
			6/22/2016	330	330
			12/20/2016	330.4	330.4
			6/6/2017	304	304
			11/7/2017	409	409
			2/27/2018	368	368
			9/27/2018	375	375
			5/7/2019	585	585
			11/21/2019	525	525
			6/25/2020	619	619
			11/16/2020	549	549
			5/26/2021	576	576
			11/17/2021	527	527
MW#03-1	35	0 (0%)	6/24/2004	209	209
			9/15/2004	220	220
			12/15/2004	184	184
			3/16/2005	160	160
			6/15/2005	252	252
			9/21/2005	180	180
			12/20/2006	204	204
			6/12/2007	200	200
			12/17/2007	190	190
			6/11/2008	200	200
			12/3/2008	206	206
			6/17/2009	204	204
			12/9/2009	216	216
			6/17/2010	232	232
			12/22/2010	216	216
			6/29/2011	210	210
			12/7/2011	222	222
			6/6/2012	216	216
			6/19/2013	144	144
			12/11/2013	212	212
			6/11/2014	222	222
			12/3/2014	194	194
			6/17/2015	134	134
			12/1/2015	150	150
			6/22/2016	130	130
			12/20/2016	211.6	211.6
			6/6/2017	56	56
			11/7/2017	217	217
			2/27/2018	72	72
			5/7/2019	55	55
			11/21/2019	55	55
			6/25/2020	126	126
			11/17/2020	234	234
			5/26/2021	30.2	30.2
			11/16/2021	103	103
MW#03-2	40	0 (0%)	6/24/2004	235	235
			9/15/2004	200	200
			12/15/2004	222	222
			3/16/2005	220	220
			6/15/2005	252	252
			9/21/2005	224	224
			12/21/2005	230	230

3/15/2006	220	220
6/21/2006	228	228
12/20/2006	220	220
6/12/2007	228	228
12/17/2007	200	200
6/11/2008	200	200
12/3/2008	210	210
6/17/2009	200	200
12/9/2009	208	208
6/17/2010	216	216
12/22/2010	230	230
6/29/2011	224	224
12/7/2011	236	236
6/6/2012	230	230
12/12/2012	242	242
6/19/2013	232	232
12/11/2013	230	230
6/11/2014	92	92
12/3/2014	76	76
6/17/2015	220	220
12/1/2015	214	214
6/22/2016	204	204
12/20/2016	199.4	199.4
6/6/2017	192	192
11/7/2017	192	192
2/27/2018	196	196
9/27/2018	185	185
5/7/2019	220	220
11/21/2019	220	220
6/25/2020	223	223
11/17/2020	209	209
5/26/2021	220	220
11/17/2021	208	208

There are 0 unused locations

Loc.	Meas.	ND	Date	Conc.	Original

Non-Parametric Prediction Interval

Inter-Well Comparison

Parameter: Alkalinity

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Percent Non-Detects = 0%
Number of comparisons = 4
Future Samples (k) = 4
Recent Dates = 1
Background Measurements (n) = 74
Maximum Background Value = 550
Confidence Level = 94.9%
False Positive Rate = 5.1%

Location	Date	Count	Mean	Significant
MW#93-2	11/17/2021	1	108	FALSE
MW#93-3	11/17/2021	1	527	FALSE
MW#03-1	11/16/2021	1	103	FALSE
MW#03-2	11/17/2021	1	208	FALSE

Shapiro-Francia Test of Normality

Parameter: Alkalinity

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Number of Measurements = 298

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	30.2	-2.74777	7.55021	-82.9825
2	55	-2.51213	13.861	-221.15
3	55	-2.32634	19.2729	-349.099
4	56	-2.22621	24.2289	-473.766
5	72	-2.14441	28.8274	-628.164
6	76	-2.05375	33.0453	-784.248
7	92	-1.99539	37.0269	-967.825
8	103	-1.94314	40.8026	-1167.97
9	108	-1.88079	44.34	-1371.09
10	126	-1.83843	47.7198	-1602.73
11	130	-1.79912	50.9566	-1836.62
12	134	-1.75069	54.0215	-2071.21
13	140	-1.71688	56.9692	-2311.58
14	144	-1.68494	59.8082	-2554.21
15	150	-1.64485	62.5138	-2800.93
16	160	-1.61644	65.1267	-3059.56
17	162.2	-1.58927	67.6524	-3317.34
18	170	-1.55477	70.0697	-3581.66
19	176	-1.53007	72.4108	-3850.95
20	180	-1.50626	74.6797	-4122.07
21	184	-1.47579	76.8576	-4393.62
22	184	-1.4538	78.9712	-4661.12
23	185	-1.4325	81.0232	-4926.13
24	190	-1.40507	82.9975	-5193.1
25	191	-1.38517	84.9162	-5457.66
26	192	-1.36581	86.7816	-5719.9
27	192	-1.34075	88.5792	-5977.32
28	194	-1.32251	90.3282	-6233.89
29	196	-1.30469	92.0304	-6489.61
30	199.4	-1.28155	93.6728	-6745.15
31	200	-1.26464	95.2721	-6998.08
32	200	-1.24264	96.8163	-7246.61
33	200	-1.22653	98.3207	-7491.91
34	200	-1.21073	99.7865	-7734.06
35	200	-1.19012	101.203	-7972.08
36	200	-1.17499	102.584	-8207.08
37	200	-1.16012	103.929	-8439.1
38	200	-1.14069	105.231	-8667.24
39	200	-1.12639	106.499	-8892.52
40	200	-1.11232	107.737	-9114.98
41	201	-1.0939	108.933	-9334.86
42	204	-1.08032	110.1	-9555.24
43	204	-1.06694	111.239	-9772.9
44	204	-1.04939	112.34	-9986.97
45	206	-1.03643	113.414	-10200.5
46	206	-1.02365	114.462	-10411.3
47	208	-1.00687	115.476	-10620.8

48	208	-0.994457	116.465	-10827.6
49	208	-0.982202	117.429	-11031.9
50	208	-0.966088	118.363	-11232.9
51	209	-0.954165	119.273	-11432.3
52	209	-0.942375	120.161	-11629.2
53	210	-0.926859	121.02	-11823.9
54	210	-0.915365	121.858	-12016.1
55	210	-0.903992	122.675	-12206
56	210	-0.889006	123.466	-12392.6
57	210	-0.877897	124.236	-12577
58	211.6	-0.866894	124.988	-12760.4
59	212	-0.852385	125.714	-12941.1
60	214	-0.841621	126.423	-13121.2
61	214	-0.827417	127.107	-13298.3
62	214	-0.816874	127.775	-13473.1
63	215	-0.806422	128.425	-13646.5
64	216	-0.792618	129.053	-13817.7
65	216	-0.782366	129.665	-13986.7
66	216	-0.772193	130.262	-14153.5
67	216	-0.758753	130.837	-14317.4
68	217	-0.748762	131.398	-14479.9
69	220	-0.738846	131.944	-14642.4
70	220	-0.725736	132.471	-14802.1
71	220	-0.715986	132.983	-14959.6
72	220	-0.706302	133.482	-15115
73	220	-0.693493	133.963	-15267.5
74	220	-0.68396	134.431	-15418
75	220	-0.67449	134.886	-15566.4
76	220	-0.661955	135.324	-15712
77	220	-0.652622	135.75	-15855.6
78	220	-0.643345	136.164	-15997.2
79	220	-0.631062	136.562	-16136
80	222	-0.621911	136.949	-16274
81	222	-0.612813	137.324	-16410.1
82	222	-0.60076	137.685	-16543.5
83	223	-0.591776	138.035	-16675.4
84	224	-0.582841	138.375	-16806
85	224	-0.570999	138.701	-16933.9
86	224	-0.56217	139.017	-17059.8
87	224	-0.553384	139.323	-17183.8
88	225	-0.541736	139.617	-17305.7
89	225	-0.533048	139.901	-17425.6
90	226	-0.521527	140.173	-17543.5
91	226	-0.51293	140.436	-17659.4
92	226	-0.504372	140.69	-17773.4
93	226	-0.493018	140.934	-17884.8
94	226	-0.484544	141.168	-17994.3
95	227	-0.476105	141.395	-18102.4
96	228	-0.464904	141.611	-18208.4
97	228	-0.456542	141.82	-18312.5
98	228	-0.448213	142.02	-18414.7
99	228	-0.437153	142.212	-18514.3
100	230	-0.428895	142.396	-18613
101	230	-0.420664	142.572	-18709.7
102	230	-0.409735	142.74	-18804
103	230	-0.401571	142.902	-18896.3
104	230	-0.393433	143.056	-18986.8

105	230	-0.382622	143.203	-19074.8
106	232	-0.374544	143.343	-19161.7
107	232	-0.36649	143.477	-19246.7
108	232	-0.355788	143.604	-19329.3
109	234	-0.347787	143.725	-19410.7
110	234	-0.33981	143.84	-19490.2
111	235	-0.329206	143.949	-19567.5
112	235	-0.321278	144.052	-19643
113	236	-0.31337	144.15	-19717
114	236	-0.302855	144.242	-19788.5
115	236	-0.294992	144.329	-19858.1
116	240	-0.287147	144.411	-19927
117	240	-0.276714	144.488	-19993.4
118	240	-0.268908	144.56	-20058
119	240	-0.26112	144.628	-20120.6
120	240	-0.250759	144.691	-20180.8
121	240	-0.243007	144.75	-20239.1
122	240	-0.232693	144.805	-20295
123	240	-0.224974	144.855	-20349
124	240	-0.217267	144.902	-20401.1
125	240	-0.207012	144.945	-20450.8
126	240	-0.199336	144.985	-20498.6
127	242	-0.191671	145.022	-20545
128	244	-0.181468	145.055	-20589.3
129	244	-0.173829	145.085	-20631.7
130	244	-0.166199	145.112	-20672.3
131	244	-0.156042	145.137	-20710.3
132	246	-0.148434	145.159	-20746.9
133	246	-0.140835	145.179	-20781.5
134	246	-0.130716	145.196	-20813.7
135	246	-0.123135	145.211	-20844
136	247	-0.115562	145.224	-20872.5
137	248	-0.105474	145.235	-20898.7
138	249	-0.0979139	145.245	-20923
139	250	-0.0903606	145.253	-20945.6
140	250	-0.0802981	145.26	-20965.7
141	250	-0.0727562	145.265	-20983.9
142	250	-0.0652187	145.269	-21000.2
143	250	-0.0551734	145.272	-21014
144	250	-0.0476439	145.274	-21025.9
145	252	-0.0401167	145.276	-21036
146	252	-0.0300838	145.277	-21043.6
147	252	-0.0225612	145.277	-21049.3
148	252	-0.0150408	145.278	-21053.1
149	253	-0.00501359	145.278	-21054.3
150	254	0.00501359	145.278	-21053.1
151	254	0.0150408	145.278	-21049.2
152	255	0.0225612	145.279	-21043.5
153	255	0.0300838	145.279	-21035.8
154	255	0.0401167	145.281	-21025.6
155	256	0.0476439	145.283	-21013.4
156	256	0.0551734	145.286	-20999.3
157	256	0.0652187	145.291	-20982.6
158	260	0.0727562	145.296	-20963.6
159	261	0.0802981	145.302	-20942.7
160	262	0.0903606	145.31	-20919
161	262	0.0979139	145.32	-20893.4

162	263	0.105474	145.331	-20865.6
163	264	0.115562	145.345	-20835.1
164	264	0.123135	145.36	-20802.6
165	264	0.130716	145.377	-20768.1
166	264	0.140835	145.397	-20730.9
167	266	0.148434	145.419	-20691.4
168	266	0.156042	145.443	-20649.9
169	268	0.166199	145.471	-20605.4
170	268	0.173829	145.501	-20558.8
171	268	0.181468	145.534	-20510.2
172	270	0.191671	145.571	-20458.4
173	270	0.199336	145.61	-20404.6
174	271	0.207012	145.653	-20348.5
175	272	0.217267	145.7	-20289.4
176	280	0.224974	145.751	-20226.4
177	280	0.232693	145.805	-20161.3
178	280	0.243007	145.864	-20093.2
179	282	0.250759	145.927	-20022.5
180	284	0.26112	145.995	-19948.3
181	288	0.268908	146.068	-19870.9
182	288	0.276714	146.144	-19791.2
183	288	0.287147	146.227	-19708.5
184	290	0.294992	146.314	-19623
185	290	0.302855	146.405	-19535.1
186	290	0.31337	146.503	-19444.2
187	290	0.321278	146.607	-19351.1
188	296	0.329206	146.715	-19253.6
189	296	0.33981	146.831	-19153
190	300	0.347787	146.952	-19048.7
191	300	0.355788	147.078	-18942
192	300	0.36649	147.212	-18832
193	304	0.374544	147.353	-18718.2
194	308	0.382622	147.499	-18600.3
195	309	0.393433	147.654	-18478.7
196	310	0.401571	147.815	-18354.3
197	312	0.409735	147.983	-18226.4
198	314	0.420664	148.16	-18094.3
199	316	0.428895	148.344	-17958.8
200	320	0.437153	148.535	-17818.9
201	320	0.448213	148.736	-17675.5
202	320	0.456542	148.944	-17529.4
203	320	0.464904	149.16	-17380.6
204	324	0.476105	149.387	-17226.4
205	326	0.484544	149.622	-17068.4
206	326	0.493018	149.865	-16907.7
207	327	0.504372	150.119	-16742.8
208	328	0.51293	150.383	-16574.5
209	329	0.521527	150.654	-16402.9
210	329	0.533048	150.939	-16227.6
211	330	0.541736	151.232	-16048.8
212	330	0.553384	151.538	-15866.2
213	330	0.56217	151.854	-15680.6
214	330	0.570999	152.18	-15492.2
215	330	0.582841	152.52	-15299.9
216	330	0.591776	152.87	-15104.6
217	330.4	0.60076	153.231	-14906.1
218	332	0.612813	153.607	-14702.7

219	332	0.621911	153.994	-14496.2
220	334	0.631062	154.392	-14285.4
221	336	0.643345	154.806	-14069.2
222	338	0.652622	155.232	-13848.7
223	340	0.661955	155.67	-13623.6
224	340	0.67449	156.125	-13394.3
225	340	0.68396	156.593	-13161.7
226	340	0.693493	157.073	-12925.9
227	340	0.706302	157.572	-12685.8
228	340	0.715986	158.085	-12442.3
229	340	0.725736	158.612	-12195.6
230	342	0.738846	159.158	-11942.9
231	342	0.748762	159.718	-11686.8
232	344	0.758753	160.294	-11425.8
233	344	0.772193	160.89	-11160.2
234	346	0.782366	161.502	-10889.5
235	347	0.792618	162.131	-10614.5
236	348	0.806422	162.781	-10333.8
237	350	0.816874	163.448	-10047.9
238	350	0.827417	164.133	-9758.32
239	350	0.841621	164.841	-9463.75
240	353	0.852385	165.568	-9162.86
241	356	0.866894	166.319	-8854.24
242	358	0.877897	167.09	-8539.96
243	360	0.889006	167.88	-8219.91
244	360	0.903992	168.697	-7894.48
245	360	0.915365	169.535	-7564.95
246	360	0.926859	170.394	-7231.28
247	360	0.942375	171.282	-6892.02
248	360	0.954165	172.193	-6548.52
249	362	0.966088	173.126	-6198.8
250	363	0.982202	174.091	-5842.26
251	364	0.994457	175.08	-5480.28
252	364	1.00687	176.094	-5113.78
253	365	1.02365	177.141	-4740.14
254	366	1.03643	178.216	-4360.81
255	367	1.04939	179.317	-3975.69
256	368	1.06694	180.455	-3583.05
257	368	1.08032	181.622	-3185.49
258	370	1.0939	182.819	-2780.75
259	370	1.11232	184.056	-2369.19
260	370	1.12639	185.325	-1952.43
261	370	1.14069	186.626	-1530.37
262	375	1.16012	187.972	-1095.33
263	376	1.17499	189.353	-653.534
264	380	1.19012	190.769	-201.289
265	380	1.21073	192.235	258.788
266	380	1.22653	193.739	724.869
267	383	1.24264	195.283	1200.8
268	384	1.26464	196.883	1686.42
269	384	1.28155	198.525	2178.54
270	384	1.30469	200.227	2679.54
271	384	1.32251	201.976	3187.38
272	384	1.34075	203.774	3702.23
273	388	1.36581	205.639	4232.16
274	389	1.38517	207.558	4770.99
275	390	1.40507	209.532	5318.97

276	390	1.4325	211.584	5877.65
277	393	1.4538	213.698	6449
278	394	1.47579	215.876	7030.46
279	395	1.50626	218.145	7625.43
280	395.4	1.53007	220.486	8230.42
281	398	1.55477	222.903	8849.22
282	400	1.58927	225.429	9484.92
283	400	1.61644	228.042	10131.5
284	409	1.64485	230.747	10804.2
285	430	1.68494	233.586	11528.8
286	440	1.71688	236.534	12284.2
287	441	1.75069	239.599	13056.2
288	450	1.79912	242.836	13865.9
289	473	1.83843	246.215	14735.4
290	480	1.88079	249.753	15638.2
291	525	1.94314	253.529	16658.4
292	527	1.99539	257.51	17709.9
293	542	2.05375	261.728	18823.1
294	549	2.14441	266.327	20000.3
295	550	2.22621	271.283	21224.8
296	576	2.32634	276.694	22564.7
297	585	2.51213	283.005	24034.3
298	619	2.74777	290.555	25735.2

Data Set Standard Deviation = 90.1034
Numerator = 6.623e+008
Denominator = 7.00596e+008
W Statistic = 0.945337 = 6.623e+008 / 7.00596e+008

5% Critical value of 0.976 exceeds 0.945337
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.945337
Evidence of non-normality at 99% level of significance

Levene's Test for Equal of Variance

Parameter: Alkalinity

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Overall Mean = 43.0735
Overall Std Dev = 47.2623
Overall Total = 12835.9
SS Groups = 71412.9
SS Total = 663415

ANOVA Table

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Squares	F
Between Groups	71412.9	4	17853.2	8.83611
Error (within groups)	592002	293	2020.49	
Totals	663415	297		

95% F-Statistic = 2.37

8.83611 exceeds 2.37; assumption of equal variance should be rejected

Group: MW#93-1	Sample	Residual
	12/15/1994	0.102703
	12/14/1995	32.8973
	3/6/1996	17.1027
	4/25/1996	3.8973
	10/2/1996	1.8973
	12/10/1996	20.8973
	3/11/1997	16.8973
	4/15/1997	36.8973
	8/14/1997	33.1027
	12/4/1997	13.1027
	3/31/1998	6.8973
	6/23/1998	23.1027
	8/11/1998	22.1027
	12/8/1998	9.1027
	3/9/1999	26.8973
	6/8/1999	28.1027
	8/19/1999	33.1027
	12/14/1999	6.8973
	3/7/2000	17.1027
	6/23/2000	2.8973
	12/12/2000	83.1027
	3/27/2001	4.8973
	6/28/2001	26.8973
	9/10/2001	40.8973
	12/18/2001	40.8973
	3/19/2002	36.8973
	6/26/2002	16.8973
	9/18/2002	13.8973
	12/11/2002	22.8973
	3/13/2003	46.8973

6/25/2003	30.8973
9/26/2003	46.8973
12/10/2003	42.8973
3/9/2004	37.8973
6/24/2004	18.8973
9/15/2004	34.8973
12/15/2004	39.8973
3/16/2005	26.8973
6/15/2005	36.8973
9/21/2005	19.8973
12/21/2005	26.8973
3/15/2006	46.8973
6/21/2006	52.8973
12/20/2006	66.8973
6/12/2007	56.8973
12/17/2007	36.8973
6/11/2008	3.1027
12/3/2008	22.8973
6/17/2009	16.8973
12/9/2009	3.1027
6/17/2010	13.1027
12/22/2010	3.1027
6/29/2011	0.897297
12/7/2011	3.1027
6/6/2012	17.1027
12/12/2012	36.8973
6/19/2013	6.8973
12/11/2013	8.8973
6/11/2014	24.8973
12/3/2014	1.1027
6/17/2015	13.1027
12/1/2015	16.1027
6/22/2016	23.1027
12/20/2016	28.5027
6/6/2017	31.1027
11/7/2017	27.1027
2/27/2018	17.1027
9/27/2018	6.8973
5/7/2019	183.103
11/21/2019	113.103
6/25/2020	175.103
11/17/2020	106.103
5/26/2021	74.1027
11/17/2021	26.1027

Group: MW#93-2	Date	Residual
	12/15/1994	88.0293
	12/14/1995	67.0293
	3/6/1996	49.9707
	4/25/1996	81.9707
	10/2/1996	81.9707
	12/10/1996	11.9707
	3/11/1997	48.0293
	4/15/1997	38.0293
	8/14/1997	18.0293
	12/4/1997	58.0293
	3/31/1998	74.0293

6/23/1998	8.02933
8/11/1998	50.0293
12/8/1998	58.0293
3/9/1999	34.0293
6/8/1999	38.0293
8/19/1999	32.0293
12/14/1999	18.0293
3/7/2000	14.0293
6/23/2000	5.97067
12/12/2000	38.0293
3/27/2001	43.0293
6/28/2001	18.0293
9/10/2001	50.0293
12/18/2001	23.0293
3/19/2002	4.97067
6/26/2002	31.9707
9/18/2002	2.02933
12/11/2002	9.02933
3/13/2003	18.0293
6/25/2003	12.0293
9/26/2003	8.02933
12/10/2003	58.0293
3/9/2004	21.9707
6/24/2004	70.9707
9/15/2004	13.9707
12/15/2004	29.9707
3/16/2005	18.0293
6/15/2005	12.0293
9/21/2005	30.0293
12/21/2005	26.0293
3/15/2006	8.02933
6/21/2006	31.9707
12/20/2006	97.9707
2/21/2007	81.9707
6/12/2007	53.9707
12/17/2007	48.0293
6/11/2008	18.0293
12/3/2008	21.9707
6/17/2009	8.02933
12/9/2009	22.0293
6/17/2010	6.02933
12/22/2010	18.0293
6/29/2011	7.97067
12/7/2011	29.9707
6/6/2012	2.02933
12/12/2012	10.0293
6/19/2013	105.971
12/11/2013	69.9707
6/11/2014	83.9707
12/3/2014	37.9707
6/17/2015	125.971
12/1/2015	32.0293
6/22/2016	82.0293
12/20/2016	95.8293
6/6/2017	12.0293
11/7/2017	171.971
2/27/2018	23.9707

9/27/2018	11.9707
5/7/2019	101.971
11/21/2019	101.971
6/25/2020	2.97067
11/16/2020	7.97067
5/26/2021	57.0293
11/17/2021	150.029

Group: MW#93-3	Date	Residual
	12/15/1994	51.3432
	12/14/1995	85.3432
	3/6/1996	65.3432
	4/25/1996	63.3432
	10/2/1996	51.3432
	12/10/1996	66.3432
	3/11/1997	81.3432
	4/15/1997	91.3432
	8/14/1997	36.3432
	12/4/1997	151.343
	3/31/1998	51.3432
	6/23/1998	66.3432
	8/11/1998	67.3432
	12/8/1998	77.3432
	3/9/1999	57.3432
	6/8/1999	55.3432
	8/19/1999	31.3432
	12/14/1999	8.65676
	3/7/2000	27.3432
	6/23/2000	47.3432
	12/12/2000	28.6568
	3/27/2001	37.3432
	6/28/2001	36.3432
	9/10/2001	40.6568
	12/18/2001	61.3432
	3/19/2002	36.3432
	6/26/2002	41.3432
	9/18/2002	23.3432
	12/11/2002	23.3432
	3/13/2003	44.3432
	6/25/2003	39.3432
	9/26/2003	47.3432
	12/10/2003	20.3432
	3/9/2004	7.34324
	6/24/2004	17.6568
	9/15/2004	27.3432
	12/15/2004	37.3432
	3/16/2005	1.34324
	6/15/2005	23.3432
	9/21/2005	27.3432
	12/21/2005	45.3432
	3/15/2006	64.3432
	6/21/2006	38.3432
	12/20/2006	41.3432
	6/12/2007	11.3432
	12/17/2007	1.34324
	6/11/2008	8.65676
	12/3/2008	65.3432

6/17/2009	51.3432
12/9/2009	77.3432
6/17/2010	4.65676
12/22/2010	61.3432
6/29/2011	35.3432
12/7/2011	47.3432
6/6/2012	3.34324
12/12/2012	65.3432
6/19/2013	24.6568
12/11/2013	29.3432
6/11/2014	46.6568
12/3/2014	29.3432
6/17/2015	96.6568
5/25/2016	148.657
6/22/2016	38.6568
12/20/2016	39.0568
6/6/2017	12.6568
11/7/2017	117.657
2/27/2018	76.6568
9/27/2018	83.6568
5/7/2019	293.657
11/21/2019	233.657
6/25/2020	327.657
11/16/2020	257.657
5/26/2021	284.657
11/17/2021	235.657

Group: MW#03-1	Date	Residual
	6/24/2004	35.6629
	9/15/2004	46.6629
	12/15/2004	10.6629
	3/16/2005	13.3371
	6/15/2005	78.6629
	9/21/2005	6.66286
	12/20/2006	30.6629
	6/12/2007	26.6629
	12/17/2007	16.6629
	6/11/2008	26.6629
	12/3/2008	32.6629
	6/17/2009	30.6629
	12/9/2009	42.6629
	6/17/2010	58.6629
	12/22/2010	42.6629
	6/29/2011	36.6629
	12/7/2011	48.6629
	6/6/2012	42.6629
	6/19/2013	29.3371
	12/11/2013	38.6629
	6/11/2014	48.6629
	12/3/2014	20.6629
	6/17/2015	39.3371
	12/1/2015	23.3371
	6/22/2016	43.3371
	12/20/2016	38.2629
	6/6/2017	117.337
	11/7/2017	43.6629
	2/27/2018	101.337

	5/7/2019	118.337
	11/21/2019	118.337
	6/25/2020	47.3371
	11/17/2020	60.6629
	5/26/2021	143.137
	11/16/2021	70.3371

Group: MW#03-2	Date	Residual
	6/24/2004	24.815
	9/15/2004	10.185
	12/15/2004	11.815
	3/16/2005	9.815
	6/15/2005	41.815
	9/21/2005	13.815
	12/21/2005	19.815
	3/15/2006	9.815
	6/21/2006	17.815
	12/20/2006	9.815
	6/12/2007	17.815
	12/17/2007	10.185
	6/11/2008	10.185
	12/3/2008	0.185
	6/17/2009	10.185
	12/9/2009	2.185
	6/17/2010	5.815
	12/22/2010	19.815
	6/29/2011	13.815
	12/7/2011	25.815
	6/6/2012	19.815
	12/12/2012	31.815
	6/19/2013	21.815
	12/11/2013	19.815
	6/11/2014	118.185
	12/3/2014	134.185
	6/17/2015	9.815
	12/1/2015	3.815
	6/22/2016	6.185
	12/20/2016	10.785
	6/6/2017	18.185
	11/7/2017	18.185
	2/27/2018	14.185
	9/27/2018	25.185
	5/7/2019	9.815
	11/21/2019	9.815
	6/25/2020	12.815
	11/17/2020	1.185
	5/26/2021	9.815
	11/17/2021	2.185

Concentrations (ppb)

Parameter: Antimony

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Measurements: 65
Total Non-Detect: 65
Percent Non-Detects: 100%
Total Background Measurements: 13
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
MW#93-1	13	13 (100%)	5/24/2018	ND<0.01	ND<0.01
			6/19/2018	ND<0.01	ND<0.01
			7/19/2018	ND<0.01	ND<0.01
			8/22/2018	ND<0.01	ND<0.01
			9/19/2018	ND<0.01	ND<0.01
			10/18/2018	ND<0.01	ND<0.01
			11/20/2018	ND<0.01	ND<0.01
			12/20/2018	ND<0.01	ND<0.01
			11/21/2019	ND<0.01	ND<0.01
			6/25/2020	ND<0.005	ND<0.005
			11/17/2020	ND<0.005	ND<0.005
			5/26/2021	ND<0.005	ND<0.005
			11/17/2021	ND<0.005	ND<0.005

There are 4 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
MW#03-1	13	13 (100%)	5/24/2018	ND<0.01	ND<0.01
			6/19/2018	ND<0.01	ND<0.01
			7/19/2018	ND<0.01	ND<0.01
			8/22/2018	ND<0.01	ND<0.01
			10/18/2018	ND<0.01	ND<0.01
			11/20/2018	ND<0.01	ND<0.01
			12/20/2018	ND<0.01	ND<0.01
			3/26/2019	ND<0.01	ND<0.01
			11/21/2019	ND<0.002	ND<0.002
			6/25/2020	ND<0.005	ND<0.005
			11/17/2020	ND<0.005	ND<0.005
			5/26/2021	ND<0.005	ND<0.005
			11/16/2021	ND<0.005	ND<0.005
MW#03-2	13	13 (100%)	5/24/2018	ND<0.01	ND<0.01
			6/19/2018	ND<0.01	ND<0.01
			7/19/2018	ND<0.01	ND<0.01
			8/22/2018	ND<0.01	ND<0.01
			9/19/2018	ND<0.01	ND<0.01
			10/18/2018	ND<0.01	ND<0.01
			11/20/2018	ND<0.01	ND<0.01
			12/20/2018	ND<0.01	ND<0.01
			11/21/2019	ND<0.002	ND<0.002
			6/25/2020	ND<0.005	ND<0.005
			11/17/2020	ND<0.005	ND<0.005
			5/26/2021	ND<0.005	ND<0.005
			11/17/2021	ND<0.005	ND<0.005

MW#93-2	13	13 (100%)	5/24/2018	ND<0.01	ND<0.01
			6/19/2018	ND<0.01	ND<0.01
			7/19/2018	ND<0.01	ND<0.01
			8/22/2018	ND<0.01	ND<0.01
			9/19/2018	ND<0.01	ND<0.01
			10/18/2018	ND<0.01	ND<0.01
			11/20/2018	ND<0.01	ND<0.01
			12/20/2018	ND<0.01	ND<0.01
			11/21/2019	ND<0.002	ND<0.002
			6/25/2020	ND<0.005	ND<0.005
			11/16/2020	ND<0.005	ND<0.005
			5/26/2021	ND<0.005	ND<0.005
			11/17/2021	ND<0.005	ND<0.005
MW#93-3	13	13 (100%)	5/24/2018	ND<0.01	ND<0.01
			6/19/2018	ND<0.01	ND<0.01
			7/19/2018	ND<0.01	ND<0.01
			8/22/2018	ND<0.01	ND<0.01
			9/19/2018	ND<0.01	ND<0.01
			10/18/2018	ND<0.01	ND<0.01
			11/20/2018	ND<0.01	ND<0.01
			12/20/2018	ND<0.01	ND<0.01
			11/21/2019	ND<0.002	ND<0.002
			6/25/2020	ND<0.005	ND<0.005
			11/16/2020	ND<0.005	ND<0.005
			5/26/2021	ND<0.005	ND<0.005
			11/17/2021	ND<0.005	ND<0.005

There are 0 unused locations

Loc.	Meas.	ND	Date	Conc.	Original

Concentrations (ppb)

Parameter: Arsenic

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Measurements: 188
Total Non-Detect: 133
Percent Non-Detects: 70.7447%
Total Background Measurements: 38
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
MW#93-1	38	31 (81.5789%)	6/12/2007	0.0109	0.0109
			12/17/2007	ND<0.005	ND<0.005
			6/11/2008	ND<0.005	ND<0.005
			12/3/2008	ND<0.005	ND<0.005
			6/17/2009	ND<0.005	ND<0.005
			12/9/2009	ND<0.005	ND<0.005
			6/17/2010	ND<0.005	ND<0.005
			12/22/2010	ND<0.005	ND<0.005
			6/29/2011	ND<0.005	ND<0.005
			12/7/2011	ND<0.005	ND<0.005
			6/6/2012	ND<0.005	ND<0.005
			12/12/2012	0.0068	0.0068
			6/19/2013	ND<0.005	ND<0.005
			12/11/2013	ND<0.005	ND<0.005
			6/11/2014	ND<0.005	ND<0.005
			12/3/2014	ND<0.005	ND<0.005
			6/17/2015	ND<0.005	ND<0.005
			12/1/2015	ND<0.005	ND<0.005
			6/22/2016	ND<0	ND<0
			12/20/2016	ND<0.0005	ND<0.0005
			6/6/2017	ND<0.005	ND<0.005
			11/7/2017	ND<0.005	ND<0.005
			2/27/2018	0.006	0.006
			5/24/2018	ND<0.005	ND<0.005
			6/19/2018	ND<0.005	ND<0.005
			7/19/2018	ND<0.005	ND<0.005
			8/22/2018	ND<0.005	ND<0.005
			9/19/2018	ND<0.005	ND<0.005
			9/27/2018	ND<0.005	ND<0.005
			10/18/2018	ND<0.005	ND<0.005
			11/20/2018	ND<0.005	ND<0.005
			12/20/2018	ND<0.005	ND<0.005
			5/7/2019	ND<0.005	ND<0.005
			11/21/2019	ND<0.001	ND<0.001
			6/25/2020	0.000405	0.000405
			11/17/2020	0.000336	0.000336
			5/26/2021	0.000268	0.000268
			11/17/2021	0.000277	0.000277

There are 4 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
MW#03-1	36	29 (80.5556%)	6/12/2007	ND<0.005	ND<0.005
			12/17/2007	ND<0.005	ND<0.005

			6/11/2008	ND<0.005	ND<0.005
			12/3/2008	ND<0.005	ND<0.005
			6/17/2009	ND<0.005	ND<0.005
			12/9/2009	ND<0.005	ND<0.005
			6/17/2010	ND<0.005	ND<0.005
			12/22/2010	ND<0.005	ND<0.005
			6/29/2011	ND<0.005	ND<0.005
			12/7/2011	ND<0.005	ND<0.005
			6/6/2012	ND<0.005	ND<0.005
			6/19/2013	0.008	0.008
			12/11/2013	ND<0.005	ND<0.005
			6/11/2014	ND<0.005	ND<0.005
			12/3/2014	ND<0.005	ND<0.005
			6/17/2015	ND<0.005	ND<0.005
			12/1/2015	ND<0.005	ND<0.005
			6/22/2016	ND<0	ND<0
			12/20/2016	ND<0.0005	ND<0.0005
			6/6/2017	ND<0.005	ND<0.005
			11/7/2017	ND<0.005	ND<0.005
			2/27/2018	ND<0.005	ND<0.005
			5/24/2018	ND<0.005	ND<0.005
			6/19/2018	ND<0.005	ND<0.005
			7/19/2018	0.0445	0.0445
			8/22/2018	0.123	0.123
			10/18/2018	ND<0.005	ND<0.005
			11/20/2018	ND<0.005	ND<0.005
			12/20/2018	ND<0.005	ND<0.005
			3/26/2019	ND<0.005	ND<0.005
			5/7/2019	ND<0.005	ND<0.005
			11/21/2019	ND<0.001	ND<0.001
			6/25/2020	0.000538	0.000538
			11/17/2020	0.000677	0.000677
			5/26/2021	0.000249	0.000249
			11/16/2021	0.00062	0.00062
MW#03-2	38	36 (94.7368%)	6/12/2007	ND<0.005	ND<0.005
			12/17/2007	ND<0.005	ND<0.005
			6/11/2008	ND<0.005	ND<0.005
			12/3/2008	ND<0.005	ND<0.005
			6/17/2009	ND<0.005	ND<0.005
			12/9/2009	ND<0.005	ND<0.005
			6/17/2010	ND<0.005	ND<0.005
			12/22/2010	ND<0.005	ND<0.005
			6/29/2011	ND<0.005	ND<0.005
			12/7/2011	ND<0.005	ND<0.005
			6/6/2012	ND<0.005	ND<0.005
			12/12/2012	ND<0.005	ND<0.005
			6/19/2013	ND<0.005	ND<0.005
			12/11/2013	ND<0.005	ND<0.005
			6/11/2014	ND<0.005	ND<0.005
			12/3/2014	ND<0.005	ND<0.005
			6/17/2015	ND<0.005	ND<0.005
			12/1/2015	ND<0.005	ND<0.005
			6/22/2016	ND<0.005	ND<0.005
			12/20/2016	ND<0.0005	ND<0.0005
			6/6/2017	ND<0.005	ND<0.005
			11/7/2017	ND<0.005	ND<0.005

			2/27/2018	0.008	0.008
			5/24/2018	ND<0.005	ND<0.005
			6/19/2018	ND<0.005	ND<0.005
			7/19/2018	ND<0.005	ND<0.005
			8/22/2018	ND<0.005	ND<0.005
			9/19/2018	ND<0.005	ND<0.005
			9/27/2018	ND<0.005	ND<0.005
			10/18/2018	ND<0.005	ND<0.005
			11/20/2018	ND<0.005	ND<0.005
			12/20/2018	ND<0.005	ND<0.005
			5/7/2019	ND<0.005	ND<0.005
			11/21/2019	ND<0.001	ND<0.001
			6/25/2020	0.000329	0.000329
			11/17/2020	ND<0.001	ND<0.001
			5/26/2021	ND<0.001	ND<0.001
			11/17/2021	ND<0.001	ND<0.001
MW#93-2	38	3 (7.89474%)	6/12/2007	0.0343	0.0343
			12/17/2007	0.0603	0.0603
			6/11/2008	0.051	0.051
			12/3/2008	0.033	0.033
			6/17/2009	0.0525	0.0525
			12/9/2009	0.0635	0.0635
			6/17/2010	0.0179	0.0179
			12/22/2010	0.0215	0.0215
			6/29/2011	0.061	0.061
			12/7/2011	ND<0.005	ND<0.005
			6/6/2012	0.0098	0.0098
			12/12/2012	0.0562	0.0562
			6/19/2013	ND<0.005	ND<0.005
			12/11/2013	0.0353	0.0353
			6/11/2014	0.0197	0.0197
			12/3/2014	0.0274	0.0274
			6/17/2015	ND<0.005	ND<0.005
			12/1/2015	0.03	0.03
			6/22/2016	0.047	0.047
			12/20/2016	0.06	0.06
			6/6/2017	0.038	0.038
			11/7/2017	0.028	0.028
			2/27/2018	0.024	0.024
			5/24/2018	0.0292	0.0292
			6/19/2018	0.0274	0.0274
			7/19/2018	0.0367	0.0367
			8/22/2018	0.0333	0.0333
			9/19/2018	0.0344	0.0344
			9/27/2018	0.0389	0.0389
			10/18/2018	0.0378	0.0378
			11/20/2018	0.0313	0.0313
			12/20/2018	0.0285	0.0285
			5/7/2019	0.0259	0.0259
			11/21/2019	0.0197	0.0197
			6/25/2020	0.0176	0.0176
			11/16/2020	0.0204	0.0204
			5/26/2021	0.0148	0.0148
			11/17/2021	0.0266	0.0266
MW#93-3	38	34 (89.4737%)	6/12/2007	ND<0.005	ND<0.005

12/17/2007	ND<0.005	ND<0.005
6/11/2008	ND<0.005	ND<0.005
12/3/2008	ND<0.005	ND<0.005
6/17/2009	ND<0.005	ND<0.005
12/9/2009	ND<0.005	ND<0.005
6/17/2010	ND<0.005	ND<0.005
12/22/2010	ND<0.005	ND<0.005
6/29/2011	ND<0.005	ND<0.005
12/7/2011	ND<0.005	ND<0.005
6/6/2012	ND<0.005	ND<0.005
12/12/2012	ND<0.005	ND<0.005
6/19/2013	ND<0.005	ND<0.005
12/11/2013	ND<0.005	ND<0.005
6/11/2014	ND<0.005	ND<0.005
12/3/2014	ND<0.005	ND<0.005
6/17/2015	ND<0.005	ND<0.005
12/1/2015	ND<0.005	ND<0.005
6/22/2016	ND<0.005	ND<0.005
12/20/2016	ND<0.0005	ND<0.0005
6/6/2017	ND<0.005	ND<0.005
11/7/2017	ND<0.005	ND<0.005
2/27/2018	ND<0.005	ND<0.005
5/24/2018	ND<0.005	ND<0.005
6/19/2018	ND<0.005	ND<0.005
7/19/2018	ND<0.005	ND<0.005
8/22/2018	ND<0.005	ND<0.005
9/19/2018	ND<0.005	ND<0.005
9/27/2018	ND<0.005	ND<0.005
10/18/2018	ND<0.005	ND<0.005
11/20/2018	ND<0.005	ND<0.005
12/20/2018	ND<0.005	ND<0.005
5/7/2019	ND<0.005	ND<0.005
11/21/2019	ND<0.001	ND<0.001
6/25/2020	0.000572	0.000572
11/16/2020	0.00059	0.00059
5/26/2021	0.000522	0.000522
11/17/2021	0.00062	0.00062

There are 0 unused locations

Loc.	Meas.	ND	Date	Conc.	Original

Non-Parametric Prediction Interval

Inter-Well Comparison

Parameter: Arsenic

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Percent Non-Detects = 70.7447%
Number of comparisons = 4
Future Samples (k) = 4
Recent Dates = 1
Background Measurements (n) = 38
Maximum Background Value = 0.0109
Confidence Level = 90.5%
False Positive Rate = 9.5%

Location	Date	Count	Mean	Significant
MW#03-1	11/16/2021	1	0.00062	FALSE
MW#03-2	11/17/2021	1	0.001	FALSE
MW#93-2	**11/17/2021**	**1**	**0.0266**	**TRUE**
MW#93-3	11/17/2021	1	0.00062	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for MW#93-2

Parameter: Arsenic

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Percent Non-Detects = 8.10811%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 37
Maximum Baseline Concentration = 0.0635
Confidence Level = 97.4%
False Positive Rate = 2.6%

Baseline Measurements	Date	Value
	6/12/2007	0.0343
	12/17/2007	0.0603
	6/11/2008	0.051
	12/3/2008	0.033
	6/17/2009	0.0525
	12/9/2009	0.0635
	6/17/2010	0.0179
	12/22/2010	0.0215
	6/29/2011	0.061
	12/7/2011	ND<0.005
	6/6/2012	0.0098
	12/12/2012	0.0562
	6/19/2013	ND<0.005
	12/11/2013	0.0353
	6/11/2014	0.0197
	12/3/2014	0.0274
	6/17/2015	ND<0.005
	12/1/2015	0.03
	6/22/2016	0.047
	12/20/2016	0.06
	6/6/2017	0.038
	11/7/2017	0.028
	2/27/2018	0.024
	5/24/2018	0.0292
	6/19/2018	0.0274
	7/19/2018	0.0367
	8/22/2018	0.0333
	9/19/2018	0.0344
	9/27/2018	0.0389
	10/18/2018	0.0378
	11/20/2018	0.0313
	12/20/2018	0.0285
	5/7/2019	0.0259
	11/21/2019	0.0197
	6/25/2020	0.0176
	11/16/2020	0.0204
	5/26/2021	0.0148

Date	Count	Mean	Significant
11/17/2021	1	0.0266	FALSE

Shapiro-Francia Test of Normality

Parameter: Arsenic

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Number of Measurements = 188

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0	-2.57583	6.63492	0
2	0	-2.32634	12.0468	0
3	0.000249	-2.17009	16.7561	-0.000540353
4	0.000268	-2.03352	20.8913	-0.00108534
5	0.000277	-1.94314	24.6671	-0.00162358
6	0.000329	-1.86629	28.1501	-0.00223759
7	0.000336	-1.78661	31.3421	-0.0028379
8	0.000405	-1.72793	34.3278	-0.00353771
9	0.0005	-1.67466	37.1323	-0.00437504
10	0.0005	-1.62576	39.7754	-0.00518792
11	0.0005	-1.57179	42.246	-0.00597381
12	0.0005	-1.53007	44.5871	-0.00673885
13	0.000522	-1.49085	46.8097	-0.00751707
14	0.000538	-1.44663	48.9024	-0.00829536
15	0.000572	-1.41183	50.8957	-0.00910293
16	0.00059	-1.37866	52.7964	-0.00991634
17	0.00062	-1.34694	54.6107	-0.0107514
18	0.00062	-1.31058	56.3283	-0.011564
19	0.000677	-1.28155	57.9706	-0.0124316
20	0.001	-1.25357	59.5421	-0.0136852
21	0.001	-1.22123	61.0335	-0.0149064
22	0.001	-1.19522	62.462	-0.0161016
23	0.001	-1.17	63.8309	-0.0172716
24	0.001	-1.1455	65.1431	-0.0184171
25	0.001	-1.11699	66.3908	-0.0195341
26	0.001	-1.0939	67.5874	-0.020628
27	0.005	-1.07138	68.7352	-0.0259849
28	0.005	-1.04505	69.8274	-0.0312102
29	0.005	-1.02365	70.8752	-0.0363284
30	0.005	-1.00271	71.8807	-0.041342
31	0.005	-0.97815	72.8374	-0.0462327
32	0.005	-0.958125	73.7554	-0.0510233
33	0.005	-0.938476	74.6362	-0.0557157
34	0.005	-0.919183	75.4811	-0.0603116
35	0.005	-0.896473	76.2847	-0.064794
36	0.005	-0.877897	77.0554	-0.0691835
37	0.005	-0.859618	77.7944	-0.0734816
38	0.005	-0.838054	78.4967	-0.0776719
39	0.005	-0.820379	79.1697	-0.0817737
40	0.005	-0.802956	79.8145	-0.0857885
41	0.005	-0.785774	80.4319	-0.0897174
42	0.005	-0.765456	81.0178	-0.0935447
43	0.005	-0.748762	81.5785	-0.0972885
44	0.005	-0.732275	82.1147	-0.10095
45	0.005	-0.712751	82.6227	-0.104514
46	0.005	-0.696684	83.1081	-0.107997
47	0.005	-0.680797	83.5716	-0.111401

48	0.005	-0.665079	84.0139	-0.114726
49	0.005	-0.646431	84.4318	-0.117959
50	0.005	-0.631062	84.83	-0.121114
51	0.005	-0.615839	85.2093	-0.124193
52	0.005	-0.597761	85.5666	-0.127182
53	0.005	-0.582841	85.9063	-0.130096
54	0.005	-0.568052	86.229	-0.132936
55	0.005	-0.550465	86.532	-0.135689
56	0.005	-0.53594	86.8192	-0.138368
57	0.005	-0.521527	87.0912	-0.140976
58	0.005	-0.507221	87.3485	-0.143512
59	0.005	-0.490189	87.5888	-0.145963
60	0.005	-0.476105	87.8154	-0.148344
61	0.005	-0.462114	88.029	-0.150654
62	0.005	-0.445443	88.2274	-0.152881
63	0.005	-0.431644	88.4137	-0.15504
64	0.005	-0.417928	88.5884	-0.157129
65	0.005	-0.40429	88.7518	-0.159151
66	0.005	-0.388022	88.9024	-0.161091
67	0.005	-0.374544	89.0427	-0.162964
68	0.005	-0.361133	89.1731	-0.164769
69	0.005	-0.345126	89.2922	-0.166495
70	0.005	-0.331854	89.4023	-0.168154
71	0.005	-0.318639	89.5039	-0.169747
72	0.005	-0.305481	89.5972	-0.171275
73	0.005	-0.28976	89.6812	-0.172723
74	0.005	-0.276714	89.7577	-0.174107
75	0.005	-0.263715	89.8273	-0.175426
76	0.005	-0.248174	89.8889	-0.176666
77	0.005	-0.235269	89.9442	-0.177843
78	0.005	-0.222403	89.9937	-0.178955
79	0.005	-0.209575	90.0376	-0.180003
80	0.005	-0.194225	90.0753	-0.180974
81	0.005	-0.181468	90.1083	-0.181881
82	0.005	-0.168741	90.1367	-0.182725
83	0.005	-0.153505	90.1603	-0.183492
84	0.005	-0.140835	90.1801	-0.184197
85	0.005	-0.128189	90.1966	-0.184838
86	0.005	-0.113039	90.2093	-0.185403
87	0.005	-0.100433	90.2194	-0.185905
88	0.005	-0.0878447	90.2271	-0.186344
89	0.005	-0.0752698	90.2328	-0.18672
90	0.005	-0.0601949	90.2364	-0.187021
91	0.005	-0.0476439	90.2387	-0.18726
92	0.005	-0.0350997	90.2399	-0.187435
93	0.005	-0.0200544	90.2403	-0.187535
94	0.005	-0.00751925	90.2404	-0.187573
95	0.005	0.00751925	90.2404	-0.187535
96	0.005	0.0200544	90.2408	-0.187435
97	0.005	0.0350997	90.2421	-0.18726
98	0.005	0.0476439	90.2444	-0.187021
99	0.005	0.0601949	90.248	-0.18672
100	0.005	0.0752698	90.2536	-0.186344
101	0.005	0.0878447	90.2614	-0.185905
102	0.005	0.100433	90.2714	-0.185403
103	0.005	0.113039	90.2842	-0.184838
104	0.005	0.128189	90.3007	-0.184197

105	0.005	0.140835	90.3205	-0.183492
106	0.005	0.153505	90.3441	-0.182725
107	0.005	0.168741	90.3725	-0.181881
108	0.005	0.181468	90.4055	-0.180974
109	0.005	0.194225	90.4432	-0.180003
110	0.005	0.209575	90.4871	-0.178955
111	0.005	0.222403	90.5366	-0.177843
112	0.005	0.235269	90.5919	-0.176666
113	0.005	0.248174	90.6535	-0.175426
114	0.005	0.263715	90.7231	-0.174107
115	0.005	0.276714	90.7996	-0.172723
116	0.005	0.28976	90.8836	-0.171275
117	0.005	0.305481	90.9769	-0.169747
118	0.005	0.318639	91.0784	-0.168154
119	0.005	0.331854	91.1886	-0.166495
120	0.005	0.345126	91.3077	-0.164769
121	0.005	0.361133	91.4381	-0.162964
122	0.005	0.374544	91.5784	-0.161091
123	0.005	0.388022	91.7289	-0.159151
124	0.005	0.40429	91.8924	-0.157129
125	0.005	0.417928	92.067	-0.15504
126	0.005	0.431644	92.2534	-0.152881
127	0.005	0.445443	92.4518	-0.150654
128	0.005	0.462114	92.6653	-0.148344
129	0.005	0.476105	92.892	-0.145963
130	0.005	0.490189	93.1323	-0.143512
131	0.005	0.507221	93.3896	-0.140976
132	0.005	0.521527	93.6616	-0.138368
133	0.005	0.53594	93.9488	-0.135689
134	0.005	0.550465	94.2518	-0.132936
135	0.005	0.568052	94.5745	-0.130096
136	0.005	0.582841	94.9142	-0.127182
137	0.005	0.597761	95.2715	-0.124193
138	0.005	0.615839	95.6508	-0.121114
139	0.005	0.631062	96.049	-0.117959
140	0.005	0.646431	96.4669	-0.114726
141	0.005	0.665079	96.9092	-0.111401
142	0.005	0.680797	97.3727	-0.107997
143	0.005	0.696684	97.8581	-0.104514
144	0.005	0.712751	98.3661	-0.10095
145	0.005	0.732275	98.9023	-0.0972885
146	0.005	0.748762	99.4629	-0.0935447
147	0.006	0.765456	100.049	-0.0889519
148	0.0068	0.785774	100.666	-0.0836087
149	0.008	0.802956	101.311	-0.077185
150	0.008	0.820379	101.984	-0.070622
151	0.0098	0.838054	102.686	-0.0624091
152	0.0109	0.859618	103.425	-0.0530392
153	0.0148	0.877897	104.196	-0.0400464
154	0.0176	0.896473	105	-0.0242684
155	0.0179	0.919183	105.845	-0.00781506
156	0.0197	0.938476	106.725	0.0106729
157	0.0197	0.958125	107.643	0.029548
158	0.0204	0.97815	108.6	0.0495022
159	0.0215	1.00271	109.606	0.0710605
160	0.024	1.02365	110.653	0.0956282
161	0.0259	1.04505	111.746	0.122695

162	0.0266	1.07138	112.893	0.151194
163	0.0274	1.0939	114.09	0.181166
164	0.0274	1.11699	115.338	0.211772
165	0.028	1.1455	116.65	0.243846
166	0.0285	1.17	118.019	0.277191
167	0.0292	1.19522	119.447	0.312091
168	0.03	1.22123	120.939	0.348728
169	0.0313	1.25357	122.51	0.387965
170	0.033	1.28155	124.153	0.430256
171	0.0333	1.31058	125.87	0.473898
172	0.0343	1.34694	127.684	0.520098
173	0.0344	1.37866	129.585	0.567524
174	0.0353	1.41183	131.578	0.617362
175	0.0367	1.44663	133.671	0.670453
176	0.0378	1.49085	135.894	0.726808
177	0.038	1.53007	138.235	0.78495
178	0.0389	1.57179	140.705	0.846093
179	0.0445	1.62576	143.348	0.918439
180	0.047	1.67466	146.153	0.997148
181	0.051	1.72793	149.139	1.08527
182	0.0525	1.78661	152.331	1.17907
183	0.0562	1.86629	155.814	1.28396
184	0.06	1.94314	159.589	1.40054
185	0.0603	2.03352	163.725	1.52316
186	0.061	2.17009	168.434	1.65554
187	0.0635	2.32634	173.846	1.80326
188	0.123	2.57583	180.481	2.12009

Data Set Standard Deviation = 0.0157666
Numerator = 4.49478
Denominator = 8.38971
W Statistic = 0.53575 = 4.49478 / 8.38971

5% Critical value of 0.976 exceeds 0.53575
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.53575
Evidence of non-normality at 99% level of significance

Levene's Test for Equal of Variance

Parameter: Arsenic

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Overall Mean = 0.00483792
Overall Std Dev = 0.0104596
Overall Total = 0.90953
SS Groups = 0.00399921
SS Total = 0.0204585

ANOVA Table

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Squares	F
Between Groups	0.00399921	4	0.000999802	11.1162
Error (within groups)	0.0164593	183	8.99414e-005	
Totals	0.0204585	187		

95% F-Statistic = 2.37

11.1162 exceeds 2.37; assumption of equal variance should be rejected

Group: MW#93-1	Sample	Residual
	6/12/2007	0.00651879
	12/17/2007	0.000618789
	6/11/2008	0.000618789
	12/3/2008	0.000618789
	6/17/2009	0.000618789
	12/9/2009	0.000618789
	6/17/2010	0.000618789
	12/22/2010	0.000618789
	6/29/2011	0.000618789
	12/7/2011	0.000618789
	6/6/2012	0.000618789
	12/12/2012	0.00241879
	6/19/2013	0.000618789
	12/11/2013	0.000618789
	6/11/2014	0.000618789
	12/3/2014	0.000618789
	6/17/2015	0.000618789
	12/1/2015	0.000618789
	6/22/2016	0.00438121
	12/20/2016	0.00388121
	6/6/2017	0.000618789
	11/7/2017	0.000618789
	2/27/2018	0.00161879
	5/24/2018	0.000618789
	6/19/2018	0.000618789
	7/19/2018	0.000618789
	8/22/2018	0.000618789
	9/19/2018	0.000618789
	9/27/2018	0.000618789
	10/18/2018	0.000618789

11/20/2018	0.000618789
12/20/2018	0.000618789
5/7/2019	0.000618789
11/21/2019	0.00338121
6/25/2020	0.00397621
11/17/2020	0.00404521
5/26/2021	0.00411321
11/17/2021	0.00410421

Group: MW#03-1

Date	Residual
6/12/2007	0.00358567
12/17/2007	0.00358567
6/11/2008	0.00358567
12/3/2008	0.00358567
6/17/2009	0.00358567
12/9/2009	0.00358567
6/17/2010	0.00358567
12/22/2010	0.00358567
6/29/2011	0.00358567
12/7/2011	0.00358567
6/6/2012	0.00358567
6/19/2013	0.000585667
12/11/2013	0.00358567
6/11/2014	0.00358567
12/3/2014	0.00358567
6/17/2015	0.00358567
12/1/2015	0.00358567
6/22/2016	0.00858567
12/20/2016	0.00808567
6/6/2017	0.00358567
11/7/2017	0.00358567
2/27/2018	0.00358567
5/24/2018	0.00358567
6/19/2018	0.00358567
7/19/2018	0.0359143
8/22/2018	0.114414
10/18/2018	0.00358567
11/20/2018	0.00358567
12/20/2018	0.00358567
3/26/2019	0.00358567
5/7/2019	0.00358567
11/21/2019	0.00758567
6/25/2020	0.00804767
11/17/2020	0.00790867
5/26/2021	0.00833667
11/16/2021	0.00796567

Group: MW#03-2

Date	Residual
6/12/2007	0.000583447
12/17/2007	0.000583447
6/11/2008	0.000583447
12/3/2008	0.000583447
6/17/2009	0.000583447
12/9/2009	0.000583447
6/17/2010	0.000583447
12/22/2010	0.000583447
6/29/2011	0.000583447

12/7/2011	0.000583447
6/6/2012	0.000583447
12/12/2012	0.000583447
6/19/2013	0.000583447
12/11/2013	0.000583447
6/11/2014	0.000583447
12/3/2014	0.000583447
6/17/2015	0.000583447
12/1/2015	0.000583447
6/22/2016	0.000583447
12/20/2016	0.00391655
6/6/2017	0.000583447
11/7/2017	0.000583447
2/27/2018	0.00358345
5/24/2018	0.000583447
6/19/2018	0.000583447
7/19/2018	0.000583447
8/22/2018	0.000583447
9/19/2018	0.000583447
9/27/2018	0.000583447
10/18/2018	0.000583447
11/20/2018	0.000583447
12/20/2018	0.000583447
5/7/2019	0.000583447
11/21/2019	0.00341655
6/25/2020	0.00408755
11/17/2020	0.00341655
5/26/2021	0.00341655
11/17/2021	0.00341655

Group: MW#93-2	Date	Residual
	6/12/2007	0.00251316
	12/17/2007	0.0285132
	6/11/2008	0.0192132
	12/3/2008	0.00121316
	6/17/2009	0.0207132
	12/9/2009	0.0317132
	6/17/2010	0.0138868
	12/22/2010	0.0102868
	6/29/2011	0.0292132
	12/7/2011	0.0267868
	6/6/2012	0.0219868
	12/12/2012	0.0244132
	6/19/2013	0.0267868
	12/11/2013	0.00351316
	6/11/2014	0.0120868
	12/3/2014	0.00438684
	6/17/2015	0.0267868
	12/1/2015	0.00178684
	6/22/2016	0.0152132
	12/20/2016	0.0282132
	6/6/2017	0.00621316
	11/7/2017	0.00378684
	2/27/2018	0.00778684
	5/24/2018	0.00258684
	6/19/2018	0.00438684
	7/19/2018	0.00491316

8/22/2018	0.00151316
9/19/2018	0.00261316
9/27/2018	0.00711316
10/18/2018	0.00601316
11/20/2018	0.000486842
12/20/2018	0.00328684
5/7/2019	0.00588684
11/21/2019	0.0120868
6/25/2020	0.0141868
11/16/2020	0.0113868
5/26/2021	0.0169868
11/17/2021	0.00518684

Group: MW#93-3	Date	Residual
	6/12/2007	0.000689368
	12/17/2007	0.000689368
	6/11/2008	0.000689368
	12/3/2008	0.000689368
	6/17/2009	0.000689368
	12/9/2009	0.000689368
	6/17/2010	0.000689368
	12/22/2010	0.000689368
	6/29/2011	0.000689368
	12/7/2011	0.000689368
	6/6/2012	0.000689368
	12/12/2012	0.000689368
	6/19/2013	0.000689368
	12/11/2013	0.000689368
	6/11/2014	0.000689368
	12/3/2014	0.000689368
	6/17/2015	0.000689368
	12/1/2015	0.000689368
	6/22/2016	0.000689368
	12/20/2016	0.00381063
	6/6/2017	0.000689368
	11/7/2017	0.000689368
	2/27/2018	0.000689368
	5/24/2018	0.000689368
	6/19/2018	0.000689368
	7/19/2018	0.000689368
	8/22/2018	0.000689368
	9/19/2018	0.000689368
	9/27/2018	0.000689368
	10/18/2018	0.000689368
	11/20/2018	0.000689368
	12/20/2018	0.000689368
	5/7/2019	0.000689368
	11/21/2019	0.00331063
	6/25/2020	0.00373863
	11/16/2020	0.00372063
	5/26/2021	0.00378863
	11/17/2021	0.00369063

Concentrations (ppb)

Parameter: Barium

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Measurements: 65
Total Non-Detect: 2
Percent Non-Detects: 3.07692%
Total Background Measurements: 13
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
MW#93-1	13	0 (0%)	5/24/2018	0.0246	0.0246
			6/19/2018	0.0239	0.0239
			7/19/2018	0.0202	0.0202
			8/22/2018	0.0152	0.0152
			9/19/2018	0.0267	0.0267
			10/18/2018	0.0213	0.0213
			11/20/2018	0.0267	0.0267
			12/20/2018	0.0175	0.0175
			11/21/2019	0.0321	0.0321
			6/25/2020	0.0283	0.0283
			11/17/2020	0.0405	0.0405
			5/26/2021	0.0132	0.0132
			11/17/2021	0.0173	0.0173

There are 4 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
MW#03-1	13	0 (0%)	5/24/2018	0.0519	0.0519
			6/19/2018	0.0752	0.0752
			7/19/2018	0.671	0.671
			8/22/2018	2	2
			10/18/2018	0.184	0.184
			11/20/2018	0.0663	0.0663
			12/20/2018	0.0375	0.0375
			3/26/2019	0.0384	0.0384
			11/21/2019	0.0449	0.0449
			6/25/2020	0.0776	0.0776
			11/17/2020	0.19	0.19
			5/26/2021	0.0293	0.0293
			11/16/2021	0.064	0.064
MW#03-2	13	1 (7.69231%)	5/24/2018	0.0519	0.0519
			6/19/2018	0.0391	0.0391
			7/19/2018	0.044	0.044
			8/22/2018	0.0409	0.0409
			9/19/2018	0.0447	0.0447
			10/18/2018	0.0463	0.0463
			11/20/2018	ND<0	ND<0
			12/20/2018	0.0443	0.0443
			11/21/2019	0.044	0.044
			6/25/2020	0.0348	0.0348
			11/17/2020	0.0395	0.0395
			5/26/2021	0.0335	0.0335
			11/17/2021	0.0329	0.0329

MW#93-2	13	0 (0%)	5/24/2018	0.0604	0.0604
			6/19/2018	0.0538	0.0538
			7/19/2018	0.0583	0.0583
			8/22/2018	0.0612	0.0612
			9/19/2018	0.0641	0.0641
			10/18/2018	0.0669	0.0669
			11/20/2018	0.069	0.069
			12/20/2018	0.0651	0.0651
			11/21/2019	0.1	0.1
			6/25/2020	0.147	0.147
			11/16/2020	0.151	0.151
			5/26/2021	0.126	0.126
			11/17/2021	0.127	0.127
MW#93-3	13	1 (7.69231%)	5/24/2018	0.214	0.214
			6/19/2018	0.201	0.201
			7/19/2018	0.259	0.259
			8/22/2018	0.184	0.184
			9/19/2018	0.228	0.228
			10/18/2018	0.241	0.241
			11/20/2018	ND<0	ND<0
			12/20/2018	0.259	0.259
			11/21/2019	0.116	0.116
			6/25/2020	0.0604	0.0604
			11/16/2020	0.0604	0.0604
			5/26/2021	0.0627	0.0627
			11/17/2021	0.0604	0.0604

There are 0 unused locations

Loc.	Meas.	ND	Date	Conc.	Original

Non-Parametric Prediction Interval

Inter-Well Comparison

Parameter: Barium

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Percent Non-Detects = 3.07692%
Number of comparisons = 4
Future Samples (k) = 4
Recent Dates = 1
Background Measurements (n) = 13
Maximum Background Value = 0.0405
Confidence Level = 76.5%
False Positive Rate = 23.5%

Location	Date	Count	Mean	Significant
MW#03-1	**11/16/2021**	**1**	**0.064**	**TRUE**
MW#03-2	11/17/2021	1	0.0329	FALSE
MW#93-2	**11/17/2021**	**1**	**0.127**	**TRUE**
MW#93-3	**11/17/2021**	**1**	**0.0604**	**TRUE**

Non-Parametric Prediction Interval

Intra-Well Comparison for MW#03-1

Parameter: Barium

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 12
Maximum Baseline Concentration = 2
Confidence Level = 92.3%
False Positive Rate = 7.7%

Baseline Measurements	Date	Value
	5/24/2018	0.0519
	6/19/2018	0.0752
	7/19/2018	0.671
	8/22/2018	2
	10/18/2018	0.184
	11/20/2018	0.0663
	12/20/2018	0.0375
	3/26/2019	0.0384
	11/21/2019	0.0449
	6/25/2020	0.0776
	11/17/2020	0.19
	5/26/2021	0.0293

Date	Count	Mean	Significant
11/16/2021	1	0.064	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for MW#93-2

Parameter: Barium

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 12
Maximum Baseline Concentration = 0.151
Confidence Level = 92.3%
False Positive Rate = 7.7%

Baseline Measurements	Date	Value
	5/24/2018	0.0604
	6/19/2018	0.0538
	7/19/2018	0.0583
	8/22/2018	0.0612
	9/19/2018	0.0641
	10/18/2018	0.0669
	11/20/2018	0.069
	12/20/2018	0.0651
	11/21/2019	0.1
	6/25/2020	0.147
	11/16/2020	0.151
	5/26/2021	0.126

Date	Count	Mean	Significant
11/17/2021	1	0.127	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for MW#93-3

Parameter: Barium

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Percent Non-Detects = 8.33333%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 12
Maximum Baseline Concentration = 0.259
Confidence Level = 92.3%
False Positive Rate = 7.7%

Baseline Measurements	Date	Value
	5/24/2018	0.214
	6/19/2018	0.201
	7/19/2018	0.259
	8/22/2018	0.184
	9/19/2018	0.228
	10/18/2018	0.241
	11/20/2018	ND<0
	12/20/2018	0.259
	11/21/2019	0.116
	6/25/2020	0.0604
	11/16/2020	0.0604
	5/26/2021	0.0627

Date	Count	Mean	Significant
11/17/2021	1	0.0604	FALSE

Shapiro-Francia Test of Normality

Parameter: Barium

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Number of Measurements = 65

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0	-2.17009	4.70929	0
2	0	-1.88079	8.24666	0
3	0.0132	-1.6954	11.121	-0.0223793
4	0.0152	-1.55477	13.5384	-0.0460118
5	0.0173	-1.43953	15.6106	-0.0709157
6	0.0175	-1.34075	17.4082	-0.0943789
7	0.0202	-1.24809	18.9659	-0.11959
8	0.0213	-1.17	20.3348	-0.144511
9	0.0239	-1.09847	21.5415	-0.170765
10	0.0246	-1.03215	22.6068	-0.196156
11	0.0267	-0.970094	23.5479	-0.222057
12	0.0267	-0.911562	24.3788	-0.246396
13	0.0283	-0.855996	25.1116	-0.270621
14	0.0293	-0.7995	25.7508	-0.294046
15	0.0321	-0.748762	26.3114	-0.318081
16	0.0329	-0.699883	26.8013	-0.341107
17	0.0335	-0.652622	27.2272	-0.36297
18	0.0348	-0.606775	27.5954	-0.384086
19	0.0375	-0.56217	27.9114	-0.405167
20	0.0384	-0.515791	28.1774	-0.424974
21	0.0391	-0.473299	28.4014	-0.44348
22	0.0395	-0.431644	28.5878	-0.46053
23	0.0405	-0.390726	28.7404	-0.476354
24	0.0409	-0.350451	28.8632	-0.490687
25	0.044	-0.310738	28.9598	-0.50436
26	0.044	-0.271509	29.0335	-0.516306
27	0.0443	-0.230118	29.0865	-0.526501
28	0.0447	-0.191671	29.1232	-0.535068
29	0.0449	-0.153505	29.1468	-0.541961
30	0.0463	-0.115562	29.1601	-0.547311
31	0.0519	-0.0777834	29.1662	-0.551348
32	0.0519	-0.0401167	29.1678	-0.55343
33	0.0538	0	29.1678	-0.55343
34	0.0583	0.0401167	29.1694	-0.551091
35	0.0604	0.0777834	29.1754	-0.546393
36	0.0604	0.115562	29.1888	-0.539413
37	0.0604	0.153505	29.2124	-0.530142
38	0.0604	0.191671	29.2491	-0.518565
39	0.0612	0.230118	29.3021	-0.504481
40	0.0627	0.271509	29.3758	-0.487458
41	0.064	0.310738	29.4723	-0.467571
42	0.0641	0.350451	29.5951	-0.445107
43	0.0651	0.390726	29.7478	-0.41967
44	0.0663	0.431644	29.9341	-0.391052
45	0.0669	0.473299	30.1581	-0.359389
46	0.069	0.515791	30.4242	-0.323799
47	0.0752	0.56217	30.7402	-0.281524

48	0.0776	0.606775	31.1084	-0.234438
49	0.1	0.652622	31.5343	-0.169176
50	0.116	0.699883	32.0241	-0.0879896
51	0.126	0.748762	32.5848	0.00635446
52	0.127	0.7995	33.224	0.107891
53	0.147	0.855996	33.9567	0.233722
54	0.151	0.911562	34.7877	0.371368
55	0.184	0.970094	35.7287	0.549866
56	0.184	1.03215	36.7941	0.739782
57	0.19	1.09847	38.0007	0.948491
58	0.201	1.17	39.3696	1.18366
59	0.214	1.24809	40.9273	1.45075
60	0.228	1.34075	42.725	1.75644
61	0.241	1.43953	44.7972	2.10337
62	0.259	1.55477	47.2145	2.50606
63	0.259	1.6954	50.0889	2.94516
64	0.671	1.88079	53.6263	4.20717
65	2	2.17009	58.3356	8.54736

Data Set Standard Deviation = 0.257354
Numerator = 73.0573
Denominator = 247.272
W Statistic = 0.295453 = 73.0573 / 247.272

5% Critical value of 0.965 exceeds 0.295453
Evidence of non-normality at 95% level of significance

1% Critical value of 0.948 exceeds 0.295453
Evidence of non-normality at 99% level of significance

Levene's Test for Equal of Variance

Parameter: Barium

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Overall Mean = 0.0911844
Overall Std Dev = 0.222546
Overall Total = 5.92698
SS Groups = 0.956557
SS Total = 3.16971

ANOVA Table

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Squares	F
Between Groups	0.956557	4	0.239139	6.48321
Error (within groups)	2.21316	60	0.036886	
Totals	3.16971	64		

95% F-Statistic = 2.52521

6.48321 exceeds 2.52521; assumption of equal variance should be rejected

Group: MW#93-1	Sample	Residual
	5/24/2018	0.000946154
	6/19/2018	0.000246154
	7/19/2018	0.00345385
	8/22/2018	0.00845385
	9/19/2018	0.00304615
	10/18/2018	0.00235385
	11/20/2018	0.00304615
	12/20/2018	0.00615385
	11/21/2019	0.00844615
	6/25/2020	0.00464615
	11/17/2020	0.0168462
	5/26/2021	0.0104538
	11/17/2021	0.00635385

Group: MW#03-1	Date	Residual
	5/24/2018	0.219646
	6/19/2018	0.196346
	7/19/2018	0.399454
	8/22/2018	1.72845
	10/18/2018	0.0875462
	11/20/2018	0.205246
	12/20/2018	0.234046
	3/26/2019	0.233146
	11/21/2019	0.226646
	6/25/2020	0.193946
	11/17/2020	0.0815462
	5/26/2021	0.242246
	11/16/2021	0.207546

Group: MW#03-2	Date	Residual

5/24/2018	0.0137538
6/19/2018	0.000953846
7/19/2018	0.00585385
8/22/2018	0.00275385
9/19/2018	0.00655385
10/18/2018	0.00815385
11/20/2018	0.0381462
12/20/2018	0.00615385
11/21/2019	0.00585385
6/25/2020	0.00334615
11/17/2020	0.00135385
5/26/2021	0.00464615
11/17/2021	0.00524615

Group: MW#93-2

Date	Residual
5/24/2018	0.0280462
6/19/2018	0.0346462
7/19/2018	0.0301462
8/22/2018	0.0272462
9/19/2018	0.0243462
10/18/2018	0.0215462
11/20/2018	0.0194462
12/20/2018	0.0233462
11/21/2019	0.0115538
6/25/2020	0.0585538
11/16/2020	0.0625538
5/26/2021	0.0375538
11/17/2021	0.0385538

Group: MW#93-3

Date	Residual
5/24/2018	0.0643154
6/19/2018	0.0513154
7/19/2018	0.109315
8/22/2018	0.0343154
9/19/2018	0.0783154
10/18/2018	0.0913154
11/20/2018	0.149685
12/20/2018	0.109315
11/21/2019	0.0336846
6/25/2020	0.0892846
11/16/2020	0.0892846
5/26/2021	0.0869846
11/17/2021	0.0892846

Concentrations (ppb)

Parameter: Beryllium

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Measurements: 65
Total Non-Detect: 63
Percent Non-Detects: 96.9231%
Total Background Measurements: 13
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
MW#93-1	13	13 (100%)	5/24/2018	ND<0.01	ND<0.01
			6/19/2018	ND<0.01	ND<0.01
			7/19/2018	ND<0.01	ND<0.01
			8/22/2018	ND<0.01	ND<0.01
			9/19/2018	ND<0.01	ND<0.01
			10/18/2018	ND<0.01	ND<0.01
			11/20/2018	ND<0.01	ND<0.01
			12/20/2018	ND<0.01	ND<0.01
			11/21/2019	ND<0.01	ND<0.01
			6/25/2020	ND<0.001	ND<0.001
			11/17/2020	ND<0.001	ND<0.001
			5/26/2021	ND<0.001	ND<0.001
			11/17/2021	ND<0.001	ND<0.001

There are 4 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
MW#03-1	13	11 (84.6154%)	5/24/2018	ND<0.01	ND<0.01
			6/19/2018	ND<0.01	ND<0.01
			7/19/2018	0.0201	0.0201
			8/22/2018	0.0108	0.0108
			10/18/2018	ND<0.01	ND<0.01
			11/20/2018	ND<0.01	ND<0.01
			12/20/2018	ND<0.01	ND<0.01
			3/26/2019	ND<0.01	ND<0.01
			11/21/2019	ND<0.001	ND<0.001
			6/25/2020	ND<0.001	ND<0.001
			11/17/2020	ND<0.001	ND<0.001
			5/26/2021	ND<0.001	ND<0.001
			11/16/2021	ND<0.001	ND<0.001
MW#03-2	13	13 (100%)	5/24/2018	ND<0.01	ND<0.01
			6/19/2018	ND<0.01	ND<0.01
			7/19/2018	ND<0.01	ND<0.01
			8/22/2018	ND<0.01	ND<0.01
			9/19/2018	ND<0.01	ND<0.01
			10/18/2018	ND<0.01	ND<0.01
			11/20/2018	ND<0.01	ND<0.01
			12/20/2018	ND<0.01	ND<0.01
			11/21/2019	ND<0.001	ND<0.001
			6/25/2020	ND<0.001	ND<0.001
			11/17/2020	ND<0.001	ND<0.001
			5/26/2021	ND<0.001	ND<0.001
			11/17/2021	ND<0.001	ND<0.001

MW#93-2	13	13 (100%)	5/24/2018	ND<0.01	ND<0.01
			6/19/2018	ND<0.01	ND<0.01
			7/19/2018	ND<0.01	ND<0.01
			8/22/2018	ND<0.01	ND<0.01
			9/19/2018	ND<0.01	ND<0.01
			10/18/2018	ND<0.01	ND<0.01
			11/20/2018	ND<0.01	ND<0.01
			12/20/2018	ND<0.01	ND<0.01
			11/21/2019	ND<0.001	ND<0.001
			6/25/2020	ND<0.001	ND<0.001
			11/16/2020	ND<0.001	ND<0.001
			5/26/2021	ND<0.001	ND<0.001
			11/17/2021	ND<0.001	ND<0.001
MW#93-3	13	13 (100%)	5/24/2018	ND<0.01	ND<0.01
			6/19/2018	ND<0.01	ND<0.01
			7/19/2018	ND<0.01	ND<0.01
			8/22/2018	ND<0.01	ND<0.01
			9/19/2018	ND<0.01	ND<0.01
			10/18/2018	ND<0.01	ND<0.01
			11/20/2018	ND<0.01	ND<0.01
			12/20/2018	ND<0.01	ND<0.01
			11/21/2019	ND<0.001	ND<0.001
			6/25/2020	ND<0.001	ND<0.001
			11/16/2020	ND<0.001	ND<0.001
			5/26/2021	ND<0.001	ND<0.001
			11/17/2021	ND<0.001	ND<0.001

There are 0 unused locations

Loc.	Meas.	ND	Date	Conc.	Original

Concentrations (ppb)

Parameter: Boron

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Measurements: 83
Total Non-Detect: 33
Percent Non-Detects: 39.759%
Total Background Measurements: 17
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
MW#93-1	17	0 (0%)	10/11/2016	0.429	0.429
			12/20/2016	0.386	0.386
			2/16/2017	0.341	0.341
			3/8/2017	0.348	0.348
			5/9/2017	0.366	0.366
			6/6/2017	0.371	0.371
			8/22/2017	0.458	0.458
			9/22/2017	0.499	0.499
			11/7/2017	0.46	0.46
			2/27/2018	0.33	0.33
			9/27/2018	0.386	0.386
			5/7/2019	0.178	0.178
			11/21/2019	0.303	0.303
			6/25/2020	0.185	0.185
			11/17/2020	0.211	0.211
			5/26/2021	0.227	0.227
			11/17/2021	0.322	0.322

There are 4 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
MW#03-1	16	13 (81.25%)	10/11/2016	ND<0.025	ND<0.025
			12/20/2016	ND<0.025	ND<0.025
			2/16/2017	ND<0.025	ND<0.025
			3/8/2017	ND<0.025	ND<0.025
			5/9/2017	0.041	0.041
			6/6/2017	ND<0.025	ND<0.025
			8/22/2017	ND<0.025	ND<0.025
			9/22/2017	0.025	0.025
			11/7/2017	ND<0.1	ND<0.1
			2/27/2018	0.05	0.05
			5/7/2019	ND<0.1	ND<0.1
			11/21/2019	ND<0.2	ND<0.2
			6/25/2020	ND<0.2	ND<0.2
			11/17/2020	ND<0.2	ND<0.2
			5/26/2021	ND<0.2	ND<0.2
			11/16/2021	ND<0.2	ND<0.2
MW#03-2	16	15 (93.75%)	10/11/2016	ND<0.025	ND<0.025
			12/20/2016	ND<0.025	ND<0.025
			2/16/2017	ND<0.025	ND<0.025
			3/8/2017	ND<0.025	ND<0.025
			5/9/2017	0.032	0.032
			6/6/2017	ND<0.025	ND<0.025

			8/22/2017	ND<0.025	ND<0.025
			9/22/2017	ND<0.025	ND<0.025
			11/7/2017	ND<0.1	ND<0.1
			2/27/2018	ND<0.05	ND<0.05
			5/7/2019	ND<0.1	ND<0.1
			11/21/2019	ND<0.2	ND<0.2
			6/25/2020	ND<0.2	ND<0.2
			11/17/2020	ND<0.2	ND<0.2
			5/26/2021	ND<0.2	ND<0.2
			11/17/2021	ND<0.2	ND<0.2
MW#93-2	17	0 (0%)	10/11/2016	2.86	2.86
			12/20/2016	2.31	2.31
			2/16/2017	2.09	2.09
			3/8/2017	2.07	2.07
			5/9/2017	1.97	1.97
			6/6/2017	1.83	1.83
			8/22/2017	2.38	2.38
			9/22/2017	2.48	2.48
			11/7/2017	0.46	0.46
			2/27/2018	0.064	0.064
			9/27/2018	2.01	2.01
			5/7/2019	1.61	1.61
			11/21/2019	1.76	1.76
			6/25/2020	1.74	1.74
			11/16/2020	1.76	1.76
			5/26/2021	1.59	1.59
			11/17/2021	1.71	1.71
MW#93-3	17	5 (29.4118%)	10/11/2016	0.079	0.079
			12/20/2016	0.08	0.08
			2/16/2017	0.126	0.126
			3/8/2017	0.09	0.09
			5/9/2017	0.139	0.139
			6/6/2017	ND<0.025	ND<0.025
			8/22/2017	0.119	0.119
			9/22/2017	0.118	0.118
			11/7/2017	ND<0.1	ND<0.1
			2/27/2018	0.089	0.089
			9/27/2018	ND<0.1	ND<0.1
			5/7/2019	ND<0.1	ND<0.1
			11/21/2019	ND<0.2	ND<0.2
			6/25/2020	0.0726	0.0726
			11/16/2020	0.0762	0.0762
			5/26/2021	0.0889	0.0889
			11/17/2021	0.0912	0.0912

There are 0 unused locations

Loc.	Meas.	ND	Date	Conc.	Original

Non-Parametric Prediction Interval

Inter-Well Comparison

Parameter: Boron

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Percent Non-Detects = 39.759%
Number of comparisons = 4
Future Samples (k) = 4
Recent Dates = 1
Background Measurements (n) = 17
Maximum Background Value = 0.499
Confidence Level = 81%
False Positive Rate = 19%

Location	Date	Count	Mean	Significant
MW#03-1	11/16/2021	1	0.2	FALSE
MW#03-2	11/17/2021	1	0.2	FALSE
MW#93-2	**11/17/2021**	**1**	**1.71**	**TRUE**
MW#93-3	11/17/2021	1	0.0912	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for MW#93-2

Parameter: Boron

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 16
Maximum Baseline Concentration = 2.86
Confidence Level = 94.1%
False Positive Rate = 5.9%

Baseline Measurements	Date	Value
	10/11/2016	2.86
	12/20/2016	2.31
	2/16/2017	2.09
	3/8/2017	2.07
	5/9/2017	1.97
	6/6/2017	1.83
	8/22/2017	2.38
	9/22/2017	2.48
	11/7/2017	0.46
	2/27/2018	0.064
	9/27/2018	2.01
	5/7/2019	1.61
	11/21/2019	1.76
	6/25/2020	1.74
	11/16/2020	1.76
	5/26/2021	1.59

Date	Count	Mean	Significant
11/17/2021	1	1.71	FALSE

Shapiro-Francia Test of Normality

Parameter: Boron

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Number of Measurements = 83

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0.025	-2.29036	5.24576	-0.0572591
2	0.025	-1.99539	9.22736	-0.107144
3	0.025	-1.81191	12.5104	-0.152442
4	0.025	-1.67466	15.3149	-0.194308
5	0.025	-1.56322	17.7585	-0.233389
6	0.025	-1.46838	19.9147	-0.270098
7	0.025	-1.38517	21.8334	-0.304728
8	0.025	-1.31058	23.551	-0.337492
9	0.025	-1.24264	25.0952	-0.368558
10	0.025	-1.18	26.4876	-0.398058
11	0.025	-1.12639	27.7563	-0.426218
12	0.025	-1.07138	28.9042	-0.453003
13	0.025	-1.01943	29.9434	-0.478488
14	0.025	-0.970094	30.8845	-0.502741
15	0.025	-0.923014	31.7365	-0.525816
16	0.032	-0.877897	32.5072	-0.553909
17	0.041	-0.834498	33.2035	-0.588123
18	0.05	-0.792618	33.8318	-0.627754
19	0.05	-0.752084	34.3974	-0.665358
20	0.064	-0.712751	34.9054	-0.710974
21	0.0726	-0.67449	35.3604	-0.759942
22	0.0762	-0.640266	35.7703	-0.80873
23	0.079	-0.603765	36.1348	-0.856428
24	0.08	-0.568052	36.4575	-0.901872
25	0.0889	-0.533048	36.7417	-0.94926
26	0.089	-0.498687	36.9904	-0.993643
27	0.09	-0.464904	37.2065	-1.03548
28	0.0912	-0.431644	37.3928	-1.07485
29	0.1	-0.398855	37.5519	-1.11474
30	0.1	-0.36649	37.6862	-1.15139
31	0.1	-0.334503	37.7981	-1.18484
32	0.1	-0.305481	37.8914	-1.21538
33	0.1	-0.27411	37.9666	-1.24279
34	0.1	-0.243007	38.0256	-1.2671
35	0.1	-0.212137	38.0706	-1.28831
36	0.118	-0.181468	38.1035	-1.30972
37	0.119	-0.150969	38.1263	-1.32769
38	0.126	-0.12061	38.1409	-1.34288
39	0.139	-0.0903606	38.149	-1.35544
40	0.178	-0.0601949	38.1527	-1.36616
41	0.185	-0.0300838	38.1536	-1.37172
42	0.2	0	38.1536	-1.37172
43	0.2	0.0300838	38.1545	-1.36571
44	0.2	0.0601949	38.1581	-1.35367
45	0.2	0.0903606	38.1663	-1.3356
46	0.2	0.12061	38.1808	-1.31147
47	0.2	0.150969	38.2036	-1.28128

48	0.2	0.181468	38.2365	-1.24499
49	0.2	0.212137	38.2815	-1.20256
50	0.2	0.243007	38.3406	-1.15396
51	0.2	0.27411	38.4157	-1.09914
52	0.2	0.305481	38.509	-1.03804
53	0.211	0.334503	38.6209	-0.96746
54	0.227	0.36649	38.7553	-0.884267
55	0.303	0.398855	38.9143	-0.763414
56	0.322	0.431644	39.1007	-0.624424
57	0.33	0.464904	39.3168	-0.471006
58	0.341	0.498687	39.5655	-0.300953
59	0.348	0.533048	39.8496	-0.115453
60	0.366	0.568052	40.1723	0.0924543
61	0.371	0.603765	40.5368	0.316451
62	0.386	0.640266	40.9468	0.563594
63	0.386	0.67449	41.4017	0.823947
64	0.429	0.712751	41.9097	1.12972
65	0.458	0.752084	42.4754	1.47417
66	0.46	0.792618	43.1036	1.83878
67	0.46	0.834498	43.8	2.22264
68	0.499	0.877897	44.5707	2.66071
69	1.59	0.923014	45.4226	4.12831
70	1.61	0.970094	46.3637	5.69016
71	1.71	1.01943	47.403	7.43338
72	1.74	1.07138	48.5508	9.29758
73	1.76	1.12639	49.8196	11.28
74	1.76	1.18	51.212	13.3568
75	1.83	1.24264	52.7561	15.6309
76	1.97	1.31058	54.4737	18.2127
77	2.01	1.38517	56.3924	20.9969
78	2.07	1.46838	58.5486	24.0365
79	2.09	1.56322	60.9923	27.3036
80	2.31	1.67466	63.7968	31.1721
81	2.38	1.81191	67.0798	35.4844
82	2.48	1.99539	71.0614	40.433
83	2.86	2.29036	76.3071	46.9834

Data Set Standard Deviation = 0.742011
Numerator = 2207.44
Denominator = 3445.08
W Statistic = 0.640752 = 2207.44 / 3445.08

5% Critical value of 0.971 exceeds 0.640752
Evidence of non-normality at 95% level of significance

1% Critical value of 0.96 exceeds 0.640752
Evidence of non-normality at 99% level of significance

Levene's Test for Equal of Variance

Parameter: Boron

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Overall Mean = 0.137559
Overall Std Dev = 0.272883
Overall Total = 11.4174
SS Groups = 1.99978
SS Total = 6.10615

ANOVA Table

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Squares	F
Between Groups	1.99978	4	0.499946	9.49641
Error (within groups)	4.10637	78	0.0526458	
Totals	6.10615	82		

95% F-Statistic = 2.44724

9.49641 exceeds 2.44724; assumption of equal variance should be rejected

Group: MW#93-1	Sample	Residual
	10/11/2016	0.0878235
	12/20/2016	0.0448235
	2/16/2017	0.000176471
	3/8/2017	0.00682353
	5/9/2017	0.0248235
	6/6/2017	0.0298235
	8/22/2017	0.116824
	9/22/2017	0.157824
	11/7/2017	0.118824
	2/27/2018	0.0111765
	9/27/2018	0.0448235
	5/7/2019	0.163176
	11/21/2019	0.0381765
	6/25/2020	0.156176
	11/17/2020	0.130176
	5/26/2021	0.114176
	11/17/2021	0.0191765

Group: MW#03-1	Date	Residual
	10/11/2016	0.066625
	12/20/2016	0.066625
	2/16/2017	0.066625
	3/8/2017	0.066625
	5/9/2017	0.050625
	6/6/2017	0.066625
	8/22/2017	0.066625
	9/22/2017	0.066625
	11/7/2017	0.008375
	2/27/2018	0.041625
	5/7/2019	0.008375

11/21/2019	0.108375
6/25/2020	0.108375
11/17/2020	0.108375
5/26/2021	0.108375
11/16/2021	0.108375

Group: MW#03-2

Date	Residual
10/11/2016	0.0660625
12/20/2016	0.0660625
2/16/2017	0.0660625
3/8/2017	0.0660625
5/9/2017	0.0590625
6/6/2017	0.0660625
8/22/2017	0.0660625
9/22/2017	0.0660625
11/7/2017	0.0089375
2/27/2018	0.0410625
5/7/2019	0.0089375
11/21/2019	0.108938
6/25/2020	0.108938
11/17/2020	0.108938
5/26/2021	0.108938
11/17/2021	0.108938

Group: MW#93-2

Date	Residual
10/11/2016	1.05447
12/20/2016	0.504471
2/16/2017	0.284471
3/8/2017	0.264471
5/9/2017	0.164471
6/6/2017	0.0244706
8/22/2017	0.574471
9/22/2017	0.674471
11/7/2017	1.34553
2/27/2018	1.74153
9/27/2018	0.204471
5/7/2019	0.195529
11/21/2019	0.0455294
6/25/2020	0.0655294
11/16/2020	0.0455294
5/26/2021	0.215529
11/17/2021	0.0955294

Group: MW#93-3

Date	Residual
10/11/2016	0.0206412
12/20/2016	0.0196412
2/16/2017	0.0263588
3/8/2017	0.00964118
5/9/2017	0.0393588
6/6/2017	0.0746412
8/22/2017	0.0193588
9/22/2017	0.0183588
11/7/2017	0.000358824
2/27/2018	0.0106412
9/27/2018	0.000358824
5/7/2019	0.000358824
11/21/2019	0.100359

6/25/2020	0.0270412
11/16/2020	0.0234412
5/26/2021	0.0107412
11/17/2021	0.00844118

Concentrations (ppb)

Parameter: Cadmium

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Measurements: 65
Total Non-Detect: 57
Percent Non-Detects: 87.6923%
Total Background Measurements: 13
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
MW#93-1	13	8 (61.5385%)	5/24/2018	ND<0.001	ND<0.001
			6/19/2018	ND<0.001	ND<0.001
			7/19/2018	ND<0.001	ND<0.001
			8/22/2018	ND<0.001	ND<0.001
			9/19/2018	ND<0.00117	ND<0.00117
			10/18/2018	ND<0.001	ND<0.001
			11/20/2018	0.00125	0.00125
			12/20/2018	ND<0.001	ND<0.001
			11/21/2019	0.00112	0.00112
			6/25/2020	0.000369	0.000369
			11/17/2020	0.000541	0.000541
			5/26/2021	ND<0.001	ND<0.001
			11/17/2021	0.00043	0.00043

There are 4 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
MW#03-1	13	11 (84.6154%)	5/24/2018	ND<0.001	ND<0.001
			6/19/2018	ND<0.001	ND<0.001
			7/19/2018	0.00486	0.00486
			8/22/2018	0.0204	0.0204
			10/18/2018	ND<0.001	ND<0.001
			11/20/2018	ND<0.001	ND<0.001
			12/20/2018	ND<0.001	ND<0.001
			3/26/2019	ND<0.001	ND<0.001
			11/21/2019	ND<0.001	ND<0.001
			6/25/2020	ND<0.001	ND<0.001
			11/17/2020	ND<0.001	ND<0.001
			5/26/2021	ND<0.001	ND<0.001
			11/16/2021	ND<0.001	ND<0.001
MW#03-2	13	13 (100%)	5/24/2018	ND<0.001	ND<0.001
			6/19/2018	ND<0.001	ND<0.001
			7/19/2018	ND<0.001	ND<0.001
			8/22/2018	ND<0.001	ND<0.001
			9/19/2018	ND<0.001	ND<0.001
			10/18/2018	ND<0.001	ND<0.001
			11/20/2018	ND<0.001	ND<0.001
			12/20/2018	ND<0.001	ND<0.001
			11/21/2019	ND<0.001	ND<0.001
			6/25/2020	ND<0.001	ND<0.001
			11/17/2020	ND<0.001	ND<0.001
			5/26/2021	ND<0.001	ND<0.001
			11/17/2021	ND<0.001	ND<0.001

MW#93-2	13	12 (92.3077%)	5/24/2018	ND<0.001	ND<0.001
			6/19/2018	ND<0.001	ND<0.001
			7/19/2018	ND<0.001	ND<0.001
			8/22/2018	ND<0.001	ND<0.001
			9/19/2018	ND<0.001	ND<0.001
			10/18/2018	ND<0.001	ND<0.001
			11/20/2018	ND<0.001	ND<0.001
			12/20/2018	ND<0.001	ND<0.001
			11/21/2019	ND<0.001	ND<0.001
			6/25/2020	ND<0.001	ND<0.001
			11/16/2020	ND<0.001	ND<0.001
			5/26/2021	ND<0.001	ND<0.001
			11/17/2021	0.000207	0.000207
MW#93-3	13	13 (100%)	5/24/2018	ND<0.001	ND<0.001
			6/19/2018	ND<0.001	ND<0.001
			7/19/2018	ND<0.001	ND<0.001
			8/22/2018	ND<0.001	ND<0.001
			9/19/2018	ND<0.001	ND<0.001
			10/18/2018	ND<0.001	ND<0.001
			11/20/2018	ND<0.001	ND<0.001
			12/20/2018	ND<0.001	ND<0.001
			11/21/2019	ND<0.001	ND<0.001
			6/25/2020	ND<0.001	ND<0.001
			11/16/2020	ND<0.001	ND<0.001
			5/26/2021	ND<0.001	ND<0.001
			11/17/2021	ND<0.001	ND<0.001

There are 0 unused locations

Loc.	Meas.	ND	Date	Conc.	Original

Non-Parametric Prediction Interval

Inter-Well Comparison

Parameter: Cadmium

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Percent Non-Detects = 87.6923%
Number of comparisons = 4
Future Samples (k) = 4
Recent Dates = 1
Background Measurements (n) = 13
Maximum Background Value = 0.00125
Confidence Level = 76.5%
False Positive Rate = 23.5%

Location	Date	Count	Mean	Significant
MW#03-1	11/16/2021	1	0.001	FALSE
MW#03-2	11/17/2021	1	0.001	FALSE
MW#93-2	11/17/2021	1	0.000207	FALSE
MW#93-3	11/17/2021	1	0.001	FALSE

Shapiro-Francia Test of Normality

Parameter: Cadmium

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Number of Measurements = 65

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0.000207	-2.17009	4.70929	-0.000449209
2	0.000369	-1.88079	8.24666	-0.00114322
3	0.00043	-1.6954	11.121	-0.00187224
4	0.000541	-1.55477	13.5384	-0.00271337
5	0.001	-1.43953	15.6106	-0.0041529
6	0.001	-1.34075	17.4082	-0.00549366
7	0.001	-1.24809	18.9659	-0.00674174
8	0.001	-1.17	20.3348	-0.00791174
9	0.001	-1.09847	21.5415	-0.00901021
10	0.001	-1.03215	22.6068	-0.0100424
11	0.001	-0.970094	23.5479	-0.0110125
12	0.001	-0.911562	24.3788	-0.011924
13	0.001	-0.855996	25.1116	-0.01278
14	0.001	-0.7995	25.7508	-0.0135795
15	0.001	-0.748762	26.3114	-0.0143283
16	0.001	-0.699883	26.8013	-0.0150282
17	0.001	-0.652622	27.2272	-0.0156808
18	0.001	-0.606775	27.5954	-0.0162876
19	0.001	-0.56217	27.9114	-0.0168497
20	0.001	-0.515791	28.1774	-0.0173655
21	0.001	-0.473299	28.4014	-0.0178388
22	0.001	-0.431644	28.5878	-0.0182705
23	0.001	-0.390726	28.7404	-0.0186612
24	0.001	-0.350451	28.8632	-0.0190116
25	0.001	-0.310738	28.9598	-0.0193224
26	0.001	-0.271509	29.0335	-0.0195939
27	0.001	-0.230118	29.0865	-0.019824
28	0.001	-0.191671	29.1232	-0.0200157
29	0.001	-0.153505	29.1468	-0.0201692
30	0.001	-0.115562	29.1601	-0.0202847
31	0.001	-0.0777834	29.1662	-0.0203625
32	0.001	-0.0401167	29.1678	-0.0204026
33	0.001	0	29.1678	-0.0204026
34	0.001	0.0401167	29.1694	-0.0203625
35	0.001	0.0777834	29.1754	-0.0202847
36	0.001	0.115562	29.1888	-0.0201692
37	0.001	0.153505	29.2124	-0.0200157
38	0.001	0.191671	29.2491	-0.019824
39	0.001	0.230118	29.3021	-0.0195939
40	0.001	0.271509	29.3758	-0.0193224
41	0.001	0.310738	29.4723	-0.0190116
42	0.001	0.350451	29.5951	-0.0186612
43	0.001	0.390726	29.7478	-0.0182705
44	0.001	0.431644	29.9341	-0.0178388
45	0.001	0.473299	30.1581	-0.0173655
46	0.001	0.515791	30.4242	-0.0168497
47	0.001	0.56217	30.7402	-0.0162876

48	0.001	0.606775	31.1084	-0.0156808
49	0.001	0.652622	31.5343	-0.0150282
50	0.001	0.699883	32.0241	-0.0143283
51	0.001	0.748762	32.5848	-0.0135795
52	0.001	0.7995	33.224	-0.01278
53	0.001	0.855996	33.9567	-0.011924
54	0.001	0.911562	34.7877	-0.0110125
55	0.001	0.970094	35.7287	-0.0100424
56	0.001	1.03215	36.7941	-0.00901021
57	0.001	1.09847	38.0007	-0.00791174
58	0.001	1.17	39.3696	-0.00674174
59	0.001	1.24809	40.9273	-0.00549366
60	0.001	1.34075	42.725	-0.0041529
61	0.00112	1.43953	44.7972	-0.00254063
62	0.00117	1.55477	47.2145	-0.000721546
63	0.00125	1.6954	50.0889	0.0013977
64	0.00486	1.88079	53.6263	0.0105383
65	0.0204	2.17009	58.3356	0.0548082

Data Set Standard Deviation = 0.0024556
Numerator = 0.00300394
Denominator = 0.0225127
W Statistic = 0.133433 = 0.00300394 / 0.0225127

5% Critical value of 0.965 exceeds 0.133433
Evidence of non-normality at 95% level of significance

1% Critical value of 0.948 exceeds 0.133433
Evidence of non-normality at 99% level of significance

Levene's Test for Equal of Variance

Parameter: Cadmium

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Overall Mean = 0.000671233
Overall Std Dev = 0.00224263
Overall Total = 0.0436302
SS Groups = 9.06719e-005
SS Total = 0.00032188

ANOVA Table

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Squares	F
Between Groups	9.06719e-005	4	2.2668e-005	5.88249
Error (within groups)	0.000231208	60	3.85346e-006	
Totals	0.00032188	64		

95% F-Statistic = 2.52521

5.88249 exceeds 2.52521; assumption of equal variance should be rejected

Group: MW#93-1	Sample	Residual
	5/24/2018	8.61538e-005
	6/19/2018	8.61538e-005
	7/19/2018	8.61538e-005
	8/22/2018	8.61538e-005
	9/19/2018	0.000256154
	10/18/2018	8.61538e-005
	11/20/2018	0.000336154
	12/20/2018	8.61538e-005
	11/21/2019	0.000206154
	6/25/2020	0.000544846
	11/17/2020	0.000372846
	5/26/2021	8.61538e-005
	11/17/2021	0.000483846

Group: MW#03-1	Date	Residual
	5/24/2018	0.00178923
	6/19/2018	0.00178923
	7/19/2018	0.00207077
	8/22/2018	0.0176108
	10/18/2018	0.00178923
	11/20/2018	0.00178923
	12/20/2018	0.00178923
	3/26/2019	0.00178923
	11/21/2019	0.00178923
	6/25/2020	0.00178923
	11/17/2020	0.00178923
	5/26/2021	0.00178923
	11/16/2021	0.00178923

Group: MW#03-2	Date	Residual

5/24/2018	4.33681e-019
6/19/2018	4.33681e-019
7/19/2018	4.33681e-019
8/22/2018	4.33681e-019
9/19/2018	4.33681e-019
10/18/2018	4.33681e-019
11/20/2018	4.33681e-019
12/20/2018	4.33681e-019
11/21/2019	4.33681e-019
6/25/2020	4.33681e-019
11/17/2020	4.33681e-019
5/26/2021	4.33681e-019
11/17/2021	4.33681e-019

Group: MW#93-2

Date	Residual
5/24/2018	6.1e-005
6/19/2018	6.1e-005
7/19/2018	6.1e-005
8/22/2018	6.1e-005
9/19/2018	6.1e-005
10/18/2018	6.1e-005
11/20/2018	6.1e-005
12/20/2018	6.1e-005
11/21/2019	6.1e-005
6/25/2020	6.1e-005
11/16/2020	6.1e-005
5/26/2021	6.1e-005
11/17/2021	0.000732

Group: MW#93-3

Date	Residual
5/24/2018	4.33681e-019
6/19/2018	4.33681e-019
7/19/2018	4.33681e-019
8/22/2018	4.33681e-019
9/19/2018	4.33681e-019
10/18/2018	4.33681e-019
11/20/2018	4.33681e-019
12/20/2018	4.33681e-019
11/21/2019	4.33681e-019
6/25/2020	4.33681e-019
11/16/2020	4.33681e-019
5/26/2021	4.33681e-019
11/17/2021	4.33681e-019

Concentrations (ppb)

Parameter: Calcium

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Measurements: 92
Total Non-Detect: 5
Percent Non-Detects: 5.43478%
Total Background Measurements: 21
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
MW#93-1	21	1 (4.7619%)	6/6/2012	484	484
			12/12/2012	560	560
			6/19/2013	670	670
			12/11/2013	549	549
			6/11/2014	192	192
			12/3/2014	213	213
			6/17/2015	184	184
			12/1/2015	199	199
			6/22/2016	205	205
			12/20/2016	202	202
			6/6/2017	206	206
			11/7/2017	212	212
			2/27/2018	211	211
			9/27/2018	240	240
			11/20/2018	ND<0.5	ND<0.5
			5/7/2019	212	212
			11/21/2019	228	228
			6/25/2020	210	210
			11/17/2020	212	212
			5/26/2021	179	179
			11/17/2021	210	210

There are 4 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
MW#93-2	21	1 (4.7619%)	6/6/2012	78.9	78.9
			12/12/2012	101	101
			6/19/2013	100	100
			12/11/2013	88	88
			6/11/2014	41.8	41.8
			12/3/2014	53.8	53.8
			6/17/2015	2.29	2.29
			12/1/2015	42.8	42.8
			6/22/2016	40	40
			12/20/2016	41.8	41.8
			6/6/2017	45.2	45.2
			11/7/2017	68.5	68.5
			2/27/2018	74.7	74.7
			9/27/2018	68.9	68.9
			11/20/2018	ND<0.5	ND<0.5
			5/7/2019	86.3	86.3
			11/21/2019	117	117
			6/25/2020	198	198
			11/16/2020	225	225

			5/26/2021	200	200
			11/17/2021	195	195
MW#93-3	21	1 (4.7619%)	6/6/2012	86.4	86.4
			12/12/2012	97	97
			6/19/2013	163	163
			12/11/2013	102	102
			6/11/2014	49.5	49.5
			12/3/2014	31.7	31.7
			6/17/2015	43.4	43.4
			12/1/2015	58	58
			6/22/2016	95.6	95.6
			12/20/2016	82.1	82.1
			6/6/2017	56	56
			11/7/2017	80.2	80.2
			2/27/2018	91.8	91.8
			9/27/2018	94.8	94.8
			11/20/2018	ND<0.5	ND<0.5
			5/7/2019	110	110
			11/21/2019	107	107
			6/25/2020	92.2	92.2
			11/16/2020	82.8	82.8
			5/26/2021	75.1	75.1
			11/17/2021	80.7	80.7
MW#03-1	14	1 (7.14286%)	5/24/2018	22.2	22.2
			6/19/2018	43.6	43.6
			7/19/2018	154	154
			8/22/2018	613	613
			11/20/2018	ND<0.5	ND<0.5
			11/20/2018	35.6	35.6
			12/20/2018	13.3	13.3
			3/26/2019	16.6	16.6
			5/7/2019	15	15
			11/21/2019	16.9	16.9
			6/25/2020	35.6	35.6
			11/17/2020	76.2	76.2
			5/26/2021	8.58	8.58
			11/16/2021	27.4	27.4
MW#03-2	15	1 (6.66667%)	5/24/2018	197	197
			6/19/2018	291	291
			7/19/2018	338	338
			8/22/2018	325	325
			9/19/2018	303	303
			9/27/2018	352	352
			11/20/2018	ND<0.5	ND<0.5
			11/20/2018	331	331
			12/20/2018	350	350
			5/7/2019	267	267
			11/21/2019	386	386
			6/25/2020	338	338
			11/17/2020	321	321
			5/26/2021	302	302
			11/17/2021	294	294

There are 0 unused locations

Loc.	Meas.	ND	Date	Conc.	Original

Non-Parametric Prediction Interval

Inter-Well Comparison

Parameter: Calcium

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Percent Non-Detects = 5.43478%
Number of comparisons = 4
Future Samples (k) = 4
Recent Dates = 1
Background Measurements (n) = 21
Maximum Background Value = 670
Confidence Level = 84%
False Positive Rate = 16%

Location	Date	Count	Mean	Significant
MW#93-2	11/17/2021	1	195	FALSE
MW#93-3	11/17/2021	1	80.7	FALSE
MW#03-1	11/16/2021	1	27.4	FALSE
MW#03-2	11/17/2021	1	294	FALSE

Shapiro-Francia Test of Normality

Parameter: Calcium

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Number of Measurements = 92

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0.5	-2.32634	5.41187	-1.16317
2	0.5	-2.03352	9.54707	-2.17993
3	0.5	-1.85218	12.9776	-3.10602
4	0.5	-1.71688	15.9253	-3.96446
5	0.5	-1.61644	18.5382	-4.77268
6	2.29	-1.52203	20.8548	-8.25814
7	8.58	-1.43953	22.927	-20.6093
8	13.3	-1.36581	24.7925	-38.7745
9	15	-1.30469	26.4947	-58.3448
10	16.6	-1.24264	28.0388	-78.9727
11	16.9	-1.18504	29.4432	-98.9999
12	22.2	-1.13113	30.7226	-124.111
13	27.4	-1.08482	31.8995	-153.835
14	31.7	-1.03643	32.9736	-186.69
15	35.6	-0.990356	33.9544	-221.947
16	35.6	-0.946291	34.8499	-255.635
17	40	-0.907769	35.674	-291.945
18	41.8	-0.866894	36.4255	-328.182
19	41.8	-0.827417	37.1101	-362.768
20	42.8	-0.789191	37.7329	-396.545
21	43.4	-0.755415	38.3036	-429.33
22	43.6	-0.719228	38.8208	-460.688
23	45.2	-0.68396	39.2886	-491.603
24	49.5	-0.649522	39.7105	-523.755
25	53.8	-0.618872	40.0935	-557.05
26	56	-0.585815	40.4367	-589.856
27	58	-0.553384	40.7429	-621.952
28	68.5	-0.521527	41.0149	-657.677
29	68.9	-0.493018	41.258	-691.646
30	74.7	-0.462114	41.4716	-726.166
31	75.1	-0.431644	41.6579	-758.582
32	76.2	-0.401571	41.8191	-789.182
33	78.9	-0.374544	41.9594	-818.733
34	80.2	-0.345126	42.0785	-846.412
35	80.7	-0.316004	42.1784	-871.914
36	82.1	-0.287147	42.2608	-895.489
37	82.8	-0.26112	42.329	-917.109
38	86.3	-0.232693	42.3832	-937.191
39	86.4	-0.204452	42.425	-954.855
40	88	-0.176374	42.4561	-970.376
41	91.8	-0.150969	42.4789	-984.235
42	92.2	-0.123135	42.494	-995.588
43	94.8	-0.0953969	42.5031	-1004.63
44	95.6	-0.0677301	42.5077	-1011.11
45	97	-0.0426257	42.5095	-1015.24
46	100	-0.0150408	42.5098	-1016.75
47	101	0.0150408	42.51	-1015.23

48	102	0.0426257	42.5118	-1010.88
49	107	0.0677301	42.5164	-1003.63
50	110	0.0953969	42.5255	-993.138
51	117	0.123135	42.5407	-978.731
52	154	0.150969	42.5634	-955.482
53	163	0.176374	42.5946	-926.733
54	179	0.204452	42.6364	-890.136
55	184	0.232693	42.6905	-847.321
56	192	0.26112	42.7587	-797.185
57	195	0.287147	42.8411	-741.192
58	197	0.316004	42.941	-678.939
59	198	0.345126	43.0601	-610.604
60	199	0.374544	43.2004	-536.07
61	200	0.401571	43.3616	-455.756
62	202	0.431644	43.548	-368.564
63	205	0.462114	43.7615	-273.83
64	206	0.493018	44.0046	-172.269
65	210	0.521527	44.2766	-62.7478
66	210	0.553384	44.5828	53.4629
67	211	0.585815	44.926	177.07
68	212	0.618872	45.309	308.271
69	212	0.649522	45.7309	445.969
70	212	0.68396	46.1987	590.969
71	213	0.719228	46.716	744.165
72	225	0.755415	47.2866	914.133
73	228	0.789191	47.9094	1094.07
74	240	0.827417	48.5941	1292.65
75	267	0.866894	49.3456	1524.11
76	291	0.907769	50.1696	1788.27
77	294	0.946291	51.0651	2066.48
78	302	0.990356	52.0459	2365.57
79	303	1.03643	53.1201	2679.61
80	321	1.08482	54.2969	3027.83
81	325	1.13113	55.5764	3395.45
82	331	1.18504	56.9807	3787.7
83	338	1.24264	58.5249	4207.72
84	338	1.30469	60.2271	4648.7
85	350	1.36581	62.0925	5126.73
86	352	1.43953	64.1647	5633.45
87	386	1.52203	66.4813	6220.95
88	484	1.61644	69.0942	7003.31
89	549	1.71688	72.0419	7945.88
90	560	1.85218	75.4724	8983.1
91	613	2.03352	79.6076	10229.6
92	670	2.32634	85.0195	11788.3

Data Set Standard Deviation = 144.33
Numerator = 1.38964e+008
Denominator = 1.61167e+008
W Statistic = 0.862237 = 1.38964e+008 / 1.61167e+008

5% Critical value of 0.973 exceeds 0.862237
Evidence of non-normality at 95% level of significance

1% Critical value of 0.963 exceeds 0.862237
Evidence of non-normality at 99% level of significance

Levene's Test for Equal of Variance

Parameter: Calcium

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Overall Mean = 64.9688
Overall Std Dev = 85.8725
Overall Total = 5977.13
SS Groups = 101380
SS Total = 671042

ANOVA Table

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Squares	F
Between Groups	101380	4	25345	3.87074
Error (within groups)	569662	87	6547.84	
Totals	671042	91		

95% F-Statistic = 2.44724

3.87074 exceeds 2.44724; assumption of equal variance should be rejected

Group: MW#93-1	Sample	Residual
	6/6/2012	218.357
	12/12/2012	294.357
	6/19/2013	404.357
	12/11/2013	283.357
	6/11/2014	73.6429
	12/3/2014	52.6429
	6/17/2015	81.6429
	12/1/2015	66.6429
	6/22/2016	60.6429
	12/20/2016	63.6429
	6/6/2017	59.6429
	11/7/2017	53.6429
	2/27/2018	54.6429
	9/27/2018	25.6429
	11/20/2018	265.143
	5/7/2019	53.6429
	11/21/2019	37.6429
	6/25/2020	55.6429
	11/17/2020	53.6429
	5/26/2021	86.6429
	11/17/2021	55.6429

Group: MW#93-2	Date	Residual
	6/6/2012	10.1233
	12/12/2012	11.9767
	6/19/2013	10.9767
	12/11/2013	1.02333
	6/11/2014	47.2233
	12/3/2014	35.2233
	6/17/2015	86.7333

12/1/2015	46.2233
6/22/2016	49.0233
12/20/2016	47.2233
6/6/2017	43.8233
11/7/2017	20.5233
2/27/2018	14.3233
9/27/2018	20.1233
11/20/2018	88.5233
5/7/2019	2.72333
11/21/2019	27.9767
6/25/2020	108.977
11/16/2020	135.977
5/26/2021	110.977
11/17/2021	105.977

Group: MW#93-3

Date	Residual
6/6/2012	6.40952
12/12/2012	17.0095
6/19/2013	83.0095
12/11/2013	22.0095
6/11/2014	30.4905
12/3/2014	48.2905
6/17/2015	36.5905
12/1/2015	21.9905
6/22/2016	15.6095
12/20/2016	2.10952
6/6/2017	23.9905
11/7/2017	0.209524
2/27/2018	11.8095
9/27/2018	14.8095
11/20/2018	79.4905
5/7/2019	30.0095
11/21/2019	27.0095
6/25/2020	12.2095
11/16/2020	2.80952
5/26/2021	4.89048
11/17/2021	0.709524

Group: MW#03-1

Date	Residual
5/24/2018	54.8343
6/19/2018	33.4343
7/19/2018	76.9657
8/22/2018	535.966
11/20/2018	76.5343
11/20/2018	41.4343
12/20/2018	63.7343
3/26/2019	60.4343
5/7/2019	62.0343
11/21/2019	60.1343
6/25/2020	41.4343
11/17/2020	0.834286
5/26/2021	68.4543
11/16/2021	49.6343

Group: MW#03-2

Date	Residual
5/24/2018	96.0333
6/19/2018	2.03333

7/19/2018	44.9667
8/22/2018	31.9667
9/19/2018	9.96667
9/27/2018	58.9667
11/20/2018	292.533
11/20/2018	37.9667
12/20/2018	56.9667
5/7/2019	26.0333
11/21/2019	92.9667
6/25/2020	44.9667
11/17/2020	27.9667
5/26/2021	8.96667
11/17/2021	0.966667

Concentrations (ppb)

Parameter: Chromium

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Measurements: 65
Total Non-Detect: 63
Percent Non-Detects: 96.9231%
Total Background Measurements: 13
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
MW#93-1	13	13 (100%)	5/24/2018	ND<0.01	ND<0.01
			6/19/2018	ND<0.01	ND<0.01
			7/19/2018	ND<0.01	ND<0.01
			8/22/2018	ND<0.01	ND<0.01
			9/19/2018	ND<0.01	ND<0.01
			10/18/2018	ND<0.01	ND<0.01
			11/20/2018	ND<0.01	ND<0.01
			12/20/2018	ND<0.01	ND<0.01
			11/21/2019	ND<0.01	ND<0.01
			6/25/2020	ND<0.02	ND<0.02
			11/17/2020	ND<0.02	ND<0.02
			5/26/2021	ND<0.02	ND<0.02
			11/17/2021	ND<0.02	ND<0.02

There are 4 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
MW#03-1	13	11 (84.6154%)	5/24/2018	ND<0.01	ND<0.01
			6/19/2018	ND<0.01	ND<0.01
			7/19/2018	0.0808	0.0808
			8/22/2018	0.38	0.38
			10/18/2018	ND<0.01	ND<0.01
			11/20/2018	ND<0.01	ND<0.01
			12/20/2018	ND<0.01	ND<0.01
			3/26/2019	ND<0.01	ND<0.01
			11/21/2019	ND<0.01	ND<0.01
			6/25/2020	ND<0.02	ND<0.02
			11/17/2020	ND<0.02	ND<0.02
			5/26/2021	ND<0.02	ND<0.02
			11/16/2021	ND<0.02	ND<0.02
MW#03-2	13	13 (100%)	5/24/2018	ND<0.01	ND<0.01
			6/19/2018	ND<0.01	ND<0.01
			7/19/2018	ND<0.01	ND<0.01
			8/22/2018	ND<0.01	ND<0.01
			9/19/2018	ND<0.01	ND<0.01
			10/18/2018	ND<0.01	ND<0.01
			11/20/2018	ND<0.01	ND<0.01
			12/20/2018	ND<0.01	ND<0.01
			11/21/2019	ND<0.01	ND<0.01
			6/25/2020	ND<0.02	ND<0.02
			11/17/2020	ND<0.02	ND<0.02
			5/26/2021	ND<0.02	ND<0.02
			11/17/2021	ND<0.02	ND<0.02

MW#93-2	13	13 (100%)	5/24/2018	ND<0.01	ND<0.01
			6/19/2018	ND<0.01	ND<0.01
			7/19/2018	ND<0.01	ND<0.01
			8/22/2018	ND<0.01	ND<0.01
			9/19/2018	ND<0.01	ND<0.01
			10/18/2018	ND<0.01	ND<0.01
			11/20/2018	ND<0.01	ND<0.01
			12/20/2018	ND<0.01	ND<0.01
			11/21/2019	ND<0.01	ND<0.01
			6/25/2020	ND<0.02	ND<0.02
			11/16/2020	ND<0.02	ND<0.02
			5/26/2021	ND<0.02	ND<0.02
			11/17/2021	ND<0.02	ND<0.02
MW#93-3	13	13 (100%)	5/24/2018	ND<0.01	ND<0.01
			6/19/2018	ND<0.01	ND<0.01
			7/19/2018	ND<0.01	ND<0.01
			8/22/2018	ND<0.01	ND<0.01
			9/19/2018	ND<0.01	ND<0.01
			10/18/2018	ND<0.01	ND<0.01
			11/20/2018	ND<0.01	ND<0.01
			12/20/2018	ND<0.01	ND<0.01
			11/21/2019	ND<0.01	ND<0.01
			6/25/2020	ND<0.02	ND<0.02
			11/16/2020	ND<0.02	ND<0.02
			5/26/2021	ND<0.02	ND<0.02
			11/17/2021	ND<0.02	ND<0.02

There are 0 unused locations

Loc.	Meas.	ND	Date	Conc.	Original

Concentrations (ppb)

Parameter: Chloride

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Measurements: 305
Total Non-Detect: 6
Percent Non-Detects: 1.96721%
Total Background Measurements: 76
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
MW#93-1	76	0 (0%)	12/15/1994	30	30
			3/14/1995	38	38
			6/21/1995	37	37
			12/14/1995	24	24
			3/6/1996	20	20
			4/25/1996	32	32
			10/2/1996	40	40
			12/10/1996	30	30
			3/11/1997	4	4
			4/15/1997	28	28
			8/14/1997	33	33
			12/4/1997	29	29
			3/31/1998	30	30
			6/23/1998	37	37
			8/11/1998	24	24
			12/8/1998	31	31
			3/9/1999	30	30
			6/8/1999	35	35
			8/19/1999	40	40
			12/14/1999	40	40
			3/7/2000	50	50
			6/23/2000	52	52
			12/12/2000	54	54
			3/27/2001	60	60
			6/28/2001	58	58
			9/10/2001	46	46
			12/18/2001	46	46
			3/19/2002	42	42
			6/26/2002	51	51
			9/18/2002	57	57
			12/11/2002	56	56
			3/13/2003	56	56
			6/25/2003	63	63
			9/26/2003	59	59
			12/10/2003	40	40
			3/9/2004	58	58
			6/24/2004	61	61
			9/15/2004	44	44
			12/15/2004	48	48
			3/16/2005	42	42
			6/15/2005	42	42
			9/21/2005	42	42
			12/21/2005	58	58
			3/15/2006	50	50
			6/21/2006	31	31

			12/20/2006	35	35
			6/12/2007	24	24
			12/17/2007	27	27
			6/11/2008	29	29
			12/3/2008	28	28
			6/17/2009	20	20
			12/9/2009	24	24
			6/17/2010	17	17
			12/22/2010	20	20
			6/29/2011	20.8	20.8
			12/7/2011	17.6	17.6
			6/6/2012	23.8	23.8
			12/12/2012	22.2	22.2
			6/19/2013	21.5	21.5
			12/11/2013	17.6	17.6
			6/11/2014	19.3	19.3
			12/3/2014	16.9	16.9
			6/17/2015	13	13
			12/1/2015	15.2	15.2
			6/22/2016	13	13
			12/20/2016	15.2	15.2
			6/6/2017	16.1	16.1
			11/7/2017	16.2	16.2
			2/27/2018	15.6	15.6
			9/27/2018	16.8	16.8
			5/7/2019	18.8	18.8
			11/21/2019	22	22
			6/25/2020	11	11
			11/17/2020	14.4	14.4
			5/26/2021	12.9	12.9
			11/17/2021	17.7	17.7

There are 4 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
MW#03-1	35	4 (11.4286%)	6/24/2004	10	10
			9/15/2004	22	22
			12/15/2004	6	6
			3/16/2005	4	4
			6/15/2005	6	6
			9/21/2005	5	5
			12/20/2006	5	5
			6/12/2007	4	4
			12/17/2007	3	3
			6/11/2008	11	11
			12/3/2008	11	11
			6/17/2009	4	4
			12/9/2009	32	32
			6/17/2010	5	5
			12/22/2010	8.7	8.7
			6/29/2011	4.86	4.86
			12/7/2011	5.88	5.88
			6/6/2012	9.36	9.36
			6/19/2013	ND<5	ND<5
			12/11/2013	ND<5	ND<5
			6/11/2014	44	44

			12/3/2014	ND<5	ND<5
			6/17/2015	ND<5	ND<5
			12/1/2015	0.777	0.777
			6/22/2016	0.628	0.628
			12/20/2016	0.786	0.786
			6/6/2017	0.887	0.887
			11/7/2017	1.13	1.13
			2/27/2018	1.07	1.07
			5/7/2019	5.9	5.9
			11/21/2019	410	410
			6/25/2020	0.652	0.652
			11/17/2020	2.29	2.29
			5/26/2021	1.64	1.64
			11/16/2021	0.704	0.704
MW#03-2	41	1 (2.43902%)	6/24/2004	36	36
			9/15/2004	4	4
			12/15/2004	28	28
			3/16/2005	30	30
			6/15/2005	30	30
			9/21/2005	27	27
			12/21/2005	26	26
			3/15/2006	27	27
			6/21/2006	23	23
			12/20/2006	35	35
			6/12/2007	30	30
			12/17/2007	20	20
			6/11/2008	41	41
			12/3/2008	46	46
			6/17/2009	60	60
			12/9/2009	45	45
			6/17/2010	33	33
			12/22/2010	29	29
			6/29/2011	28.4	28.4
			12/7/2011	23.5	23.5
			6/6/2012	29.3	29.3
			12/12/2012	28.3	28.3
			6/19/2013	32.1	32.1
			12/11/2013	32.8	32.8
			6/11/2014	ND<5	ND<5
			12/3/2014	51.2	51.2
			6/17/2015	54.7	54.7
			12/1/2015	67.8	67.8
			6/22/2016	79.7	79.7
			10/11/2016	88.4	88.4
			12/20/2016	126	126
			6/6/2017	117	117
			11/7/2017	288	288
			2/27/2018	247	247
			9/27/2018	283	283
			5/7/2019	313	313
			11/21/2019	543	543
			6/25/2020	448	448
			11/17/2020	435	435
			5/26/2021	511	511
			11/17/2021	501	501

MW#93-2	77	1 (1.2987%)	12/15/1994	400	400
			3/14/1995	1500	1500
			6/21/1995	75	75
			12/14/1995	1749	1749
			3/6/1996	1674	1674
			4/25/1996	1999	1999
			10/2/1996	1553	1553
			12/10/1996	1560	1560
			3/11/1997	1634	1634
			4/15/1997	1700	1700
			8/14/1997	2149	2149
			12/4/1997	1769	1769
			3/31/1998	2000	2000
			6/23/1998	2099	2099
			8/11/1998	1874	1874
			12/8/1998	1922	1922
			3/9/1999	1700	1700
			6/8/1999	1739	1739
			8/19/1999	1800	1800
			12/14/1999	1800	1800
			3/7/2000	1328	1328
			6/23/2000	950	950
			12/12/2000	1789	1789
			3/27/2001	1749	1749
			6/28/2001	1799	1799
			9/10/2001	2050	2050
			12/18/2001	1600	1600
			3/19/2002	1730	1730
			6/26/2002	1699	1699
			9/18/2002	1674	1674
			12/11/2002	1613	1613
			3/13/2003	1510	1510
			6/25/2003	1800	1800
			9/26/2003	1616	1616
			12/10/2003	1509	1509
			3/9/2004	1800	1800
			6/24/2004	1892	1892
			9/15/2004	1435	1435
			12/15/2004	1600	1600
			3/16/2005	1325	1325
			6/15/2005	1400	1400
			9/21/2005	1412	1412
			12/21/2005	1550	1550
			3/15/2006	1375	1375
			6/21/2006	1500	1500
			12/20/2006	1250	1250
			2/21/2007	1250	1250
			6/12/2007	1350	1350
			12/17/2007	1399	1399
			6/11/2008	1210	1210
			12/3/2008	1584	1584
			6/17/2009	750	750
			12/9/2009	875	875
			6/17/2010	1500	1500
			12/22/2010	1600	1600
			6/29/2011	1670	1670
			12/7/2011	1510	1510

			6/6/2012	1610	1610
			12/12/2012	1750	1750
			6/19/2013	1390	1390
			12/11/2013	1410	1410
			6/11/2014	1360	1360
			12/3/2014	1520	1520
			6/17/2015	47.7	47.7
			12/1/2015	1760	1760
			6/22/2016	1300	1300
			12/20/2016	1690	1690
			6/6/2017	1580	1580
			11/7/2017	1160	1160
			2/27/2018	1270	1270
			9/27/2018	1250	1250
			5/7/2019	1360	1360
			11/21/2019	ND<5	ND<5
			6/25/2020	109	109
			11/16/2020	1210	1210
			5/26/2021	1670	1670
			11/17/2021	1800	1800
MW#93-3	76	0 (0%)	12/15/1994	440	440
			3/14/1995	420	420
			6/21/1995	420	420
			12/14/1995	406	406
			3/6/1996	368	368
			4/25/1996	384	384
			10/2/1996	430	430
			12/10/1996	377	377
			3/11/1997	375	375
			4/15/1997	400	400
			8/14/1997	916	916
			12/4/1997	249	249
			3/31/1998	275	275
			6/23/1998	246	246
			8/11/1998	500	500
			12/8/1998	260	260
			3/9/1999	280	280
			6/8/1999	214	214
			8/19/1999	260	260
			12/14/1999	200	200
			3/7/2000	232	232
			6/23/2000	270	270
			12/12/2000	196	196
			3/27/2001	190	190
			6/28/2001	180	180
			9/10/2001	202	202
			12/18/2001	149	149
			3/19/2002	203	203
			6/26/2002	180	180
			9/18/2002	185	185
			12/11/2002	178	178
			3/13/2003	207	207
			6/25/2003	190	190
			9/26/2003	158	158
			12/10/2003	140	140
			3/9/2004	13	13

6/24/2004	160	160
9/15/2004	139	139
12/15/2004	122	122
3/16/2005	180	180
6/15/2005	150	150
9/21/2005	215	215
12/21/2005	180	180
3/15/2006	221	221
6/21/2006	210	210
12/20/2006	210	210
6/12/2007	110	110
12/17/2007	131	131
6/11/2008	144	144
12/3/2008	152	152
6/17/2009	120	120
12/9/2009	175	175
6/17/2010	150	150
12/22/2010	170	170
6/29/2011	170	170
12/7/2011	98.9	98.9
6/6/2012	194	194
12/12/2012	168	168
6/19/2013	194	194
12/11/2013	173	173
6/11/2014	254	254
12/3/2014	194	194
6/17/2015	168	168
12/1/2015	280	280
6/22/2016	518	518
12/20/2016	475	475
6/6/2017	113	113
11/7/2017	402	402
2/27/2018	435	435
9/27/2018	426	426
5/7/2019	421	421
11/21/2019	1070	1070
6/25/2020	143	143
11/16/2020	187	187
5/26/2021	232	232
11/17/2021	183	183

There are 0 unused locations

Loc.	Meas.	ND	Date	Conc.	Original

Non-Parametric Prediction Interval

Inter-Well Comparison

Parameter: Chloride

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Percent Non-Detects = 1.96721%
Number of comparisons = 4
Future Samples (k) = 4
Recent Dates = 1
Background Measurements (n) = 76
Maximum Background Value = 63
Confidence Level = 95%
False Positive Rate = 5%

Location	Date	Count	Mean	Significant
MW#03-1	11/16/2021	1	0.704	FALSE
MW#03-2	**11/17/2021**	**1**	**501**	**TRUE**
MW#93-2	**11/17/2021**	**1**	**1800**	**TRUE**
MW#93-3	**11/17/2021**	**1**	**183**	**TRUE**

Non-Parametric Prediction Interval

Intra-Well Comparison for MW#03-2

Parameter: Chloride

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Percent Non-Detects = 2.5%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 40
Maximum Baseline Concentration = 543
Confidence Level = 97.6%
False Positive Rate = 2.4%

Baseline Measurements	Date	Value
	6/24/2004	36
	9/15/2004	4
	12/15/2004	28
	3/16/2005	30
	6/15/2005	30
	9/21/2005	27
	12/21/2005	26
	3/15/2006	27
	6/21/2006	23
	12/20/2006	35
	6/12/2007	30
	12/17/2007	20
	6/11/2008	41
	12/3/2008	46
	6/17/2009	60
	12/9/2009	45
	6/17/2010	33
	12/22/2010	29
	6/29/2011	28.4
	12/7/2011	23.5
	6/6/2012	29.3
	12/12/2012	28.3
	6/19/2013	32.1
	12/11/2013	32.8
	6/11/2014	ND<5
	12/3/2014	51.2
	6/17/2015	54.7
	12/1/2015	67.8
	6/22/2016	79.7
	10/11/2016	88.4
	12/20/2016	126
	6/6/2017	117
	11/7/2017	288
	2/27/2018	247
	9/27/2018	283
	5/7/2019	313
	11/21/2019	543
	6/25/2020	448
	11/17/2020	435
	5/26/2021	511

Date	Count	Mean	Significant
11/17/2021	1	501	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for MW#93-2

Parameter: Chloride

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 40
Maximum Baseline Concentration = 2149
Confidence Level = 97.6%
False Positive Rate = 2.4%

Baseline Measurements	Date	Value
	12/15/1994	400
	3/14/1995	1500
	6/21/1995	75
	12/14/1995	1749
	3/6/1996	1674
	4/25/1996	1999
	10/2/1996	1553
	12/10/1996	1560
	3/11/1997	1634
	4/15/1997	1700
	8/14/1997	2149
	12/4/1997	1769
	3/31/1998	2000
	6/23/1998	2099
	8/11/1998	1874
	12/8/1998	1922
	3/9/1999	1700
	6/8/1999	1739
	8/19/1999	1800
	12/14/1999	1800
	3/7/2000	1328
	6/23/2000	950
	12/12/2000	1789
	3/27/2001	1749
	6/28/2001	1799
	9/10/2001	2050
	12/18/2001	1600
	3/19/2002	1730
	6/26/2002	1699
	9/18/2002	1674
	12/11/2002	1613
	3/13/2003	1510
	6/25/2003	1800
	9/26/2003	1616
	12/10/2003	1509
	3/9/2004	1800
	6/24/2004	1892
	9/15/2004	1435
	12/15/2004	1600
	3/16/2005	1325

Date	Count	Mean	Significant
11/17/2021	1	1800	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for MW#93-3

Parameter: Chloride

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 40
Maximum Baseline Concentration = 916
Confidence Level = 97.6%
False Positive Rate = 2.4%

Baseline Measurements	Date	Value
	12/15/1994	440
	3/14/1995	420
	6/21/1995	420
	12/14/1995	406
	3/6/1996	368
	4/25/1996	384
	10/2/1996	430
	12/10/1996	377
	3/11/1997	375
	4/15/1997	400
	8/14/1997	916
	12/4/1997	249
	3/31/1998	275
	6/23/1998	246
	8/11/1998	500
	12/8/1998	260
	3/9/1999	280
	6/8/1999	214
	8/19/1999	260
	12/14/1999	200
	3/7/2000	232
	6/23/2000	270
	12/12/2000	196
	3/27/2001	190
	6/28/2001	180
	9/10/2001	202
	12/18/2001	149
	3/19/2002	203
	6/26/2002	180
	9/18/2002	185
	12/11/2002	178
	3/13/2003	207
	6/25/2003	190
	9/26/2003	158
	12/10/2003	140
	3/9/2004	13
	6/24/2004	160
	9/15/2004	139
	12/15/2004	122
	3/16/2005	180

Date	Count	Mean	Significant
11/17/2021	1	183	FALSE

Shapiro-Francia Test of Normality

Parameter: Chloride

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Number of Measurements = 305

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0.628	-2.74777	7.55021	-1.7256
2	0.652	-2.51213	13.861	-3.36351
3	0.704	-2.36561	19.4572	-5.0289
4	0.777	-2.22621	24.4132	-6.75866
5	0.786	-2.14441	29.0116	-8.44417
6	0.887	-2.07485	33.3166	-10.2846
7	1.07	-2.01409	37.3732	-12.4396
8	1.13	-1.94314	41.149	-14.6354
9	1.64	-1.8957	44.7426	-17.7443
10	2.29	-1.85218	48.1732	-21.9858
11	3	-1.81191	51.4562	-27.4215
12	4	-1.76241	54.5623	-34.4712
13	4	-1.72793	57.5481	-41.3829
14	4	-1.6954	60.4224	-48.1645
15	4	-1.65463	63.1602	-54.783
16	4	-1.62576	65.8033	-61.2861
17	4.86	-1.59819	68.3575	-69.0533
18	5	-1.57179	70.8281	-76.9122
19	5	-1.5382	73.1941	-84.6032
20	5	-1.5141	75.4866	-92.1737
21	5	-1.49085	77.7093	-99.628
22	5	-1.46838	79.8654	-106.97
23	5	-1.43953	81.9377	-114.168
24	5	-1.41865	83.9503	-121.261
25	5	-1.39838	85.9057	-128.253
26	5	-1.37866	87.8064	-135.146
27	5.88	-1.35317	89.6375	-143.103
28	5.9	-1.33462	91.4187	-150.977
29	6	-1.31652	93.1519	-158.876
30	6	-1.29303	94.8239	-166.634
31	8.7	-1.27588	96.4517	-177.734
32	9.36	-1.25908	98.037	-189.519
33	10	-1.24264	99.5812	-201.946
34	11	-1.22123	101.073	-215.379
35	11	-1.20553	102.526	-228.64
36	11	-1.19012	103.942	-241.731
37	12.9	-1.17499	105.323	-256.889
38	13	-1.15522	106.657	-271.907
39	13	-1.14069	107.959	-286.736
40	13	-1.12639	109.227	-301.379
41	14.4	-1.11232	110.465	-317.396
42	15.2	-1.0939	111.661	-334.023
43	15.2	-1.08032	112.828	-350.444
44	15.6	-1.06694	113.967	-367.088
45	16.1	-1.04939	115.068	-383.984
46	16.2	-1.03643	116.142	-400.774
47	16.8	-1.02365	117.19	-417.971

48	16.9	-1.01104	118.212	-435.058
49	17	-0.994457	119.201	-451.963
50	17.6	-0.982202	120.166	-469.25
51	17.6	-0.970094	121.107	-486.324
52	17.7	-0.958125	122.025	-503.283
53	18.8	-0.942375	122.913	-520.999
54	19.3	-0.930718	123.779	-538.962
55	20	-0.919183	124.624	-557.346
56	20	-0.903992	125.441	-575.426
57	20	-0.892733	126.238	-593.28
58	20	-0.881587	127.015	-610.912
59	20.8	-0.87055	127.773	-629.02
60	21.5	-0.855996	128.506	-647.423
61	22	-0.845198	129.22	-666.018
62	22	-0.834498	129.917	-684.377
63	22.2	-0.823893	130.596	-702.667
64	23	-0.809896	131.251	-721.295
65	23.5	-0.7995	131.891	-740.083
66	23.8	-0.789191	132.514	-758.866
67	24	-0.778966	133.12	-777.561
68	24	-0.765456	133.706	-795.932
69	24	-0.755415	134.277	-814.062
70	24	-0.745449	134.833	-831.953
71	26	-0.732275	135.369	-850.992
72	27	-0.722479	135.891	-870.499
73	27	-0.712751	136.399	-889.743
74	27	-0.703089	136.893	-908.726
75	28	-0.690309	137.37	-928.055
76	28	-0.680797	137.833	-947.117
77	28	-0.671346	138.284	-965.915
78	28.3	-0.661955	138.722	-984.648
79	28.4	-0.649522	139.144	-1003.09
80	29	-0.640266	139.554	-1021.66
81	29	-0.631062	139.952	-1039.96
82	29	-0.621911	140.339	-1058
83	29.3	-0.609791	140.711	-1075.87
84	30	-0.60076	141.072	-1093.89
85	30	-0.591776	141.422	-1111.64
86	30	-0.579873	141.758	-1129.04
87	30	-0.570999	142.084	-1146.17
88	30	-0.56217	142.4	-1163.03
89	30	-0.553384	142.706	-1179.63
90	30	-0.541736	143	-1195.89
91	31	-0.533048	143.284	-1212.41
92	31	-0.524401	143.559	-1228.67
93	32	-0.515791	143.825	-1245.17
94	32	-0.504372	144.079	-1261.31
95	32.1	-0.49585	144.325	-1277.23
96	32.8	-0.487364	144.563	-1293.22
97	33	-0.478914	144.792	-1309.02
98	33	-0.467699	145.011	-1324.45
99	35	-0.459327	145.222	-1340.53
100	35	-0.450985	145.425	-1356.31
101	35	-0.439913	145.619	-1371.71
102	36	-0.431644	145.805	-1387.25
103	37	-0.423405	145.984	-1402.92
104	37	-0.415193	146.157	-1418.28

105	38	-0.40429	146.32	-1433.64
106	40	-0.396142	146.477	-1449.49
107	40	-0.388022	146.628	-1465.01
108	40	-0.379927	146.772	-1480.21
109	40	-0.369171	146.908	-1494.97
110	41	-0.361133	147.039	-1509.78
111	42	-0.353118	147.163	-1524.61
112	42	-0.342466	147.281	-1538.99
113	42	-0.334503	147.393	-1553.04
114	42	-0.326561	147.499	-1566.76
115	44	-0.318639	147.601	-1580.78
116	44	-0.308108	147.696	-1594.33
117	45	-0.300232	147.786	-1607.84
118	46	-0.292375	147.871	-1621.29
119	46	-0.284535	147.952	-1634.38
120	46	-0.27411	148.027	-1646.99
121	47.7	-0.266311	148.098	-1659.69
122	48	-0.258527	148.165	-1672.1
123	50	-0.250759	148.228	-1684.64
124	50	-0.240426	148.286	-1696.66
125	51	-0.232693	148.34	-1708.53
126	51.2	-0.224974	148.391	-1720.05
127	52	-0.214702	148.437	-1731.21
128	54	-0.207012	148.48	-1742.39
129	54.7	-0.199336	148.519	-1753.3
130	56	-0.191671	148.556	-1764.03
131	56	-0.181468	148.589	-1774.19
132	57	-0.173829	148.619	-1784.1
133	58	-0.166199	148.647	-1793.74
134	58	-0.158579	148.672	-1802.94
135	58	-0.148434	148.694	-1811.55
136	59	-0.140835	148.714	-1819.86
137	60	-0.133244	148.732	-1827.85
138	60	-0.125661	148.747	-1835.39
139	61	-0.115562	148.761	-1842.44
140	63	-0.107995	148.772	-1849.24
141	67.8	-0.100433	148.783	-1856.05
142	75	-0.0903606	148.791	-1862.83
143	79.7	-0.0828129	148.798	-1869.43
144	88.4	-0.0752698	148.803	-1876.08
145	98.9	-0.0677301	148.808	-1882.78
146	109	-0.0576847	148.811	-1889.07
147	110	-0.0501541	148.814	-1894.59
148	113	-0.0426257	148.815	-1899.4
149	117	-0.0350997	148.817	-1903.51
150	120	-0.0250691	148.817	-1906.52
151	122	-0.0175476	148.818	-1908.66
152	126	-0.0100272	148.818	-1909.92
153	131	0	148.818	-1909.92
154	139	0.0100272	148.818	-1908.53
155	140	0.0175476	148.818	-1906.07
156	143	0.0250691	148.819	-1902.49
157	144	0.0350997	148.82	-1897.43
158	149	0.0426257	148.822	-1891.08
159	150	0.0501541	148.824	-1883.56
160	150	0.0576847	148.828	-1874.91
161	152	0.0677301	148.832	-1864.61

162	158	0.0752698	148.838	-1852.72
163	160	0.0828129	148.845	-1839.47
164	168	0.0903606	148.853	-1824.29
165	168	0.100433	148.863	-1807.42
166	170	0.107995	148.875	-1789.06
167	170	0.115562	148.888	-1769.41
168	173	0.125661	148.904	-1747.67
169	175	0.133244	148.922	-1724.35
170	178	0.140835	148.941	-1699.28
171	180	0.148434	148.963	-1672.57
172	180	0.158579	148.989	-1644.02
173	180	0.166199	149.016	-1614.11
174	180	0.173829	149.046	-1582.82
175	183	0.181468	149.079	-1549.61
176	185	0.191671	149.116	-1514.15
177	187	0.199336	149.156	-1476.87
178	190	0.207012	149.199	-1437.54
179	190	0.214702	149.245	-1396.75
180	194	0.224974	149.295	-1353.1
181	194	0.232693	149.35	-1307.96
182	194	0.240426	149.407	-1261.32
183	196	0.250759	149.47	-1212.17
184	200	0.258527	149.537	-1160.46
185	202	0.266311	149.608	-1106.67
186	203	0.27411	149.683	-1051.02
187	207	0.284535	149.764	-992.125
188	210	0.292375	149.85	-930.726
189	210	0.300232	149.94	-867.678
190	214	0.308108	150.035	-801.742
191	215	0.318639	150.136	-733.235
192	221	0.326561	150.243	-661.065
193	232	0.334503	150.355	-583.46
194	232	0.342466	150.472	-504.008
195	246	0.353118	150.597	-417.141
196	247	0.361133	150.727	-327.941
197	249	0.369171	150.863	-236.018
198	254	0.379927	151.008	-139.517
199	260	0.388022	151.158	-38.6307
200	260	0.396142	151.315	64.3661
201	270	0.40429	151.479	173.524
202	275	0.415193	151.651	287.703
203	280	0.423405	151.83	406.256
204	280	0.431644	152.017	527.116
205	283	0.439913	152.21	651.612
206	288	0.450985	152.414	781.496
207	313	0.459327	152.625	925.265
208	368	0.467699	152.843	1097.38
209	375	0.478914	153.073	1276.97
210	377	0.487364	153.31	1460.71
211	384	0.49585	153.556	1651.11
212	400	0.504372	153.81	1852.86
213	400	0.515791	154.076	2059.18
214	402	0.524401	154.351	2269.99
215	406	0.533048	154.636	2486.41
216	410	0.541736	154.929	2708.52
217	420	0.553384	155.235	2940.94
218	420	0.56217	155.551	3177.05

219	421	0.570999	155.877	3417.44
220	426	0.579873	156.214	3664.47
221	430	0.591776	156.564	3918.93
222	435	0.60076	156.925	4180.26
223	435	0.609791	157.297	4445.52
224	440	0.621911	157.683	4719.16
225	448	0.631062	158.082	5001.88
226	475	0.640266	158.492	5306
227	500	0.649522	158.913	5630.76
228	501	0.661955	159.352	5962.4
229	511	0.671346	159.802	6305.46
230	518	0.680797	160.266	6658.11
231	543	0.690309	160.742	7032.95
232	750	0.703089	161.237	7560.27
233	875	0.712751	161.745	8183.93
234	916	0.722479	162.267	8845.72
235	950	0.732275	162.803	9541.38
236	1070	0.745449	163.359	10339
237	1160	0.755415	163.929	11215.3
238	1210	0.765456	164.515	12141.5
239	1210	0.778966	165.122	13084
240	1250	0.789191	165.745	14070.5
241	1250	0.7995	166.384	15069.9
242	1250	0.809896	167.04	16082.3
243	1270	0.823893	167.719	17128.6
244	1300	0.834498	168.415	18213.5
245	1325	0.845198	169.129	19333.4
246	1328	0.855996	169.862	20470.1
247	1350	0.87055	170.62	21645.4
248	1360	0.881587	171.397	22844.3
249	1360	0.892733	172.194	24058.4
250	1375	0.903992	173.011	25301.4
251	1390	0.919183	173.856	26579.1
252	1399	0.930718	174.723	27881.2
253	1400	0.942375	175.611	29200.5
254	1410	0.958125	176.529	30551.4
255	1412	0.970094	177.47	31921.2
256	1435	0.982202	178.434	33330.7
257	1500	0.994457	179.423	34822.4
258	1500	1.01104	180.446	36338.9
259	1500	1.02365	181.493	37874.4
260	1509	1.03643	182.568	39438.4
261	1510	1.04939	183.669	41022.9
262	1510	1.06694	184.807	42634
263	1520	1.08032	185.974	44276.1
264	1550	1.0939	187.171	45971.6
265	1553	1.11232	188.408	47699.1
266	1560	1.12639	189.677	49456.3
267	1580	1.14069	190.978	51258.5
268	1584	1.15522	192.313	53088.4
269	1600	1.17499	193.693	54968.4
270	1600	1.19012	195.11	56872.6
271	1600	1.20553	196.563	58801.4
272	1610	1.22123	198.054	60767.6
273	1613	1.24264	199.598	62772
274	1616	1.25908	201.184	64806.7
275	1634	1.27588	202.812	66891.4

276	1670	1.29303	204.483	69050.8
277	1670	1.31652	206.217	71249.4
278	1674	1.33462	207.998	73483.6
279	1674	1.35317	209.829	75748.8
280	1690	1.37866	211.73	78078.7
281	1699	1.39838	213.685	80454.5
282	1700	1.41865	215.698	82866.3
283	1700	1.43953	217.77	85313.5
284	1730	1.46838	219.926	87853.8
285	1739	1.49085	222.149	90446.4
286	1749	1.5141	224.441	93094.5
287	1749	1.5382	226.807	95784.8
288	1750	1.57179	229.278	98535.5
289	1760	1.59819	231.832	101348
290	1769	1.62576	234.475	104224
291	1789	1.65463	237.213	107184
292	1799	1.6954	240.087	110234
293	1800	1.72793	243.073	113345
294	1800	1.76241	246.179	116517
295	1800	1.81191	249.462	119778
296	1800	1.85218	252.893	123112
297	1800	1.8957	256.486	126525
298	1874	1.94314	260.262	130166
299	1892	2.01409	264.319	133977
300	1922	2.07485	268.624	137965
301	1999	2.14441	273.222	142251
302	2000	2.22621	278.178	146704
303	2050	2.36561	283.774	151553
304	2099	2.51213	290.085	156826
305	2149	2.74777	297.635	162731

Data Set Standard Deviation = 644.004
Numerator = 2.64814e+010
Denominator = 3.75262e+010
W Statistic = 0.705678 = 2.64814e+010 / 3.75262e+010

5% Critical value of 0.976 exceeds 0.705678
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.705678
Evidence of non-normality at 99% level of significance

Levene's Test for Equal of Variance

Parameter: Chloride

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Overall Mean = 127.198
Overall Std Dev = 208.883
Overall Total = 38795.3
SS Groups = 3.74503e+006
SS Total = 1.32642e+007

ANOVA Table

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Squares	F
Between Groups	3.74503e+006	4	936257	29.5065
Error (within groups)	9.51915e+006	300	31730.5	
Totals	1.32642e+007	304		

95% F-Statistic = 2.37

29.5065 exceeds 2.37; assumption of equal variance should be rejected

Group: MW#93-1	Sample	Residual
	12/15/1994	2.62632
	3/14/1995	5.37368
	6/21/1995	4.37368
	12/14/1995	8.62632
	3/6/1996	12.6263
	4/25/1996	0.626316
	10/2/1996	7.37368
	12/10/1996	2.62632
	3/11/1997	28.6263
	4/15/1997	4.62632
	8/14/1997	0.373684
	12/4/1997	3.62632
	3/31/1998	2.62632
	6/23/1998	4.37368
	8/11/1998	8.62632
	12/8/1998	1.62632
	3/9/1999	2.62632
	6/8/1999	2.37368
	8/19/1999	7.37368
	12/14/1999	7.37368
	3/7/2000	17.3737
	6/23/2000	19.3737
	12/12/2000	21.3737
	3/27/2001	27.3737
	6/28/2001	25.3737
	9/10/2001	13.3737
	12/18/2001	13.3737
	3/19/2002	9.37368
	6/26/2002	18.3737
	9/18/2002	24.3737

12/11/2002	23.3737
3/13/2003	23.3737
6/25/2003	30.3737
9/26/2003	26.3737
12/10/2003	7.37368
3/9/2004	25.3737
6/24/2004	28.3737
9/15/2004	11.3737
12/15/2004	15.3737
3/16/2005	9.37368
6/15/2005	9.37368
9/21/2005	9.37368
12/21/2005	25.3737
3/15/2006	17.3737
6/21/2006	1.62632
12/20/2006	2.37368
6/12/2007	8.62632
12/17/2007	5.62632
6/11/2008	3.62632
12/3/2008	4.62632
6/17/2009	12.6263
12/9/2009	8.62632
6/17/2010	15.6263
12/22/2010	12.6263
6/29/2011	11.8263
12/7/2011	15.0263
6/6/2012	8.82632
12/12/2012	10.4263
6/19/2013	11.1263
12/11/2013	15.0263
6/11/2014	13.3263
12/3/2014	15.7263
6/17/2015	19.6263
12/1/2015	17.4263
6/22/2016	19.6263
12/20/2016	17.4263
6/6/2017	16.5263
11/7/2017	16.4263
2/27/2018	17.0263
9/27/2018	15.8263
5/7/2019	13.8263
11/21/2019	10.6263
6/25/2020	21.6263
11/17/2020	18.2263
5/26/2021	19.7263
11/17/2021	14.9263

Group: MW#03-1	**Date**	**Residual**
	6/24/2004	8.49326
	9/15/2004	3.50674
	12/15/2004	12.4933
	3/16/2005	14.4933
	6/15/2005	12.4933
	9/21/2005	13.4933
	12/20/2006	13.4933
	6/12/2007	14.4933
	12/17/2007	15.4933

6/11/2008	7.49326
12/3/2008	7.49326
6/17/2009	14.4933
12/9/2009	13.5067
6/17/2010	13.4933
12/22/2010	9.79326
6/29/2011	13.6333
12/7/2011	12.6133
6/6/2012	9.13326
6/19/2013	13.4933
12/11/2013	13.4933
6/11/2014	25.5067
12/3/2014	13.4933
6/17/2015	13.4933
12/1/2015	17.7163
6/22/2016	17.8653
12/20/2016	17.7073
6/6/2017	17.6063
11/7/2017	17.3633
2/27/2018	17.4233
5/7/2019	12.5933
11/21/2019	391.507
6/25/2020	17.8413
11/17/2020	16.2033
5/26/2021	16.8533
11/16/2021	17.7893

Group: MW#03-2	Date	Residual
	6/24/2004	83.5902
	9/15/2004	115.59
	12/15/2004	91.5902
	3/16/2005	89.5902
	6/15/2005	89.5902
	9/21/2005	92.5902
	12/21/2005	93.5902
	3/15/2006	92.5902
	6/21/2006	96.5902
	12/20/2006	84.5902
	6/12/2007	89.5902
	12/17/2007	99.5902
	6/11/2008	78.5902
	12/3/2008	73.5902
	6/17/2009	59.5902
	12/9/2009	74.5902
	6/17/2010	86.5902
	12/22/2010	90.5902
	6/29/2011	91.1902
	12/7/2011	96.0902
	6/6/2012	90.2902
	12/12/2012	91.2902
	6/19/2013	87.4902
	12/11/2013	86.7902
	6/11/2014	114.59
	12/3/2014	68.3902
	6/17/2015	64.8902
	12/1/2015	51.7902
	6/22/2016	39.8902

10/11/2016	31.1902
12/20/2016	6.40976
6/6/2017	2.59024
11/7/2017	168.41
2/27/2018	127.41
9/27/2018	163.41
5/7/2019	193.41
11/21/2019	423.41
6/25/2020	328.41
11/17/2020	315.41
5/26/2021	391.41
11/17/2021	381.41

Group: MW#93-2	Date	Residual
	12/15/1994	1075.33
	3/14/1995	24.6662
	6/21/1995	1400.33
	12/14/1995	273.666
	3/6/1996	198.666
	4/25/1996	523.666
	10/2/1996	77.6662
	12/10/1996	84.6662
	3/11/1997	158.666
	4/15/1997	224.666
	8/14/1997	673.666
	12/4/1997	293.666
	3/31/1998	524.666
	6/23/1998	623.666
	8/11/1998	398.666
	12/8/1998	446.666
	3/9/1999	224.666
	6/8/1999	263.666
	8/19/1999	324.666
	12/14/1999	324.666
	3/7/2000	147.334
	6/23/2000	525.334
	12/12/2000	313.666
	3/27/2001	273.666
	6/28/2001	323.666
	9/10/2001	574.666
	12/18/2001	124.666
	3/19/2002	254.666
	6/26/2002	223.666
	9/18/2002	198.666
	12/11/2002	137.666
	3/13/2003	34.6662
	6/25/2003	324.666
	9/26/2003	140.666
	12/10/2003	33.6662
	3/9/2004	324.666
	6/24/2004	416.666
	9/15/2004	40.3338
	12/15/2004	124.666
	3/16/2005	150.334
	6/15/2005	75.3338
	9/21/2005	63.3338
	12/21/2005	74.6662

3/15/2006	100.334
6/21/2006	24.6662
12/20/2006	225.334
2/21/2007	225.334
6/12/2007	125.334
12/17/2007	76.3338
6/11/2008	265.334
12/3/2008	108.666
6/17/2009	725.334
12/9/2009	600.334
6/17/2010	24.6662
12/22/2010	124.666
6/29/2011	194.666
12/7/2011	34.6662
6/6/2012	134.666
12/12/2012	274.666
6/19/2013	85.3338
12/11/2013	65.3338
6/11/2014	115.334
12/3/2014	44.6662
6/17/2015	1427.63
12/1/2015	284.666
6/22/2016	175.334
12/20/2016	214.666
6/6/2017	104.666
11/7/2017	315.334
2/27/2018	205.334
9/27/2018	225.334
5/7/2019	115.334
11/21/2019	1470.33
6/25/2020	1366.33
11/16/2020	265.334
5/26/2021	194.666
11/17/2021	324.666

Group: MW#93-3	Date	Residual
	12/15/1994	180.383
	3/14/1995	160.383
	6/21/1995	160.383
	12/14/1995	146.383
	3/6/1996	108.383
	4/25/1996	124.383
	10/2/1996	170.383
	12/10/1996	117.383
	3/11/1997	115.383
	4/15/1997	140.383
	8/14/1997	656.383
	12/4/1997	10.6171
	3/31/1998	15.3829
	6/23/1998	13.6171
	8/11/1998	240.383
	12/8/1998	0.382895
	3/9/1999	20.3829
	6/8/1999	45.6171
	8/19/1999	0.382895
	12/14/1999	59.6171
	3/7/2000	27.6171

6/23/2000	10.3829
12/12/2000	63.6171
3/27/2001	69.6171
6/28/2001	79.6171
9/10/2001	57.6171
12/18/2001	110.617
3/19/2002	56.6171
6/26/2002	79.6171
9/18/2002	74.6171
12/11/2002	81.6171
3/13/2003	52.6171
6/25/2003	69.6171
9/26/2003	101.617
12/10/2003	119.617
3/9/2004	246.617
6/24/2004	99.6171
9/15/2004	120.617
12/15/2004	137.617
3/16/2005	79.6171
6/15/2005	109.617
9/21/2005	44.6171
12/21/2005	79.6171
3/15/2006	38.6171
6/21/2006	49.6171
12/20/2006	49.6171
6/12/2007	149.617
12/17/2007	128.617
6/11/2008	115.617
12/3/2008	107.617
6/17/2009	139.617
12/9/2009	84.6171
6/17/2010	109.617
12/22/2010	89.6171
6/29/2011	89.6171
12/7/2011	160.717
6/6/2012	65.6171
12/12/2012	91.6171
6/19/2013	65.6171
12/11/2013	86.6171
6/11/2014	5.61711
12/3/2014	65.6171
6/17/2015	91.6171
12/1/2015	20.3829
6/22/2016	258.383
12/20/2016	215.383
6/6/2017	146.617
11/7/2017	142.383
2/27/2018	175.383
9/27/2018	166.383
5/7/2019	161.383
11/21/2019	810.383
6/25/2020	116.617
11/16/2020	72.6171
5/26/2021	27.6171
11/17/2021	76.6171

Concentrations (ppb)

Parameter: Cobalt

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Measurements: 65
Total Non-Detect: 56
Percent Non-Detects: 86.1538%
Total Background Measurements: 13
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
MW#93-1	13	12 (92.3077%)	5/24/2018	ND<0.01	ND<0.01
			6/19/2018	ND<0.01	ND<0.01
			7/19/2018	ND<0.01	ND<0.01
			8/22/2018	ND<0.01	ND<0.01
			9/19/2018	ND<0.01	ND<0.01
			10/18/2018	ND<0.01	ND<0.01
			11/20/2018	ND<0.01	ND<0.01
			12/20/2018	ND<0.01	ND<0.01
			11/21/2019	ND<0.006	ND<0.006
			6/25/2020	ND<0.002	ND<0.002
			11/17/2020	0.000252	0.000252
			5/26/2021	ND<0.002	ND<0.002
			11/17/2021	ND<0.002	ND<0.002

There are 4 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
MW#03-1	13	9 (69.2308%)	5/24/2018	ND<0.01	ND<0.01
			6/19/2018	ND<0.01	ND<0.01
			7/19/2018	0.0321	0.0321
			8/22/2018	0.115	0.115
			10/18/2018	ND<0.01	ND<0.01
			11/20/2018	ND<0.01	ND<0.01
			12/20/2018	ND<0.01	ND<0.01
			3/26/2019	ND<0.01	ND<0.01
			11/21/2019	ND<0.006	ND<0.006
			6/25/2020	ND<0.002	ND<0.002
			11/17/2020	0.000211	0.000211
			5/26/2021	ND<0.002	ND<0.002
			11/16/2021	0.000164	0.000164
MW#03-2	13	13 (100%)	5/24/2018	ND<0.01	ND<0.01
			6/19/2018	ND<0.01	ND<0.01
			7/19/2018	ND<0.01	ND<0.01
			8/22/2018	ND<0.01	ND<0.01
			9/19/2018	ND<0.01	ND<0.01
			10/18/2018	ND<0.01	ND<0.01
			11/20/2018	ND<0.01	ND<0.01
			12/20/2018	ND<0.01	ND<0.01
			11/21/2019	ND<0.006	ND<0.006
			6/25/2020	ND<0.002	ND<0.002
			11/17/2020	ND<0.002	ND<0.002
			5/26/2021	ND<0.002	ND<0.002
			11/17/2021	ND<0.002	ND<0.002

MW#93-2	13	9 (69.2308%)	5/24/2018	ND<0.01	ND<0.01
			6/19/2018	ND<0.01	ND<0.01
			7/19/2018	ND<0.01	ND<0.01
			8/22/2018	ND<0.01	ND<0.01
			9/19/2018	ND<0.01	ND<0.01
			10/18/2018	ND<0.01	ND<0.01
			11/20/2018	ND<0.01	ND<0.01
			12/20/2018	ND<0.01	ND<0.01
			11/21/2019	ND<0.006	ND<0.006
			6/25/2020	0.000252	0.000252
			11/16/2020	0.000281	0.000281
			5/26/2021	0.00023	0.00023
			11/17/2021	0.000222	0.000222
MW#93-3	13	13 (100%)	5/24/2018	ND<0.01	ND<0.01
			6/19/2018	ND<0.01	ND<0.01
			7/19/2018	ND<0.01	ND<0.01
			8/22/2018	ND<0.01	ND<0.01
			9/19/2018	ND<0.01	ND<0.01
			10/18/2018	ND<0.01	ND<0.01
			11/20/2018	ND<0.01	ND<0.01
			12/20/2018	ND<0.01	ND<0.01
			11/21/2019	ND<0.006	ND<0.006
			6/25/2020	ND<0.002	ND<0.002
			11/16/2020	ND<0.002	ND<0.002
			5/26/2021	ND<0.002	ND<0.002
			11/17/2021	ND<0.002	ND<0.002

There are 0 unused locations

Loc.	Meas.	ND	Date	Conc.	Original

Non-Parametric Prediction Interval

Inter-Well Comparison

Parameter: Cobalt

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Percent Non-Detects = 86.1538%
Number of comparisons = 4
Future Samples (k) = 4
Recent Dates = 1
Background Measurements (n) = 13
Maximum Background Value = 0.01
Confidence Level = 76.5%
False Positive Rate = 23.5%

Location	Date	Count	Mean	Significant
MW#03-1	11/16/2021	1	0.000164	FALSE
MW#03-2	11/17/2021	1	0.002	FALSE
MW#93-2	11/17/2021	1	0.000222	FALSE
MW#93-3	11/17/2021	1	0.002	FALSE

Shapiro-Francia Test of Normality

Parameter: Cobalt

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Number of Measurements = 65

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0.000164	-2.17009	4.70929	-0.000355895
2	0.000211	-1.88079	8.24666	-0.000752741
3	0.000222	-1.6954	11.121	-0.00112912
4	0.00023	-1.55477	13.5384	-0.00148672
5	0.000252	-1.43953	15.6106	-0.00184948
6	0.000252	-1.34075	17.4082	-0.00218735
7	0.000281	-1.24809	18.9659	-0.00253806
8	0.002	-1.17	20.3348	-0.00487806
9	0.002	-1.09847	21.5415	-0.007075
10	0.002	-1.03215	22.6068	-0.00913931
11	0.002	-0.970094	23.5479	-0.0110795
12	0.002	-0.911562	24.3788	-0.0129026
13	0.002	-0.855996	25.1116	-0.0146146
14	0.002	-0.7995	25.7508	-0.0162136
15	0.002	-0.748762	26.3114	-0.0177111
16	0.002	-0.699883	26.8013	-0.0191109
17	0.002	-0.652622	27.2272	-0.0204161
18	0.002	-0.606775	27.5954	-0.0216297
19	0.002	-0.56217	27.9114	-0.022754
20	0.002	-0.515791	28.1774	-0.0237856
21	0.006	-0.473299	28.4014	-0.0266254
22	0.006	-0.431644	28.5878	-0.0292153
23	0.006	-0.390726	28.7404	-0.0315596
24	0.006	-0.350451	28.8632	-0.0336623
25	0.006	-0.310738	28.9598	-0.0355268
26	0.01	-0.271509	29.0335	-0.0382419
27	0.01	-0.230118	29.0865	-0.040543
28	0.01	-0.191671	29.1232	-0.0424598
29	0.01	-0.153505	29.1468	-0.0439948
30	0.01	-0.115562	29.1601	-0.0451504
31	0.01	-0.0777834	29.1662	-0.0459282
32	0.01	-0.0401167	29.1678	-0.0463294
33	0.01	0	29.1678	-0.0463294
34	0.01	0.0401167	29.1694	-0.0459282
35	0.01	0.0777834	29.1754	-0.0451504
36	0.01	0.115562	29.1888	-0.0439948
37	0.01	0.153505	29.2124	-0.0424598
38	0.01	0.191671	29.2491	-0.040543
39	0.01	0.230118	29.3021	-0.0382419
40	0.01	0.271509	29.3758	-0.0355268
41	0.01	0.310738	29.4723	-0.0324194
42	0.01	0.350451	29.5951	-0.0289149
43	0.01	0.390726	29.7478	-0.0250076
44	0.01	0.431644	29.9341	-0.0206912
45	0.01	0.473299	30.1581	-0.0159582
46	0.01	0.515791	30.4242	-0.0108003
47	0.01	0.56217	30.7402	-0.00517858

48	0.01	0.606775	31.1084	0.000889174
49	0.01	0.652622	31.5343	0.00741539
50	0.01	0.699883	32.0241	0.0144142
51	0.01	0.748762	32.5848	0.0219018
52	0.01	0.7995	33.224	0.0298968
53	0.01	0.855996	33.9567	0.0384568
54	0.01	0.911562	34.7877	0.0475724
55	0.01	0.970094	35.7287	0.0572734
56	0.01	1.03215	36.7941	0.0675949
57	0.01	1.09847	38.0007	0.0785796
58	0.01	1.17	39.3696	0.0902796
59	0.01	1.24809	40.9273	0.10276
60	0.01	1.34075	42.725	0.116168
61	0.01	1.43953	44.7972	0.130563
62	0.01	1.55477	47.2145	0.146111
63	0.01	1.6954	50.0889	0.163065
64	0.0321	1.88079	53.6263	0.223438
65	0.115	2.17009	58.3356	0.472999

Data Set Standard Deviation = 0.0142675
Numerator = 0.223728
Denominator = 0.759994
W Statistic = 0.294381 = 0.223728 / 0.759994

5% Critical value of 0.965 exceeds 0.294381
Evidence of non-normality at 95% level of significance

1% Critical value of 0.948 exceeds 0.294381
Evidence of non-normality at 99% level of significance

Levene's Test for Equal of Variance

Parameter: Cobalt

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Overall Mean = 0.00638924
Overall Std Dev = 0.0121193
Overall Total = 0.415301
SS Groups = 0.00200392
SS Total = 0.00940017

ANOVA Table

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Squares	F
Between Groups	0.00200392	4	0.00050098	4.06406
Error (within groups)	0.00739624	60	0.000123271	
Totals	0.00940017	64		

95% F-Statistic = 2.52521

4.06406 exceeds 2.52521; assumption of equal variance should be rejected

Group: MW#93-1	Sample	Residual
	5/24/2018	0.00290369
	6/19/2018	0.00290369
	7/19/2018	0.00290369
	8/22/2018	0.00290369
	9/19/2018	0.00290369
	10/18/2018	0.00290369
	11/20/2018	0.00290369
	12/20/2018	0.00290369
	11/21/2019	0.00109631
	6/25/2020	0.00509631
	11/17/2020	0.00684431
	5/26/2021	0.00509631
	11/17/2021	0.00509631

Group: MW#03-1	Date	Residual
	5/24/2018	0.00672885
	6/19/2018	0.00672885
	7/19/2018	0.0153712
	8/22/2018	0.0982712
	10/18/2018	0.00672885
	11/20/2018	0.00672885
	12/20/2018	0.00672885
	3/26/2019	0.00672885
	11/21/2019	0.0107288
	6/25/2020	0.0147288
	11/17/2020	0.0165178
	5/26/2021	0.0147288
	11/16/2021	0.0165648

Group: MW#03-2	Date	Residual

5/24/2018	0.00276923
6/19/2018	0.00276923
7/19/2018	0.00276923
8/22/2018	0.00276923
9/19/2018	0.00276923
10/18/2018	0.00276923
11/20/2018	0.00276923
12/20/2018	0.00276923
11/21/2019	0.00123077
6/25/2020	0.00523077
11/17/2020	0.00523077
5/26/2021	0.00523077
11/17/2021	0.00523077

Group: MW#93-2

Date	Residual
5/24/2018	0.00330885
6/19/2018	0.00330885
7/19/2018	0.00330885
8/22/2018	0.00330885
9/19/2018	0.00330885
10/18/2018	0.00330885
11/20/2018	0.00330885
12/20/2018	0.00330885
11/21/2019	0.000691154
6/25/2020	0.00643915
11/16/2020	0.00641015
5/26/2021	0.00646115
11/17/2021	0.00646915

Group: MW#93-3

Date	Residual
5/24/2018	0.00276923
6/19/2018	0.00276923
7/19/2018	0.00276923
8/22/2018	0.00276923
9/19/2018	0.00276923
10/18/2018	0.00276923
11/20/2018	0.00276923
12/20/2018	0.00276923
11/21/2019	0.00123077
6/25/2020	0.00523077
11/16/2020	0.00523077
5/26/2021	0.00523077
11/17/2021	0.00523077

Non-Parametric Prediction Interval

Intra-Well Comparison for MW#03-2

Parameter: Specific Conductance

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 74
Maximum Baseline Concentration = 3600
Confidence Level = 98.7%
False Positive Rate = 1.3%

Baseline Measurements	Date	Value
	6/24/2004	692
	9/15/2004	522
	12/15/2004	655
	3/16/2005	661
	6/15/2005	674
	9/21/2005	625
	12/21/2005	572
	3/15/2006	594
	6/21/2006	636
	12/20/2006	580
	6/12/2007	680
	12/17/2007	617
	6/11/2008	674
	12/3/2008	752
	6/17/2009	720
	12/9/2009	690
	6/17/2010	685
	12/22/2010	728
	6/29/2011	748
	12/7/2011	755
	6/6/2012	716
	12/12/2012	807
	6/19/2013	807
	12/11/2013	805
	6/11/2014	219
	12/3/2014	1540
	6/17/2015	965
	12/1/2015	967
	6/22/2016	1074
	12/20/2016	1454
	6/6/2017	1498
	11/7/2017	2042
	9/6/2018	2620
	9/19/2018	2880
	5/7/2019	2730
	11/21/2019	3600
	6/25/2020	2590
	11/17/2020	2390
	5/26/2021	2620
	11/17/2021	2700

Date	Count	Mean	Significant
11/17/2021	1	2700	FALSE

Concentrations (ppb)

Parameter: Specific Conductance

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Measurements: 303
Total Non-Detect: 0
Percent Non-Detects: 0%
Total Background Measurements: 75
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
MW#93-1	75	0 (0%)	12/15/1994	1080	1080
			3/14/1995	1103	1103
			6/21/1995	1154	1154
			12/14/1995	1109	1109
			3/6/1996	1010	1010
			4/25/1996	1063	1063
			10/2/1996	1169	1169
			12/10/1996	1187	1187
			3/11/1997	1077	1077
			4/15/1997	1070	1070
			8/14/1997	1217	1217
			12/4/1997	1170	1170
			3/31/1998	1092	1092
			6/23/1998	1210	1210
			8/11/1998	1273	1273
			12/8/1998	1888	1888
			3/9/1999	1080	1080
			6/8/1999	1301	1301
			8/19/1999	1301	1301
			12/14/1999	1270	1270
			3/7/2000	1290	1290
			6/23/2000	1393	1393
			12/12/2000	1309	1309
			3/27/2001	1469	1469
			6/28/2001	1560	1560
			9/10/2001	1374	1374
			12/18/2001	1374	1374
			3/19/2002	1326	1326
			6/26/2002	1516	1516
			9/18/2002	1423	1423
			12/11/2002	1515	1515
			3/13/2003	1332	1332
			6/25/2003	1608	1608
			9/26/2003	1602	1602
			12/10/2003	1620	1620
			3/9/2004	1630	1630
			6/24/2004	1620	1620
			9/15/2004	1618	1618
			12/15/2004	1586	1586
			3/16/2005	1521	1521
			6/15/2005	1531	1531
			9/21/2005	1441	1441
			12/21/2005	1030	1030
			3/15/2006	1318	1318
			6/21/2006	1547	1547

			12/20/2006	1370	1370
			6/12/2007	1466	1466
			12/17/2007	1327	1327
			6/11/2008	1334	1334
			12/3/2008	1352	1352
			6/17/2009	1301	1301
			12/9/2009	1218	1218
			6/17/2010	1179	1179
			12/22/2010	1270	1270
			6/29/2011	1275	1275
			12/7/2011	1236	1236
			6/6/2012	1185	1185
			12/12/2012	1227	1227
			6/19/2013	1366	1366
			12/11/2013	1329	1329
			6/11/2014	1200	1200
			12/3/2014	1230	1230
			6/17/2015	1210	1210
			12/1/2015	1230	1230
			6/22/2016	1185	1185
			12/20/2016	1186	1186
			6/6/2017	1289	1289
			11/7/2017	1458	1458
			2/27/2018	1235	1235
			9/19/2018	1520	1520
			11/21/2019	1510	1510
			6/25/2020	1440	1440
			11/17/2020	1460	1460
			5/26/2021	1460	1460
			11/17/2021	1680	1680

There are 4 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
MW#93-2	78	0 (0%)	12/15/1994	7950	7950
			3/14/1995	8217	8217
			6/21/1995	9210	9210
			12/14/1995	9000	9000
			3/6/1996	8820	8820
			4/25/1996	9310	9310
			10/2/1996	9420	9420
			12/10/1996	9590	9590
			3/11/1997	9250	9250
			4/15/1997	9690	9690
			8/14/1997	10660	10660
			12/4/1997	10240	10240
			3/31/1998	9237	9237
			6/23/1998	10400	10400
			8/11/1998	11460	11460
			12/8/1998	10280	10280
			3/9/1999	9240	9240
			6/8/1999	10850	10850
			8/19/1999	10873	10873
			12/14/1999	9690	9690
			3/7/2000	9340	9340
			6/23/2000	1034	1034

12/12/2000	9080	9080
3/27/2001	10260	10260
6/28/2001	11600	11600
9/10/2001	10700	10700
12/18/2001	10660	10660
3/19/2002	10197	10197
6/26/2002	10590	10590
9/18/2002	9690	9690
12/11/2002	10283	10283
3/13/2003	8920	8920
6/25/2003	10590	10590
9/26/2003	10693	10693
12/10/2003	10550	10550
3/9/2004	10620	10620
6/24/2004	10494	10494
9/15/2004	10340	10340
12/15/2004	9940	9940
3/16/2005	9690	9690
6/15/2005	10010	10010
9/21/2005	9660	9660
12/21/2005	10000	10000
3/15/2006	8650	8650
6/21/2006	9830	9830
12/20/2006	8310	8310
2/21/2007	7660	7660
6/12/2007	9590	9590
12/17/2007	9100	9100
6/11/2008	9600	9600
12/3/2008	10520	10520
12/15/2008	9070	9070
6/17/2009	10690	10690
12/9/2009	10050	10050
6/17/2010	10020	10020
12/22/2010	11230	11230
6/29/2011	11110	11110
12/7/2011	10770	10770
6/6/2012	10490	10490
12/12/2012	11460	11460
6/19/2013	10500	10500
12/11/2013	10650	10650
6/11/2014	9940	9940
12/3/2014	10900	10900
6/17/2015	1270	1270
12/1/2015	10560	10560
6/22/2016	6710	6710
12/20/2016	11400	11400
6/6/2017	12590	12590
11/7/2017	10.52	10.52
2/27/2018	10.9	10.9
9/19/2018	15700	15700
5/7/2019	15700	15700
11/21/2019	15400	15400
6/25/2020	12200	12200
11/16/2020	12700	12700
5/26/2021	13300	13300
11/17/2021	15000	15000

MW#93-3	76	0 (0%)	12/15/1994	1762	1762
			3/14/1995	1490	1490
			6/21/1995	1421	1421
			12/14/1995	1534	1534
			3/6/1996	1327	1327
			4/25/1996	1570	1570
			10/2/1996	1657	1657
			12/10/1996	1427	1427
			3/11/1997	1370	1370
			4/15/1997	1244	1244
			8/14/1997	1351	1351
			12/4/1997	1140	1140
			3/31/1998	1172	1172
			6/23/1998	1214	1214
			8/11/1998	1296	1296
			12/8/1998	1177	1177
			3/9/1999	1137	1137
			6/8/1999	1180	1180
			8/19/1999	1253	1253
			12/14/1999	1088	1088
			3/7/2000	1250	1250
			6/23/2000	1070	1070
			12/12/2000	1051	1051
			3/27/2001	1149	1149
			6/28/2001	1155	1155
			9/10/2001	1250	1250
			12/18/2001	1064	1064
			3/19/2002	1240	1240
			6/26/2002	787	787
			9/18/2002	1109	1109
			12/11/2002	1125	1125
			3/13/2003	1034	1034
			6/25/2003	1111	1111
			9/26/2003	1109	1109
			12/10/2003	1173	1173
			3/9/2004	881	881
			6/24/2004	1129	1129
			9/15/2004	1068	1068
			12/15/2004	972	972
			3/16/2005	1134	1134
			6/15/2005	1080	1080
			9/21/2005	1155	1155
			12/21/2005	1140	1140
			3/15/2006	1035	1035
			6/21/2006	1226	1226
			12/20/2006	1087	1087
			6/12/2007	1031	1031
			12/17/2007	910	910
			6/11/2008	1023	1023
			12/3/2008	1073	1073
			6/17/2009	1073	1073
			12/9/2009	1038	1038
			6/17/2010	1108	1108
			12/22/2010	1090	1090
			6/29/2011	1178	1178
			12/7/2011	930	930
			6/6/2012	1203	1203

			12/12/2012	1010	1010
			6/19/2013	1438	1438
			12/11/2013	1252	1252
			6/11/2014	1500	1500
			12/3/2014	1200	1200
			6/17/2015	1480	1480
			12/1/2015	1807	1807
			10/11/2016	2005	2005
			12/20/2016	2200	2200
			6/6/2017	1743	1743
			11/7/2017	2121	2121
			9/6/2018	2380	2380
			9/19/2018	2110	2110
			5/7/2019	2830	2830
			11/21/2019	2200	2200
			6/25/2020	2080	2080
			11/16/2020	2060	2060
			5/26/2021	2130	2130
			11/17/2021	2240	2240
MW#03-1	34	0 (0%)	6/24/2004	497	497
			9/15/2004	687	687
			12/15/2004	514	514
			3/16/2005	422	422
			6/15/2005	465	465
			9/21/2005	517	517
			12/20/2006	447	447
			6/12/2007	630	630
			12/17/2007	540	540
			6/11/2008	467	467
			12/3/2008	649	649
			6/17/2009	519	519
			12/9/2009	469	469
			6/17/2010	500	500
			12/22/2010	504	504
			6/29/2011	463	463
			12/7/2011	501	501
			6/6/2012	457	457
			6/19/2013	373	373
			12/11/2013	476	476
			6/11/2014	826	826
			12/3/2014	409	409
			6/17/2015	267	267
			12/1/2015	385	385
			6/22/2016	320	320
			6/6/2017	198	198
			11/7/2017	444	444
			2/27/2018	186.1	186.1
			9/19/2018	573	573
			11/21/2019	140	140
			6/25/2020	255	255
			11/17/2020	524	524
			5/26/2021	128	128
			11/16/2021	279	279
MW#03-2	40	0 (0%)	6/24/2004	692	692
			9/15/2004	522	522

12/15/2004	655	655
3/16/2005	661	661
6/15/2005	674	674
9/21/2005	625	625
12/21/2005	572	572
3/15/2006	594	594
6/21/2006	636	636
12/20/2006	580	580
6/12/2007	680	680
12/17/2007	617	617
6/11/2008	674	674
12/3/2008	752	752
6/17/2009	720	720
12/9/2009	690	690
6/17/2010	685	685
12/22/2010	728	728
6/29/2011	748	748
12/7/2011	755	755
6/6/2012	716	716
12/12/2012	807	807
6/19/2013	807	807
12/11/2013	805	805
6/11/2014	219	219
12/3/2014	1540	1540
6/17/2015	965	965
12/1/2015	967	967
6/22/2016	1074	1074
12/20/2016	1454	1454
6/6/2017	1498	1498
11/7/2017	2042	2042
9/6/2018	2620	2620
9/19/2018	2880	2880
5/7/2019	2730	2730
11/21/2019	3600	3600
6/25/2020	2590	2590
11/17/2020	2390	2390
5/26/2021	2620	2620
11/17/2021	2700	2700

There are 0 unused locations

Loc.	Meas.	ND	Date	Conc.	Original

Non-Parametric Prediction Interval

Inter-Well Comparison

Parameter: Specific Conductance

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Percent Non-Detects = 0%
Number of comparisons = 4
Future Samples (k) = 4
Recent Dates = 1
Background Measurements (n) = 75
Maximum Background Value = 1888
Confidence Level = 94.9%
False Positive Rate = 5.1%

Location	Date	Count	Mean	Significant
MW#93-2	**11/17/2021**	**1**	**15000**	**TRUE**
MW#93-3	**11/17/2021**	**1**	**2240**	**TRUE**
MW#03-1	11/16/2021	1	279	FALSE
MW#03-2	**11/17/2021**	**1**	**2700**	**TRUE**

Non-Parametric Prediction Interval

Intra-Well Comparison for MW#93-2

Parameter: Specific Conductance

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 74
Maximum Baseline Concentration = 15700
Confidence Level = 98.7%
False Positive Rate = 1.3%

Baseline Measurements	Date	Value
	12/15/1994	7950
	3/14/1995	8217
	6/21/1995	9210
	12/14/1995	9000
	3/6/1996	8820
	4/25/1996	9310
	10/2/1996	9420
	12/10/1996	9590
	3/11/1997	9250
	4/15/1997	9690
	8/14/1997	10660
	12/4/1997	10240
	3/31/1998	9237
	6/23/1998	10400
	8/11/1998	11460
	12/8/1998	10280
	3/9/1999	9240
	6/8/1999	10850
	8/19/1999	10873
	12/14/1999	9690
	3/7/2000	9340
	6/23/2000	1034
	12/12/2000	9080
	3/27/2001	10260
	6/28/2001	11600
	9/10/2001	10700
	12/18/2001	10660
	3/19/2002	10197
	6/26/2002	10590
	9/18/2002	9690
	12/11/2002	10283
	3/13/2003	8920
	6/25/2003	10590
	9/26/2003	10693
	12/10/2003	10550
	3/9/2004	10620
	6/24/2004	10494
	9/15/2004	10340
	12/15/2004	9940
	3/16/2005	9690
	6/15/2005	10010
	9/21/2005	9660

12/21/2005	10000
3/15/2006	8650
6/21/2006	9830
12/20/2006	8310
2/21/2007	7660
6/12/2007	9590
12/17/2007	9100
6/11/2008	9600
12/3/2008	10520
12/15/2008	9070
6/17/2009	10690
12/9/2009	10050
6/17/2010	10020
12/22/2010	11230
6/29/2011	11110
12/7/2011	10770
6/6/2012	10490
12/12/2012	11460
6/19/2013	10500
12/11/2013	10650
6/11/2014	9940
12/3/2014	10900
6/17/2015	1270
12/1/2015	10560
6/22/2016	6710
12/20/2016	11400
6/6/2017	12590
11/7/2017	10.52
2/27/2018	10.9
9/19/2018	15700
5/7/2019	15700
11/21/2019	15400

Date	Count	Mean	Significant
11/17/2021	1	15000	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for MW#93-3

Parameter: Specific Conductance

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 74
Maximum Baseline Concentration = 2830
Confidence Level = 98.7%
False Positive Rate = 1.3%

Baseline Measurements	Date	Value
	12/15/1994	1762
	3/14/1995	1490
	6/21/1995	1421
	12/14/1995	1534
	3/6/1996	1327
	4/25/1996	1570
	10/2/1996	1657
	12/10/1996	1427
	3/11/1997	1370
	4/15/1997	1244
	8/14/1997	1351
	12/4/1997	1140
	3/31/1998	1172
	6/23/1998	1214
	8/11/1998	1296
	12/8/1998	1177
	3/9/1999	1137
	6/8/1999	1180
	8/19/1999	1253
	12/14/1999	1088
	3/7/2000	1250
	6/23/2000	1070
	12/12/2000	1051
	3/27/2001	1149
	6/28/2001	1155
	9/10/2001	1250
	12/18/2001	1064
	3/19/2002	1240
	6/26/2002	787
	9/18/2002	1109
	12/11/2002	1125
	3/13/2003	1034
	6/25/2003	1111
	9/26/2003	1109
	12/10/2003	1173
	3/9/2004	881
	6/24/2004	1129
	9/15/2004	1068
	12/15/2004	972
	3/16/2005	1134
	6/15/2005	1080
	9/21/2005	1155

12/21/2005	1140
3/15/2006	1035
6/21/2006	1226
12/20/2006	1087
6/12/2007	1031
12/17/2007	910
6/11/2008	1023
12/3/2008	1073
6/17/2009	1073
12/9/2009	1038
6/17/2010	1108
12/22/2010	1090
6/29/2011	1178
12/7/2011	930
6/6/2012	1203
12/12/2012	1010
6/19/2013	1438
12/11/2013	1252
6/11/2014	1500
12/3/2014	1200
6/17/2015	1480
12/1/2015	1807
10/11/2016	2005
12/20/2016	2200
6/6/2017	1743
11/7/2017	2121
9/6/2018	2380
9/19/2018	2110
5/7/2019	2830
11/21/2019	2200
6/25/2020	2080
11/16/2020	2060

Date	Count	Mean	Significant
11/17/2021	1	2240	FALSE

Shapiro-Francia Test of Normality

Parameter: Specific Conductance

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Number of Measurements = 303

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	10.52	-2.74777	7.55021	-28.9065
2	10.9	-2.51213	13.861	-56.2887
3	128	-2.36561	19.4572	-359.087
4	140	-2.22621	24.4132	-670.756
5	186.1	-2.14441	29.0116	-1069.83
6	198	-2.07485	33.3166	-1480.65
7	219	-1.99539	37.2982	-1917.64
8	255	-1.94314	41.074	-2413.14
9	267	-1.8957	44.6677	-2919.29
10	279	-1.85218	48.0982	-3436.05
11	320	-1.79912	51.3351	-4011.77
12	373	-1.76241	54.4411	-4669.15
13	385	-1.72793	57.4269	-5334.4
14	409	-1.68494	60.2659	-6023.54
15	422	-1.65463	63.0037	-6721.79
16	444	-1.62576	65.6468	-7443.63
17	447	-1.59819	68.201	-8158.02
18	457	-1.56322	70.6447	-8872.41
19	463	-1.5382	73.0107	-9584.6
20	465	-1.5141	75.3032	-10288.7
21	467	-1.48328	77.5034	-10981.4
22	469	-1.46106	79.6381	-11666.6
23	476	-1.43953	81.7103	-12351.8
24	497	-1.41865	83.7229	-13056.9
25	500	-1.39175	85.6598	-13752.7
26	501	-1.3722	87.5428	-14440.2
27	504	-1.35317	89.3739	-15122.2
28	514	-1.32854	91.1389	-15805.1
29	517	-1.31058	92.8565	-16482.7
30	519	-1.29303	94.5284	-17153.7
31	522	-1.27588	96.1563	-17819.8
32	524	-1.25357	97.7277	-18476.6
33	540	-1.23724	99.2585	-19144.7
34	572	-1.22123	100.75	-19843.3
35	573	-1.20036	102.191	-20531.1
36	580	-1.18504	103.595	-21218.4
37	594	-1.17	104.964	-21913.4
38	617	-1.15035	106.287	-22623.1
39	625	-1.1359	107.578	-23333.1
40	630	-1.12168	108.836	-24039.7
41	636	-1.10768	110.063	-24744.2
42	649	-1.08935	111.249	-25451.2
43	655	-1.07584	112.407	-26155.9
44	661	-1.06252	113.536	-26858.2
45	674	-1.04505	114.628	-27562.6
46	674	-1.03215	115.693	-28258.2
47	680	-1.01943	116.732	-28951.5

48	685	-1.00687	117.746	-29641.2
49	687	-0.990356	118.727	-30321.5
50	690	-0.97815	119.684	-30996.5
51	692	-0.966088	120.617	-31665
52	716	-0.950222	121.52	-32345.3
53	720	-0.938476	122.401	-33021.1
54	728	-0.926859	123.26	-33695.8
55	748	-0.915365	124.098	-34380.5
56	752	-0.900227	124.908	-35057.5
57	755	-0.889006	125.698	-35728.7
58	787	-0.877897	126.469	-36419.6
59	805	-0.863249	127.214	-37114.5
60	807	-0.852385	127.941	-37802.4
61	807	-0.841621	128.649	-38481.6
62	826	-0.830953	129.34	-39167.9
63	881	-0.816874	130.007	-39887.6
64	910	-0.806422	130.657	-40621.4
65	930	-0.796056	131.291	-41361.8
66	965	-0.782366	131.903	-42116.7
67	967	-0.772193	132.499	-42863.5
68	972	-0.7621	133.08	-43604.2
69	1010	-0.752084	133.646	-44363.8
70	1010	-0.738846	134.192	-45110.1
71	1023	-0.729003	134.723	-45855.8
72	1030	-0.719228	135.24	-46596.6
73	1031	-0.706302	135.739	-47324.8
74	1034	-0.696684	136.225	-48045.2
75	1034	-0.687131	136.697	-48755.7
76	1035	-0.67449	137.152	-49453.8
77	1038	-0.665079	137.594	-50144.1
78	1051	-0.655726	138.024	-50833.3
79	1063	-0.646431	138.442	-51520.5
80	1064	-0.634124	138.844	-52195.2
81	1068	-0.624956	139.235	-52862.6
82	1070	-0.615839	139.614	-53521.6
83	1070	-0.603765	139.978	-54167.6
84	1073	-0.594766	140.332	-54805.8
85	1073	-0.585815	140.675	-55434.4
86	1074	-0.576911	141.008	-56054
87	1077	-0.565108	141.328	-56662.6
88	1080	-0.556308	141.637	-57263.4
89	1080	-0.547551	141.937	-57854.8
90	1080	-0.53594	142.224	-58433.6
91	1087	-0.52728	142.502	-59006.7
92	1088	-0.518658	142.771	-59571
93	1090	-0.510074	143.031	-60127
94	1092	-0.498687	143.28	-60671.6
95	1103	-0.490189	143.52	-61212.3
96	1108	-0.481728	143.752	-61746
97	1109	-0.470498	143.974	-62267.8
98	1109	-0.462114	144.187	-62780.3
99	1109	-0.453763	144.393	-63283.5
100	1111	-0.445443	144.592	-63778.4
101	1125	-0.434397	144.78	-64267.1
102	1129	-0.426148	144.962	-64748.2
103	1134	-0.417928	145.136	-65222.1
104	1137	-0.40701	145.302	-65684.9

105	1140	-0.398855	145.461	-66139.6
106	1140	-0.390726	145.614	-66585
107	1149	-0.382622	145.76	-67024.7
108	1154	-0.371856	145.899	-67453.8
109	1155	-0.363809	146.031	-67874
110	1155	-0.355788	146.158	-68284.9
111	1169	-0.345126	146.277	-68688.4
112	1170	-0.337155	146.39	-69082.8
113	1172	-0.329206	146.499	-69468.7
114	1173	-0.318639	146.6	-69842.4
115	1177	-0.310738	146.697	-70208.2
116	1178	-0.302855	146.788	-70564.9
117	1179	-0.294992	146.876	-70912.7
118	1180	-0.284535	146.956	-71248.5
119	1185	-0.276714	147.033	-71576.4
120	1185	-0.268908	147.105	-71895
121	1186	-0.258527	147.172	-72201.7
122	1187	-0.250759	147.235	-72499.3
123	1200	-0.243007	147.294	-72790.9
124	1200	-0.235269	147.349	-73073.2
125	1203	-0.224974	147.4	-73343.9
126	1210	-0.217267	147.447	-73606.8
127	1210	-0.209575	147.491	-73860.4
128	1214	-0.199336	147.531	-74102.4
129	1217	-0.191671	147.568	-74335.6
130	1218	-0.184017	147.602	-74559.8
131	1226	-0.176374	147.633	-74776
132	1227	-0.166199	147.66	-74979.9
133	1230	-0.158579	147.685	-75175
134	1230	-0.150969	147.708	-75360.7
135	1235	-0.140835	147.728	-75534.6
136	1236	-0.133244	147.746	-75699.3
137	1240	-0.125661	147.762	-75855.1
138	1244	-0.118085	147.776	-76002
139	1250	-0.107995	147.787	-76137
140	1250	-0.100433	147.797	-76262.5
141	1252	-0.0928787	147.806	-76378.8
142	1253	-0.0828129	147.813	-76482.6
143	1270	-0.0752698	147.818	-76578.2
144	1270	-0.0677301	147.823	-76664.2
145	1270	-0.0601949	147.827	-76740.6
146	1273	-0.0501541	147.829	-76804.5
147	1275	-0.0426257	147.831	-76858.8
148	1289	-0.0350997	147.832	-76904.1
149	1290	-0.0250691	147.833	-76936.4
150	1296	-0.0175476	147.833	-76959.2
151	1301	-0.0100272	147.833	-76972.2
152	1301	0	147.833	-76972.2
153	1301	0.0100272	147.833	-76959.2
154	1309	0.0175476	147.834	-76936.2
155	1318	0.0250691	147.834	-76903.1
156	1326	0.0350997	147.836	-76856.6
157	1327	0.0426257	147.837	-76800
158	1327	0.0501541	147.84	-76733.5
159	1329	0.0601949	147.843	-76653.5
160	1332	0.0677301	147.848	-76563.3
161	1334	0.0752698	147.854	-76462.9

162	1351	0.0828129	147.861	-76351
163	1352	0.0928787	147.869	-76225.4
164	1366	0.100433	147.879	-76088.2
165	1370	0.107995	147.891	-75940.3
166	1370	0.118085	147.905	-75778.5
167	1374	0.125661	147.921	-75605.8
168	1374	0.133244	147.938	-75422.7
169	1393	0.140835	147.958	-75226.6
170	1421	0.150969	147.981	-75012
171	1423	0.158579	148.006	-74786.4
172	1427	0.166199	148.034	-74549.2
173	1438	0.176374	148.065	-74295.6
174	1440	0.184017	148.099	-74030.6
175	1441	0.191671	148.136	-73754.4
176	1454	0.199336	148.175	-73464.6
177	1458	0.209575	148.219	-73159
178	1460	0.217267	148.266	-72841.8
179	1460	0.224974	148.317	-72513.3
180	1466	0.235269	148.372	-72168.4
181	1469	0.243007	148.431	-71811.5
182	1480	0.250759	148.494	-71440.3
183	1490	0.258527	148.561	-71055.1
184	1498	0.268908	148.633	-70652.3
185	1500	0.276714	148.71	-70237.2
186	1510	0.284535	148.791	-69807.6
187	1515	0.294992	148.878	-69360.7
188	1516	0.302855	148.97	-68901.5
189	1520	0.310738	149.066	-68429.2
190	1521	0.318639	149.168	-67944.6
191	1531	0.329206	149.276	-67440.6
192	1534	0.337155	149.39	-66923.4
193	1540	0.345126	149.509	-66391.9
194	1547	0.355788	149.636	-65841.5
195	1560	0.363809	149.768	-65273.9
196	1570	0.371856	149.906	-64690.1
197	1586	0.382622	150.053	-64083.3
198	1602	0.390726	150.205	-63457.3
199	1608	0.398855	150.364	-62816
200	1618	0.40701	150.53	-62157.4
201	1620	0.417928	150.705	-61480.4
202	1620	0.426148	150.886	-60790
203	1630	0.434397	151.075	-60082
204	1657	0.445443	151.273	-59343.9
205	1680	0.453763	151.479	-58581.5
206	1743	0.462114	151.693	-57776.1
207	1762	0.470498	151.914	-56947
208	1807	0.481728	152.146	-56076.6
209	1888	0.490189	152.387	-55151.1
210	2005	0.498687	152.635	-54151.2
211	2042	0.510074	152.895	-53109.7
212	2060	0.518658	153.164	-52041.2
213	2080	0.52728	153.442	-50944.5
214	2110	0.53594	153.73	-49813.6
215	2121	0.547551	154.03	-48652.3
216	2130	0.556308	154.339	-47467.3
217	2200	0.565108	154.658	-46224.1
218	2200	0.576911	154.991	-44954.9

219	2240	0.585815	155.334	-43642.7
220	2380	0.594766	155.688	-42227.1
221	2390	0.603765	156.053	-40784.1
222	2590	0.615839	156.432	-39189.1
223	2620	0.624956	156.822	-37551.7
224	2620	0.634124	157.225	-35890.3
225	2700	0.646431	157.642	-34145
226	2730	0.655726	158.072	-32354.8
227	2830	0.665079	158.515	-30472.7
228	2880	0.67449	158.97	-28530.1
229	3600	0.687131	159.442	-26056.5
230	6710	0.696684	159.927	-21381.7
231	7660	0.706302	160.426	-15971.4
232	7950	0.719228	160.943	-10253.6
233	8217	0.729003	161.475	-4263.34
234	8310	0.738846	162.021	1876.47
235	8650	0.752084	162.586	8382
236	8820	0.7621	163.167	15103.7
237	8920	0.772193	163.763	21991.7
238	9000	0.782366	164.375	29033
239	9070	0.796056	165.009	36253.2
240	9080	0.806422	165.66	43575.5
241	9100	0.816874	166.327	51009.1
242	9210	0.830953	167.017	58662.1
243	9237	0.841621	167.726	66436.2
244	9240	0.852385	168.452	74312.2
245	9250	0.863249	169.197	82297.3
246	9310	0.877897	169.968	90470.5
247	9340	0.889006	170.758	98773.8
248	9420	0.900227	171.569	107254
249	9590	0.915365	172.407	116032
250	9590	0.926859	173.266	124921
251	9600	0.938476	174.147	133930
252	9660	0.950222	175.049	143109
253	9690	0.966088	175.983	152471
254	9690	0.97815	176.94	161949
255	9690	0.990356	177.92	171546
256	9690	1.00687	178.934	181302
257	9830	1.01943	179.973	191323
258	9940	1.03215	181.039	201583
259	9940	1.04505	182.131	211971
260	10000	1.06252	183.26	222596
261	10010	1.07584	184.417	233365
262	10020	1.08935	185.604	244280
263	10050	1.10768	186.831	255412
264	10197	1.12168	188.089	266850
265	10240	1.1359	189.379	278482
266	10260	1.15035	190.703	290284
267	10280	1.17	192.071	302312
268	10283	1.18504	193.476	314498
269	10340	1.20036	194.917	326909
270	10400	1.22123	196.408	339610
271	10490	1.23724	197.939	352589
272	10494	1.25357	199.51	365744
273	10500	1.27588	201.138	379140
274	10520	1.29303	202.81	392743
275	10550	1.31058	204.528	406570

276	10560	1.32854	206.293	420599
277	10590	1.35317	208.124	434929
278	10590	1.3722	210.007	449461
279	10620	1.39175	211.944	464241
280	10650	1.41865	213.956	479350
281	10660	1.43953	216.028	494695
282	10660	1.46106	218.163	510270
283	10690	1.48328	220.363	526126
284	10693	1.5141	222.656	542317
285	10700	1.5382	225.022	558775
286	10770	1.56322	227.466	575611
287	10850	1.59819	230.02	592952
288	10873	1.62576	232.663	610629
289	10900	1.65463	235.401	628664
290	11110	1.68494	238.24	647384
291	11230	1.72793	241.225	666788
292	11400	1.76241	244.331	686880
293	11460	1.79912	247.568	707498
294	11460	1.85218	250.999	728724
295	11600	1.8957	254.593	750714
296	12200	1.94314	258.368	774420
297	12590	1.99539	262.35	799542
298	12700	2.07485	266.655	825893
299	13300	2.14441	271.253	854413
300	15000	2.22621	276.209	887806
301	15400	2.36561	281.805	924237
302	15700	2.51213	288.116	963677
303	15700	2.74777	295.667	1.00682e+006

Data Set Standard Deviation = 4075.83
Numerator = 1.01368e+012
Denominator = 1.48334e+012
W Statistic = 0.683376 = 1.01368e+012 / 1.48334e+012

5% Critical value of 0.976 exceeds 0.683376
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.683376
Evidence of non-normality at 99% level of significance

Levene's Test for Equal of Variance

Parameter: Specific Conductance

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Overall Mean = 621.845
Overall Std Dev = 1275.9
Overall Total = 188419
SS Groups = 1.00195e+008
SS Total = 4.91631e+008

ANOVA Table

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Squares	F
Between Groups	1.00195e+008	4	2.50486e+007	19.0695
Error (within groups)	3.91436e+008	298	1.31354e+006	
Totals	4.91631e+008	302		

95% F-Statistic = 2.37

19.0695 exceeds 2.37; assumption of equal variance should be rejected

Group: MW#93-1	Sample	Residual
	12/15/1994	254.733
	3/14/1995	231.733
	6/21/1995	180.733
	12/14/1995	225.733
	3/6/1996	324.733
	4/25/1996	271.733
	10/2/1996	165.733
	12/10/1996	147.733
	3/11/1997	257.733
	4/15/1997	264.733
	8/14/1997	117.733
	12/4/1997	164.733
	3/31/1998	242.733
	6/23/1998	124.733
	8/11/1998	61.7333
	12/8/1998	553.267
	3/9/1999	254.733
	6/8/1999	33.7333
	8/19/1999	33.7333
	12/14/1999	64.7333
	3/7/2000	44.7333
	6/23/2000	58.2667
	12/12/2000	25.7333
	3/27/2001	134.267
	6/28/2001	225.267
	9/10/2001	39.2667
	12/18/2001	39.2667
	3/19/2002	8.73333
	6/26/2002	181.267
	9/18/2002	88.2667

12/11/2002	180.267
3/13/2003	2.73333
6/25/2003	273.267
9/26/2003	267.267
12/10/2003	285.267
3/9/2004	295.267
6/24/2004	285.267
9/15/2004	283.267
12/15/2004	251.267
3/16/2005	186.267
6/15/2005	196.267
9/21/2005	106.267
12/21/2005	304.733
3/15/2006	16.7333
6/21/2006	212.267
12/20/2006	35.2667
6/12/2007	131.267
12/17/2007	7.73333
6/11/2008	0.733333
12/3/2008	17.2667
6/17/2009	33.7333
12/9/2009	116.733
6/17/2010	155.733
12/22/2010	64.7333
6/29/2011	59.7333
12/7/2011	98.7333
6/6/2012	149.733
12/12/2012	107.733
6/19/2013	31.2667
12/11/2013	5.73333
6/11/2014	134.733
12/3/2014	104.733
6/17/2015	124.733
12/1/2015	104.733
6/22/2016	149.733
12/20/2016	148.733
6/6/2017	45.7333
11/7/2017	123.267
2/27/2018	99.7333
9/19/2018	185.267
11/21/2019	175.267
6/25/2020	105.267
11/17/2020	125.267
5/26/2021	125.267
11/17/2021	345.267

Group: MW#93-2	**Date**	**Residual**
	12/15/1994	1934.86
	3/14/1995	1667.86
	6/21/1995	674.864
	12/14/1995	884.864
	3/6/1996	1064.86
	4/25/1996	574.864
	10/2/1996	464.864
	12/10/1996	294.864
	3/11/1997	634.864
	4/15/1997	194.864

8/14/1997	775.136
12/4/1997	355.136
3/31/1998	647.864
6/23/1998	515.136
8/11/1998	1575.14
12/8/1998	395.136
3/9/1999	644.864
6/8/1999	965.136
8/19/1999	988.136
12/14/1999	194.864
3/7/2000	544.864
6/23/2000	8850.86
12/12/2000	804.864
3/27/2001	375.136
6/28/2001	1715.14
9/10/2001	815.136
12/18/2001	775.136
3/19/2002	312.136
6/26/2002	705.136
9/18/2002	194.864
12/11/2002	398.136
3/13/2003	964.864
6/25/2003	705.136
9/26/2003	808.136
12/10/2003	665.136
3/9/2004	735.136
6/24/2004	609.136
9/15/2004	455.136
12/15/2004	55.1356
3/16/2005	194.864
6/15/2005	125.136
9/21/2005	224.864
12/21/2005	115.136
3/15/2006	1234.86
6/21/2006	54.8644
12/20/2006	1574.86
2/21/2007	2224.86
6/12/2007	294.864
12/17/2007	784.864
6/11/2008	284.864
12/3/2008	635.136
12/15/2008	814.864
6/17/2009	805.136
12/9/2009	165.136
6/17/2010	135.136
12/22/2010	1345.14
6/29/2011	1225.14
12/7/2011	885.136
6/6/2012	605.136
12/12/2012	1575.14
6/19/2013	615.136
12/11/2013	765.136
6/11/2014	55.1356
12/3/2014	1015.14
6/17/2015	8614.86
12/1/2015	675.136
6/22/2016	3174.86

12/20/2016	1515.14
6/6/2017	2705.14
11/7/2017	9874.34
2/27/2018	9873.96
9/19/2018	5815.14
5/7/2019	5815.14
11/21/2019	5515.14
6/25/2020	2315.14
11/16/2020	2815.14
5/26/2021	3415.14
11/17/2021	5115.14

Group: MW#93-3	Date	Residual
	12/15/1994	408.882
	3/14/1995	136.882
	6/21/1995	67.8816
	12/14/1995	180.882
	3/6/1996	26.1184
	4/25/1996	216.882
	10/2/1996	303.882
	12/10/1996	73.8816
	3/11/1997	16.8816
	4/15/1997	109.118
	8/14/1997	2.11842
	12/4/1997	213.118
	3/31/1998	181.118
	6/23/1998	139.118
	8/11/1998	57.1184
	12/8/1998	176.118
	3/9/1999	216.118
	6/8/1999	173.118
	8/19/1999	100.118
	12/14/1999	265.118
	3/7/2000	103.118
	6/23/2000	283.118
	12/12/2000	302.118
	3/27/2001	204.118
	6/28/2001	198.118
	9/10/2001	103.118
	12/18/2001	289.118
	3/19/2002	113.118
	6/26/2002	566.118
	9/18/2002	244.118
	12/11/2002	228.118
	3/13/2003	319.118
	6/25/2003	242.118
	9/26/2003	244.118
	12/10/2003	180.118
	3/9/2004	472.118
	6/24/2004	224.118
	9/15/2004	285.118
	12/15/2004	381.118
	3/16/2005	219.118
	6/15/2005	273.118
	9/21/2005	198.118
	12/21/2005	213.118
	3/15/2006	318.118

6/21/2006	127.118
12/20/2006	266.118
6/12/2007	322.118
12/17/2007	443.118
6/11/2008	330.118
12/3/2008	280.118
6/17/2009	280.118
12/9/2009	315.118
6/17/2010	245.118
12/22/2010	263.118
6/29/2011	175.118
12/7/2011	423.118
6/6/2012	150.118
12/12/2012	343.118
6/19/2013	84.8816
12/11/2013	101.118
6/11/2014	146.882
12/3/2014	153.118
6/17/2015	126.882
12/1/2015	453.882
10/11/2016	651.882
12/20/2016	846.882
6/6/2017	389.882
11/7/2017	767.882
9/6/2018	1026.88
9/19/2018	756.882
5/7/2019	1476.88
11/21/2019	846.882
6/25/2020	726.882
11/16/2020	706.882
5/26/2021	776.882
11/17/2021	886.882

Group: MW#03-1	**Date**	**Residual**
	6/24/2004	54.9088
	9/15/2004	244.909
	12/15/2004	71.9088
	3/16/2005	20.0912
	6/15/2005	22.9088
	9/21/2005	74.9088
	12/20/2006	4.90882
	6/12/2007	187.909
	12/17/2007	97.9088
	6/11/2008	24.9088
	12/3/2008	206.909
	6/17/2009	76.9088
	12/9/2009	26.9088
	6/17/2010	57.9088
	12/22/2010	61.9088
	6/29/2011	20.9088
	12/7/2011	58.9088
	6/6/2012	14.9088
	6/19/2013	69.0912
	12/11/2013	33.9088
	6/11/2014	383.909
	12/3/2014	33.0912
	6/17/2015	175.091

12/1/2015	57.0912
6/22/2016	122.091
6/6/2017	244.091
11/7/2017	1.90882
2/27/2018	255.991
9/19/2018	130.909
11/21/2019	302.091
6/25/2020	187.091
11/17/2020	81.9088
5/26/2021	314.091
11/16/2021	163.091

Group: MW#03-2	Date	Residual
	6/24/2004	515.1
	9/15/2004	685.1
	12/15/2004	552.1
	3/16/2005	546.1
	6/15/2005	533.1
	9/21/2005	582.1
	12/21/2005	635.1
	3/15/2006	613.1
	6/21/2006	571.1
	12/20/2006	627.1
	6/12/2007	527.1
	12/17/2007	590.1
	6/11/2008	533.1
	12/3/2008	455.1
	6/17/2009	487.1
	12/9/2009	517.1
	6/17/2010	522.1
	12/22/2010	479.1
	6/29/2011	459.1
	12/7/2011	452.1
	6/6/2012	491.1
	12/12/2012	400.1
	6/19/2013	400.1
	12/11/2013	402.1
	6/11/2014	988.1
	12/3/2014	332.9
	6/17/2015	242.1
	12/1/2015	240.1
	6/22/2016	133.1
	12/20/2016	246.9
	6/6/2017	290.9
	11/7/2017	834.9
	9/6/2018	1412.9
	9/19/2018	1672.9
	5/7/2019	1522.9
	11/21/2019	2392.9
	6/25/2020	1382.9
	11/17/2020	1182.9
	5/26/2021	1412.9
	11/17/2021	1492.9

Concentrations (ppb)

Parameter: Fluoride

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Measurements: 122
Total Non-Detect: 43
Percent Non-Detects: 35.2459%
Total Background Measurements: 25
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
MW#93-1	25	10 (40%)	10/11/2016	0.1	0.1
			12/20/2016	0.2	0.2
			2/16/2017	0.16	0.16
			3/8/2017	0.19	0.19
			5/9/2017	0.13	0.13
			6/6/2017	0.14	0.14
			8/22/2017	0.1	0.1
			9/22/2017	0.11	0.11
			11/7/2017	0.12	0.12
			2/27/2018	0.16	0.16
			5/24/2018	ND<0.2	ND<0.2
			6/19/2018	ND<0.2	ND<0.2
			7/19/2018	ND<0.2	ND<0.2
			8/22/2018	ND<0.2	ND<0.2
			9/19/2018	0.243	0.243
			9/27/2018	ND<0.1	ND<0.1
			10/18/2018	ND<0.2	ND<0.2
			11/20/2018	ND<0.2	ND<0.2
			12/20/2018	ND<0.2	ND<0.2
			5/7/2019	ND<0.2	ND<0.2
			11/21/2019	ND<0.2	ND<0.2
			6/25/2020	0.168	0.168
			11/17/2020	0.183	0.183
			5/26/2021	0.245	0.245
			11/17/2021	0.168	0.168

There are 4 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
MW#03-1	25	13 (52%)	10/11/2016	ND<0.1	ND<0.1
			12/20/2016	0.18	0.18
			2/16/2017	0.13	0.13
			3/8/2017	0.19	0.19
			5/9/2017	0.1	0.1
			6/6/2017	ND<0.1	ND<0.1
			8/22/2017	0.1	0.1
			9/22/2017	0.1	0.1
			11/7/2017	0.12	0.12
			2/27/2018	0.1	0.1
			5/24/2018	ND<0.2	ND<0.2
			6/19/2018	ND<0.2	ND<0.2
			7/19/2018	ND<0.2	ND<0.2
			8/22/2018	ND<0.1	ND<0.1
			9/19/2018	0.21	0.21

			10/18/2018	ND<0.2	ND<0.2
			11/20/2018	ND<0.2	ND<0.2
			12/20/2018	ND<0.2	ND<0.2
			3/26/2019	ND<0.2	ND<0.2
			5/7/2019	ND<0.2	ND<0.2
			11/21/2019	ND<0.2	ND<0.2
			6/25/2020	0.0846	0.0846
			11/17/2020	0.109	0.109
			5/26/2021	ND<0.15	ND<0.15
			11/16/2021	0.134	0.134
MW#03-2	24	13 (54.1667%)	10/11/2016	ND<0.1	ND<0.1
			12/20/2016	0.14	0.14
			2/16/2017	0.12	0.12
			3/8/2017	0.14	0.14
			5/9/2017	ND<0.1	ND<0.1
			6/6/2017	0.1	0.1
			8/22/2017	ND<0.1	ND<0.1
			9/22/2017	ND<0.1	ND<0.1
			11/7/2017	0.1	0.1
			2/27/2018	0.12	0.12
			5/24/2018	ND<0.2	ND<0.2
			6/19/2018	ND<0.2	ND<0.2
			7/19/2018	ND<0.2	ND<0.2
			8/22/2018	ND<0.2	ND<0.2
			9/19/2018	0.21	0.21
			10/18/2018	ND<0.2	ND<0.2
			11/20/2018	ND<0.2	ND<0.2
			12/20/2018	ND<0.2	ND<0.2
			5/7/2019	ND<0.2	ND<0.2
			11/21/2019	ND<0.2	ND<0.2
			6/25/2020	0.119	0.119
			11/17/2020	0.116	0.116
			5/26/2021	0.09	0.09
			11/17/2021	0.117	0.117
MW#93-2	24	1 (4.16667%)	10/11/2016	0.81	0.81
			12/20/2016	1.06	1.06
			2/16/2017	0.68	0.68
			3/8/2017	0.79	0.79
			5/9/2017	0.7	0.7
			6/6/2017	0.68	0.68
			8/22/2017	0.35	0.35
			9/22/2017	0.51	0.51
			11/7/2017	0.12	0.12
			2/27/2018	ND<0.1	ND<0.1
			5/24/2018	0.937	0.937
			6/19/2018	0.991	0.991
			7/19/2018	0.906	0.906
			8/22/2018	0.865	0.865
			9/19/2018	1	1
			10/18/2018	0.698	0.698
			11/20/2018	1.02	1.02
			12/20/2018	0.685	0.685
			5/7/2019	0.367	0.367
			11/21/2019	0.554	0.554
			6/25/2020	0.313	0.313

			11/16/2020	0.705	0.705
			5/26/2021	0.287	0.287
			11/17/2021	0.793	0.793
MW#93-3	24	6 (25%)	10/11/2016	0.15	0.15
			12/20/2016	0.23	0.23
			2/16/2017	0.2	0.2
			3/8/2017	0.22	0.22
			5/9/2017	0.18	0.18
			6/6/2017	0.24	0.24
			8/22/2017	0.23	0.23
			9/22/2017	0.2	0.2
			11/7/2017	0.2	0.2
			2/27/2018	0.21	0.21
			5/24/2018	0.23	0.23
			6/19/2018	0.223	0.223
			7/19/2018	ND<0.21	ND<0.21
			8/22/2018	ND<0.2	ND<0.2
			9/19/2018	0.389	0.389
			10/18/2018	ND<0.2	ND<0.2
			11/20/2018	0.283	0.283
			12/20/2018	ND<0.2	ND<0.2
			5/7/2019	ND<0.2	ND<0.2
			11/21/2019	ND<0.2	ND<0.2
			6/25/2020	0.252	0.252
			11/16/2020	0.27	0.27
			5/26/2021	0.233	0.233
			11/17/2021	0.329	0.329

There are 0 unused locations

Loc.	Meas.	ND	Date	Conc.	Original

Non-Parametric Prediction Interval

Inter-Well Comparison

Parameter: Fluoride

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Percent Non-Detects = 35.2459%
Number of comparisons = 4
Future Samples (k) = 4
Recent Dates = 1
Background Measurements (n) = 25
Maximum Background Value = 0.245
Confidence Level = 86.2%
False Positive Rate = 13.8%

Location	Date	Count	Mean	Significant
MW#03-1	11/16/2021	1	0.134	FALSE
MW#03-2	11/17/2021	1	0.117	FALSE
MW#93-2	**11/17/2021**	**1**	**0.793**	**TRUE**
MW#93-3	**11/17/2021**	**1**	**0.329**	**TRUE**

Non-Parametric Prediction Interval

Intra-Well Comparison for MW#93-2

Parameter: Fluoride

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Percent Non-Detects = 4.16667%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 24
Maximum Baseline Concentration = 1.06
Confidence Level = 96%
False Positive Rate = 4%

Baseline Measurements	Date	Value
	10/11/2016	0.81
	12/20/2016	1.06
	2/16/2017	0.68
	3/8/2017	0.79
	5/9/2017	0.7
	6/6/2017	0.68
	8/22/2017	0.35
	9/22/2017	0.51
	11/7/2017	0.12
	2/27/2018	ND<0.1
	5/24/2018	0.937
	6/19/2018	0.991
	7/19/2018	0.906
	8/22/2018	0.865
	9/19/2018	1
	10/18/2018	0.698
	11/20/2018	1.02
	12/20/2018	0.685
	5/7/2019	0.367
	11/21/2019	0.554
	6/25/2020	0.313
	11/16/2020	0.705
	5/26/2021	0.287
	11/17/2021	0.793

Date	Count	Mean	Significant
11/17/2021	1	0.793	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for MW#93-3

Parameter: Fluoride

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Percent Non-Detects = 25%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 24
Maximum Baseline Concentration = 0.389
Confidence Level = 96%
False Positive Rate = 4%

Baseline Measurements	Date	Value
	10/11/2016	0.15
	12/20/2016	0.23
	2/16/2017	0.2
	3/8/2017	0.22
	5/9/2017	0.18
	6/6/2017	0.24
	8/22/2017	0.23
	9/22/2017	0.2
	11/7/2017	0.2
	2/27/2018	0.21
	5/24/2018	0.23
	6/19/2018	0.223
	7/19/2018	ND<0.21
	8/22/2018	ND<0.2
	9/19/2018	0.389
	10/18/2018	ND<0.2
	11/20/2018	0.283
	12/20/2018	ND<0.2
	5/7/2019	ND<0.2
	11/21/2019	ND<0.2
	6/25/2020	0.252
	11/16/2020	0.27
	5/26/2021	0.233
	11/17/2021	0.329

Date	Count	Mean	Significant
11/17/2021	1	0.329	FALSE

Shapiro-Francia Test of Normality

Parameter: Fluoride

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Number of Measurements = 122

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0.0846	-2.40892	5.80292	-0.203795
2	0.09	-2.14441	10.4014	-0.396792
3	0.1	-1.97737	14.3114	-0.594528
4	0.1	-1.85218	17.7419	-0.779746
5	0.1	-1.75069	20.8068	-0.954815
6	0.1	-1.66456	23.5776	-1.12127
7	0.1	-1.58927	26.1034	-1.2802
8	0.1	-1.5141	28.3959	-1.43161
9	0.1	-1.4538	30.5094	-1.57699
10	0.1	-1.39838	32.4649	-1.71683
11	0.1	-1.34694	34.2791	-1.85152
12	0.1	-1.29884	35.9661	-1.9814
13	0.1	-1.25357	37.5375	-2.10676
14	0.1	-1.21073	39.0034	-2.22783
15	0.1	-1.17	40.3723	-2.34483
16	0.1	-1.12639	41.6411	-2.45747
17	0.1	-1.08935	42.8277	-2.56641
18	0.1	-1.05375	43.9381	-2.67178
19	0.1	-1.01943	44.9774	-2.77372
20	0.109	-0.986272	45.9501	-2.88123
21	0.11	-0.954165	46.8605	-2.98619
22	0.116	-0.923014	47.7125	-3.09326
23	0.117	-0.892733	48.5095	-3.19771
24	0.119	-0.859618	49.2484	-3.3
25	0.12	-0.830953	49.9389	-3.39971
26	0.12	-0.802956	50.5836	-3.49607
27	0.12	-0.775574	51.1851	-3.58914
28	0.12	-0.748762	51.7458	-3.67899
29	0.12	-0.722479	52.2678	-3.76569
30	0.13	-0.696684	52.7531	-3.85626
31	0.13	-0.668209	53.1996	-3.94312
32	0.134	-0.643345	53.6135	-4.02933
33	0.14	-0.618872	53.9965	-4.11597
34	0.14	-0.594766	54.3503	-4.19924
35	0.14	-0.570999	54.6763	-4.27918
36	0.15	-0.547551	54.9761	-4.36131
37	0.15	-0.524401	55.2511	-4.43997
38	0.16	-0.501527	55.5026	-4.52022
39	0.16	-0.476105	55.7293	-4.59639
40	0.168	-0.453763	55.9352	-4.67263
41	0.168	-0.431644	56.1215	-4.74514
42	0.18	-0.409735	56.2894	-4.8189
43	0.18	-0.388022	56.44	-4.88874
44	0.183	-0.36649	56.5743	-4.95581
45	0.19	-0.345126	56.6934	-5.02138
46	0.19	-0.323919	56.7983	-5.08293
47	0.2	-0.300232	56.8885	-5.14297

48	0.2	-0.279319	56.9665	-5.19884
49	0.2	-0.258527	57.0333	-5.25054
50	0.2	-0.237847	57.0899	-5.29811
51	0.2	-0.217267	57.1371	-5.34156
52	0.2	-0.196779	57.1758	-5.38092
53	0.2	-0.176374	57.2069	-5.41619
54	0.2	-0.153505	57.2305	-5.4469
55	0.2	-0.133244	57.2482	-5.47354
56	0.2	-0.113039	57.261	-5.49615
57	0.2	-0.0928787	57.2697	-5.51473
58	0.2	-0.0727562	57.2749	-5.52928
59	0.2	-0.0526632	57.2777	-5.53981
60	0.2	-0.0325917	57.2788	-5.54633
61	0.2	-0.0125328	57.2789	-5.54884
62	0.2	0.0125328	57.2791	-5.54633
63	0.2	0.0325917	57.2802	-5.53981
64	0.2	0.0526632	57.2829	-5.52928
65	0.2	0.0727562	57.2882	-5.51473
66	0.2	0.0928787	57.2969	-5.49615
67	0.2	0.113039	57.3096	-5.47354
68	0.2	0.133244	57.3274	-5.4469
69	0.2	0.153505	57.3509	-5.41619
70	0.2	0.176374	57.3821	-5.38092
71	0.2	0.196779	57.4208	-5.34156
72	0.2	0.217267	57.468	-5.29811
73	0.2	0.237847	57.5246	-5.25054
74	0.2	0.258527	57.5914	-5.19884
75	0.2	0.279319	57.6694	-5.14297
76	0.2	0.300232	57.7595	-5.08293
77	0.2	0.323919	57.8645	-5.01814
78	0.2	0.345126	57.9836	-4.94912
79	0.2	0.36649	58.1179	-4.87582
80	0.2	0.388022	58.2685	-4.79821
81	0.2	0.409735	58.4363	-4.71627
82	0.2	0.431644	58.6227	-4.62994
83	0.21	0.453763	58.8286	-4.53465
84	0.21	0.476105	59.0552	-4.43467
85	0.21	0.501527	59.3068	-4.32935
86	0.21	0.524401	59.5818	-4.21922
87	0.22	0.547551	59.8816	-4.09876
88	0.223	0.570999	60.2076	-3.97143
89	0.23	0.594766	60.5614	-3.83463
90	0.23	0.618872	60.9444	-3.69229
91	0.23	0.643345	61.3583	-3.54432
92	0.233	0.668209	61.8048	-3.38863
93	0.24	0.696684	62.2901	-3.22142
94	0.243	0.722479	62.8121	-3.04586
95	0.245	0.748762	63.3727	-2.86242
96	0.252	0.775574	63.9743	-2.66697
97	0.27	0.802956	64.619	-2.45017
98	0.283	0.830953	65.3095	-2.21501
99	0.287	0.859618	66.0484	-1.9683
100	0.313	0.892733	66.8454	-1.68888
101	0.329	0.923014	67.6974	-1.38521
102	0.35	0.954165	68.6078	-1.05125
103	0.367	0.986272	69.5805	-0.689286
104	0.389	1.01943	70.6198	-0.292728

105	0.51	1.05375	71.7301	0.244682
106	0.554	1.08935	72.9168	0.848181
107	0.68	1.12639	74.1856	1.61413
108	0.68	1.17	75.5545	2.40973
109	0.685	1.21073	77.0203	3.23908
110	0.698	1.25357	78.5918	4.11407
111	0.7	1.29884	80.2787	5.02325
112	0.705	1.34694	82.093	5.97284
113	0.79	1.39838	84.0484	7.07756
114	0.793	1.4538	86.162	8.23043
115	0.81	1.5141	88.4545	9.45685
116	0.865	1.58927	90.9803	10.8316
117	0.906	1.66456	93.751	12.3397
118	0.937	1.75069	96.8159	13.9801
119	0.991	1.85218	100.246	15.8156
120	1	1.97737	104.156	17.7929
121	1.02	2.14441	108.755	19.9802
122	1.06	2.40892	114.558	22.5337

Data Set Standard Deviation = 0.235889
Numerator = 507.767
Denominator = 771.304
W Statistic = 0.658323 = 507.767 / 771.304

5% Critical value of 0.976 exceeds 0.658323
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.658323
Evidence of non-normality at 99% level of significance

Levene's Test for Equal of Variance

Parameter: Fluoride

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Overall Mean = 0.0758456
Overall Std Dev = 0.105244
Overall Total = 9.25316
SS Groups = 0.671312
SS Total = 1.34022

ANOVA Table

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Squares	F
Between Groups	0.671312	4	0.167828	29.3551
Error (within groups)	0.668909	117	0.00571717	
Totals	1.34022	121		

95% F-Statistic = 2.44724

29.3551 exceeds 2.44724; assumption of equal variance should be rejected

Group: MW#93-1	Sample	Residual
	10/11/2016	0.07268
	12/20/2016	0.02732
	2/16/2017	0.01268
	3/8/2017	0.01732
	5/9/2017	0.04268
	6/6/2017	0.03268
	8/22/2017	0.07268
	9/22/2017	0.06268
	11/7/2017	0.05268
	2/27/2018	0.01268
	5/24/2018	0.02732
	6/19/2018	0.02732
	7/19/2018	0.02732
	8/22/2018	0.02732
	9/19/2018	0.07032
	9/27/2018	0.07268
	10/18/2018	0.02732
	11/20/2018	0.02732
	12/20/2018	0.02732
	5/7/2019	0.02732
	11/21/2019	0.02732
	6/25/2020	0.00468
	11/17/2020	0.01032
	5/26/2021	0.07232
	11/17/2021	0.00468

Group: MW#03-1	Date	Residual
	10/11/2016	0.052304
	12/20/2016	0.027696
	2/16/2017	0.022304

3/8/2017	0.037696
5/9/2017	0.052304
6/6/2017	0.052304
8/22/2017	0.052304
9/22/2017	0.052304
11/7/2017	0.032304
2/27/2018	0.052304
5/24/2018	0.047696
6/19/2018	0.047696
7/19/2018	0.047696
8/22/2018	0.052304
9/19/2018	0.057696
10/18/2018	0.047696
11/20/2018	0.047696
12/20/2018	0.047696
3/26/2019	0.047696
5/7/2019	0.047696
11/21/2019	0.047696
6/25/2020	0.067704
11/17/2020	0.043304
5/26/2021	0.002304
11/16/2021	0.018304

Group: MW#03-2	**Date**	**Residual**
	10/11/2016	0.0488333
	12/20/2016	0.00883333
	2/16/2017	0.0288333
	3/8/2017	0.00883333
	5/9/2017	0.0488333
	6/6/2017	0.0488333
	8/22/2017	0.0488333
	9/22/2017	0.0488333
	11/7/2017	0.0488333
	2/27/2018	0.0288333
	5/24/2018	0.0511667
	6/19/2018	0.0511667
	7/19/2018	0.0511667
	8/22/2018	0.0511667
	9/19/2018	0.0611667
	10/18/2018	0.0511667
	11/20/2018	0.0511667
	12/20/2018	0.0511667
	5/7/2019	0.0511667
	11/21/2019	0.0511667
	6/25/2020	0.0298333
	11/17/2020	0.0328333
	5/26/2021	0.0588333
	11/17/2021	0.0318333

Group: MW#93-2	**Date**	**Residual**
	10/11/2016	0.146625
	12/20/2016	0.396625
	2/16/2017	0.016625
	3/8/2017	0.126625
	5/9/2017	0.036625
	6/6/2017	0.016625
	8/22/2017	0.313375

9/22/2017	0.153375
11/7/2017	0.543375
2/27/2018	0.563375
5/24/2018	0.273625
6/19/2018	0.327625
7/19/2018	0.242625
8/22/2018	0.201625
9/19/2018	0.336625
10/18/2018	0.034625
11/20/2018	0.356625
12/20/2018	0.021625
5/7/2019	0.296375
11/21/2019	0.109375
6/25/2020	0.350375
11/16/2020	0.041625
5/26/2021	0.376375
11/17/2021	0.129625

Group: MW#93-3	Date	Residual
	10/11/2016	0.0782917
	12/20/2016	0.00170833
	2/16/2017	0.0282917
	3/8/2017	0.00829167
	5/9/2017	0.0482917
	6/6/2017	0.0117083
	8/22/2017	0.00170833
	9/22/2017	0.0282917
	11/7/2017	0.0282917
	2/27/2018	0.0182917
	5/24/2018	0.00170833
	6/19/2018	0.00529167
	7/19/2018	0.0182917
	8/22/2018	0.0282917
	9/19/2018	0.160708
	10/18/2018	0.0282917
	11/20/2018	0.0547083
	12/20/2018	0.0282917
	5/7/2019	0.0282917
	11/21/2019	0.0282917
	6/25/2020	0.0237083
	11/16/2020	0.0417083
	5/26/2021	0.00470833
	11/17/2021	0.100708

Concentrations (ppb)

Parameter: Lead

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Measurements: 65
Total Non-Detect: 62
Percent Non-Detects: 95.3846%
Total Background Measurements: 13
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
MW#93-1	13	13 (100%)	5/24/2018	ND<0.005	ND<0.005
			6/19/2018	ND<0.005	ND<0.005
			7/19/2018	ND<0.005	ND<0.005
			8/22/2018	ND<0.005	ND<0.005
			9/19/2018	ND<0.005	ND<0.005
			10/18/2018	ND<0.005	ND<0.005
			11/20/2018	ND<0.005	ND<0.005
			12/20/2018	ND<0.005	ND<0.005
			11/21/2019	ND<0.001	ND<0.001
			6/25/2020	ND<0.002	ND<0.002
			11/17/2020	ND<0.002	ND<0.002
			5/26/2021	ND<0.002	ND<0.002
			11/17/2021	ND<0.002	ND<0.002

There are 4 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
MW#03-1	13	10 (76.9231%)	5/24/2018	ND<0.005	ND<0.005
			6/19/2018	ND<0.005	ND<0.005
			7/19/2018	0.124	0.124
			8/22/2018	0.143	0.143
			10/18/2018	ND<0.005	ND<0.005
			11/20/2018	ND<0.005	ND<0.005
			12/20/2018	0.00791	0.00791
			3/26/2019	ND<0.005	ND<0.005
			11/21/2019	ND<0.001	ND<0.001
			6/25/2020	ND<0.002	ND<0.002
			11/17/2020	ND<0.002	ND<0.002
			5/26/2021	ND<0.002	ND<0.002
			11/16/2021	ND<0.002	ND<0.002
MW#03-2	13	13 (100%)	5/24/2018	ND<0.005	ND<0.005
			6/19/2018	ND<0.005	ND<0.005
			7/19/2018	ND<0.005	ND<0.005
			8/22/2018	ND<0.005	ND<0.005
			9/19/2018	ND<0.005	ND<0.005
			10/18/2018	ND<0.005	ND<0.005
			11/20/2018	ND<0.005	ND<0.005
			12/20/2018	ND<0.005	ND<0.005
			11/21/2019	ND<0.001	ND<0.001
			6/25/2020	ND<0.002	ND<0.002
			11/17/2020	ND<0.002	ND<0.002
			5/26/2021	ND<0.002	ND<0.002
			11/17/2021	ND<0.002	ND<0.002

MW#93-2	13	13 (100%)	5/24/2018	ND<0.005	ND<0.005
			6/19/2018	ND<0.005	ND<0.005
			7/19/2018	ND<0.005	ND<0.005
			8/22/2018	ND<0.005	ND<0.005
			9/19/2018	ND<0.005	ND<0.005
			10/18/2018	ND<0.005	ND<0.005
			11/20/2018	ND<0.005	ND<0.005
			12/20/2018	ND<0.005	ND<0.005
			11/21/2019	ND<0.001	ND<0.001
			6/25/2020	ND<0.002	ND<0.002
			11/16/2020	ND<0.002	ND<0.002
			5/26/2021	ND<0.002	ND<0.002
			11/17/2021	ND<0.002	ND<0.002
MW#93-3	13	13 (100%)	5/24/2018	ND<0.005	ND<0.005
			6/19/2018	ND<0.005	ND<0.005
			7/19/2018	ND<0.005	ND<0.005
			8/22/2018	ND<0.005	ND<0.005
			9/19/2018	ND<0.005	ND<0.005
			10/18/2018	ND<0.005	ND<0.005
			11/20/2018	ND<0.005	ND<0.005
			12/20/2018	ND<0.005	ND<0.005
			11/21/2019	ND<0.001	ND<0.001
			6/25/2020	ND<0.002	ND<0.002
			11/16/2020	ND<0.002	ND<0.002
			5/26/2021	ND<0.002	ND<0.002
			11/17/2021	ND<0.002	ND<0.002

There are 0 unused locations

Loc.	Meas.	ND	Date	Conc.	Original

Concentrations (ppb)

Parameter: Lithium

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Measurements: 65
Total Non-Detect: 42
Percent Non-Detects: 64.6154%
Total Background Measurements: 13
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
MW#93-1	13	13 (100%)	5/24/2018	ND<0.01	ND<0.01
			6/19/2018	ND<0.015	ND<0.015
			7/19/2018	ND<0.015	ND<0.015
			8/22/2018	ND<0.015	ND<0.015
			9/19/2018	ND<0.015	ND<0.015
			10/18/2018	ND<0.015	ND<0.015
			11/20/2018	ND<0.015	ND<0.015
			12/20/2018	ND<0.015	ND<0.015
			11/21/2019	ND<0.015	ND<0.015
			6/25/2020	ND<0.015	ND<0.015
			11/17/2020	ND<0.015	ND<0.015
			5/26/2021	ND<0.015	ND<0.015
			11/17/2021	ND<0.015	ND<0.015

There are 4 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
MW#03-1	13	12 (92.3077%)	5/24/2018	ND<0.01	ND<0.01
			6/19/2018	ND<0.015	ND<0.015
			7/19/2018	ND<0.015	ND<0.015
			8/22/2018	0.0461	0.0461
			10/18/2018	ND<0.015	ND<0.015
			11/20/2018	ND<0.015	ND<0.015
			12/20/2018	ND<0.015	ND<0.015
			3/26/2019	ND<0.015	ND<0.015
			11/21/2019	ND<0.015	ND<0.015
			6/25/2020	ND<0.015	ND<0.015
			11/17/2020	ND<0.015	ND<0.015
			5/26/2021	ND<0.015	ND<0.015
			11/16/2021	ND<0.015	ND<0.015
MW#03-2	13	8 (61.5385%)	5/24/2018	0.0173	0.0173
			6/19/2018	ND<0.015	ND<0.015
			7/19/2018	ND<0.015	ND<0.015
			8/22/2018	ND<0.015	ND<0.015
			9/19/2018	ND<0.015	ND<0.015
			10/18/2018	ND<0.015	ND<0.015
			11/20/2018	ND<0.015	ND<0.015
			12/20/2018	ND<0.015	ND<0.015
			11/21/2019	0.0154	0.0154
			6/25/2020	0.00813	0.00813
			11/17/2020	ND<0.015	ND<0.015
			5/26/2021	0.0112	0.0112
			11/17/2021	0.0144	0.0144

MW#93-2	13	8 (61.5385%)	5/24/2018	0.0302	0.0302
			6/19/2018	ND<0.015	ND<0.015
			7/19/2018	ND<0.015	ND<0.015
			8/22/2018	ND<0.015	ND<0.015
			9/19/2018	ND<0.015	ND<0.015
			10/18/2018	ND<0.015	ND<0.015
			11/20/2018	0.0185	0.0185
			12/20/2018	ND<0.015	ND<0.015
			11/21/2019	ND<0.015	ND<0.015
			6/25/2020	0.00976	0.00976
			11/16/2020	ND<0.015	ND<0.015
			5/26/2021	0.0136	0.0136
			11/17/2021	0.0115	0.0115
MW#93-3	13	1 (7.69231%)	5/24/2018	0.178	0.178
			6/19/2018	0.162	0.162
			7/19/2018	ND<0.015	ND<0.015
			8/22/2018	0.159	0.159
			9/19/2018	0.16	0.16
			10/18/2018	0.164	0.164
			11/20/2018	0.187	0.187
			12/20/2018	0.168	0.168
			11/21/2019	0.182	0.182
			6/25/2020	0.124	0.124
			11/16/2020	0.128	0.128
			5/26/2021	0.127	0.127
			11/17/2021	0.124	0.124

There are 0 unused locations

Loc.	Meas.	ND	Date	Conc.	Original

Non-Parametric Prediction Interval

Inter-Well Comparison

Parameter: Lithium

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Percent Non-Detects = 64.6154%
Number of comparisons = 4
Future Samples (k) = 4
Recent Dates = 1
Background Measurements (n) = 13
Maximum Background Value = 0.015
Confidence Level = 76.5%
False Positive Rate = 23.5%

Location	Date	Count	Mean	Significant
MW#03-1	11/16/2021	1	0.015	FALSE
MW#03-2	11/17/2021	1	0.0144	FALSE
MW#93-2	11/17/2021	1	0.0115	FALSE
MW#93-3	**11/17/2021**	**1**	**0.124**	**TRUE**

Non-Parametric Prediction Interval

Intra-Well Comparison for MW#93-3

Parameter: Lithium

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Percent Non-Detects = 8.33333%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 12
Maximum Baseline Concentration = 0.187
Confidence Level = 92.3%
False Positive Rate = 7.7%

Baseline Measurements	Date	Value
	5/24/2018	0.178
	6/19/2018	0.162
	7/19/2018	ND<0.015
	8/22/2018	0.159
	9/19/2018	0.16
	10/18/2018	0.164
	11/20/2018	0.187
	12/20/2018	0.168
	11/21/2019	0.182
	6/25/2020	0.124
	11/16/2020	0.128
	5/26/2021	0.127

Date	Count	Mean	Significant
11/17/2021	1	0.124	FALSE

Shapiro-Francia Test of Normality

Parameter: Lithium

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Number of Measurements = 65

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0.00813	-2.17009	4.70929	-0.0176428
2	0.00976	-1.88079	8.24666	-0.0359993
3	0.01	-1.6954	11.121	-0.0529533
4	0.01	-1.55477	13.5384	-0.068501
5	0.0112	-1.43953	15.6106	-0.0846238
6	0.0115	-1.34075	17.4082	-0.100042
7	0.0136	-1.24809	18.9659	-0.117016
8	0.0144	-1.17	20.3348	-0.133864
9	0.015	-1.09847	21.5415	-0.150341
10	0.015	-1.03215	22.6068	-0.165824
11	0.015	-0.970094	23.5479	-0.180375
12	0.015	-0.911562	24.3788	-0.194049
13	0.015	-0.855996	25.1116	-0.206889
14	0.015	-0.7995	25.7508	-0.218881
15	0.015	-0.748762	26.3114	-0.230113
16	0.015	-0.699883	26.8013	-0.240611
17	0.015	-0.652622	27.2272	-0.2504
18	0.015	-0.606775	27.5954	-0.259502
19	0.015	-0.56217	27.9114	-0.267934
20	0.015	-0.515791	28.1774	-0.275671
21	0.015	-0.473299	28.4014	-0.282771
22	0.015	-0.431644	28.5878	-0.289245
23	0.015	-0.390726	28.7404	-0.295106
24	0.015	-0.350451	28.8632	-0.300363
25	0.015	-0.310738	28.9598	-0.305024
26	0.015	-0.271509	29.0335	-0.309097
27	0.015	-0.230118	29.0865	-0.312548
28	0.015	-0.191671	29.1232	-0.315423
29	0.015	-0.153505	29.1468	-0.317726
30	0.015	-0.115562	29.1601	-0.319459
31	0.015	-0.0777834	29.1662	-0.320626
32	0.015	-0.0401167	29.1678	-0.321228
33	0.015	0	29.1678	-0.321228
34	0.015	0.0401167	29.1694	-0.320626
35	0.015	0.0777834	29.1754	-0.319459
36	0.015	0.115562	29.1888	-0.317726
37	0.015	0.153505	29.2124	-0.315423
38	0.015	0.191671	29.2491	-0.312548
39	0.015	0.230118	29.3021	-0.309097
40	0.015	0.271509	29.3758	-0.305024
41	0.015	0.310738	29.4723	-0.300363
42	0.015	0.350451	29.5951	-0.295106
43	0.015	0.390726	29.7478	-0.289245
44	0.015	0.431644	29.9341	-0.282771
45	0.015	0.473299	30.1581	-0.275671
46	0.015	0.515791	30.4242	-0.267934
47	0.015	0.56217	30.7402	-0.259502

48	0.015	0.606775	31.1084	-0.2504
49	0.0154	0.652622	31.5343	-0.24035
50	0.0173	0.699883	32.0241	-0.228242
51	0.0185	0.748762	32.5848	-0.21439
52	0.0302	0.7995	33.224	-0.190245
53	0.0461	0.855996	33.9567	-0.150783
54	0.124	0.911562	34.7877	-0.0377497
55	0.124	0.970094	35.7287	0.082542
56	0.127	1.03215	36.7941	0.213626
57	0.128	1.09847	38.0007	0.35423
58	0.159	1.17	39.3696	0.54026
59	0.16	1.24809	40.9273	0.739954
60	0.162	1.34075	42.725	0.957156
61	0.164	1.43953	44.7972	1.19324
62	0.168	1.55477	47.2145	1.45444
63	0.178	1.6954	50.0889	1.75622
64	0.182	1.88079	53.6263	2.09853
65	0.187	2.17009	58.3356	2.50433

Data Set Standard Deviation = 0.0557325
Numerator = 6.27168
Denominator = 11.5966
W Statistic = 0.540821 = 6.27168 / 11.5966

5% Critical value of 0.965 exceeds 0.540821
Evidence of non-normality at 95% level of significance

1% Critical value of 0.948 exceeds 0.540821
Evidence of non-normality at 99% level of significance

Levene's Test for Equal of Variance

Parameter: Lithium

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Overall Mean = 0.00814615
Overall Std Dev = 0.0182019
Overall Total = 0.5295
SS Groups = 0.00891705
SS Total = 0.0212038

ANOVA Table

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Squares	F
Between Groups	0.00891705	4	0.00222926	10.8861
Error (within groups)	0.0122868	60	0.00020478	
Totals	0.0212038	64		

95% F-Statistic = 2.52521

10.8861 exceeds 2.52521; assumption of equal variance should be rejected

Group: MW#93-1	Sample	Residual
	5/24/2018	0.00461538
	6/19/2018	0.000384615
	7/19/2018	0.000384615
	8/22/2018	0.000384615
	9/19/2018	0.000384615
	10/18/2018	0.000384615
	11/20/2018	0.000384615
	12/20/2018	0.000384615
	11/21/2019	0.000384615
	6/25/2020	0.000384615
	11/17/2020	0.000384615
	5/26/2021	0.000384615
	11/17/2021	0.000384615

Group: MW#03-1	Date	Residual
	5/24/2018	0.00700769
	6/19/2018	0.00200769
	7/19/2018	0.00200769
	8/22/2018	0.0290923
	10/18/2018	0.00200769
	11/20/2018	0.00200769
	12/20/2018	0.00200769
	3/26/2019	0.00200769
	11/21/2019	0.00200769
	6/25/2020	0.00200769
	11/17/2020	0.00200769
	5/26/2021	0.00200769
	11/16/2021	0.00200769

Group: MW#03-2	Date	Residual

5/24/2018	0.00295923
6/19/2018	0.000659231
7/19/2018	0.000659231
8/22/2018	0.000659231
9/19/2018	0.000659231
10/18/2018	0.000659231
11/20/2018	0.000659231
12/20/2018	0.000659231
11/21/2019	0.00105923
6/25/2020	0.00621077
11/17/2020	0.000659231
5/26/2021	0.00314077
11/17/2021	5.92308e-005

Group: MW#93-2

Date	Residual
5/24/2018	0.0145415
6/19/2018	0.000658462
7/19/2018	0.000658462
8/22/2018	0.000658462
9/19/2018	0.000658462
10/18/2018	0.000658462
11/20/2018	0.00284154
12/20/2018	0.000658462
11/21/2019	0.000658462
6/25/2020	0.00589846
11/16/2020	0.000658462
5/26/2021	0.00205846
11/17/2021	0.00415846

Group: MW#93-3

Date	Residual
5/24/2018	0.0335385
6/19/2018	0.0175385
7/19/2018	0.129462
8/22/2018	0.0145385
9/19/2018	0.0155385
10/18/2018	0.0195385
11/20/2018	0.0425385
12/20/2018	0.0235385
11/21/2019	0.0375385
6/25/2020	0.0204615
11/16/2020	0.0164615
5/26/2021	0.0174615
11/17/2021	0.0204615

Concentrations (ppb)

Parameter: Mercury

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Measurements: 66
Total Non-Detect: 39
Percent Non-Detects: 59.0909%
Total Background Measurements: 13
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
MW#93-1	13	13 (100%)	5/24/2018	ND<5e-005	ND<5e-005
			6/19/2018	ND<5e-005	ND<5e-005
			7/19/2018	ND<5e-005	ND<5e-005
			8/22/2018	ND<5e-005	ND<5e-005
			9/19/2018	ND<5e-005	ND<5e-005
			10/18/2018	ND<5e-005	ND<5e-005
			11/20/2018	ND<5e-005	ND<5e-005
			12/20/2018	ND<5e-005	ND<5e-005
			11/21/2019	ND<5e-005	ND<5e-005
			6/25/2020	ND<0.0002	ND<0.0002
			11/17/2020	ND<0.0002	ND<0.0002
			5/26/2021	ND<0.0002	ND<0.0002
			11/17/2021	ND<0.0002	ND<0.0002

There are 4 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
MW#03-1	13	12 (92.3077%)	5/24/2018	ND<5e-005	ND<5e-005
			6/19/2018	ND<5e-005	ND<5e-005
			7/19/2018	ND<5e-005	ND<5e-005
			8/22/2018	0.000184	0.000184
			10/18/2018	ND<5e-005	ND<5e-005
			11/20/2018	ND<5e-005	ND<5e-005
			12/20/2018	ND<5e-005	ND<5e-005
			3/26/2019	ND<5e-005	ND<5e-005
			11/21/2019	ND<5e-005	ND<5e-005
			6/25/2020	ND<0.0002	ND<0.0002
			11/17/2020	ND<0.0002	ND<0.0002
			5/26/2021	ND<0.0002	ND<0.0002
			11/16/2021	ND<0.0002	ND<0.0002
MW#03-2	14	1 (7.14286%)	5/24/2018	ND<5e-005	ND<5e-005
			6/19/2018	0.000224	0.000224
			7/19/2018	0.000239	0.000239
			8/22/2018	0.000255	0.000255
			9/19/2018	0.000636	0.000636
			10/18/2018	0.00101	0.00101
			11/20/2018	0.000803	0.000803
			12/20/2018	0.00107	0.00107
			11/21/2019	0.00694	0.00694
			2/14/2020	0.00171	0.00171
			6/25/2020	0.000234	0.000234
			11/17/2020	0.00086	0.00086
			5/26/2021	0.00239	0.00239

			11/17/2021	0.00215	0.00215
MW#93-2	13	12 (92.3077%)	5/24/2018	ND<5e-005	ND<5e-005
			6/19/2018	ND<5e-005	ND<5e-005
			7/19/2018	ND<5e-005	ND<5e-005
			8/22/2018	ND<5e-005	ND<5e-005
			9/19/2018	ND<5e-005	ND<5e-005
			10/18/2018	0.000572	0.000572
			11/20/2018	ND<5e-005	ND<5e-005
			12/20/2018	ND<5e-005	ND<5e-005
			11/21/2019	ND<5e-005	ND<5e-005
			6/25/2020	ND<0.0002	ND<0.0002
			11/16/2020	ND<0.0002	ND<0.0002
			5/26/2021	ND<0.0002	ND<0.0002
			11/17/2021	ND<0.0002	ND<0.0002
MW#93-3	13	1 (7.69231%)	5/24/2018	0.000787	0.000787
			6/19/2018	0.000367	0.000367
			7/19/2018	0.00033	0.00033
			8/22/2018	0.000514	0.000514
			9/19/2018	0.000428	0.000428
			10/18/2018	0.000579	0.000579
			11/20/2018	0.000577	0.000577
			12/20/2018	0.000245	0.000245
			11/21/2019	0.000861	0.000861
			6/25/2020	ND<0.0002	ND<0.0002
			11/16/2020	0.00031	0.00031
			5/26/2021	0.000348	0.000348
			11/17/2021	0.000572	0.000572

There are 0 unused locations

Loc.	Meas.	ND	Date	Conc.	Original

Non-Parametric Prediction Interval

Inter-Well Comparison

Parameter: Mercury

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Percent Non-Detects = 59.0909%
Number of comparisons = 4
Future Samples (k) = 4
Recent Dates = 1
Background Measurements (n) = 13
Maximum Background Value = 0.0002
Confidence Level = 76.5%
False Positive Rate = 23.5%

Location	Date	Count	Mean	Significant
MW#03-1	11/16/2021	1	0.0002	FALSE
MW#03-2	**11/17/2021**	**1**	**0.00215**	**TRUE**
MW#93-2	11/17/2021	1	0.0002	FALSE
MW#93-3	**11/17/2021**	**1**	**0.000572**	**TRUE**

Non-Parametric Prediction Interval

Intra-Well Comparison for MW#03-2

Parameter: Mercury

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Percent Non-Detects = 8.33333%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 12
Maximum Baseline Concentration = 0.00694
Confidence Level = 92.3%
False Positive Rate = 7.7%

Baseline Measurements	Date	Value
	5/24/2018	ND<5e-005
	6/19/2018	0.000224
	7/19/2018	0.000239
	8/22/2018	0.000255
	9/19/2018	0.000636
	10/18/2018	0.00101
	11/20/2018	0.000803
	12/20/2018	0.00107
	11/21/2019	0.00694
	2/14/2020	0.00171
	6/25/2020	0.000234
	11/17/2020	0.00086

Date	Count	Mean	Significant
11/17/2021	1	0.00215	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for MW#93-3

Parameter: Mercury

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Percent Non-Detects = 8.33333%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 12
Maximum Baseline Concentration = 0.000861
Confidence Level = 92.3%
False Positive Rate = 7.7%

Baseline Measurements	Date	Value
	5/24/2018	0.000787
	6/19/2018	0.000367
	7/19/2018	0.00033
	8/22/2018	0.000514
	9/19/2018	0.000428
	10/18/2018	0.000579
	11/20/2018	0.000577
	12/20/2018	0.000245
	11/21/2019	0.000861
	6/25/2020	ND<0.0002
	11/16/2020	0.00031
	5/26/2021	0.000348

Date	Count	Mean	Significant
11/17/2021	1	0.000572	FALSE

Shapiro-Francia Test of Normality

Parameter: Mercury

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Number of Measurements = 66

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	5e-005	-2.19728	4.82806	-0.000109864
2	5e-005	-1.8957	8.42172	-0.000204649
3	5e-005	-1.70604	11.3323	-0.000289951
4	5e-005	-1.56322	13.776	-0.000368112
5	5e-005	-1.44663	15.8687	-0.000440444
6	5e-005	-1.34694	17.683	-0.000507791
7	5e-005	-1.25908	19.2683	-0.000570745
8	5e-005	-1.18	20.6607	-0.000629745
9	5e-005	-1.10768	21.8876	-0.000685129
10	5e-005	-1.04073	22.9707	-0.000737166
11	5e-005	-0.97815	23.9275	-0.000786073
12	5e-005	-0.919183	24.7724	-0.000832032
13	5e-005	-0.863249	25.5176	-0.000875195
14	5e-005	-0.813379	26.1792	-0.000915864
15	5e-005	-0.7621	26.76	-0.000953969
16	5e-005	-0.712751	27.268	-0.000989606
17	5e-005	-0.665079	27.7103	-0.00102286
18	5e-005	-0.618872	28.0933	-0.0010538
19	5e-005	-0.573953	28.4228	-0.0010825
20	5e-005	-0.530162	28.7038	-0.00110901
21	5e-005	-0.487364	28.9414	-0.00113338
22	5e-005	-0.445443	29.1398	-0.00115565
23	5e-005	-0.40429	29.3032	-0.00117586
24	5e-005	-0.363809	29.4356	-0.00119406
25	5e-005	-0.323919	29.5405	-0.00121025
26	5e-005	-0.284535	29.6215	-0.00122448
27	0.000184	-0.248174	29.6831	-0.00127014
28	0.0002	-0.209575	29.727	-0.00131206
29	0.0002	-0.171285	29.7563	-0.00134631
30	0.0002	-0.133244	29.7741	-0.00137296
31	0.0002	-0.0953969	29.7832	-0.00139204
32	0.0002	-0.0576847	29.7865	-0.00140358
33	0.0002	-0.0200544	29.7869	-0.00140759
34	0.0002	0.0200544	29.7873	-0.00140358
35	0.0002	0.0576847	29.7906	-0.00139204
36	0.0002	0.0953969	29.7997	-0.00137296
37	0.0002	0.133244	29.8175	-0.00134631
38	0.0002	0.171285	29.8468	-0.00131206
39	0.0002	0.209575	29.8907	-0.00127014
40	0.0002	0.248174	29.9523	-0.00122051
41	0.000224	0.284535	30.0333	-0.00115677
42	0.000234	0.323919	30.1382	-0.00108097
43	0.000239	0.363809	30.2706	-0.000994024
44	0.000245	0.40429	30.434	-0.000894973
45	0.000255	0.445443	30.6324	-0.000781385
46	0.00031	0.487364	30.87	-0.000630302
47	0.00033	0.530162	31.151	-0.000455348

48	0.000348	0.573953	31.4805	-0.000255613
49	0.000367	0.618872	31.8635	-2.84867e-005
50	0.000428	0.665079	32.3058	0.000256167
51	0.000514	0.712751	32.8138	0.000622521
52	0.000572	0.7621	33.3946	0.00105844
53	0.000572	0.813379	34.0562	0.0015237
54	0.000577	0.863249	34.8014	0.00202179
55	0.000579	0.919183	35.6463	0.002554
56	0.000636	0.97815	36.6031	0.0031761
57	0.000787	1.04073	37.6862	0.00399516
58	0.000803	1.10768	38.9131	0.00488462
59	0.00086	1.18	40.3056	0.00589943
60	0.000861	1.25908	41.8908	0.0069835
61	0.00101	1.34694	43.7051	0.0083439
62	0.00107	1.44663	45.7978	0.0098918
63	0.00171	1.56322	48.2415	0.0125649
64	0.00215	1.70604	51.1521	0.0162329
65	0.00239	1.8957	54.7457	0.0207636
66	0.00694	2.19728	59.5738	0.0360128

Data Set Standard Deviation = 0.000936832
Numerator = 0.00129692
Denominator = 0.00339854
W Statistic = 0.381611 = 0.00129692 / 0.00339854

5% Critical value of 0.966 exceeds 0.381611
Evidence of non-normality at 95% level of significance

1% Critical value of 0.95 exceeds 0.381611
Evidence of non-normality at 99% level of significance

Levene's Test for Equal of Variance

Parameter: Mercury

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Overall Mean = 0.00031842
Overall Std Dev = 0.000735465
Overall Total = 0.0210157
SS Groups = 1.16799e-005
SS Total = 3.5159e-005

ANOVA Table

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Squares	F
Between Groups	1.16799e-005	4	2.91997e-006	7.58622
Error (within groups)	2.34792e-005	61	3.84904e-007	
Totals	3.5159e-005	65		

95% F-Statistic = 2.44724

7.58622 exceeds 2.44724; assumption of equal variance should be rejected

Group: MW#93-1	Sample	Residual
	5/24/2018	4.61538e-005
	6/19/2018	4.61538e-005
	7/19/2018	4.61538e-005
	8/22/2018	4.61538e-005
	9/19/2018	4.61538e-005
	10/18/2018	4.61538e-005
	11/20/2018	4.61538e-005
	12/20/2018	4.61538e-005
	11/21/2019	4.61538e-005
	6/25/2020	0.000103846
	11/17/2020	0.000103846
	5/26/2021	0.000103846
	11/17/2021	0.000103846

Group: MW#03-1	Date	Residual
	5/24/2018	5.64615e-005
	6/19/2018	5.64615e-005
	7/19/2018	5.64615e-005
	8/22/2018	7.75385e-005
	10/18/2018	5.64615e-005
	11/20/2018	5.64615e-005
	12/20/2018	5.64615e-005
	3/26/2019	5.64615e-005
	11/21/2019	5.64615e-005
	6/25/2020	9.35385e-005
	11/17/2020	9.35385e-005
	5/26/2021	9.35385e-005
	11/16/2021	9.35385e-005

Group: MW#03-2	Date	Residual

5/24/2018	0.0012765
6/19/2018	0.0011025
7/19/2018	0.0010875
8/22/2018	0.0010715
9/19/2018	0.0006905
10/18/2018	0.0003165
11/20/2018	0.0005235
12/20/2018	0.0002565
11/21/2019	0.0056135
2/14/2020	0.0003835
6/25/2020	0.0010925
11/17/2020	0.0004665
5/26/2021	0.0010635
11/17/2021	0.0008235

Group: MW#93-2

Date	Residual
5/24/2018	8.63077e-005
6/19/2018	8.63077e-005
7/19/2018	8.63077e-005
8/22/2018	8.63077e-005
9/19/2018	8.63077e-005
10/18/2018	0.000435692
11/20/2018	8.63077e-005
12/20/2018	8.63077e-005
11/21/2019	8.63077e-005
6/25/2020	6.36923e-005
11/16/2020	6.36923e-005
5/26/2021	6.36923e-005
11/17/2021	6.36923e-005

Group: MW#93-3

Date	Residual
5/24/2018	0.000316385
6/19/2018	0.000103615
7/19/2018	0.000140615
8/22/2018	4.33846e-005
9/19/2018	4.26154e-005
10/18/2018	0.000108385
11/20/2018	0.000106385
12/20/2018	0.000225615
11/21/2019	0.000390385
6/25/2020	0.000270615
11/16/2020	0.000160615
5/26/2021	0.000122615
11/17/2021	0.000101385

Concentrations (ppb)

Parameter: Molybdenum

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Measurements: 65
Total Non-Detect: 47
Percent Non-Detects: 72.3077%
Total Background Measurements: 13
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
MW#93-1	13	11 (84.6154%)	5/24/2018	ND<0.01	ND<0.01
			6/19/2018	ND<0.01	ND<0.01
			7/19/2018	ND<0.01	ND<0.01
			8/22/2018	ND<0.01	ND<0.01
			9/19/2018	ND<0.01	ND<0.01
			10/18/2018	ND<0.01	ND<0.01
			11/20/2018	ND<0.01	ND<0.01
			12/20/2018	ND<0.01	ND<0.01
			11/21/2019	ND<0.01	ND<0.01
			6/25/2020	0.00105	0.00105
			11/17/2020	0.00113	0.00113
			5/26/2021	ND<0.005	ND<0.005
			11/17/2021	ND<0.005	ND<0.005

There are 4 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
MW#93-2	13	1 (7.69231%)	5/24/2018	1.4	1.4
			6/19/2018	1.18	1.18
			7/19/2018	ND<0.01	ND<0.01
			8/22/2018	0.949	0.949
			9/19/2018	1.34	1.34
			10/18/2018	1.08	1.08
			11/20/2018	1.29	1.29
			12/20/2018	1.34	1.34
			11/21/2019	0.252	0.252
			6/25/2020	0.213	0.213
			11/16/2020	0.32	0.32
			5/26/2021	0.906	0.906
			11/17/2021	1.66	1.66
MW#03-1	13	9 (69.2308%)	5/24/2018	ND<0.01	ND<0.01
			6/19/2018	ND<0.01	ND<0.01
			7/19/2018	ND<0.01	ND<0.01
			8/22/2018	0.0167	0.0167
			10/18/2018	ND<0.01	ND<0.01
			11/20/2018	ND<0.01	ND<0.01
			12/20/2018	ND<0.01	ND<0.01
			3/26/2019	ND<0.01	ND<0.01
			11/21/2019	ND<0.01	ND<0.01
			6/25/2020	0.000992	0.000992
			11/17/2020	0.00274	0.00274
			5/26/2021	ND<0.005	ND<0.005
			11/16/2021	0.00111	0.00111

MW#03-2	13	13 (100%)	5/24/2018	ND<0.01	ND<0.01
			6/19/2018	ND<0.01	ND<0.01
			7/19/2018	ND<0.01	ND<0.01
			8/22/2018	ND<0.01	ND<0.01
			9/19/2018	ND<0.01	ND<0.01
			10/18/2018	ND<0.01	ND<0.01
			11/20/2018	ND<0.01	ND<0.01
			12/20/2018	ND<0.01	ND<0.01
			11/21/2019	ND<0.01	ND<0.01
			6/25/2020	ND<0.005	ND<0.005
			11/17/2020	ND<0.005	ND<0.005
			5/26/2021	ND<0.005	ND<0.005
			11/17/2021	ND<0.005	ND<0.005
MW#93-3	13	13 (100%)	5/24/2018	ND<0.01	ND<0.01
			6/19/2018	ND<0.01	ND<0.01
			7/19/2018	ND<0.01	ND<0.01
			8/22/2018	ND<0.01	ND<0.01
			9/19/2018	ND<0.01	ND<0.01
			10/18/2018	ND<0.01	ND<0.01
			11/20/2018	ND<0.01	ND<0.01
			12/20/2018	ND<0.01	ND<0.01
			11/21/2019	ND<0.01	ND<0.01
			6/25/2020	ND<0.005	ND<0.005
			11/16/2020	ND<0.005	ND<0.005
			5/26/2021	ND<0.005	ND<0.005
			11/17/2021	ND<0.005	ND<0.005

There are 0 unused locations

Loc.	Meas.	ND	Date	Conc.	Original

Non-Parametric Prediction Interval

Inter-Well Comparison

Parameter: Molybdenum

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Percent Non-Detects = 72.3077%
Number of comparisons = 4
Future Samples (k) = 4
Recent Dates = 1
Background Measurements (n) = 13
Maximum Background Value = 0.01
Confidence Level = 76.5%
False Positive Rate = 23.5%

Location	Date	Count	Mean	Significant
MW#93-2	**11/17/2021**	**1**	**1.66**	**TRUE**
MW#03-1	11/16/2021	1	0.00111	FALSE
MW#03-2	11/17/2021	1	0.005	FALSE
MW#93-3	11/17/2021	1	0.005	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for MW#93-2

Parameter: Molybdenum

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Percent Non-Detects = 8.33333%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 12
Maximum Baseline Concentration = 1.4
Confidence Level = 92.3%
False Positive Rate = 7.7%

Baseline Measurements	Date	Value
	5/24/2018	1.4
	6/19/2018	1.18
	7/19/2018	ND<0.01
	8/22/2018	0.949
	9/19/2018	1.34
	10/18/2018	1.08
	11/20/2018	1.29
	12/20/2018	1.34
	11/21/2019	0.252
	6/25/2020	0.213
	11/16/2020	0.32
	5/26/2021	0.906

Date	Count	Mean	Significant
11/17/2021	1	1.66	TRUE

Shapiro-Francia Test of Normality

Parameter: Molybdenum

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Number of Measurements = 65

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0.000992	-2.17009	4.70929	-0.00215273
2	0.00105	-1.88079	8.24666	-0.00412756
3	0.00111	-1.6954	11.121	-0.00600945
4	0.00113	-1.55477	13.5384	-0.00776634
5	0.00274	-1.43953	15.6106	-0.0117107
6	0.005	-1.34075	17.4082	-0.0184144
7	0.005	-1.24809	18.9659	-0.0246549
8	0.005	-1.17	20.3348	-0.0305049
9	0.005	-1.09847	21.5415	-0.0359972
10	0.005	-1.03215	22.6068	-0.041158
11	0.005	-0.970094	23.5479	-0.0460085
12	0.005	-0.911562	24.3788	-0.0505663
13	0.005	-0.855996	25.1116	-0.0548462
14	0.005	-0.7995	25.7508	-0.0588437
15	0.005	-0.748762	26.3114	-0.0625876
16	0.005	-0.699883	26.8013	-0.066087
17	0.01	-0.652622	27.2272	-0.0726132
18	0.01	-0.606775	27.5954	-0.0786809
19	0.01	-0.56217	27.9114	-0.0843026
20	0.01	-0.515791	28.1774	-0.0894605
21	0.01	-0.473299	28.4014	-0.0941935
22	0.01	-0.431644	28.5878	-0.09851
23	0.01	-0.390726	28.7404	-0.102417
24	0.01	-0.350451	28.8632	-0.105922
25	0.01	-0.310738	28.9598	-0.109029
26	0.01	-0.271509	29.0335	-0.111744
27	0.01	-0.230118	29.0865	-0.114045
28	0.01	-0.191671	29.1232	-0.115962
29	0.01	-0.153505	29.1468	-0.117497
30	0.01	-0.115562	29.1601	-0.118653
31	0.01	-0.0777834	29.1662	-0.119431
32	0.01	-0.0401167	29.1678	-0.119832
33	0.01	0	29.1678	-0.119832
34	0.01	0.0401167	29.1694	-0.119431
35	0.01	0.0777834	29.1754	-0.118653
36	0.01	0.115562	29.1888	-0.117497
37	0.01	0.153505	29.2124	-0.115962
38	0.01	0.191671	29.2491	-0.114045
39	0.01	0.230118	29.3021	-0.111744
40	0.01	0.271509	29.3758	-0.109029
41	0.01	0.310738	29.4723	-0.105922
42	0.01	0.350451	29.5951	-0.102417
43	0.01	0.390726	29.7478	-0.09851
44	0.01	0.431644	29.9341	-0.0941935
45	0.01	0.473299	30.1581	-0.0894605
46	0.01	0.515791	30.4242	-0.0843026
47	0.01	0.56217	30.7402	-0.0786809

48	0.01	0.606775	31.1084	-0.0726132
49	0.01	0.652622	31.5343	-0.066087
50	0.01	0.699883	32.0241	-0.0590881
51	0.01	0.748762	32.5848	-0.0516005
52	0.01	0.7995	33.224	-0.0436055
53	0.0167	0.855996	33.9567	-0.0293104
54	0.213	0.911562	34.7877	0.164852
55	0.252	0.970094	35.7287	0.409316
56	0.32	1.03215	36.7941	0.739605
57	0.906	1.09847	38.0007	1.73482
58	0.949	1.17	39.3696	2.84515
59	1.08	1.24809	40.9273	4.19308
60	1.18	1.34075	42.725	5.77517
61	1.29	1.43953	44.7972	7.63217
62	1.34	1.55477	47.2145	9.71556
63	1.34	1.6954	50.0889	11.9874
64	1.4	1.88079	53.6263	14.6205
65	1.66	2.17009	58.3356	18.2229

Data Set Standard Deviation = 0.435046
Numerator = 332.072
Denominator = 706.616
W Statistic = 0.469947 = 332.072 / 706.616

5% Critical value of 0.965 exceeds 0.469947
Evidence of non-normality at 95% level of significance

1% Critical value of 0.948 exceeds 0.469947
Evidence of non-normality at 99% level of significance

Levene's Test for Equal of Variance

Parameter: Molybdenum

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Overall Mean = 0.0911139
Overall Std Dev = 0.214949
Overall Total = 5.9224
SS Groups = 2.03298
SS Total = 2.95699

ANOVA Table

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Squares	F
Between Groups	2.03298	4	0.508246	33.0026
Error (within groups)	0.92401	60	0.0154002	
Totals	2.95699	64		

95% F-Statistic = 2.52521

33.0026 exceeds 2.52521; assumption of equal variance should be rejected

Group: MW#93-1	Sample	Residual
	5/24/2018	0.00214
	6/19/2018	0.00214
	7/19/2018	0.00214
	8/22/2018	0.00214
	9/19/2018	0.00214
	10/18/2018	0.00214
	11/20/2018	0.00214
	12/20/2018	0.00214
	11/21/2019	0.00214
	6/25/2020	0.00681
	11/17/2020	0.00673
	5/26/2021	0.00286
	11/17/2021	0.00286

Group: MW#93-2	Date	Residual
	5/24/2018	0.481538
	6/19/2018	0.261538
	7/19/2018	0.908462
	8/22/2018	0.0305385
	9/19/2018	0.421538
	10/18/2018	0.161538
	11/20/2018	0.371538
	12/20/2018	0.421538
	11/21/2019	0.666462
	6/25/2020	0.705462
	11/16/2020	0.598462
	5/26/2021	0.0124615
	11/17/2021	0.741538

Group: MW#03-1	Date	Residual

5/24/2018	0.00180446
6/19/2018	0.00180446
7/19/2018	0.00180446
8/22/2018	0.00850446
10/18/2018	0.00180446
11/20/2018	0.00180446
12/20/2018	0.00180446
3/26/2019	0.00180446
11/21/2019	0.00180446
6/25/2020	0.00720354
11/17/2020	0.00545554
5/26/2021	0.00319554
11/16/2021	0.00708554

Group: MW#03-2

Date	Residual
5/24/2018	0.00153846
6/19/2018	0.00153846
7/19/2018	0.00153846
8/22/2018	0.00153846
9/19/2018	0.00153846
10/18/2018	0.00153846
11/20/2018	0.00153846
12/20/2018	0.00153846
11/21/2019	0.00153846
6/25/2020	0.00346154
11/17/2020	0.00346154
5/26/2021	0.00346154
11/17/2021	0.00346154

Group: MW#93-3

Date	Residual
5/24/2018	0.00153846
6/19/2018	0.00153846
7/19/2018	0.00153846
8/22/2018	0.00153846
9/19/2018	0.00153846
10/18/2018	0.00153846
11/20/2018	0.00153846
12/20/2018	0.00153846
11/21/2019	0.00153846
6/25/2020	0.00346154
11/16/2020	0.00346154
5/26/2021	0.00346154
11/17/2021	0.00346154

Concentrations (ppb)

Parameter: ph

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Measurements: 307
Total Non-Detect: 0
Percent Non-Detects: 0%
Total Background Measurements: 76
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
MW#93-1	76	0 (0%)	12/15/1994	6.67	6.67
			3/14/1995	6.72	6.72
			6/21/1995	6.58	6.58
			12/14/1995	6.72	6.72
			3/6/1996	6.72	6.72
			4/25/1996	6.79	6.79
			10/2/1996	6.61	6.61
			12/10/1996	6.51	6.51
			3/11/1997	6.77	6.77
			4/15/1997	6.66	6.66
			8/14/1997	6.66	6.66
			12/4/1997	6.78	6.78
			3/31/1998	6.87	6.87
			6/23/1998	6.5	6.5
			8/11/1998	7.05	7.05
			12/8/1998	6.62	6.62
			3/9/1999	6.6	6.6
			6/8/1999	6.93	6.93
			8/19/1999	6.54	6.54
			12/14/1999	6.55	6.55
			3/7/2000	6.59	6.59
			6/23/2000	6.52	6.52
			12/12/2000	6.56	6.56
			3/27/2001	6.6	6.6
			6/28/2001	6.59	6.59
			9/10/2001	6.76	6.76
			12/18/2001	6.76	6.76
			3/19/2002	6.93	6.93
			6/26/2002	6.85	6.85
			9/18/2002	6.62	6.62
			12/11/2002	6.58	6.58
			3/13/2003	6.66	6.66
			6/25/2003	6.94	6.94
			9/26/2003	6.42	6.42
			12/10/2003	6.64	6.64
			3/9/2004	6.68	6.68
			6/24/2004	6.53	6.53
			9/15/2004	6.43	6.43
			12/15/2004	6.61	6.61
			3/16/2005	6.57	6.57
			6/15/2005	6.53	6.53
			9/21/2005	6.65	6.65
			12/21/2005	6.61	6.61
			3/15/2006	6.64	6.64
			6/21/2006	6.85	6.85

			12/20/2006	6.67	6.67
			6/12/2007	6.58	6.58
			12/17/2007	6.33	6.33
			6/11/2008	6.7	6.7
			12/3/2008	6.5	6.5
			6/17/2009	6.8	6.8
			12/9/2009	6.6	6.6
			6/17/2010	6.5	6.5
			12/22/2010	6.55	6.55
			6/29/2011	6.5	6.5
			12/7/2011	6.41	6.41
			6/6/2012	6.23	6.23
			12/12/2012	6.61	6.61
			6/19/2013	6.58	6.58
			12/11/2013	6.57	6.57
			6/11/2014	6.1	6.1
			12/3/2014	6.69	6.69
			6/17/2015	6.38	6.38
			12/1/2015	6.45	6.45
			6/22/2016	6.59	6.59
			12/20/2016	6.28	6.28
			6/6/2017	6.69	6.69
			11/7/2017	6.21	6.21
			2/27/2018	6.47	6.47
			9/19/2018	6.62	6.62
			5/7/2019	7	7
			11/21/2019	6.46	6.46
			6/26/2020	6.88	6.88
			11/17/2020	6.45	6.45
			5/26/2021	6.59	6.59
			11/17/2021	7.17	7.17

There are 4 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
MW#93-2	79	0 (0%)	12/15/1994	8.54	8.54
			3/14/1995	8.82	8.82
			6/21/1995	8.68	8.68
			12/14/1995	8.16	8.16
			3/6/1996	9.37	9.37
			4/25/1996	9.14	9.14
			10/2/1996	8.94	8.94
			12/10/1996	9.27	9.27
			3/11/1997	8.95	8.95
			4/15/1997	9.25	9.25
			8/14/1997	8.67	8.67
			12/4/1997	8.77	8.77
			3/31/1998	9.32	9.32
			6/23/1998	8.87	8.87
			8/11/1998	9	9
			12/8/1998	8.9	8.9
			3/9/1999	9.39	9.39
			6/8/1999	9.25	9.25
			8/19/1999	9.15	9.15
			12/14/1999	8.98	8.98
			3/7/2000	9.2	9.2

6/23/2000	9.18	9.18
12/12/2000	9.18	9.18
3/27/2001	9.29	9.29
6/28/2001	9.22	9.22
9/10/2001	9.1	9.1
12/18/2001	9.4	9.4
3/19/2002	9.54	9.54
6/26/2002	9.44	9.44
9/18/2002	9.24	9.24
12/11/2002	9.16	9.16
3/13/2003	9.28	9.28
6/25/2003	9.27	9.27
9/26/2003	9.32	9.32
12/10/2003	9.25	9.25
3/9/2004	9.37	9.37
6/24/2004	9.24	9.24
9/15/2004	9.32	9.32
12/15/2004	9.26	9.26
3/16/2005	9.23	9.23
6/15/2005	9.1	9.1
9/21/2005	9.25	9.25
12/21/2005	9.31	9.31
3/15/2006	9.47	9.47
6/21/2006	9.4	9.4
12/20/2006	9.18	9.18
2/21/2007	9.2	9.2
6/12/2007	9.1	9.1
12/17/2007	9.3	9.3
6/11/2008	9.4	9.4
12/3/2008	9.7	9.7
12/15/2008	9.6	9.6
6/17/2009	9.8	9.8
12/9/2009	9.8	9.8
6/17/2010	9.6	9.6
12/22/2010	9.5	9.5
6/29/2011	9.4	9.4
12/7/2011	9.5	9.5
6/6/2012	9.68	9.68
12/12/2012	10.02	10.02
1/9/2013	9.51	9.51
6/19/2013	9.4	9.4
12/11/2013	9.46	9.46
6/11/2014	8.55	8.55
12/3/2014	8.95	8.95
6/17/2015	9.13	9.13
12/1/2015	9.37	9.37
6/22/2016	9.28	9.28
12/20/2016	9.72	9.72
6/6/2017	9.29	9.29
11/7/2017	8.86	8.86
2/27/2018	9.04	9.04
9/19/2018	9.09	9.09
5/7/2019	9.05	9.05
11/21/2019	8.44	8.44
6/26/2020	8.59	8.59
11/16/2020	8.48	8.48
5/26/2021	8.74	8.74

			11/17/2021	8.64	8.64
MW#93-3	76	0 (0%)	12/15/1994	6.68	6.68
			3/14/1995	6.74	6.74
			6/21/1995	6.61	6.61
			12/14/1995	6.75	6.75
			3/6/1996	6.85	6.85
			4/25/1996	6.78	6.78
			10/2/1996	6.75	6.75
			12/10/1996	6.7	6.7
			3/11/1997	6.8	6.8
			4/15/1997	6.74	6.74
			8/14/1997	6.88	6.88
			12/4/1997	6.88	6.88
			3/31/1998	6.92	6.92
			6/23/1998	6.76	6.76
			8/11/1998	6.91	6.91
			12/8/1998	6.93	6.93
			3/9/1999	6.78	6.78
			6/8/1999	6.85	6.85
			8/19/1999	6.97	6.97
			12/14/1999	6.8	6.8
			3/7/2000	6.77	6.77
			6/23/2000	6.82	6.82
			12/12/2000	6.86	6.86
			3/27/2001	6.79	6.79
			6/28/2001	6.86	6.86
			9/10/2001	7.04	7.04
			12/18/2001	6.93	6.93
			3/19/2002	7	7
			6/26/2002	6.89	6.89
			9/18/2002	7.96	7.96
			12/11/2002	6.74	6.74
			3/13/2003	6.87	6.87
			6/25/2003	6.85	6.85
			9/26/2003	6.77	6.77
			12/10/2003	6.99	6.99
			3/9/2004	7.45	7.45
			6/24/2004	6.8	6.8
			9/15/2004	6.7	6.7
			12/15/2004	6.88	6.88
			3/16/2005	6.69	6.69
			6/15/2005	6.81	6.81
			9/21/2005	6.85	6.85
			12/21/2005	6.7	6.7
			3/15/2006	7.07	7.07
			6/21/2006	6.84	6.84
			12/20/2006	6.93	6.93
			6/12/2007	6.89	6.89
			12/17/2007	6.8	6.8
			6/11/2008	6.8	6.8
			12/3/2008	6.8	6.8
			6/17/2009	7.2	7.2
			12/9/2009	6.9	6.9
			6/17/2010	6.7	6.7
			12/22/2010	6.82	6.82
			6/29/2011	6.7	6.7

			12/7/2011	6.77	6.77
			6/6/2012	6.42	6.42
			12/12/2012	6.85	6.85
			6/19/2013	6.49	6.49
			12/11/2013	7.07	7.07
			6/11/2014	6.08	6.08
			12/3/2014	6.8	6.8
			6/17/2015	6.4	6.4
			12/1/2015	6.6	6.6
			6/22/2016	6.43	6.43
			12/20/2016	6.27	6.27
			6/6/2017	6.65	6.65
			11/7/2017	6.46	6.46
			2/27/2018	6.49	6.49
			9/19/2018	6.55	6.55
			5/7/2019	6.69	6.69
			11/21/2019	6.54	6.54
			6/26/2020	6.75	6.75
			11/16/2020	6.24	6.24
			5/26/2021	6.71	6.71
			11/17/2021	6.92	6.92
MW#03-1	36	0 (0%)	6/24/2004	7.27	7.27
			9/15/2004	6.78	6.78
			12/15/2004	7.32	7.32
			3/16/2005	7.3	7.3
			6/15/2005	7.28	7.28
			9/21/2005	7.88	7.88
			12/20/2006	7	7
			6/12/2007	7.29	7.29
			12/17/2007	6.8	6.8
			6/11/2008	7.4	7.4
			12/3/2008	7.4	7.4
			6/17/2009	7.6	7.6
			12/9/2009	7.5	7.5
			6/17/2010	7.1	7.1
			12/22/2010	6.89	6.89
			6/29/2011	7.3	7.3
			12/7/2011	7.05	7.05
			6/6/2012	7.33	7.33
			6/19/2013	7.15	7.15
			12/11/2013	7.19	7.19
			6/11/2014	6.62	6.62
			12/3/2014	6.73	6.73
			6/17/2015	6.66	6.66
			12/1/2015	6.34	6.34
			6/22/2016	7.2	7.2
			12/20/2016	6.75	6.75
			6/6/2017	6.64	6.64
			11/7/2017	6.44	6.44
			2/27/2018	6.81	6.81
			9/19/2018	7.19	7.19
			5/7/2019	6.33	6.33
			11/21/2019	6.23	6.23
			6/25/2020	6.77	6.77
			11/17/2020	6.92	6.92
			5/26/2021	5.58	5.58

			11/16/2021	7.62	7.62
MW#03-2	40	0 (0%)	6/24/2004	6.84	6.84
			9/15/2004	7.17	7.17
			12/15/2004	6.86	6.86
			3/16/2005	6.8	6.8
			6/15/2005	6.87	6.87
			9/21/2005	6.87	6.87
			12/21/2005	6.83	6.83
			3/15/2006	6.88	6.88
			6/21/2006	6.78	6.78
			12/20/2006	6.88	6.88
			6/12/2007	6.87	6.87
			12/17/2007	6.7	6.7
			6/11/2008	6.9	6.9
			12/3/2008	6.8	6.8
			6/17/2009	7.3	7.3
			12/9/2009	6.8	6.8
			6/17/2010	6.8	6.8
			12/22/2010	7.2	7.2
			6/29/2011	6.7	6.7
			12/7/2011	6.69	6.69
			6/6/2012	6.73	6.73
			12/12/2012	6.82	6.82
			6/19/2013	6.88	6.88
			12/11/2013	6.72	6.72
			6/11/2014	7	7
			12/3/2014	7.14	7.14
			6/17/2015	6.45	6.45
			12/1/2015	6.39	6.39
			6/22/2016	6.75	6.75
			12/20/2016	6.36	6.36
			6/6/2017	6.73	6.73
			11/7/2017	6.22	6.22
			2/27/2018	6.47	6.47
			9/19/2018	6.63	6.63
			5/7/2019	6.81	6.81
			11/21/2019	6.56	6.56
			6/25/2020	6.65	6.65
			11/17/2020	6.64	6.64
			5/26/2021	6.54	6.54
			11/17/2021	6.92	6.92

There are 0 unused locations

Loc.	Meas.	ND	Date	Conc.	Original

Non-Parametric Prediction Interval

Inter-Well Comparison

Parameter: ph

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Percent Non-Detects = 0%
Number of comparisons = 4
Future Samples (k) = 4
Recent Dates = 1
Background Measurements (n) = 76
Maximum Background Value = 7.17
Confidence Level = 95%
False Positive Rate = 5%

Location	Date	Count	Mean	Significant
MW#93-2	**11/17/2021**	**1**	**8.64**	**TRUE**
MW#93-3	11/17/2021	1	6.92	FALSE
MW#03-1	**11/16/2021**	**1**	**7.62**	**TRUE**
MW#03-2	11/17/2021	1	6.92	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for MW#03-1

Parameter: ph

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 75
Maximum Baseline Concentration = 7.88
Confidence Level = 98.7%
False Positive Rate = 1.3%

Baseline Measurements	Date	Value
	6/24/2004	7.27
	9/15/2004	6.78
	12/15/2004	7.32
	3/16/2005	7.3
	6/15/2005	7.28
	9/21/2005	7.88
	12/20/2006	7
	6/12/2007	7.29
	12/17/2007	6.8
	6/11/2008	7.4
	12/3/2008	7.4
	6/17/2009	7.6
	12/9/2009	7.5
	6/17/2010	7.1
	12/22/2010	6.89
	6/29/2011	7.3
	12/7/2011	7.05
	6/6/2012	7.33
	6/19/2013	7.15
	12/11/2013	7.19
	6/11/2014	6.62
	12/3/2014	6.73
	6/17/2015	6.66
	12/1/2015	6.34
	6/22/2016	7.2
	12/20/2016	6.75
	6/6/2017	6.64
	11/7/2017	6.44
	2/27/2018	6.81
	9/19/2018	7.19
	5/7/2019	6.33
	11/21/2019	6.23
	6/25/2020	6.77
	11/17/2020	6.92
	5/26/2021	5.58
	11/16/2021	7.62

Date	Count	Mean	Significant
11/16/2021	1	7.62	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for MW#93-2

Parameter: ph

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 75
Maximum Baseline Concentration = 10.02
Confidence Level = 98.7%
False Positive Rate = 1.3%

Baseline Measurements	Date	Value
	12/15/1994	8.54
	3/14/1995	8.82
	6/21/1995	8.68
	12/14/1995	8.16
	3/6/1996	9.37
	4/25/1996	9.14
	10/2/1996	8.94
	12/10/1996	9.27
	3/11/1997	8.95
	4/15/1997	9.25
	8/14/1997	8.67
	12/4/1997	8.77
	3/31/1998	9.32
	6/23/1998	8.87
	8/11/1998	9
	12/8/1998	8.9
	3/9/1999	9.39
	6/8/1999	9.25
	8/19/1999	9.15
	12/14/1999	8.98
	3/7/2000	9.2
	6/23/2000	9.18
	12/12/2000	9.18
	3/27/2001	9.29
	6/28/2001	9.22
	9/10/2001	9.1
	12/18/2001	9.4
	3/19/2002	9.54
	6/26/2002	9.44
	9/18/2002	9.24
	12/11/2002	9.16
	3/13/2003	9.28
	6/25/2003	9.27
	9/26/2003	9.32
	12/10/2003	9.25
	3/9/2004	9.37
	6/24/2004	9.24
	9/15/2004	9.32
	12/15/2004	9.26
	3/16/2005	9.23
	6/15/2005	9.1
	9/21/2005	9.25

12/21/2005	9.31
3/15/2006	9.47
6/21/2006	9.4
12/20/2006	9.18
2/21/2007	9.2
6/12/2007	9.1
12/17/2007	9.3
6/11/2008	9.4
12/3/2008	9.7
12/15/2008	9.6
6/17/2009	9.8
12/9/2009	9.8
6/17/2010	9.6
12/22/2010	9.5
6/29/2011	9.4
12/7/2011	9.5
6/6/2012	9.68
12/12/2012	10.02
1/9/2013	9.51
6/19/2013	9.4
12/11/2013	9.46
6/11/2014	8.55
12/3/2014	8.95
6/17/2015	9.13
12/1/2015	9.37
6/22/2016	9.28
12/20/2016	9.72
6/6/2017	9.29
11/7/2017	8.86
2/27/2018	9.04
9/19/2018	9.09
5/7/2019	9.05
11/21/2019	8.44

Date	Count	Mean	Significant
11/17/2021	1	8.64	FALSE

Shapiro-Francia Test of Normality

Parameter: ph

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Number of Measurements = 307

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	5.58	-2.74777	7.55021	-15.3325
2	6.08	-2.51213	13.861	-30.6063
3	6.1	-2.36561	19.4572	-45.0365
4	6.21	-2.25713	24.5518	-59.0533
5	6.22	-2.14441	29.1503	-72.3915
6	6.23	-2.07485	33.4553	-85.3178
7	6.23	-2.01409	37.5118	-97.8656
8	6.24	-1.95996	41.3533	-110.096
9	6.27	-1.8957	44.947	-121.982
10	6.28	-1.85218	48.3775	-133.613
11	6.33	-1.81191	51.6605	-145.083
12	6.33	-1.77438	54.809	-156.315
13	6.34	-1.72793	57.7947	-167.27
14	6.36	-1.6954	60.6691	-178.053
15	6.38	-1.66456	63.4398	-188.672
16	6.39	-1.63524	66.1138	-199.122
17	6.4	-1.59819	68.6681	-209.35
18	6.41	-1.57179	71.1386	-219.425
19	6.42	-1.54643	73.53	-229.353
20	6.42	-1.52203	75.8466	-239.125
21	6.43	-1.49085	78.0693	-248.711
22	6.43	-1.46838	80.2254	-258.153
23	6.44	-1.44663	82.3182	-267.469
24	6.45	-1.42554	84.3503	-276.664
25	6.45	-1.39838	86.3058	-285.683
26	6.45	-1.37866	88.2065	-294.576
27	6.46	-1.35946	90.0546	-303.358
28	6.46	-1.34075	91.8522	-312.019
29	6.47	-1.31652	93.5855	-320.537
30	6.47	-1.29884	95.2725	-328.94
31	6.49	-1.28155	96.9148	-337.258
32	6.49	-1.26464	98.5141	-345.465
33	6.5	-1.24264	100.058	-353.542
34	6.5	-1.22653	101.563	-361.515
35	6.5	-1.21073	103.029	-369.384
36	6.5	-1.19522	104.457	-377.153
37	6.51	-1.17499	105.838	-384.803
38	6.52	-1.16012	107.184	-392.367
39	6.53	-1.1455	108.496	-399.847
40	6.53	-1.13113	109.775	-407.233
41	6.54	-1.11232	111.012	-414.508
42	6.54	-1.09847	112.219	-421.692
43	6.54	-1.08482	113.396	-428.786
44	6.55	-1.07138	114.544	-435.804
45	6.55	-1.05375	115.654	-442.706
46	6.55	-1.04073	116.737	-449.523
47	6.56	-1.02789	117.794	-456.266

48	6.56	-1.01522	118.825	-462.925
49	6.57	-0.998575	119.822	-469.486
50	6.57	-0.986272	120.794	-475.966
51	6.58	-0.974114	121.743	-482.376
52	6.58	-0.9621	122.669	-488.706
53	6.58	-0.946291	123.564	-494.933
54	6.58	-0.93459	124.438	-501.082
55	6.59	-0.923014	125.29	-507.165
56	6.59	-0.911562	126.121	-513.172
57	6.59	-0.896473	126.924	-519.08
58	6.59	-0.885291	127.708	-524.914
59	6.6	-0.874218	128.472	-530.684
60	6.6	-0.863249	129.218	-536.381
61	6.6	-0.848786	129.938	-541.983
62	6.6	-0.838054	130.64	-547.514
63	6.61	-0.827417	131.325	-552.984
64	6.61	-0.816874	131.992	-558.383
65	6.61	-0.802956	132.637	-563.691
66	6.61	-0.792618	133.265	-568.93
67	6.61	-0.782366	133.877	-574.101
68	6.62	-0.772193	134.474	-579.213
69	6.62	-0.758753	135.049	-584.236
70	6.62	-0.748762	135.61	-589.193
71	6.62	-0.738846	136.156	-594.084
72	6.63	-0.729003	136.687	-598.918
73	6.64	-0.715986	137.2	-603.672
74	6.64	-0.706302	137.699	-608.362
75	6.64	-0.696684	138.184	-612.988
76	6.64	-0.687131	138.656	-617.55
77	6.65	-0.67449	139.111	-622.035
78	6.65	-0.665079	139.554	-626.458
79	6.65	-0.655726	139.984	-630.819
80	6.66	-0.646431	140.401	-635.124
81	6.66	-0.637192	140.808	-639.368
82	6.66	-0.624956	141.198	-643.53
83	6.66	-0.615839	141.577	-647.631
84	6.67	-0.606775	141.946	-651.679
85	6.67	-0.597761	142.303	-655.666
86	6.68	-0.585815	142.646	-659.579
87	6.68	-0.576911	142.979	-663.433
88	6.69	-0.568052	143.302	-667.233
89	6.69	-0.559237	143.614	-670.974
90	6.69	-0.547551	143.914	-674.637
91	6.69	-0.538836	144.204	-678.242
92	6.69	-0.530162	144.485	-681.789
93	6.7	-0.521527	144.757	-685.283
94	6.7	-0.510074	145.018	-688.701
95	6.7	-0.501527	145.269	-692.061
96	6.7	-0.493018	145.512	-695.364
97	6.7	-0.484544	145.747	-698.611
98	6.7	-0.473299	145.971	-701.782
99	6.7	-0.464904	146.187	-704.897
100	6.7	-0.456542	146.396	-707.955
101	6.71	-0.448213	146.597	-710.963
102	6.72	-0.437153	146.788	-713.901
103	6.72	-0.428895	146.972	-716.783
104	6.72	-0.420664	147.149	-719.61

105	6.72	-0.412463	147.319	-722.381
106	6.73	-0.401571	147.48	-725.084
107	6.73	-0.393433	147.635	-727.732
108	6.73	-0.385321	147.783	-730.325
109	6.74	-0.377233	147.925	-732.867
110	6.74	-0.36649	148.06	-735.338
111	6.74	-0.358459	148.188	-737.754
112	6.75	-0.350451	148.311	-740.119
113	6.75	-0.342466	148.428	-742.431
114	6.75	-0.331854	148.539	-744.671
115	6.75	-0.323919	148.643	-746.857
116	6.75	-0.316004	148.743	-748.99
117	6.76	-0.308108	148.838	-751.073
118	6.76	-0.297612	148.927	-753.085
119	6.76	-0.28976	149.011	-755.044
120	6.77	-0.281926	149.09	-756.952
121	6.77	-0.27411	149.165	-758.808
122	6.77	-0.263715	149.235	-760.593
123	6.77	-0.255936	149.3	-762.326
124	6.77	-0.248174	149.362	-764.006
125	6.78	-0.240426	149.42	-765.636
126	6.78	-0.230118	149.473	-767.197
127	6.78	-0.222403	149.522	-768.705
128	6.78	-0.214702	149.568	-770.16
129	6.78	-0.207012	149.611	-771.564
130	6.79	-0.196779	149.65	-772.9
131	6.79	-0.189118	149.686	-774.184
132	6.8	-0.181468	149.719	-775.418
133	6.8	-0.173829	149.749	-776.6
134	6.8	-0.163659	149.776	-777.713
135	6.8	-0.156042	149.8	-778.774
136	6.8	-0.148434	149.822	-779.783
137	6.8	-0.140835	149.842	-780.741
138	6.8	-0.130716	149.859	-781.63
139	6.8	-0.123135	149.874	-782.467
140	6.8	-0.115562	149.887	-783.253
141	6.8	-0.107995	149.899	-783.987
142	6.8	-0.0979139	149.909	-784.653
143	6.8	-0.0903606	149.917	-785.268
144	6.8	-0.0828129	149.924	-785.831
145	6.81	-0.0752698	149.929	-786.343
146	6.81	-0.0652187	149.934	-786.787
147	6.81	-0.0576847	149.937	-787.18
148	6.82	-0.0501541	149.939	-787.522
149	6.82	-0.0426257	149.941	-787.813
150	6.82	-0.0325917	149.942	-788.035
151	6.83	-0.0250691	149.943	-788.207
152	6.84	-0.0175476	149.943	-788.327
153	6.84	-0.0100272	149.943	-788.395
154	6.85	0	149.943	-788.395
155	6.85	0.0100272	149.943	-788.327
156	6.85	0.0175476	149.944	-788.206
157	6.85	0.0250691	149.944	-788.035
158	6.85	0.0325917	149.945	-787.811
159	6.85	0.0426257	149.947	-787.519
160	6.85	0.0501541	149.95	-787.176
161	6.86	0.0576847	149.953	-786.78

162	6.86	0.0652187	149.957	-786.333
163	6.86	0.0752698	149.963	-785.816
164	6.87	0.0828129	149.97	-785.247
165	6.87	0.0903606	149.978	-784.627
166	6.87	0.0979139	149.988	-783.954
167	6.87	0.107995	149.999	-783.212
168	6.87	0.115562	150.013	-782.418
169	6.88	0.123135	150.028	-781.571
170	6.88	0.130716	150.045	-780.672
171	6.88	0.140835	150.065	-779.703
172	6.88	0.148434	150.087	-778.681
173	6.88	0.156042	150.111	-777.608
174	6.88	0.163659	150.138	-776.482
175	6.88	0.173829	150.168	-775.286
176	6.89	0.181468	150.201	-774.036
177	6.89	0.189118	150.237	-772.733
178	6.89	0.196779	150.276	-771.377
179	6.9	0.207012	150.318	-769.948
180	6.9	0.214702	150.365	-768.467
181	6.91	0.222403	150.414	-766.93
182	6.92	0.230118	150.467	-765.338
183	6.92	0.240426	150.525	-763.674
184	6.92	0.248174	150.586	-761.957
185	6.92	0.255936	150.652	-760.186
186	6.93	0.263715	150.721	-758.358
187	6.93	0.27411	150.797	-756.458
188	6.93	0.281926	150.876	-754.505
189	6.93	0.28976	150.96	-752.497
190	6.93	0.297612	151.049	-750.434
191	6.94	0.308108	151.143	-748.296
192	6.97	0.316004	151.243	-746.093
193	6.99	0.323919	151.348	-743.829
194	7	0.331854	151.458	-741.506
195	7	0.342466	151.576	-739.109
196	7	0.350451	151.698	-736.656
197	7	0.358459	151.827	-734.147
198	7.04	0.36649	151.961	-731.566
199	7.05	0.377233	152.104	-728.907
200	7.05	0.385321	152.252	-726.19
201	7.07	0.393433	152.407	-723.409
202	7.07	0.401571	152.568	-720.57
203	7.1	0.412463	152.738	-717.641
204	7.14	0.420664	152.915	-714.638
205	7.15	0.428895	153.099	-711.571
206	7.17	0.437153	153.29	-708.437
207	7.17	0.448213	153.491	-705.223
208	7.19	0.456542	153.7	-701.941
209	7.19	0.464904	153.916	-698.598
210	7.2	0.473299	154.14	-695.19
211	7.2	0.484544	154.374	-691.701
212	7.2	0.493018	154.618	-688.152
213	7.27	0.501527	154.869	-684.506
214	7.28	0.510074	155.129	-680.792
215	7.29	0.521527	155.401	-676.99
216	7.3	0.530162	155.682	-673.12
217	7.3	0.538836	155.973	-669.187
218	7.3	0.547551	156.272	-665.19

219	7.32	0.559237	156.585	-661.096
220	7.33	0.568052	156.908	-656.932
221	7.4	0.576911	157.241	-652.663
222	7.4	0.585815	157.584	-648.328
223	7.45	0.597761	157.941	-643.875
224	7.5	0.606775	158.309	-639.324
225	7.6	0.615839	158.689	-634.643
226	7.62	0.624956	159.079	-629.881
227	7.88	0.637192	159.485	-624.86
228	7.96	0.646431	159.903	-619.715
229	8.16	0.655726	160.333	-614.364
230	8.44	0.665079	160.775	-608.751
231	8.48	0.67449	161.23	-603.031
232	8.54	0.687131	161.703	-597.163
233	8.55	0.696684	162.188	-591.206
234	8.59	0.706302	162.687	-585.139
235	8.64	0.715986	163.199	-578.953
236	8.67	0.729003	163.731	-572.632
237	8.68	0.738846	164.277	-566.219
238	8.74	0.748762	164.837	-559.675
239	8.77	0.758753	165.413	-553.021
240	8.82	0.772193	166.009	-546.21
241	8.86	0.782366	166.621	-539.278
242	8.87	0.792618	167.25	-532.248
243	8.9	0.802956	167.894	-525.101
244	8.94	0.816874	168.562	-517.799
245	8.95	0.827417	169.246	-510.393
246	8.95	0.838054	169.949	-502.893
247	8.98	0.848786	170.669	-495.271
248	9	0.863249	171.414	-487.501
249	9.04	0.874218	172.179	-479.598
250	9.05	0.885291	172.962	-471.587
251	9.09	0.896473	173.766	-463.438
252	9.1	0.911562	174.597	-455.142
253	9.1	0.923014	175.449	-446.743
254	9.1	0.93459	176.322	-438.238
255	9.13	0.946291	177.218	-429.599
256	9.14	0.9621	178.143	-420.805
257	9.15	0.974114	179.092	-411.892
258	9.16	0.986272	180.065	-402.858
259	9.18	0.998575	181.062	-393.691
260	9.18	1.01522	182.093	-384.371
261	9.18	1.02789	183.149	-374.935
262	9.2	1.04073	184.233	-365.36
263	9.2	1.05375	185.343	-355.666
264	9.22	1.07138	186.491	-345.788
265	9.23	1.08482	187.668	-335.775
266	9.24	1.09847	188.874	-325.625
267	9.24	1.11232	190.112	-315.347
268	9.25	1.13113	191.391	-304.884
269	9.25	1.1455	192.703	-294.288
270	9.25	1.16012	194.049	-283.557
271	9.25	1.17499	195.43	-272.688
272	9.26	1.19522	196.858	-261.621
273	9.27	1.21073	198.324	-250.397
274	9.27	1.22653	199.828	-239.027
275	9.28	1.24264	201.373	-227.495

276	9.28	1.26464	202.972	-215.76
277	9.29	1.28155	204.614	-203.854
278	9.29	1.29884	206.301	-191.788
279	9.3	1.31652	208.034	-179.544
280	9.31	1.34075	209.832	-167.062
281	9.32	1.35946	211.68	-154.392
282	9.32	1.37866	213.581	-141.542
283	9.32	1.39838	215.536	-128.51
284	9.37	1.42554	217.569	-115.152
285	9.37	1.44663	219.661	-101.597
286	9.37	1.46838	221.817	-87.8385
287	9.39	1.49085	224.04	-73.8394
288	9.4	1.52203	226.357	-59.5323
289	9.4	1.54643	228.748	-44.9958
290	9.4	1.57179	231.219	-30.221
291	9.4	1.59819	233.773	-15.198
292	9.4	1.63524	236.447	0.173197
293	9.44	1.66456	239.218	15.8867
294	9.46	1.6954	242.092	31.9251
295	9.47	1.72793	245.078	48.2886
296	9.5	1.77438	248.226	65.1452
297	9.5	1.81191	251.509	82.3584
298	9.51	1.85218	254.94	99.9726
299	9.54	1.8957	258.533	118.058
300	9.6	1.95996	262.375	136.873
301	9.6	2.01409	266.431	156.208
302	9.68	2.07485	270.736	176.293
303	9.7	2.14441	275.335	197.094
304	9.72	2.25713	280.43	219.033
305	9.8	2.36561	286.026	242.216
306	9.8	2.51213	292.337	266.835
307	10.02	2.74777	299.887	294.368

Data Set Standard Deviation = 1.10618
Numerator = 86652.3
Denominator = 112287
W Statistic = 0.771705 = 86652.3 / 112287

5% Critical value of 0.976 exceeds 0.771705
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.771705
Evidence of non-normality at 99% level of significance

Levene's Test for Equal of Variance

Parameter: ph

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Overall Mean = 0.200796
Overall Std Dev = 0.206956
Overall Total = 61.6445
SS Groups = 1.75443
SS Total = 13.1062

ANOVA Table

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Squares	F
Between Groups	1.75443	4	0.438607	11.6686
Error (within groups)	11.3517	302	0.0375885	
Totals	13.1062	306		

95% F-Statistic = 2.37

11.6686 exceeds 2.37; assumption of equal variance should be rejected

Group: MW#93-1	Sample	Residual
	12/15/1994	0.0498684
	3/14/1995	0.0998684
	6/21/1995	0.0401316
	12/14/1995	0.0998684
	3/6/1996	0.0998684
	4/25/1996	0.169868
	10/2/1996	0.0101316
	12/10/1996	0.110132
	3/11/1997	0.149868
	4/15/1997	0.0398684
	8/14/1997	0.0398684
	12/4/1997	0.159868
	3/31/1998	0.249868
	6/23/1998	0.120132
	8/11/1998	0.429868
	12/8/1998	0.000131579
	3/9/1999	0.0201316
	6/8/1999	0.309868
	8/19/1999	0.0801316
	12/14/1999	0.0701316
	3/7/2000	0.0301316
	6/23/2000	0.100132
	12/12/2000	0.0601316
	3/27/2001	0.0201316
	6/28/2001	0.0301316
	9/10/2001	0.139868
	12/18/2001	0.139868
	3/19/2002	0.309868
	6/26/2002	0.229868
	9/18/2002	0.000131579

12/11/2002	0.0401316
3/13/2003	0.0398684
6/25/2003	0.319868
9/26/2003	0.200132
12/10/2003	0.0198684
3/9/2004	0.0598684
6/24/2004	0.0901316
9/15/2004	0.190132
12/15/2004	0.0101316
3/16/2005	0.0501316
6/15/2005	0.0901316
9/21/2005	0.0298684
12/21/2005	0.0101316
3/15/2006	0.0198684
6/21/2006	0.229868
12/20/2006	0.0498684
6/12/2007	0.0401316
12/17/2007	0.290132
6/11/2008	0.0798684
12/3/2008	0.120132
6/17/2009	0.179868
12/9/2009	0.0201316
6/17/2010	0.120132
12/22/2010	0.0701316
6/29/2011	0.120132
12/7/2011	0.210132
6/6/2012	0.390132
12/12/2012	0.0101316
6/19/2013	0.0401316
12/11/2013	0.0501316
6/11/2014	0.520132
12/3/2014	0.0698684
6/17/2015	0.240132
12/1/2015	0.170132
6/22/2016	0.0301316
12/20/2016	0.340132
6/6/2017	0.0698684
11/7/2017	0.410132
2/27/2018	0.150132
9/19/2018	0.000131579
5/7/2019	0.379868
11/21/2019	0.160132
6/26/2020	0.259868
11/17/2020	0.170132
5/26/2021	0.0301316
11/17/2021	0.549868

Group: MW#93-2	**Date**	**Residual**
	12/15/1994	0.647468
	3/14/1995	0.367468
	6/21/1995	0.507468
	12/14/1995	1.02747
	3/6/1996	0.182532
	4/25/1996	0.0474684
	10/2/1996	0.247468
	12/10/1996	0.0825316
	3/11/1997	0.237468

4/15/1997	0.0625316
8/14/1997	0.517468
12/4/1997	0.417468
3/31/1998	0.132532
6/23/1998	0.317468
8/11/1998	0.187468
12/8/1998	0.287468
3/9/1999	0.202532
6/8/1999	0.0625316
8/19/1999	0.0374684
12/14/1999	0.207468
3/7/2000	0.0125316
6/23/2000	0.00746835
12/12/2000	0.00746835
3/27/2001	0.102532
6/28/2001	0.0325316
9/10/2001	0.0874684
12/18/2001	0.212532
3/19/2002	0.352532
6/26/2002	0.252532
9/18/2002	0.0525316
12/11/2002	0.0274684
3/13/2003	0.0925316
6/25/2003	0.0825316
9/26/2003	0.132532
12/10/2003	0.0625316
3/9/2004	0.182532
6/24/2004	0.0525316
9/15/2004	0.132532
12/15/2004	0.0725316
3/16/2005	0.0425316
6/15/2005	0.0874684
9/21/2005	0.0625316
12/21/2005	0.122532
3/15/2006	0.282532
6/21/2006	0.212532
12/20/2006	0.00746835
2/21/2007	0.0125316
6/12/2007	0.0874684
12/17/2007	0.112532
6/11/2008	0.212532
12/3/2008	0.512532
12/15/2008	0.412532
6/17/2009	0.612532
12/9/2009	0.612532
6/17/2010	0.412532
12/22/2010	0.312532
6/29/2011	0.212532
12/7/2011	0.312532
6/6/2012	0.492532
12/12/2012	0.832532
1/9/2013	0.322532
6/19/2013	0.212532
12/11/2013	0.272532
6/11/2014	0.637468
12/3/2014	0.237468
6/17/2015	0.0574684

12/1/2015	0.182532
6/22/2016	0.0925316
12/20/2016	0.532532
6/6/2017	0.102532
11/7/2017	0.327468
2/27/2018	0.147468
9/19/2018	0.0974684
5/7/2019	0.137468
11/21/2019	0.747468
6/26/2020	0.597468
11/16/2020	0.707468
5/26/2021	0.447468
11/17/2021	0.547468

Group: MW#93-3	Date	Residual
	12/15/1994	0.105921
	3/14/1995	0.0459211
	6/21/1995	0.175921
	12/14/1995	0.0359211
	3/6/1996	0.0640789
	4/25/1996	0.00592105
	10/2/1996	0.0359211
	12/10/1996	0.0859211
	3/11/1997	0.0140789
	4/15/1997	0.0459211
	8/14/1997	0.0940789
	12/4/1997	0.0940789
	3/31/1998	0.134079
	6/23/1998	0.0259211
	8/11/1998	0.124079
	12/8/1998	0.144079
	3/9/1999	0.00592105
	6/8/1999	0.0640789
	8/19/1999	0.184079
	12/14/1999	0.0140789
	3/7/2000	0.0159211
	6/23/2000	0.0340789
	12/12/2000	0.0740789
	3/27/2001	0.00407895
	6/28/2001	0.0740789
	9/10/2001	0.254079
	12/18/2001	0.144079
	3/19/2002	0.214079
	6/26/2002	0.104079
	9/18/2002	1.17408
	12/11/2002	0.0459211
	3/13/2003	0.0840789
	6/25/2003	0.0640789
	9/26/2003	0.0159211
	12/10/2003	0.204079
	3/9/2004	0.664079
	6/24/2004	0.0140789
	9/15/2004	0.0859211
	12/15/2004	0.0940789
	3/16/2005	0.0959211
	6/15/2005	0.0240789
	9/21/2005	0.0640789

12/21/2005	0.0859211
3/15/2006	0.284079
6/21/2006	0.0540789
12/20/2006	0.144079
6/12/2007	0.104079
12/17/2007	0.0140789
6/11/2008	0.0140789
12/3/2008	0.0140789
6/17/2009	0.414079
12/9/2009	0.114079
6/17/2010	0.0859211
12/22/2010	0.0340789
6/29/2011	0.0859211
12/7/2011	0.0159211
6/6/2012	0.365921
12/12/2012	0.0640789
6/19/2013	0.295921
12/11/2013	0.284079
6/11/2014	0.705921
12/3/2014	0.0140789
6/17/2015	0.385921
12/1/2015	0.185921
6/22/2016	0.355921
12/20/2016	0.515921
6/6/2017	0.135921
11/7/2017	0.325921
2/27/2018	0.295921
9/19/2018	0.235921
5/7/2019	0.0959211
11/21/2019	0.245921
6/26/2020	0.0359211
11/16/2020	0.545921
5/26/2021	0.0759211
11/17/2021	0.134079

Group: MW#03-1	Date	Residual
	6/24/2004	0.279444
	9/15/2004	0.210556
	12/15/2004	0.329444
	3/16/2005	0.309444
	6/15/2005	0.289444
	9/21/2005	0.889444
	12/20/2006	0.00944444
	6/12/2007	0.299444
	12/17/2007	0.190556
	6/11/2008	0.409444
	12/3/2008	0.409444
	6/17/2009	0.609444
	12/9/2009	0.509444
	6/17/2010	0.109444
	12/22/2010	0.100556
	6/29/2011	0.309444
	12/7/2011	0.0594444
	6/6/2012	0.339444
	6/19/2013	0.159444
	12/11/2013	0.199444
	6/11/2014	0.370556

12/3/2014	0.260556
6/17/2015	0.330556
12/1/2015	0.650556
6/22/2016	0.209444
12/20/2016	0.240556
6/6/2017	0.350556
11/7/2017	0.550556
2/27/2018	0.180556
9/19/2018	0.199444
5/7/2019	0.660556
11/21/2019	0.760556
6/25/2020	0.220556
11/17/2020	0.0705556
5/26/2021	1.41056
11/16/2021	0.629444

Group: MW#03-2	Date	Residual
	6/24/2004	0.06625
	9/15/2004	0.39625
	12/15/2004	0.08625
	3/16/2005	0.02625
	6/15/2005	0.09625
	9/21/2005	0.09625
	12/21/2005	0.05625
	3/15/2006	0.10625
	6/21/2006	0.00625
	12/20/2006	0.10625
	6/12/2007	0.09625
	12/17/2007	0.07375
	6/11/2008	0.12625
	12/3/2008	0.02625
	6/17/2009	0.52625
	12/9/2009	0.02625
	6/17/2010	0.02625
	12/22/2010	0.42625
	6/29/2011	0.07375
	12/7/2011	0.08375
	6/6/2012	0.04375
	12/12/2012	0.04625
	6/19/2013	0.10625
	12/11/2013	0.05375
	6/11/2014	0.22625
	12/3/2014	0.36625
	6/17/2015	0.32375
	12/1/2015	0.38375
	6/22/2016	0.02375
	12/20/2016	0.41375
	6/6/2017	0.04375
	11/7/2017	0.55375
	2/27/2018	0.30375
	9/19/2018	0.14375
	5/7/2019	0.03625
	11/21/2019	0.21375
	6/25/2020	0.12375
	11/17/2020	0.13375
	5/26/2021	0.23375
	11/17/2021	0.14625

Concentrations (ppb)

Parameter: Radium Combined

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Measurements: 65
Total Non-Detect: 1
Percent Non-Detects: 1.53846%
Total Background Measurements: 13
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
MW#93-1	13	1 (7.69231%)	5/24/2018	0.666	0.666
			6/22/2018	0.0833	0.0833
			7/19/2018	0.117	0.117
			8/22/2018	0.32	0.32
			9/19/2018	ND<0	ND<0
			10/18/2018	1.19	1.19
			11/20/2018	0.785	0.785
			12/20/2018	0.735	0.735
			11/21/2019	0.872	0.872
			6/25/2020	0.447	0.447
			11/17/2020	0.202	0.202
			5/26/2021	0.99	0.99
			11/17/2021	2.24	2.24

There are 4 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
MW#03-1	13	0 (0%)	5/24/2018	1.19	1.19
			6/22/2018	3.08	3.08
			7/19/2018	0.457	0.457
			8/22/2018	6.1	6.1
			10/18/2018	2.84	2.84
			11/20/2018	0.809	0.809
			12/20/2018	1.71	1.71
			3/26/2019	0.994	0.994
			11/21/2019	0.729	0.729
			6/25/2020	0.715	0.715
			11/17/2020	1.184	1.184
			5/26/2021	1.84	1.84
			11/16/2021	1.974	1.974
MW#03-2	13	0 (0%)	5/24/2018	1.24	1.24
			6/22/2018	0.108	0.108
			7/19/2018	2.55	2.55
			8/22/2018	0.515	0.515
			9/19/2018	0.34	0.34
			10/18/2018	0.939	0.939
			11/20/2018	1.39	1.39
			12/20/2018	1.01	1.01
			11/21/2019	0.394	0.394
			6/25/2020	0.949	0.949
			11/17/2020	3.586	3.586
			5/26/2021	0.41	0.41
			11/17/2021	0.804	0.804

MW#93-2	13	0 (0%)	5/24/2018	1.44	1.44
			6/22/2018	1.8	1.8
			7/19/2018	5.74	5.74
			8/22/2018	2.24	2.24
			9/19/2018	0.935	0.935
			10/18/2018	1.9	1.9
			11/20/2018	1.28	1.28
			12/20/2018	1.16	1.16
			11/21/2019	1.25	1.25
			6/25/2020	3.24	3.24
			11/16/2020	3.478	3.478
			5/26/2021	3.25	3.25
			11/17/2021	3.743	3.743
MW#93-3	13	0 (0%)	5/24/2018	0.422	0.422
			6/22/2018	0.336	0.336
			7/19/2018	0.519	0.519
			8/22/2018	1	1
			9/19/2018	0.3	0.3
			10/18/2018	1.45	1.45
			11/20/2018	1.42	1.42
			12/20/2018	1.39	1.39
			11/21/2019	1.03	1.03
			6/25/2020	0.519	0.519
			11/16/2020	0.7	0.7
			5/26/2021	0.42	0.42
			11/17/2021	1.783	1.783

There are 0 unused locations

Loc.	Meas.	ND	Date	Conc.	Original

Non-Parametric Prediction Interval

Intra-Well Comparison for MW#93-2

Parameter: Radium Combined

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 12
Maximum Baseline Concentration = 5.74
Confidence Level = 92.3%
False Positive Rate = 7.7%

Baseline Measurements	Date	Value
	5/24/2018	1.44
	6/22/2018	1.8
	7/19/2018	5.74
	8/22/2018	2.24
	9/19/2018	0.935
	10/18/2018	1.9
	11/20/2018	1.28
	12/20/2018	1.16
	11/21/2019	1.25
	6/25/2020	3.24
	11/16/2020	3.478
	5/26/2021	3.25

Date	Count	Mean	Significant
11/17/2021	1	3.743	FALSE

Non-Parametric Prediction Interval

Inter-Well Comparison

Parameter: Radium Combined

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Percent Non-Detects = 1.53846%
Number of comparisons = 4
Future Samples (k) = 4
Recent Dates = 1
Background Measurements (n) = 13
Maximum Background Value = 2.24
Confidence Level = 76.5%
False Positive Rate = 23.5%

Location	Date	Count	Mean	Significant
MW#03-1	11/16/2021	1	1.974	FALSE
MW#03-2	11/17/2021	1	0.804	FALSE
MW#93-2	**11/17/2021**	**1**	**3.743**	**TRUE**
MW#93-3	11/17/2021	1	1.783	FALSE

Shapiro-Francia Test of Normality

Parameter: Radium Combined

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Number of Measurements = 65

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0	-2.17009	4.70929	0
2	0.0833	-1.88079	8.24666	-0.15667
3	0.108	-1.6954	11.121	-0.339773
4	0.117	-1.55477	13.5384	-0.521681
5	0.202	-1.43953	15.6106	-0.812466
6	0.3	-1.34075	17.4082	-1.21469
7	0.32	-1.24809	18.9659	-1.61408
8	0.336	-1.17	20.3348	-2.0072
9	0.34	-1.09847	21.5415	-2.38068
10	0.394	-1.03215	22.6068	-2.78735
11	0.41	-0.970094	23.5479	-3.18509
12	0.42	-0.911562	24.3788	-3.56794
13	0.422	-0.855996	25.1116	-3.92917
14	0.447	-0.7995	25.7508	-4.28655
15	0.457	-0.748762	26.3114	-4.62873
16	0.515	-0.699883	26.8013	-4.98917
17	0.519	-0.652622	27.2272	-5.32788
18	0.519	-0.606775	27.5954	-5.6428
19	0.666	-0.56217	27.9114	-6.01721
20	0.7	-0.515791	28.1774	-6.37826
21	0.715	-0.473299	28.4014	-6.71667
22	0.729	-0.431644	28.5878	-7.03134
23	0.735	-0.390726	28.7404	-7.31852
24	0.785	-0.350451	28.8632	-7.59362
25	0.804	-0.310738	28.9598	-7.84346
26	0.809	-0.271509	29.0335	-8.06311
27	0.872	-0.230118	29.0865	-8.26377
28	0.935	-0.191671	29.1232	-8.44299
29	0.939	-0.153505	29.1468	-8.58713
30	0.949	-0.115562	29.1601	-8.69679
31	0.99	-0.0777834	29.1662	-8.7738
32	0.994	-0.0401167	29.1678	-8.81368
33	1	0	29.1678	-8.81368
34	1.01	0.0401167	29.1694	-8.77316
35	1.03	0.0777834	29.1754	-8.69304
36	1.16	0.115562	29.1888	-8.55899
37	1.184	0.153505	29.2124	-8.37724
38	1.19	0.191671	29.2491	-8.14915
39	1.19	0.230118	29.3021	-7.87531
40	1.24	0.271509	29.3758	-7.53864
41	1.25	0.310738	29.4723	-7.15022
42	1.28	0.350451	29.5951	-6.70164
43	1.39	0.390726	29.7478	-6.15853
44	1.39	0.431644	29.9341	-5.55855
45	1.42	0.473299	30.1581	-4.88646
46	1.44	0.515791	30.4242	-4.14372
47	1.45	0.56217	30.7402	-3.32857

48	1.71	0.606775	31.1084	-2.29099
49	1.783	0.652622	31.5343	-1.12736
50	1.8	0.699883	32.0241	0.132425
51	1.84	0.748762	32.5848	1.51015
52	1.9	0.7995	33.224	3.0292
53	1.974	0.855996	33.9567	4.71893
54	2.24	0.911562	34.7877	6.76083
55	2.24	0.970094	35.7287	8.93384
56	2.55	1.03215	36.7941	11.5658
57	2.84	1.09847	38.0007	14.6855
58	3.08	1.17	39.3696	18.2891
59	3.24	1.24809	40.9273	22.3329
60	3.25	1.34075	42.725	26.6903
61	3.478	1.43953	44.7972	31.697
62	3.586	1.55477	47.2145	37.2724
63	3.743	1.6954	50.0889	43.6183
64	5.74	1.88079	53.6263	54.414
65	6.1	2.17009	58.3356	67.6516

Data Set Standard Deviation = 1.23505
Numerator = 4576.74
Denominator = 5694.86
W Statistic = 0.803661 = 4576.74 / 5694.86

5% Critical value of 0.965 exceeds 0.803661
Evidence of non-normality at 95% level of significance

1% Critical value of 0.948 exceeds 0.803661
Evidence of non-normality at 99% level of significance

Levene's Test for Equal of Variance

Parameter: Radium Combined

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Overall Mean = 0.743742
Overall Std Dev = 0.729228
Overall Total = 48.3432
SS Groups = 5.58297
SS Total = 34.0335

ANOVA Table

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Squares	F
Between Groups	5.58297	4	1.39574	2.94351
Error (within groups)	28.4505	60	0.474175	
Totals	34.0335	64		

95% F-Statistic = 2.52521

2.94351 exceeds 2.52521; assumption of equal variance should be rejected

Group: MW#93-1	Sample	Residual
	5/24/2018	0.000823077
	6/22/2018	0.581877
	7/19/2018	0.548177
	8/22/2018	0.345177
	9/19/2018	0.665177
	10/18/2018	0.524823
	11/20/2018	0.119823
	12/20/2018	0.0698231
	11/21/2019	0.206823
	6/25/2020	0.218177
	11/17/2020	0.463177
	5/26/2021	0.324823
	11/17/2021	1.57482

Group: MW#03-1	Date	Residual
	5/24/2018	0.627077
	6/22/2018	1.26292
	7/19/2018	1.36008
	8/22/2018	4.28292
	10/18/2018	1.02292
	11/20/2018	1.00808
	12/20/2018	0.107077
	3/26/2019	0.823077
	11/21/2019	1.08808
	6/25/2020	1.10208
	11/17/2020	0.633077
	5/26/2021	0.0229231
	11/16/2021	0.156923

Group: MW#03-2	Date	Residual

5/24/2018	0.145
6/22/2018	0.987
7/19/2018	1.455
8/22/2018	0.58
9/19/2018	0.755
10/18/2018	0.156
11/20/2018	0.295
12/20/2018	0.085
11/21/2019	0.701
6/25/2020	0.146
11/17/2020	2.491
5/26/2021	0.685
11/17/2021	0.291

Group: MW#93-2	Date	Residual
	5/24/2018	0.979692
	6/22/2018	0.619692
	7/19/2018	3.32031
	8/22/2018	0.179692
	9/19/2018	1.48469
	10/18/2018	0.519692
	11/20/2018	1.13969
	12/20/2018	1.25969
	11/21/2019	1.16969
	6/25/2020	0.820308
	11/16/2020	1.05831
	5/26/2021	0.830308
	11/17/2021	1.32331

Group: MW#93-3	Date	Residual
	5/24/2018	0.446385
	6/22/2018	0.532385
	7/19/2018	0.349385
	8/22/2018	0.131615
	9/19/2018	0.568385
	10/18/2018	0.581615
	11/20/2018	0.551615
	12/20/2018	0.521615
	11/21/2019	0.161615
	6/25/2020	0.349385
	11/16/2020	0.168385
	5/26/2021	0.448385
	11/17/2021	0.914615

Concentrations (ppb)

Parameter: Selenium

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Measurements: 65
Total Non-Detect: 58
Percent Non-Detects: 89.2308%
Total Background Measurements: 13
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
MW#93-1	13	13 (100%)	5/24/2018	ND<0.005	ND<0.005
			6/19/2018	ND<0.005	ND<0.005
			7/19/2018	ND<0.005	ND<0.005
			8/22/2018	ND<0.005	ND<0.005
			9/19/2018	ND<0.005	ND<0.005
			10/18/2018	ND<0.005	ND<0.005
			11/20/2018	ND<0.005	ND<0.005
			12/20/2018	ND<0.005	ND<0.005
			11/21/2019	ND<0.005	ND<0.005
			6/25/2020	ND<0.002	ND<0.002
			11/17/2020	ND<0.002	ND<0.002
			5/26/2021	ND<0.002	ND<0.002
			11/17/2021	ND<0.002	ND<0.002

There are 4 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
MW#03-1	13	11 (84.6154%)	5/24/2018	ND<0.005	ND<0.005
			6/19/2018	ND<0.005	ND<0.005
			7/19/2018	ND<0.005	ND<0.005
			8/22/2018	0.0144	0.0144
			10/18/2018	ND<0.005	ND<0.005
			11/20/2018	ND<0.005	ND<0.005
			12/20/2018	ND<0.005	ND<0.005
			3/26/2019	ND<0.005	ND<0.005
			11/21/2019	ND<0.005	ND<0.005
			6/25/2020	ND<0.002	ND<0.002
			11/17/2020	0.000522	0.000522
			5/26/2021	ND<0.002	ND<0.002
			11/16/2021	ND<0.002	ND<0.002
MW#03-2	13	13 (100%)	5/24/2018	ND<0.005	ND<0.005
			6/19/2018	ND<0.005	ND<0.005
			7/19/2018	ND<0.005	ND<0.005
			8/22/2018	ND<0.005	ND<0.005
			9/19/2018	ND<0.005	ND<0.005
			10/18/2018	ND<0.005	ND<0.005
			11/20/2018	ND<0.005	ND<0.005
			12/20/2018	ND<0.005	ND<0.005
			11/21/2019	ND<0.005	ND<0.005
			6/25/2020	ND<0.002	ND<0.002
			11/17/2020	ND<0.002	ND<0.002
			5/26/2021	ND<0.002	ND<0.002
			11/17/2021	ND<0.002	ND<0.002

MW#93-2	13	8 (61.5385%)	5/24/2018	ND<0.005	ND<0.005
			6/19/2018	ND<0.005	ND<0.005
			7/19/2018	ND<0.005	ND<0.005
			8/22/2018	ND<0.005	ND<0.005
			9/19/2018	ND<0.005	ND<0.005
			10/18/2018	ND<0.005	ND<0.005
			11/20/2018	ND<0.005	ND<0.005
			12/20/2018	ND<0.005	ND<0.005
			11/21/2019	0.00621	0.00621
			6/25/2020	0.00129	0.00129
			11/16/2020	0.000834	0.000834
			5/26/2021	0.000649	0.000649
			11/17/2021	0.00102	0.00102
MW#93-3	13	13 (100%)	5/24/2018	ND<0.005	ND<0.005
			6/19/2018	ND<0.005	ND<0.005
			7/19/2018	ND<0.005	ND<0.005
			8/22/2018	ND<0.005	ND<0.005
			9/19/2018	ND<0.005	ND<0.005
			10/18/2018	ND<0.005	ND<0.005
			11/20/2018	ND<0.005	ND<0.005
			12/20/2018	ND<0.005	ND<0.005
			11/21/2019	ND<0.005	ND<0.005
			6/25/2020	ND<0.002	ND<0.002
			11/16/2020	ND<0.002	ND<0.002
			5/26/2021	ND<0.002	ND<0.002
			11/17/2021	ND<0.002	ND<0.002

There are 0 unused locations

Loc.	Meas.	ND	Date	Conc.	Original

Non-Parametric Prediction Interval

Inter-Well Comparison

Parameter: Selenium

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Percent Non-Detects = 89.2308%
Number of comparisons = 4
Future Samples (k) = 4
Recent Dates = 1
Background Measurements (n) = 13
Maximum Background Value = 0.005
Confidence Level = 76.5%
False Positive Rate = 23.5%

Location	Date	Count	Mean	Significant
MW#03-1	11/16/2021	1	0.002	FALSE
MW#03-2	11/17/2021	1	0.002	FALSE
MW#93-2	11/17/2021	1	0.00102	FALSE
MW#93-3	11/17/2021	1	0.002	FALSE

Shapiro-Francia Test of Normality

Parameter: Selenium

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Number of Measurements = 65

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0.000522	-2.17009	4.70929	-0.00113279
2	0.000649	-1.88079	8.24666	-0.00235342
3	0.000834	-1.6954	11.121	-0.00376738
4	0.00102	-1.55477	13.5384	-0.00535325
5	0.00129	-1.43953	15.6106	-0.00721024
6	0.002	-1.34075	17.4082	-0.00989175
7	0.002	-1.24809	18.9659	-0.0123879
8	0.002	-1.17	20.3348	-0.0147279
9	0.002	-1.09847	21.5415	-0.0169249
10	0.002	-1.03215	22.6068	-0.0189892
11	0.002	-0.970094	23.5479	-0.0209294
12	0.002	-0.911562	24.3788	-0.0227525
13	0.002	-0.855996	25.1116	-0.0244645
14	0.002	-0.7995	25.7508	-0.0260635
15	0.002	-0.748762	26.3114	-0.027561
16	0.002	-0.699883	26.8013	-0.0289608
17	0.002	-0.652622	27.2272	-0.030266
18	0.002	-0.606775	27.5954	-0.0314796
19	0.002	-0.56217	27.9114	-0.0326039
20	0.002	-0.515791	28.1774	-0.0336355
21	0.005	-0.473299	28.4014	-0.036002
22	0.005	-0.431644	28.5878	-0.0381602
23	0.005	-0.390726	28.7404	-0.0401138
24	0.005	-0.350451	28.8632	-0.0418661
25	0.005	-0.310738	28.9598	-0.0434198
26	0.005	-0.271509	29.0335	-0.0447773
27	0.005	-0.230118	29.0865	-0.0459279
28	0.005	-0.191671	29.1232	-0.0468863
29	0.005	-0.153505	29.1468	-0.0476538
30	0.005	-0.115562	29.1601	-0.0482316
31	0.005	-0.0777834	29.1662	-0.0486205
32	0.005	-0.0401167	29.1678	-0.0488211
33	0.005	0	29.1678	-0.0488211
34	0.005	0.0401167	29.1694	-0.0486205
35	0.005	0.0777834	29.1754	-0.0482316
36	0.005	0.115562	29.1888	-0.0476538
37	0.005	0.153505	29.2124	-0.0468863
38	0.005	0.191671	29.2491	-0.0459279
39	0.005	0.230118	29.3021	-0.0447773
40	0.005	0.271509	29.3758	-0.0434198
41	0.005	0.310738	29.4723	-0.0418661
42	0.005	0.350451	29.5951	-0.0401138
43	0.005	0.390726	29.7478	-0.0381602
44	0.005	0.431644	29.9341	-0.036002
45	0.005	0.473299	30.1581	-0.0336355
46	0.005	0.515791	30.4242	-0.0310565
47	0.005	0.56217	30.7402	-0.0282457

48	0.005	0.606775	31.1084	-0.0252118
49	0.005	0.652622	31.5343	-0.0219487
50	0.005	0.699883	32.0241	-0.0184493
51	0.005	0.748762	32.5848	-0.0147055
52	0.005	0.7995	33.224	-0.010708
53	0.005	0.855996	33.9567	-0.00642798
54	0.005	0.911562	34.7877	-0.00187018
55	0.005	0.970094	35.7287	0.00298029
56	0.005	1.03215	36.7941	0.00814106
57	0.005	1.09847	38.0007	0.0136334
58	0.005	1.17	39.3696	0.0194834
59	0.005	1.24809	40.9273	0.0257238
60	0.005	1.34075	42.725	0.0324276
61	0.005	1.43953	44.7972	0.0396253
62	0.005	1.55477	47.2145	0.0473991
63	0.005	1.6954	50.0889	0.0558761
64	0.00621	1.88079	53.6263	0.0675558
65	0.0144	2.17009	58.3356	0.0988051

Data Set Standard Deviation = 0.0020314
Numerator = 0.00976245
Denominator = 0.0154066
W Statistic = 0.633656 = 0.00976245 / 0.0154066

5% Critical value of 0.965 exceeds 0.633656
Evidence of non-normality at 95% level of significance

1% Critical value of 0.948 exceeds 0.633656
Evidence of non-normality at 99% level of significance

Levene's Test for Equal of Variance

Parameter: Selenium

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Overall Mean = 0.00149966
Overall Std Dev = 0.00132744
Overall Total = 0.0974777
SS Groups = 4.84694e-006
SS Total = 0.000112774

ANOVA Table

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Squares	F
Between Groups	4.84694e-006	4	1.21173e-006	0.673641
Error (within groups)	0.000107927	60	1.79878e-006	
Totals	0.000112774	64		

95% F-Statistic = 2.52521

0.673641 does not exceed 2.52521 indicating equal variance

Group: MW#93-1	Sample	Residual
	5/24/2018	0.000923077
	6/19/2018	0.000923077
	7/19/2018	0.000923077
	8/22/2018	0.000923077
	9/19/2018	0.000923077
	10/18/2018	0.000923077
	11/20/2018	0.000923077
	12/20/2018	0.000923077
	11/21/2019	0.000923077
	6/25/2020	0.00207692
	11/17/2020	0.00207692
	5/26/2021	0.00207692
	11/17/2021	0.00207692

Group: MW#03-1	Date	Residual
	5/24/2018	0.000313692
	6/19/2018	0.000313692
	7/19/2018	0.000313692
	8/22/2018	0.00971369
	10/18/2018	0.000313692
	11/20/2018	0.000313692
	12/20/2018	0.000313692
	3/26/2019	0.000313692
	11/21/2019	0.000313692
	6/25/2020	0.00268631
	11/17/2020	0.00416431
	5/26/2021	0.00268631
	11/16/2021	0.00268631

Group: MW#03-2	Date	Residual

5/24/2018	0.000923077
6/19/2018	0.000923077
7/19/2018	0.000923077
8/22/2018	0.000923077
9/19/2018	0.000923077
10/18/2018	0.000923077
11/20/2018	0.000923077
12/20/2018	0.000923077
11/21/2019	0.000923077
6/25/2020	0.00207692
11/17/2020	0.00207692
5/26/2021	0.00207692
11/17/2021	0.00207692

Group: MW#93-2

Date	Residual
5/24/2018	0.00115362
6/19/2018	0.00115362
7/19/2018	0.00115362
8/22/2018	0.00115362
9/19/2018	0.00115362
10/18/2018	0.00115362
11/20/2018	0.00115362
12/20/2018	0.00115362
11/21/2019	0.00236362
6/25/2020	0.00255638
11/16/2020	0.00301238
5/26/2021	0.00319738
11/17/2021	0.00282638

Group: MW#93-3

Date	Residual
5/24/2018	0.000923077
6/19/2018	0.000923077
7/19/2018	0.000923077
8/22/2018	0.000923077
9/19/2018	0.000923077
10/18/2018	0.000923077
11/20/2018	0.000923077
12/20/2018	0.000923077
11/21/2019	0.000923077
6/25/2020	0.00207692
11/16/2020	0.00207692
5/26/2021	0.00207692
11/17/2021	0.00207692

Concentrations (ppb)

Parameter: Sodium

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Measurements: 246
Total Non-Detect: 0
Percent Non-Detects: 0%
Total Background Measurements: 56
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
MW#93-1	56	0 (0%)	12/15/1994	54.7	54.7
			12/14/1995	51.9	51.9
			12/10/1996	51.6	51.6
			12/4/1997	51.2	51.2
			12/8/1998	47	47
			12/14/1999	64.4	64.4
			12/12/2000	100	100
			3/19/2002	112	112
			6/26/2002	95	95
			9/18/2002	78	78
			12/11/2002	83	83
			3/13/2003	94	94
			6/25/2003	113	113
			9/26/2003	84.6	84.6
			12/10/2003	98.1	98.1
			3/9/2004	95.4	95.4
			6/24/2004	94.7	94.7
			9/15/2004	71	71
			12/15/2004	92.3	92.3
			3/16/2005	86.3	86.3
			6/15/2005	77.4	77.4
			9/21/2005	92.8	92.8
			12/21/2005	81.9	81.9
			3/15/2006	99.7	99.7
			6/21/2006	82	82
			12/20/2006	85.1	85.1
			6/12/2007	74.9	74.9
			12/17/2007	81.8	81.8
			6/11/2008	56.5	56.5
			12/3/2008	75.2	75.2
			6/17/2009	67.4	67.4
			12/9/2009	76.9	76.9
			6/17/2010	55	55
			12/22/2010	70.5	70.5
			6/29/2011	55.4	55.4
			12/7/2011	69.1	69.1
			6/6/2012	55.6	55.6
			12/12/2012	58.9	58.9
			6/19/2013	70	70
			12/11/2013	72.9	72.9
			6/11/2014	56.5	56.5
			12/3/2014	69.4	69.4
			6/17/2015	69.7	69.7
			12/1/2015	57.5	57.5
			6/22/2016	66.9	66.9

			12/20/2016	54.8	54.8
			6/6/2017	58.4	58.4
			11/7/2017	45.2	45.2
			2/27/2018	59.6	59.6
			9/27/2018	68.2	68.2
			5/7/2019	124	124
			11/21/2019	99.1	99.1
			6/25/2020	130	130
			11/17/2020	120	120
			5/26/2021	112	112
			11/17/2021	90.4	90.4

There are 4 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
MW#93-2	57	0 (0%)	12/15/1994	2170	2170
			12/14/1995	2220	2220
			12/10/1996	2100	2100
			12/4/1997	2440	2440
			12/8/1998	2565	2565
			12/14/1999	2980	2980
			12/12/2000	2800	2800
			3/19/2002	2500	2500
			6/26/2002	2260	2260
			9/18/2002	2140	2140
			12/11/2002	2320	2320
			3/13/2003	2600	2600
			6/25/2003	1990	1990
			9/26/2003	1820	1820
			12/10/2003	1920	1920
			3/9/2004	2050	2050
			6/24/2004	2180	2180
			9/15/2004	1800	1800
			12/15/2004	2480	2480
			3/16/2005	2490	2490
			6/15/2005	2030	2030
			9/21/2005	2520	2520
			12/21/2005	2300	2300
			3/15/2006	2720	2720
			6/21/2006	2450	2450
			12/20/2006	2170	2170
			2/21/2007	2900	2900
			6/12/2007	1980	1980
			12/17/2007	2244	2244
			6/11/2008	2649	2649
			12/3/2008	2120	2120
			6/17/2009	2230	2230
			12/9/2009	2140	2140
			6/17/2010	2100	2100
			12/22/2010	2460	2460
			6/29/2011	2190	2190
			12/7/2011	2500	2500
			6/6/2012	2060	2060
			12/12/2012	2730	2730
			6/19/2013	2230	2230
			12/11/2013	2290	2290

			6/11/2014	1940	1940
			12/3/2014	2730	2730
			6/17/2015	270	270
			5/25/2016	1890	1890
			6/22/2016	2700	2700
			12/20/2016	2400	2400
			6/6/2017	2310	2310
			11/7/2017	2750	2750
			2/27/2018	2220	2220
			9/27/2018	2660	2660
			5/7/2019	2470	2470
			11/21/2019	2500	2500
			6/25/2020	2660	2660
			11/16/2020	2800	2800
			5/26/2021	2680	2680
			11/17/2021	2560	2560
MW#93-3	58	0 (0%)	12/15/1994	330	330
			12/14/1995	219	219
			12/10/1996	248	248
			12/4/1997	201	201
			12/8/1998	199	199
			12/14/1999	208	208
			12/12/2000	230	230
			12/18/2001	172	172
			3/19/2002	222	222
			6/26/2002	189	189
			9/18/2002	163	163
			12/11/2002	216	216
			3/13/2003	230	230
			6/25/2003	190	190
			9/26/2003	229	229
			12/10/2003	231	231
			3/9/2004	30.8	30.8
			6/24/2004	150	150
			9/15/2004	200	200
			12/15/2004	186	186
			3/16/2005	196	196
			6/15/2005	170	170
			9/21/2005	239	239
			12/21/2005	180	180
			3/15/2006	180	180
			6/21/2006	227	227
			12/20/2006	211	211
			6/12/2007	159	159
			12/17/2007	194	194
			6/11/2008	195	195
			12/3/2008	190	190
			6/17/2009	173	173
			12/9/2009	202	202
			6/17/2010	202	202
			12/22/2010	216	216
			6/29/2011	158	158
			12/7/2011	218	218
			6/6/2012	201	201
			12/12/2012	168	168
			6/19/2013	235	235

			12/11/2013	234	234
			6/11/2014	258	258
			12/3/2014	220	220
			6/17/2015	280	280
			12/1/2015	339	339
			6/22/2016	449	449
			10/11/2016	368	368
			12/20/2016	337	337
			6/6/2017	301	301
			11/7/2017	368	368
			2/27/2018	272	272
			9/27/2018	372	372
			5/7/2019	412	412
			11/21/2019	403	403
			6/25/2020	376	376
			11/16/2020	374	374
			5/26/2021	355	355
			11/17/2021	368	368
MW#03-1	35	0 (0%)	6/24/2004	10.2	10.2
			9/15/2004	42	42
			12/15/2004	8.04	8.04
			3/16/2005	5.99	5.99
			6/15/2005	7.3	7.3
			9/21/2005	14.1	14.1
			12/20/2006	8	8
			6/12/2007	7.96	7.96
			12/17/2007	9.88	9.88
			6/11/2008	5.71	5.71
			12/3/2008	7.01	7.01
			6/17/2009	7.34	7.34
			12/9/2009	6.77	6.77
			6/17/2010	9.31	9.31
			12/22/2010	7.11	7.11
			6/29/2011	7.04	7.04
			12/7/2011	8.87	8.87
			6/6/2012	7.94	7.94
			6/19/2013	10.3	10.3
			12/11/2013	9.78	9.78
			6/11/2014	55.9	55.9
			12/3/2014	9.8	9.8
			6/17/2015	9.7	9.7
			12/1/2015	12	12
			6/22/2016	8.59	8.59
			12/20/2016	7.94	7.94
			6/6/2017	6.56	6.56
			11/7/2017	17.6	17.6
			2/27/2018	16.8	16.8
			5/7/2019	13.1	13.1
			11/21/2019	10.5	10.5
			6/25/2020	7.75	7.75
			11/17/2020	26.9	26.9
			5/26/2021	12.4	12.4
			11/16/2021	21	21
MW#03-2	40	0 (0%)	6/24/2004	47.4	47.4
			9/15/2004	8.7	8.7

12/15/2004	51.3	51.3
3/16/2005	47	47
6/15/2005	42.8	42.8
9/21/2005	52.6	52.6
12/21/2005	46.5	46.5
3/15/2006	50.4	50.4
6/21/2006	44.9	44.9
12/20/2006	50.5	50.5
6/12/2007	47	47
12/17/2007	50.2	50.2
6/11/2008	33.8	33.8
12/3/2008	54.4	54.4
6/17/2009	48.2	48.2
12/9/2009	47.3	47.3
6/17/2010	52.9	52.9
12/22/2010	51.7	51.7
6/29/2011	51	51
12/7/2011	60.1	60.1
6/6/2012	52	52
12/12/2012	61.3	61.3
6/19/2013	57.3	57.3
12/11/2013	54	54
6/11/2014	9.78	9.78
12/3/2014	68	68
6/17/2015	66.3	66.3
12/1/2015	63.8	63.8
6/22/2016	76.8	76.8
12/20/2016	80.2	80.2
6/6/2017	96.8	96.8
11/7/2017	120	120
2/27/2018	104	104
9/27/2018	128	128
5/7/2019	138	138
11/21/2019	166	166
6/25/2020	165	165
11/17/2020	162	162
5/26/2021	166	166
11/17/2021	169	169

There are 0 unused locations

Loc.	Meas.	ND	Date	Conc.	Original

Non-Parametric Prediction Interval

Inter-Well Comparison

Parameter: Sodium

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Percent Non-Detects = 0%
Number of comparisons = 4
Future Samples (k) = 4
Recent Dates = 1
Background Measurements (n) = 56
Maximum Background Value = 130
Confidence Level = 93.3%
False Positive Rate = 6.7%

Location	Date	Count	Mean	Significant
MW#93-2	**11/17/2021**	**1**	**2560**	**TRUE**
MW#93-3	**11/17/2021**	**1**	**368**	**TRUE**
MW#03-1	11/16/2021	1	21	FALSE
MW#03-2	**11/17/2021**	**1**	**169**	**TRUE**

Non-Parametric Prediction Interval

Intra-Well Comparison for MW#03-2

Parameter: Sodium

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 55
Maximum Baseline Concentration = 169
Confidence Level = 98.2%
False Positive Rate = 1.8%

Baseline Measurements	Date	Value
	6/24/2004	47.4
	9/15/2004	8.7
	12/15/2004	51.3
	3/16/2005	47
	6/15/2005	42.8
	9/21/2005	52.6
	12/21/2005	46.5
	3/15/2006	50.4
	6/21/2006	44.9
	12/20/2006	50.5
	6/12/2007	47
	12/17/2007	50.2
	6/11/2008	33.8
	12/3/2008	54.4
	6/17/2009	48.2
	12/9/2009	47.3
	6/17/2010	52.9
	12/22/2010	51.7
	6/29/2011	51
	12/7/2011	60.1
	6/6/2012	52
	12/12/2012	61.3
	6/19/2013	57.3
	12/11/2013	54
	6/11/2014	9.78
	12/3/2014	68
	6/17/2015	66.3
	12/1/2015	63.8
	6/22/2016	76.8
	12/20/2016	80.2
	6/6/2017	96.8
	11/7/2017	120
	2/27/2018	104
	9/27/2018	128
	5/7/2019	138
	11/21/2019	166
	6/25/2020	165
	11/17/2020	162
	5/26/2021	166
	11/17/2021	169

Date	Count	Mean	Significant
11/17/2021	1	169	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for MW#93-2

Parameter: Sodium

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 55
Maximum Baseline Concentration = 2980
Confidence Level = 98.2%
False Positive Rate = 1.8%

Baseline Measurements	Date	Value
	12/15/1994	2170
	12/14/1995	2220
	12/10/1996	2100
	12/4/1997	2440
	12/8/1998	2565
	12/14/1999	2980
	12/12/2000	2800
	3/19/2002	2500
	6/26/2002	2260
	9/18/2002	2140
	12/11/2002	2320
	3/13/2003	2600
	6/25/2003	1990
	9/26/2003	1820
	12/10/2003	1920
	3/9/2004	2050
	6/24/2004	2180
	9/15/2004	1800
	12/15/2004	2480
	3/16/2005	2490
	6/15/2005	2030
	9/21/2005	2520
	12/21/2005	2300
	3/15/2006	2720
	6/21/2006	2450
	12/20/2006	2170
	2/21/2007	2900
	6/12/2007	1980
	12/17/2007	2244
	6/11/2008	2649
	12/3/2008	2120
	6/17/2009	2230
	12/9/2009	2140
	6/17/2010	2100
	12/22/2010	2460
	6/29/2011	2190
	12/7/2011	2500
	6/6/2012	2060
	12/12/2012	2730
	6/19/2013	2230
	12/11/2013	2290
	6/11/2014	1940

12/3/2014	2730
6/17/2015	270
5/25/2016	1890
6/22/2016	2700
12/20/2016	2400
6/6/2017	2310
11/7/2017	2750
2/27/2018	2220
9/27/2018	2660
5/7/2019	2470
11/21/2019	2500
6/25/2020	2660
11/16/2020	2800

Date	Count	Mean	Significant
11/17/2021	1	2560	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for MW#93-3

Parameter: Sodium

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 55
Maximum Baseline Concentration = 449
Confidence Level = 98.2%
False Positive Rate = 1.8%

Baseline Measurements	Date	Value
	12/15/1994	330
	12/14/1995	219
	12/10/1996	248
	12/4/1997	201
	12/8/1998	199
	12/14/1999	208
	12/12/2000	230
	12/18/2001	172
	3/19/2002	222
	6/26/2002	189
	9/18/2002	163
	12/11/2002	216
	3/13/2003	230
	6/25/2003	190
	9/26/2003	229
	12/10/2003	231
	3/9/2004	30.8
	6/24/2004	150
	9/15/2004	200
	12/15/2004	186
	3/16/2005	196
	6/15/2005	170
	9/21/2005	239
	12/21/2005	180
	3/15/2006	180
	6/21/2006	227
	12/20/2006	211
	6/12/2007	159
	12/17/2007	194
	6/11/2008	195
	12/3/2008	190
	6/17/2009	173
	12/9/2009	202
	6/17/2010	202
	12/22/2010	216
	6/29/2011	158
	12/7/2011	218
	6/6/2012	201
	12/12/2012	168
	6/19/2013	235
	12/11/2013	234
	6/11/2014	258

12/3/2014	220
6/17/2015	280
12/1/2015	339
6/22/2016	449
10/11/2016	368
12/20/2016	337
6/6/2017	301
11/7/2017	368
2/27/2018	272
9/27/2018	372
5/7/2019	412
11/21/2019	403
6/25/2020	376

Date	Count	Mean	Significant
11/17/2021	1	368	FALSE

Shapiro-Francia Test of Normality

Parameter: Sodium

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Number of Measurements = 246

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	5.71	-2.65209	7.03356	-15.1434
2	5.99	-2.40892	12.8365	-29.5729
3	6.56	-2.25713	17.9311	-44.3796
4	6.77	-2.14441	22.5296	-58.8973
5	7.01	-2.05375	26.7475	-73.294
6	7.04	-1.97737	30.6575	-87.2147
7	7.11	-1.91103	34.3095	-100.802
8	7.3	-1.85218	37.7401	-114.323
9	7.34	-1.79912	40.9769	-127.529
10	7.75	-1.75069	44.0418	-141.096
11	7.94	-1.70604	46.9524	-154.642
12	7.94	-1.66456	49.7231	-167.859
13	7.96	-1.62576	52.3662	-180.8
14	8	-1.58927	54.892	-193.514
15	8.04	-1.55477	57.3093	-206.015
16	8.59	-1.52203	59.6259	-219.089
17	8.7	-1.49085	61.8486	-232.059
18	8.87	-1.46106	63.9833	-245.019
19	9.31	-1.4325	66.0353	-258.355
20	9.7	-1.40507	68.0096	-271.985
21	9.78	-1.3722	69.8925	-285.405
22	9.78	-1.34694	71.7067	-298.578
23	9.8	-1.32251	73.4558	-311.538
24	9.88	-1.29884	75.1427	-324.371
25	10.2	-1.27588	76.7706	-337.385
26	10.3	-1.25357	78.342	-350.297
27	10.5	-1.23187	79.8595	-363.231
28	12	-1.21073	81.3254	-377.76
29	12.4	-1.19012	82.7418	-392.517
30	13.1	-1.17	84.1107	-407.844
31	14.1	-1.15035	85.434	-424.064
32	16.8	-1.13113	86.7134	-443.067
33	17.6	-1.11232	87.9507	-462.644
34	21	-1.0939	89.1473	-485.616
35	26.9	-1.07584	90.3047	-514.556
36	30.8	-1.05812	91.4243	-547.146
37	33.8	-1.04073	92.5075	-582.323
38	42	-1.02365	93.5553	-625.316
39	42.8	-1.00687	94.5691	-668.41
40	44.9	-0.990356	95.5499	-712.877
41	45.2	-0.974114	96.4988	-756.907
42	46.5	-0.954165	97.4092	-801.276
43	47	-0.938476	98.29	-845.384
44	47	-0.923014	99.1419	-888.766
45	47	-0.907769	99.966	-931.431
46	47.3	-0.892733	100.763	-973.657
47	47.4	-0.877897	101.534	-1015.27

48	48.2	-0.863249	102.279	-1056.88
49	50.2	-0.848786	102.999	-1099.49
50	50.4	-0.834498	103.696	-1141.55
51	50.5	-0.820379	104.369	-1182.98
52	51	-0.806422	105.019	-1224.1
53	51.2	-0.792618	105.647	-1264.68
54	51.3	-0.778966	106.254	-1304.65
55	51.6	-0.765456	106.84	-1344.14
56	51.7	-0.752084	107.406	-1383.03
57	51.9	-0.738846	107.951	-1421.37
58	52	-0.725736	108.478	-1459.11
59	52.6	-0.712751	108.986	-1496.6
60	52.9	-0.699883	109.476	-1533.62
61	54	-0.687131	109.948	-1570.73
62	54.4	-0.671346	110.399	-1607.25
63	54.7	-0.658838	110.833	-1643.29
64	54.8	-0.646431	111.251	-1678.71
65	55	-0.634124	111.653	-1713.59
66	55.4	-0.621911	112.04	-1748.04
67	55.6	-0.609791	112.412	-1781.95
68	55.9	-0.597761	112.769	-1815.36
69	56.5	-0.585815	113.112	-1848.46
70	56.5	-0.573953	113.441	-1880.89
71	57.3	-0.56217	113.758	-1913.1
72	57.5	-0.550465	114.061	-1944.75
73	58.4	-0.538836	114.351	-1976.22
74	58.9	-0.52728	114.629	-2007.28
75	59.6	-0.515791	114.895	-2038.02
76	60.1	-0.504372	115.149	-2068.33
77	61.3	-0.493018	115.392	-2098.56
78	63.8	-0.481728	115.624	-2129.29
79	64.4	-0.470498	115.846	-2159.59
80	66.3	-0.459327	116.057	-2190.04
81	66.9	-0.448213	116.258	-2220.03
82	67.4	-0.437153	116.449	-2249.49
83	68	-0.423405	116.628	-2278.28
84	68.2	-0.412463	116.798	-2306.41
85	69.1	-0.401571	116.959	-2334.16
86	69.4	-0.390726	117.112	-2361.28
87	69.7	-0.379927	117.256	-2387.76
88	70	-0.369171	117.393	-2413.6
89	70.5	-0.358459	117.521	-2438.87
90	71	-0.347787	117.642	-2463.57
91	72.9	-0.337155	117.756	-2488.14
92	74.9	-0.326561	117.863	-2512.6
93	75.2	-0.316004	117.962	-2536.37
94	76.8	-0.305481	118.056	-2559.83
95	76.9	-0.294992	118.143	-2582.51
96	77.4	-0.284535	118.224	-2604.54
97	78	-0.27411	118.299	-2625.92
98	80.2	-0.263715	118.368	-2647.07
99	81.8	-0.253347	118.433	-2667.79
100	81.9	-0.243007	118.492	-2687.69
101	82	-0.232693	118.546	-2706.77
102	83	-0.222403	118.595	-2725.23
103	84.6	-0.209575	118.639	-2742.96
104	85.1	-0.199336	118.679	-2759.93

105	86.3	-0.189118	118.715	-2776.25
106	90.4	-0.17892	118.747	-2792.42
107	92.3	-0.168741	118.775	-2808
108	92.8	-0.158579	118.8	-2822.71
109	94	-0.148434	118.822	-2836.67
110	94.7	-0.138305	118.841	-2849.76
111	95	-0.128189	118.858	-2861.94
112	95.4	-0.118085	118.872	-2873.21
113	96.8	-0.107995	118.883	-2883.66
114	98.1	-0.0979139	118.893	-2893.27
115	99.1	-0.0878447	118.901	-2901.97
116	99.7	-0.0777834	118.907	-2909.73
117	100	-0.0677301	118.911	-2916.5
118	104	-0.0576847	118.915	-2922.5
119	112	-0.0476439	118.917	-2927.83
120	112	-0.0376076	118.918	-2932.05
121	113	-0.0275759	118.919	-2935.16
122	120	-0.0175476	118.919	-2937.27
123	120	-0.00751925	118.92	-2938.17
124	124	0.00751925	118.92	-2937.24
125	128	0.0175476	118.92	-2934.99
126	130	0.0275759	118.921	-2931.41
127	138	0.0376076	118.922	-2926.22
128	150	0.0476439	118.924	-2919.07
129	158	0.0576847	118.928	-2909.96
130	159	0.0677301	118.932	-2899.19
131	162	0.0777834	118.938	-2886.59
132	163	0.0878447	118.946	-2872.27
133	165	0.0979139	118.956	-2856.11
134	166	0.107995	118.967	-2838.19
135	166	0.118085	118.981	-2818.58
136	168	0.128189	118.998	-2797.05
137	169	0.138305	119.017	-2773.67
138	170	0.148434	119.039	-2748.44
139	172	0.158579	119.064	-2721.16
140	173	0.168741	119.092	-2691.97
141	180	0.17892	119.124	-2659.77
142	180	0.189118	119.16	-2625.73
143	186	0.199336	119.2	-2588.65
144	189	0.209575	119.244	-2549.04
145	190	0.222403	119.293	-2506.78
146	190	0.232693	119.347	-2462.57
147	194	0.243007	119.407	-2415.43
148	195	0.253347	119.471	-2366.02
149	196	0.263715	119.54	-2314.34
150	199	0.27411	119.615	-2259.79
151	200	0.284535	119.696	-2202.88
152	201	0.294992	119.783	-2143.59
153	201	0.305481	119.877	-2082.19
154	202	0.316004	119.977	-2018.35
155	202	0.326561	120.083	-1952.39
156	208	0.337155	120.197	-1882.26
157	211	0.347787	120.318	-1808.88
158	216	0.358459	120.446	-1731.45
159	216	0.369171	120.583	-1651.71
160	218	0.379927	120.727	-1568.89
161	219	0.390726	120.88	-1483.32

162	220	0.401571	121.041	-1394.97
163	222	0.412463	121.211	-1303.4
164	227	0.423405	121.39	-1207.29
165	229	0.437153	121.581	-1107.18
166	230	0.448213	121.782	-1004.09
167	230	0.459327	121.993	-898.449
168	231	0.470498	122.215	-789.764
169	234	0.481728	122.447	-677.039
170	235	0.493018	122.69	-561.18
171	239	0.504372	122.944	-440.635
172	248	0.515791	123.21	-312.719
173	258	0.52728	123.488	-176.681
174	270	0.538836	123.779	-31.1954
175	272	0.550465	124.082	118.531
176	280	0.56217	124.398	275.939
177	301	0.573953	124.727	448.698
178	330	0.585815	125.07	642.017
179	337	0.597761	125.428	843.463
180	339	0.609791	125.799	1050.18
181	355	0.621911	126.186	1270.96
182	368	0.634124	126.588	1504.32
183	368	0.646431	127.006	1742.2
184	368	0.658838	127.44	1984.66
185	372	0.671346	127.891	2234.4
186	374	0.687131	128.363	2491.38
187	376	0.699883	128.853	2754.54
188	403	0.712751	129.361	3041.78
189	412	0.725736	129.888	3340.78
190	449	0.738846	130.433	3672.52
191	1800	0.752084	130.999	5026.28
192	1820	0.765456	131.585	6419.4
193	1890	0.778966	132.192	7891.65
194	1920	0.792618	132.82	9413.48
195	1940	0.806422	133.47	10977.9
196	1980	0.820379	134.143	12602.3
197	1990	0.834498	134.84	14262.9
198	2030	0.848786	135.56	15986
199	2050	0.863249	136.305	17755.6
200	2060	0.877897	137.076	19564.1
201	2100	0.892733	137.873	21438.8
202	2100	0.907769	138.697	23345.2
203	2120	0.923014	139.549	25301.9
204	2140	0.938476	140.43	27310.3
205	2140	0.954165	141.34	29352.2
206	2170	0.974114	142.289	31466
207	2170	0.990356	143.27	33615.1
208	2180	1.00687	144.284	35810.1
209	2190	1.02365	145.332	38051.9
210	2220	1.04073	146.415	40362.3
211	2220	1.05812	147.534	42711.3
212	2230	1.07584	148.692	45110.4
213	2230	1.0939	149.888	47549.8
214	2244	1.11232	151.126	50045.9
215	2260	1.13113	152.405	52602.2
216	2290	1.15035	153.728	55236.5
217	2300	1.17	155.097	57927.5
218	2310	1.19012	156.514	60676.7

219	2320	1.21073	157.98	63485.6
220	2400	1.23187	159.497	66442.1
221	2440	1.25357	161.068	69500.8
222	2450	1.27588	162.696	72626.7
223	2460	1.29884	164.383	75821.8
224	2470	1.32251	166.132	79088.4
225	2480	1.34694	167.947	82428.8
226	2490	1.3722	169.83	85845.6
227	2500	1.40507	171.804	89358.3
228	2500	1.4325	173.856	92939.5
229	2500	1.46106	175.991	96592.2
230	2520	1.49085	178.213	100349
231	2560	1.52203	180.53	104246
232	2565	1.55477	182.947	108234
233	2600	1.58927	185.473	112366
234	2649	1.62576	188.116	116672
235	2660	1.66456	190.887	121100
236	2660	1.70604	193.797	125638
237	2680	1.75069	196.862	130330
238	2700	1.79912	200.099	135188
239	2720	1.85218	203.53	140225
240	2730	1.91103	207.182	145443
241	2730	1.97737	211.092	150841
242	2750	2.05375	215.309	156489
243	2800	2.14441	219.908	162493
244	2800	2.25713	225.003	168813
245	2900	2.40892	230.806	175799
246	2980	2.65209	237.839	183702

Data Set Standard Deviation = 956.733
Numerator = 3.37464e+010
Denominator = 5.33373e+010
W Statistic = 0.632698 = 3.37464e+010 / 5.33373e+010

5% Critical value of 0.976 exceeds 0.632698
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.632698
Evidence of non-normality at 99% level of significance

Levene's Test for Equal of Variance

Parameter: Sodium

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Overall Mean = 90.3728
Overall Std Dev = 174.47
Overall Total = 22231.7
SS Groups = 2.77096e+006
SS Total = 7.45771e+006

ANOVA Table

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Squares	F
Between Groups	2.77096e+006	4	692739	35.6217
Error (within groups)	4.68676e+006	241	19447.1	
Totals	7.45771e+006	245		

95% F-Statistic = 2.37

35.6217 exceeds 2.37; assumption of equal variance should be rejected

Group: MW#93-1	Sample	Residual
	12/15/1994	23.1375
	12/14/1995	25.9375
	12/10/1996	26.2375
	12/4/1997	26.6375
	12/8/1998	30.8375
	12/14/1999	13.4375
	12/12/2000	22.1625
	3/19/2002	34.1625
	6/26/2002	17.1625
	9/18/2002	0.1625
	12/11/2002	5.1625
	3/13/2003	16.1625
	6/25/2003	35.1625
	9/26/2003	6.7625
	12/10/2003	20.2625
	3/9/2004	17.5625
	6/24/2004	16.8625
	9/15/2004	6.8375
	12/15/2004	14.4625
	3/16/2005	8.4625
	6/15/2005	0.4375
	9/21/2005	14.9625
	12/21/2005	4.0625
	3/15/2006	21.8625
	6/21/2006	4.1625
	12/20/2006	7.2625
	6/12/2007	2.9375
	12/17/2007	3.9625
	6/11/2008	21.3375
	12/3/2008	2.6375

	6/17/2009	10.4375
	12/9/2009	0.9375
	6/17/2010	22.8375
	12/22/2010	7.3375
	6/29/2011	22.4375
	12/7/2011	8.7375
	6/6/2012	22.2375
	12/12/2012	18.9375
	6/19/2013	7.8375
	12/11/2013	4.9375
	6/11/2014	21.3375
	12/3/2014	8.4375
	6/17/2015	8.1375
	12/1/2015	20.3375
	6/22/2016	10.9375
	12/20/2016	23.0375
	6/6/2017	19.4375
	11/7/2017	32.6375
	2/27/2018	18.2375
	9/27/2018	9.6375
	5/7/2019	46.1625
	11/21/2019	21.2625
	6/25/2020	52.1625
	11/17/2020	42.1625
	5/26/2021	34.1625
	11/17/2021	12.5625

Group: MW#93-2	**Date**	**Residual**
	12/15/1994	152.421
	12/14/1995	102.421
	12/10/1996	222.421
	12/4/1997	117.579
	12/8/1998	242.579
	12/14/1999	657.579
	12/12/2000	477.579
	3/19/2002	177.579
	6/26/2002	62.4211
	9/18/2002	182.421
	12/11/2002	2.42105
	3/13/2003	277.579
	6/25/2003	332.421
	9/26/2003	502.421
	12/10/2003	402.421
	3/9/2004	272.421
	6/24/2004	142.421
	9/15/2004	522.421
	12/15/2004	157.579
	3/16/2005	167.579
	6/15/2005	292.421
	9/21/2005	197.579
	12/21/2005	22.4211
	3/15/2006	397.579
	6/21/2006	127.579
	12/20/2006	152.421
	2/21/2007	577.579
	6/12/2007	342.421
	12/17/2007	78.4211

6/11/2008	326.579
12/3/2008	202.421
6/17/2009	92.4211
12/9/2009	182.421
6/17/2010	222.421
12/22/2010	137.579
6/29/2011	132.421
12/7/2011	177.579
6/6/2012	262.421
12/12/2012	407.579
6/19/2013	92.4211
12/11/2013	32.4211
6/11/2014	382.421
12/3/2014	407.579
6/17/2015	2052.42
5/25/2016	432.421
6/22/2016	377.579
12/20/2016	77.5789
6/6/2017	12.4211
11/7/2017	427.579
2/27/2018	102.421
9/27/2018	337.579
5/7/2019	147.579
11/21/2019	177.579
6/25/2020	337.579
11/16/2020	477.579
5/26/2021	357.579
11/17/2021	237.579

Group: MW#93-3	Date	Residual
	12/15/1994	87.8655
	12/14/1995	23.1345
	12/10/1996	5.86552
	12/4/1997	41.1345
	12/8/1998	43.1345
	12/14/1999	34.1345
	12/12/2000	12.1345
	12/18/2001	70.1345
	3/19/2002	20.1345
	6/26/2002	53.1345
	9/18/2002	79.1345
	12/11/2002	26.1345
	3/13/2003	12.1345
	6/25/2003	52.1345
	9/26/2003	13.1345
	12/10/2003	11.1345
	3/9/2004	211.334
	6/24/2004	92.1345
	9/15/2004	42.1345
	12/15/2004	56.1345
	3/16/2005	46.1345
	6/15/2005	72.1345
	9/21/2005	3.13448
	12/21/2005	62.1345
	3/15/2006	62.1345
	6/21/2006	15.1345
	12/20/2006	31.1345

6/12/2007	83.1345
12/17/2007	48.1345
6/11/2008	47.1345
12/3/2008	52.1345
6/17/2009	69.1345
12/9/2009	40.1345
6/17/2010	40.1345
12/22/2010	26.1345
6/29/2011	84.1345
12/7/2011	24.1345
6/6/2012	41.1345
12/12/2012	74.1345
6/19/2013	7.13448
12/11/2013	8.13448
6/11/2014	15.8655
12/3/2014	22.1345
6/17/2015	37.8655
12/1/2015	96.8655
6/22/2016	206.866
10/11/2016	125.866
12/20/2016	94.8655
6/6/2017	58.8655
11/7/2017	125.866
2/27/2018	29.8655
9/27/2018	129.866
5/7/2019	169.866
11/21/2019	160.866
6/25/2020	133.866
11/16/2020	131.866
5/26/2021	112.866
11/17/2021	125.866

Group: MW#03-1	Date	Residual
	6/24/2004	2.29114
	9/15/2004	29.5089
	12/15/2004	4.45114
	3/16/2005	6.50114
	6/15/2005	5.19114
	9/21/2005	1.60886
	12/20/2006	4.49114
	6/12/2007	4.53114
	12/17/2007	2.61114
	6/11/2008	6.78114
	12/3/2008	5.48114
	6/17/2009	5.15114
	12/9/2009	5.72114
	6/17/2010	3.18114
	12/22/2010	5.38114
	6/29/2011	5.45114
	12/7/2011	3.62114
	6/6/2012	4.55114
	6/19/2013	2.19114
	12/11/2013	2.71114
	6/11/2014	43.4089
	12/3/2014	2.69114
	6/17/2015	2.79114
	12/1/2015	0.491143

	6/22/2016	3.90114
	12/20/2016	4.55114
	6/6/2017	5.93114
	11/7/2017	5.10886
	2/27/2018	4.30886
	5/7/2019	0.608857
	11/21/2019	1.99114
	6/25/2020	4.74114
	11/17/2020	14.4089
	5/26/2021	0.0911429
	11/16/2021	8.50886

Group: MW#03-2	Date	Residual
	6/24/2004	26.1745
	9/15/2004	64.8745
	12/15/2004	22.2745
	3/16/2005	26.5745
	6/15/2005	30.7745
	9/21/2005	20.9745
	12/21/2005	27.0745
	3/15/2006	23.1745
	6/21/2006	28.6745
	12/20/2006	23.0745
	6/12/2007	26.5745
	12/17/2007	23.3745
	6/11/2008	39.7745
	12/3/2008	19.1745
	6/17/2009	25.3745
	12/9/2009	26.2745
	6/17/2010	20.6745
	12/22/2010	21.8745
	6/29/2011	22.5745
	12/7/2011	13.4745
	6/6/2012	21.5745
	12/12/2012	12.2745
	6/19/2013	16.2745
	12/11/2013	19.5745
	6/11/2014	63.7945
	12/3/2014	5.5745
	6/17/2015	7.2745
	12/1/2015	9.7745
	6/22/2016	3.2255
	12/20/2016	6.6255
	6/6/2017	23.2255
	11/7/2017	46.4255
	2/27/2018	30.4255
	9/27/2018	54.4255
	5/7/2019	64.4255
	11/21/2019	92.4255
	6/25/2020	91.4255
	11/17/2020	88.4255
	5/26/2021	92.4255
	11/17/2021	95.4255

Concentrations (ppb)

Parameter: Sulfate

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Measurements: 304
Total Non-Detect: 8
Percent Non-Detects: 2.63158%
Total Background Measurements: 76
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
MW#93-1	76	0 (0%)	12/15/1994	195	195
			3/14/1995	275	275
			6/21/1995	750	750
			12/14/1995	320	320
			3/6/1996	215	215
			4/25/1996	272	272
			10/2/1996	300	300
			12/10/1996	260	260
			3/11/1997	278	278
			4/15/1997	250	250
			8/14/1997	320	320
			12/4/1997	360	360
			3/31/1998	230	230
			6/23/1998	500	500
			8/11/1998	350	350
			12/8/1998	270	270
			3/9/1999	290	290
			6/8/1999	408	408
			8/19/1999	388	388
			12/14/1999	310	310
			3/7/2000	373	373
			6/23/2000	410	410
			12/12/2000	420	420
			3/27/2001	350	350
			6/28/2001	425	425
			9/10/2001	390	390
			12/18/2001	390	390
			3/19/2002	425	425
			6/26/2002	420	420
			9/18/2002	517	517
			12/11/2002	430	430
			3/13/2003	450	450
			6/25/2003	434	434
			9/26/2003	460	460
			12/10/2003	470	470
			3/9/2004	444	444
			6/24/2004	500	500
			9/15/2004	475	475
			12/15/2004	558	558
			3/16/2005	880	880
			6/15/2005	22	22
			9/21/2005	467	467
			12/21/2005	475	475
			3/15/2006	375	375
			6/21/2006	420	420

			12/20/2006	330	330
			6/12/2007	260	260
			12/17/2007	300	300
			6/11/2008	375	375
			12/3/2008	340	340
			6/17/2009	240	240
			12/9/2009	160	160
			6/17/2010	290	290
			12/22/2010	304	304
			6/29/2011	306	306
			12/7/2011	255	255
			6/6/2012	275	275
			12/12/2012	301	301
			6/19/2013	409	409
			12/11/2013	306	306
			6/11/2014	316	316
			12/3/2014	292	292
			6/17/2015	286	286
			12/1/2015	299	299
			6/22/2016	250	250
			12/20/2016	275	275
			6/6/2017	265	265
			11/7/2017	281	281
			2/27/2018	299	299
			9/27/2018	305	305
			5/7/2019	275	275
			11/21/2019	299	299
			6/25/2020	346	346
			11/17/2020	346	346
			5/26/2021	400	400
			11/17/2021	504	504

There are 4 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
MW#03-1	35	0 (0%)	6/24/2004	42	42
			9/15/2004	76	76
			12/15/2004	62	62
			3/16/2005	22	22
			6/15/2005	23	23
			9/21/2005	17	17
			12/20/2006	55	55
			6/12/2007	88	88
			12/17/2007	120	120
			6/11/2008	23	23
			12/3/2008	90	90
			6/17/2009	21	21
			12/9/2009	15	15
			6/17/2010	16	16
			12/22/2010	22.9	22.9
			6/29/2011	21.6	21.6
			12/7/2011	18.1	18.1
			6/6/2012	14.3	14.3
			6/19/2013	16.2	16.2
			12/11/2013	29.1	29.1
			6/11/2014	127	127

			12/3/2014	19.7	19.7
			6/17/2015	7.86	7.86
			12/1/2015	12.1	12.1
			6/22/2016	10.3	10.3
			12/20/2016	30.9	30.9
			6/6/2017	8.92	8.92
			11/7/2017	14.4	14.4
			2/27/2018	12.6	12.6
			5/7/2019	12.2	12.2
			11/21/2019	184	184
			6/25/2020	6.2	6.2
			11/17/2020	18.9	18.9
			5/26/2021	5.27	5.27
			11/16/2021	9.03	9.03
MW#03-2	39	0 (0%)	6/24/2004	72	72
			9/15/2004	32	32
			12/15/2004	54	54
			3/16/2005	78	78
			6/15/2005	23	23
			9/21/2005	80	80
			12/21/2005	72	72
			3/15/2006	30	30
			12/20/2006	34	34
			6/12/2007	68	68
			12/17/2007	130	130
			6/11/2008	67	67
			12/3/2008	210	210
			6/17/2009	84	84
			12/9/2009	80	80
			6/17/2010	106	106
			12/22/2010	98.9	98.9
			6/29/2011	101	101
			12/7/2011	98.8	98.8
			6/6/2012	107	107
			12/12/2012	111	111
			6/19/2013	113	113
			12/11/2013	106	106
			6/11/2014	10.3	10.3
			12/3/2014	158	158
			6/17/2015	179	179
			12/1/2015	197	197
			6/22/2016	254	254
			12/20/2016	451	451
			6/6/2017	332	332
			11/7/2017	516	516
			2/27/2018	468	468
			9/27/2018	426	426
			5/7/2019	29.6	29.6
			11/21/2019	394	394
			6/25/2020	409	409
			11/17/2020	377	377
			5/26/2021	421	421
			11/17/2021	457	457
MW#93-2	78	0 (0%)	12/15/1994	2000	2000
			3/14/1995	1550	1550

6/21/1995	185	185
12/14/1995	2367	2367
3/6/1996	2150	2150
4/25/1996	2000	2000
10/2/1996	3267	3267
12/10/1996	4000	4000
3/11/1997	1700	1700
4/15/1997	1500	1500
8/14/1997	3650	3650
12/4/1997	4300	4300
3/31/1998	2500	2500
6/23/1998	3250	3250
8/11/1998	3050	3050
12/8/1998	3050	3050
3/9/1999	3600	3600
6/8/1999	3150	3150
8/19/1999	1897	1897
12/14/1999	2500	2500
3/7/2000	3400	3400
6/23/2000	3400	3400
12/12/2000	3000	3000
3/27/2001	2133	2133
6/28/2001	2750	2750
9/10/2001	2650	2650
12/18/2001	2950	2950
3/19/2002	2967	2967
6/26/2002	3050	3050
9/18/2002	2900	2900
12/11/2002	2933	2933
3/13/2003	2900	2900
6/25/2003	2700	2700
9/26/2003	2767	2767
12/10/2003	2700	2700
3/9/2004	2550	2550
6/24/2004	2650	2650
9/15/2004	2700	2700
12/15/2004	2950	2950
3/16/2005	3200	3200
6/15/2005	2650	2650
9/21/2005	3200	3200
12/21/2005	3200	3200
3/15/2006	3000	3000
6/21/2006	2700	2700
12/20/2006	2500	2500
2/21/2007	1900	1900
6/12/2007	2400	2400
12/17/2007	3100	3100
6/11/2008	2350	2350
12/3/2008	3300	3300
12/15/2008	2400	2400
6/17/2009	2300	2300
12/9/2009	2200	2200
6/17/2010	2900	2900
12/22/2010	3460	3460
6/29/2011	2630	2630
12/7/2011	2520	2520
6/6/2012	2360	2360

			12/12/2012	3240	3240
			6/19/2013	2510	2510
			12/11/2013	2460	2460
			6/11/2014	2790	2790
			12/3/2014	2940	2940
			6/17/2015	114	114
			12/1/2015	3600	3600
			6/22/2016	2620	2620
			12/20/2016	3800	3800
			6/6/2017	3630	3630
			11/7/2017	4340	4340
			2/27/2018	3870	3870
			9/27/2018	3680	3680
			5/7/2019	3890	3890
			11/21/2019	12.4	12.4
			6/25/2020	523	523
			11/16/2020	5040	5040
			5/26/2021	5100	5100
			11/17/2021	5940	5940
MW#93-3	76	8 (10.5263%)	12/15/1994	ND<10	ND<10
			3/14/1995	ND<10	ND<10
			6/21/1995	10	10
			12/14/1995	ND<10	ND<10
			3/6/1996	10	10
			4/25/1996	ND<10	ND<10
			10/2/1996	11	11
			12/10/1996	10	10
			3/11/1997	12	12
			4/15/1997	15	15
			8/14/1997	11	11
			12/4/1997	8	8
			3/31/1998	45	45
			6/23/1998	4	4
			8/11/1998	9	9
			12/8/1998	2	2
			3/9/1999	ND<10	ND<10
			6/8/1999	3	3
			8/19/1999	ND<10	ND<10
			12/14/1999	ND<10	ND<10
			3/7/2000	13	13
			6/23/2000	14	14
			12/12/2000	7	7
			3/27/2001	3	3
			6/28/2001	ND<10	ND<10
			9/10/2001	20	20
			12/18/2001	19	19
			3/19/2002	8	8
			6/26/2002	8	8
			9/18/2002	8	8
			12/11/2002	6	6
			3/13/2003	18	18
			6/25/2003	13	13
			9/26/2003	16	16
			12/10/2003	34	34
			3/9/2004	130	130
			6/24/2004	24	24

9/15/2004	17	17
12/15/2004	26	26
3/16/2005	29	29
6/15/2005	26	26
9/21/2005	19	19
12/21/2005	23	23
3/15/2006	19	19
6/21/2006	21	21
12/20/2006	42	42
6/12/2007	3	3
12/17/2007	28	28
6/11/2008	27	27
12/3/2008	11	11
6/17/2009	16	16
12/9/2009	12	12
6/17/2010	45	45
12/22/2010	25.8	25.8
6/29/2011	34.2	34.2
12/7/2011	37.4	37.4
6/6/2012	38.3	38.3
12/12/2012	25.8	25.8
6/19/2013	61.6	61.6
12/11/2013	26.5	26.5
6/11/2014	56.2	56.2
12/3/2014	36	36
6/17/2015	109	109
12/1/2015	81	81
6/22/2016	58.5	58.5
12/20/2016	66.6	66.6
6/6/2017	18.2	18.2
11/7/2017	80.3	80.3
2/27/2018	64.2	64.2
9/27/2018	75.8	75.8
5/7/2019	105	105
11/21/2019	4010	4010
6/25/2020	328	328
11/16/2020	258	258
5/26/2021	226	226
11/17/2021	286	286

There are 0 unused locations

Loc.	Meas.	ND	Date	Conc.	Original

Non-Parametric Prediction Interval

Inter-Well Comparison

Parameter: Sulfate

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Percent Non-Detects = 2.63158%
Number of comparisons = 4
Future Samples (k) = 4
Recent Dates = 1
Background Measurements (n) = 76
Maximum Background Value = 880
Confidence Level = 95%
False Positive Rate = 5%

Location	Date	Count	Mean	Significant
MW#03-1	11/16/2021	1	9.03	FALSE
MW#03-2	11/17/2021	1	457	FALSE
MW#93-2	**11/17/2021**	**1**	**5940**	**TRUE**
MW#93-3	11/17/2021	1	286	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for MW#93-2

Parameter: Sulfate

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 75
Maximum Baseline Concentration = 4340
Confidence Level = 98.7%
False Positive Rate = 1.3%

Baseline Measurements	Date	Value
	12/15/1994	2000
	3/14/1995	1550
	6/21/1995	185
	12/14/1995	2367
	3/6/1996	2150
	4/25/1996	2000
	10/2/1996	3267
	12/10/1996	4000
	3/11/1997	1700
	4/15/1997	1500
	8/14/1997	3650
	12/4/1997	4300
	3/31/1998	2500
	6/23/1998	3250
	8/11/1998	3050
	12/8/1998	3050
	3/9/1999	3600
	6/8/1999	3150
	8/19/1999	1897
	12/14/1999	2500
	3/7/2000	3400
	6/23/2000	3400
	12/12/2000	3000
	3/27/2001	2133
	6/28/2001	2750
	9/10/2001	2650
	12/18/2001	2950
	3/19/2002	2967
	6/26/2002	3050
	9/18/2002	2900
	12/11/2002	2933
	3/13/2003	2900
	6/25/2003	2700
	9/26/2003	2767
	12/10/2003	2700
	3/9/2004	2550
	6/24/2004	2650
	9/15/2004	2700
	12/15/2004	2950
	3/16/2005	3200
	6/15/2005	2650
	9/21/2005	3200

12/21/2005	3200
3/15/2006	3000
6/21/2006	2700
12/20/2006	2500
2/21/2007	1900
6/12/2007	2400
12/17/2007	3100
6/11/2008	2350
12/3/2008	3300
12/15/2008	2400
6/17/2009	2300
12/9/2009	2200
6/17/2010	2900
12/22/2010	3460
6/29/2011	2630
12/7/2011	2520
6/6/2012	2360
12/12/2012	3240
6/19/2013	2510
12/11/2013	2460
6/11/2014	2790
12/3/2014	2940
6/17/2015	114
12/1/2015	3600
6/22/2016	2620
12/20/2016	3800
6/6/2017	3630
11/7/2017	4340
2/27/2018	3870
9/27/2018	3680
5/7/2019	3890
11/21/2019	12.4
6/25/2020	523

Date	Count	Mean	Significant
11/17/2021	1	5940	TRUE

Shapiro-Francia Test of Normality

Parameter: Sulfate

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Number of Measurements = 304

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	2	-2.74777	7.55021	-5.49553
2	3	-2.51213	13.861	-13.0319
3	3	-2.36561	19.4572	-20.1288
4	3	-2.22621	24.4132	-26.8074
5	4	-2.14441	29.0116	-35.385
6	5.27	-2.07485	33.3166	-46.3195
7	6	-2.01409	37.3732	-58.404
8	6.2	-1.94314	41.149	-70.4515
9	7	-1.8957	44.7426	-83.7213
10	7.86	-1.85218	48.1732	-98.2795
11	8	-1.79912	51.41	-112.672
12	8	-1.76241	54.5161	-126.772
13	8	-1.72793	57.5019	-140.595
14	8	-1.6954	60.3762	-154.158
15	8.92	-1.65463	63.114	-168.918
16	9	-1.62576	65.7571	-183.549
17	9.03	-1.59819	68.3113	-197.981
18	10	-1.56322	70.755	-213.613
19	10	-1.5382	73.1211	-228.995
20	10	-1.5141	75.4136	-244.136
21	10	-1.49085	77.6362	-259.045
22	10	-1.46106	79.7709	-273.655
23	10	-1.43953	81.8432	-288.051
24	10	-1.41865	83.8557	-302.237
25	10	-1.39838	85.8112	-316.221
26	10	-1.3722	87.6941	-329.943
27	10	-1.35317	89.5252	-343.475
28	10	-1.33462	91.3064	-356.821
29	10.3	-1.31058	93.024	-370.32
30	10.3	-1.29303	94.696	-383.638
31	11	-1.27588	96.3238	-397.673
32	11	-1.25908	97.9091	-411.523
33	11	-1.23724	99.4399	-425.132
34	12	-1.22123	100.931	-439.787
35	12	-1.20553	102.385	-454.253
36	12.1	-1.18504	103.789	-468.593
37	12.2	-1.17	105.158	-482.867
38	12.4	-1.15522	106.492	-497.191
39	12.6	-1.14069	107.794	-511.564
40	13	-1.12168	109.052	-526.146
41	13	-1.10768	110.279	-540.546
42	14	-1.0939	111.475	-555.86
43	14.3	-1.08032	112.642	-571.309
44	14.4	-1.06252	113.771	-586.609
45	15	-1.04939	114.872	-602.35
46	15	-1.03643	115.947	-617.896
47	16	-1.01943	116.986	-634.207

48	16	-1.00687	118	-650.317
49	16	-0.994457	118.989	-666.228
50	16.2	-0.982202	119.953	-682.14
51	17	-0.966088	120.887	-698.563
52	17	-0.954165	121.797	-714.784
53	18	-0.942375	122.685	-731.747
54	18.1	-0.926859	123.544	-748.523
55	18.2	-0.915365	124.382	-765.183
56	18.9	-0.903992	125.199	-782.268
57	19	-0.892733	125.996	-799.23
58	19	-0.877897	126.767	-815.91
59	19	-0.866894	127.519	-832.381
60	19.7	-0.855996	128.251	-849.244
61	20	-0.841621	128.96	-866.077
62	21	-0.830953	129.65	-883.527
63	21	-0.820379	130.323	-900.755
64	21.6	-0.809896	130.979	-918.249
65	22	-0.796056	131.613	-935.762
66	22	-0.785774	132.23	-953.049
67	22.9	-0.775574	132.832	-970.809
68	23	-0.765456	133.418	-988.415
69	23	-0.752084	133.983	-1005.71
70	23	-0.742143	134.534	-1022.78
71	23	-0.732275	135.07	-1039.62
72	24	-0.719228	135.588	-1056.89
73	25.8	-0.709522	136.091	-1075.19
74	25.8	-0.699883	136.581	-1093.25
75	26	-0.690309	137.057	-1111.2
76	26	-0.677639	137.517	-1128.82
77	26.5	-0.668209	137.963	-1146.52
78	27	-0.658838	138.397	-1164.31
79	28	-0.646431	138.815	-1182.41
80	29	-0.637192	139.221	-1200.89
81	29.1	-0.628006	139.615	-1219.17
82	29.6	-0.618872	139.998	-1237.48
83	30	-0.606775	140.367	-1255.69
84	30.9	-0.597761	140.724	-1274.16
85	32	-0.588793	141.071	-1293
86	34	-0.579873	141.407	-1312.71
87	34	-0.568052	141.729	-1332.03
88	34.2	-0.559237	142.042	-1351.15
89	36	-0.550465	142.345	-1370.97
90	37.4	-0.538836	142.636	-1391.12
91	38.3	-0.530162	142.917	-1411.43
92	42	-0.521527	143.189	-1433.33
93	42	-0.51293	143.452	-1454.88
94	45	-0.501527	143.703	-1477.44
95	45	-0.493018	143.946	-1499.63
96	54	-0.484544	144.181	-1525.8
97	55	-0.473299	144.405	-1551.83
98	56.2	-0.464904	144.621	-1577.95
99	58.5	-0.456542	144.83	-1604.66
100	61.6	-0.448213	145.031	-1632.27
101	62	-0.437153	145.222	-1659.38
102	64.2	-0.428895	145.406	-1686.91
103	66.6	-0.420664	145.583	-1714.93
104	67	-0.412463	145.753	-1742.56

105	68	-0.401571	145.914	-1769.87
106	72	-0.393433	146.069	-1798.2
107	72	-0.385321	146.217	-1825.94
108	75.8	-0.374544	146.358	-1854.33
109	76	-0.36649	146.492	-1882.18
110	78	-0.358459	146.62	-1910.14
111	80	-0.350451	146.743	-1938.18
112	80	-0.33981	146.859	-1965.36
113	80.3	-0.331854	146.969	-1992.01
114	81	-0.323919	147.074	-2018.25
115	84	-0.31337	147.172	-2044.57
116	88	-0.305481	147.265	-2071.45
117	90	-0.297612	147.354	-2098.24
118	98.8	-0.28976	147.438	-2126.87
119	98.9	-0.279319	147.516	-2154.49
120	101	-0.271509	147.589	-2181.92
121	105	-0.263715	147.659	-2209.61
122	106	-0.253347	147.723	-2236.46
123	106	-0.24559	147.784	-2262.49
124	107	-0.237847	147.84	-2287.94
125	109	-0.230118	147.893	-2313.02
126	111	-0.219834	147.941	-2337.43
127	113	-0.212137	147.986	-2361.4
128	114	-0.204452	148.028	-2384.71
129	120	-0.196779	148.067	-2408.32
130	127	-0.186567	148.102	-2432.01
131	130	-0.17892	148.134	-2455.27
132	130	-0.171285	148.163	-2477.54
133	158	-0.161119	148.189	-2503
134	160	-0.153505	148.213	-2527.56
135	179	-0.1459	148.234	-2553.67
136	184	-0.138305	148.253	-2579.12
137	185	-0.128189	148.269	-2602.84
138	195	-0.12061	148.284	-2626.36
139	197	-0.113039	148.297	-2648.62
140	210	-0.102953	148.307	-2670.24
141	215	-0.0953969	148.316	-2690.75
142	226	-0.0878447	148.324	-2710.61
143	230	-0.0802981	148.331	-2729.08
144	240	-0.0702426	148.336	-2745.93
145	250	-0.0627062	148.339	-2761.61
146	250	-0.0551734	148.343	-2775.4
147	254	-0.0476439	148.345	-2787.51
148	255	-0.0376076	148.346	-2797.1
149	258	-0.0300838	148.347	-2804.86
150	260	-0.0225612	148.348	-2810.72
151	260	-0.0125328	148.348	-2813.98
152	265	-0.00501359	148.348	-2815.31
153	270	0.00501359	148.348	-2813.96
154	272	0.0125328	148.348	-2810.55
155	275	0.0225612	148.348	-2804.34
156	275	0.0300838	148.349	-2796.07
157	275	0.0376076	148.351	-2785.73
158	275	0.0476439	148.353	-2772.63
159	278	0.0551734	148.356	-2757.29
160	281	0.0627062	148.36	-2739.67
161	286	0.0702426	148.365	-2719.58

162	286	0.0802981	148.371	-2696.61
163	290	0.0878447	148.379	-2671.14
164	290	0.0953969	148.388	-2643.47
165	292	0.102953	148.399	-2613.41
166	299	0.113039	148.412	-2579.61
167	299	0.12061	148.426	-2543.55
168	299	0.128189	148.443	-2505.22
169	300	0.138305	148.462	-2463.73
170	300	0.1459	148.483	-2419.96
171	301	0.153505	148.507	-2373.75
172	304	0.161119	148.533	-2324.77
173	305	0.171285	148.562	-2272.53
174	306	0.17892	148.594	-2217.78
175	306	0.186567	148.629	-2160.69
176	310	0.196779	148.667	-2099.69
177	316	0.204452	148.709	-2035.08
178	320	0.212137	148.754	-1967.2
179	320	0.219834	148.803	-1896.85
180	328	0.230118	148.856	-1821.38
181	330	0.237847	148.912	-1742.89
182	332	0.24559	148.972	-1661.35
183	340	0.253347	149.037	-1575.21
184	346	0.263715	149.106	-1483.97
185	346	0.271509	149.18	-1390.02
186	350	0.279319	149.258	-1292.26
187	350	0.28976	149.342	-1190.85
188	360	0.297612	149.43	-1083.71
189	373	0.305481	149.524	-969.762
190	375	0.31337	149.622	-852.249
191	375	0.323919	149.727	-730.779
192	377	0.331854	149.837	-605.67
193	388	0.33981	149.952	-473.824
194	390	0.350451	150.075	-337.148
195	390	0.358459	150.204	-197.349
196	394	0.36649	150.338	-52.9517
197	400	0.374544	150.478	96.8657
198	408	0.385321	150.627	254.077
199	409	0.393433	150.782	414.991
200	409	0.401571	150.943	579.233
201	410	0.412463	151.113	748.343
202	420	0.420664	151.29	925.022
203	420	0.428895	151.474	1105.16
204	420	0.437153	151.665	1288.76
205	421	0.448213	151.866	1477.46
206	425	0.456542	152.074	1671.49
207	425	0.464904	152.29	1869.07
208	426	0.473299	152.514	2070.7
209	430	0.484544	152.749	2279.05
210	434	0.493018	152.992	2493.02
211	444	0.501527	153.244	2715.7
212	450	0.51293	153.507	2946.52
213	451	0.521527	153.779	3181.73
214	457	0.530162	154.06	3424.01
215	460	0.538836	154.35	3671.88
216	467	0.550465	154.653	3928.94
217	468	0.559237	154.966	4190.67
218	470	0.568052	155.289	4457.65

219	475	0.579873	155.625	4733.09
220	475	0.588793	155.972	5012.77
221	500	0.597761	156.329	5311.65
222	500	0.606775	156.697	5615.04
223	504	0.618872	157.08	5926.95
224	516	0.628006	157.475	6251
225	517	0.637192	157.881	6580.43
226	523	0.646431	158.299	6918.51
227	558	0.658838	158.733	7286.14
228	750	0.668209	159.179	7787.3
229	880	0.677639	159.638	8383.62
230	1500	0.690309	160.115	9419.08
231	1550	0.699883	160.605	10503.9
232	1700	0.709522	161.108	11710.1
233	1897	0.719228	161.625	13074.5
234	1900	0.732275	162.162	14465.8
235	2000	0.742143	162.712	15950.1
236	2000	0.752084	163.278	17454.2
237	2133	0.765456	163.864	19087
238	2150	0.775574	164.465	20754.4
239	2200	0.785774	165.083	22483.1
240	2300	0.796056	165.717	24314.1
241	2350	0.809896	166.372	26217.3
242	2360	0.820379	167.046	28153.4
243	2367	0.830953	167.736	30120.3
244	2400	0.841621	168.444	32140.2
245	2400	0.855996	169.177	34194.6
246	2460	0.866894	169.929	36327.1
247	2500	0.877897	170.699	38521.9
248	2500	0.892733	171.496	40753.7
249	2500	0.903992	172.313	43013.7
250	2510	0.915365	173.151	45311.3
251	2520	0.926859	174.01	47646.9
252	2550	0.942375	174.898	50050
253	2620	0.954165	175.809	52549.9
254	2630	0.966088	176.742	55090.7
255	2650	0.982202	177.707	57693.6
256	2650	0.994457	178.696	60328.9
257	2650	1.00687	179.71	62997.1
258	2700	1.01943	180.749	65749.5
259	2700	1.03643	181.823	68547.9
260	2700	1.04939	182.924	71381.2
261	2700	1.06252	184.053	74250
262	2750	1.08032	185.22	77220.9
263	2767	1.0939	186.417	80247.7
264	2790	1.10768	187.644	83338.2
265	2900	1.12168	188.902	86591
266	2900	1.14069	190.203	89899
267	2900	1.15522	191.538	93249.2
268	2933	1.17	192.907	96680.8
269	2940	1.18504	194.311	100165
270	2950	1.20553	195.764	103721
271	2950	1.22123	197.256	107324
272	2967	1.23724	198.786	110995
273	3000	1.25908	200.372	114772
274	3000	1.27588	202	118599
275	3050	1.29303	203.672	122543

276	3050	1.31058	205.389	126541
277	3050	1.33462	207.17	130611
278	3100	1.35317	209.001	134806
279	3150	1.3722	210.884	139128
280	3200	1.39838	212.84	143603
281	3200	1.41865	214.852	148143
282	3200	1.43953	216.925	152749
283	3240	1.46106	219.059	157483
284	3250	1.49085	221.282	162328
285	3267	1.5141	223.575	167275
286	3300	1.5382	225.941	172351
287	3400	1.56322	228.384	177666
288	3400	1.59819	230.938	183100
289	3460	1.62576	233.582	188725
290	3600	1.65463	236.319	194682
291	3600	1.6954	239.194	200785
292	3630	1.72793	242.179	207058
293	3650	1.76241	245.286	213490
294	3680	1.79912	248.522	220111
295	3800	1.85218	251.953	227149
296	3870	1.8957	255.547	234486
297	3890	1.94314	259.322	242044
298	4000	2.01409	263.379	250101
299	4010	2.07485	267.684	258421
300	4300	2.14441	272.282	267642
301	4340	2.22621	277.238	277304
302	5040	2.36561	282.835	289226
303	5100	2.51213	289.145	302038
304	5940	2.74777	296.696	318360

Data Set Standard Deviation = 1281.43
Numerator = 1.01353e+011
Denominator = 1.47619e+011
W Statistic = 0.686587 = 1.01353e+011 / 1.47619e+011

5% Critical value of 0.976 exceeds 0.686587
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.686587
Evidence of non-normality at 99% level of significance

Levene's Test for Equal of Variance

Parameter: Sulfate

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Overall Mean = 245.253
Overall Std Dev = 491.733
Overall Total = 74556.8
SS Groups = 1.92518e+007
SS Total = 7.32658e+007

ANOVA Table

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Squares	F
Between Groups	1.92518e+007	4	4.81296e+006	26.6426
Error (within groups)	5.4014e+007	299	180649	
Totals	7.32658e+007	303		

95% F-Statistic = 2.37

26.6426 exceeds 2.37; assumption of equal variance should be rejected

Group: MW#93-1	Sample	Residual
	12/15/1994	160.395
	3/14/1995	80.3947
	6/21/1995	394.605
	12/14/1995	35.3947
	3/6/1996	140.395
	4/25/1996	83.3947
	10/2/1996	55.3947
	12/10/1996	95.3947
	3/11/1997	77.3947
	4/15/1997	105.395
	8/14/1997	35.3947
	12/4/1997	4.60526
	3/31/1998	125.395
	6/23/1998	144.605
	8/11/1998	5.39474
	12/8/1998	85.3947
	3/9/1999	65.3947
	6/8/1999	52.6053
	8/19/1999	32.6053
	12/14/1999	45.3947
	3/7/2000	17.6053
	6/23/2000	54.6053
	12/12/2000	64.6053
	3/27/2001	5.39474
	6/28/2001	69.6053
	9/10/2001	34.6053
	12/18/2001	34.6053
	3/19/2002	69.6053
	6/26/2002	64.6053
	9/18/2002	161.605

12/11/2002	74.6053
3/13/2003	94.6053
6/25/2003	78.6053
9/26/2003	104.605
12/10/2003	114.605
3/9/2004	88.6053
6/24/2004	144.605
9/15/2004	119.605
12/15/2004	202.605
3/16/2005	524.605
6/15/2005	333.395
9/21/2005	111.605
12/21/2005	119.605
3/15/2006	19.6053
6/21/2006	64.6053
12/20/2006	25.3947
6/12/2007	95.3947
12/17/2007	55.3947
6/11/2008	19.6053
12/3/2008	15.3947
6/17/2009	115.395
12/9/2009	195.395
6/17/2010	65.3947
12/22/2010	51.3947
6/29/2011	49.3947
12/7/2011	100.395
6/6/2012	80.3947
12/12/2012	54.3947
6/19/2013	53.6053
12/11/2013	49.3947
6/11/2014	39.3947
12/3/2014	63.3947
6/17/2015	69.3947
12/1/2015	56.3947
6/22/2016	105.395
12/20/2016	80.3947
6/6/2017	90.3947
11/7/2017	74.3947
2/27/2018	56.3947
9/27/2018	50.3947
5/7/2019	80.3947
11/21/2019	56.3947
6/25/2020	9.39474
11/17/2020	9.39474
5/26/2021	44.6053
11/17/2021	148.605

Group: MW#03-1	**Date**	**Residual**
	6/24/2004	5.66914
	9/15/2004	39.6691
	12/15/2004	25.6691
	3/16/2005	14.3309
	6/15/2005	13.3309
	9/21/2005	19.3309
	12/20/2006	18.6691
	6/12/2007	51.6691
	12/17/2007	83.6691

6/11/2008	13.3309
12/3/2008	53.6691
6/17/2009	15.3309
12/9/2009	21.3309
6/17/2010	20.3309
12/22/2010	13.4309
6/29/2011	14.7309
12/7/2011	18.2309
6/6/2012	22.0309
6/19/2013	20.1309
12/11/2013	7.23086
6/11/2014	90.6691
12/3/2014	16.6309
6/17/2015	28.4709
12/1/2015	24.2309
6/22/2016	26.0309
12/20/2016	5.43086
6/6/2017	27.4109
11/7/2017	21.9309
2/27/2018	23.7309
5/7/2019	24.1309
11/21/2019	147.669
6/25/2020	30.1309
11/17/2020	17.4309
5/26/2021	31.0609
11/16/2021	27.3009

Group: MW#03-2	**Date**	**Residual**
	6/24/2004	108.374
	9/15/2004	148.374
	12/15/2004	126.374
	3/16/2005	102.374
	6/15/2005	157.374
	9/21/2005	100.374
	12/21/2005	108.374
	3/15/2006	150.374
	12/20/2006	146.374
	6/12/2007	112.374
	12/17/2007	50.3744
	6/11/2008	113.374
	12/3/2008	29.6256
	6/17/2009	96.3744
	12/9/2009	100.374
	6/17/2010	74.3744
	12/22/2010	81.4744
	6/29/2011	79.3744
	12/7/2011	81.5744
	6/6/2012	73.3744
	12/12/2012	69.3744
	6/19/2013	67.3744
	12/11/2013	74.3744
	6/11/2014	170.074
	12/3/2014	22.3744
	6/17/2015	1.37436
	12/1/2015	16.6256
	6/22/2016	73.6256
	12/20/2016	270.626

6/6/2017	151.626
11/7/2017	335.626
2/27/2018	287.626
9/27/2018	245.626
5/7/2019	150.774
11/21/2019	213.626
6/25/2020	228.626
11/17/2020	196.626
5/26/2021	240.626
11/17/2021	276.626

Group: MW#93-2

Date	Residual
12/15/1994	821.608
3/14/1995	1271.61
6/21/1995	2636.61
12/14/1995	454.608
3/6/1996	671.608
4/25/1996	821.608
10/2/1996	445.392
12/10/1996	1178.39
3/11/1997	1121.61
4/15/1997	1321.61
8/14/1997	828.392
12/4/1997	1478.39
3/31/1998	321.608
6/23/1998	428.392
8/11/1998	228.392
12/8/1998	228.392
3/9/1999	778.392
6/8/1999	328.392
8/19/1999	924.608
12/14/1999	321.608
3/7/2000	578.392
6/23/2000	578.392
12/12/2000	178.392
3/27/2001	688.608
6/28/2001	71.6077
9/10/2001	171.608
12/18/2001	128.392
3/19/2002	145.392
6/26/2002	228.392
9/18/2002	78.3923
12/11/2002	111.392
3/13/2003	78.3923
6/25/2003	121.608
9/26/2003	54.6077
12/10/2003	121.608
3/9/2004	271.608
6/24/2004	171.608
9/15/2004	121.608
12/15/2004	128.392
3/16/2005	378.392
6/15/2005	171.608
9/21/2005	378.392
12/21/2005	378.392
3/15/2006	178.392
6/21/2006	121.608

12/20/2006	321.608
2/21/2007	921.608
6/12/2007	421.608
12/17/2007	278.392
6/11/2008	471.608
12/3/2008	478.392
12/15/2008	421.608
6/17/2009	521.608
12/9/2009	621.608
6/17/2010	78.3923
12/22/2010	638.392
6/29/2011	191.608
12/7/2011	301.608
6/6/2012	461.608
12/12/2012	418.392
6/19/2013	311.608
12/11/2013	361.608
6/11/2014	31.6077
12/3/2014	118.392
6/17/2015	2707.61
12/1/2015	778.392
6/22/2016	201.608
12/20/2016	978.392
6/6/2017	808.392
11/7/2017	1518.39
2/27/2018	1048.39
9/27/2018	858.392
5/7/2019	1068.39
11/21/2019	2809.21
6/25/2020	2298.61
11/16/2020	2218.39
5/26/2021	2278.39
11/17/2021	3118.39

Group: MW#93-3	**Date**	**Residual**
	12/15/1994	82.6763
	3/14/1995	82.6763
	6/21/1995	82.6763
	12/14/1995	82.6763
	3/6/1996	82.6763
	4/25/1996	82.6763
	10/2/1996	81.6763
	12/10/1996	82.6763
	3/11/1997	80.6763
	4/15/1997	77.6763
	8/14/1997	81.6763
	12/4/1997	84.6763
	3/31/1998	47.6763
	6/23/1998	88.6763
	8/11/1998	83.6763
	12/8/1998	90.6763
	3/9/1999	82.6763
	6/8/1999	89.6763
	8/19/1999	82.6763
	12/14/1999	82.6763
	3/7/2000	79.6763
	6/23/2000	78.6763

12/12/2000	85.6763
3/27/2001	89.6763
6/28/2001	82.6763
9/10/2001	72.6763
12/18/2001	73.6763
3/19/2002	84.6763
6/26/2002	84.6763
9/18/2002	84.6763
12/11/2002	86.6763
3/13/2003	74.6763
6/25/2003	79.6763
9/26/2003	76.6763
12/10/2003	58.6763
3/9/2004	37.3237
6/24/2004	68.6763
9/15/2004	75.6763
12/15/2004	66.6763
3/16/2005	63.6763
6/15/2005	66.6763
9/21/2005	73.6763
12/21/2005	69.6763
3/15/2006	73.6763
6/21/2006	71.6763
12/20/2006	50.6763
6/12/2007	89.6763
12/17/2007	64.6763
6/11/2008	65.6763
12/3/2008	81.6763
6/17/2009	76.6763
12/9/2009	80.6763
6/17/2010	47.6763
12/22/2010	66.8763
6/29/2011	58.4763
12/7/2011	55.2763
6/6/2012	54.3763
12/12/2012	66.8763
6/19/2013	31.0763
12/11/2013	66.1763
6/11/2014	36.4763
12/3/2014	56.6763
6/17/2015	16.3237
12/1/2015	11.6763
6/22/2016	34.1763
12/20/2016	26.0763
6/6/2017	74.4763
11/7/2017	12.3763
2/27/2018	28.4763
9/27/2018	16.8763
5/7/2019	12.3237
11/21/2019	3917.32
6/25/2020	235.324
11/16/2020	165.324
5/26/2021	133.324
11/17/2021	193.324

Non-Parametric Prediction Interval

Intra-Well Comparison for MW#93-3

Parameter: Total Dissolved Solids

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 19
Maximum Baseline Concentration = 1550
Confidence Level = 95%
False Positive Rate = 5%

Baseline Measurements	Date	Value
	6/6/2012	834
	12/12/2012	669
	6/19/2013	861
	12/11/2013	697
	6/11/2014	986
	12/3/2014	743
	6/17/2015	911
	12/1/2015	1050
	6/22/2016	1390
	12/20/2016	1189
	6/6/2017	780
	11/7/2017	1250
	2/27/2018	1190
	9/27/2018	1420
	5/7/2019	1510
	11/21/2019	1550
	6/25/2020	1310
	11/16/2020	1310
	5/26/2021	1240

Date	Count	Mean	Significant
11/17/2021	1	1120	FALSE

Non-Parametric Prediction Interval

Inter-Well Comparison

Parameter: Total Dissolved Solids

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Percent Non-Detects = 0%
Number of comparisons = 4
Future Samples (k) = 4
Recent Dates = 1
Background Measurements (n) = 20
Maximum Background Value = 1050
Confidence Level = 83.3%
False Positive Rate = 16.7%

Location	Date	Count	Mean	Significant
MW#93-2	**11/17/2021**	**1**	**8020**	**TRUE**
MW#93-3	**11/17/2021**	**1**	**1120**	**TRUE**
MW#03-2	**11/17/2021**	**1**	**1490**	**TRUE**
MW#03-1	11/16/2021	1	160	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for MW#03-2

Parameter: Total Dissolved Solids

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 19
Maximum Baseline Concentration = 1940
Confidence Level = 95%
False Positive Rate = 5%

Baseline Measurements	Date	Value
	9/27/2018	1630
	5/7/2019	1240
	11/21/2019	1760
	6/25/2020	1940
	11/17/2020	1770
	5/26/2021	1790
	11/17/2021	1490

Date	Count	Mean	Significant
11/17/2021	1	1490	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for MW#93-2

Parameter: Total Dissolved Solids

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 19
Maximum Baseline Concentration = 46400
Confidence Level = 95%
False Positive Rate = 5%

Baseline Measurements	Date	Value
	6/6/2012	7530
	12/12/2012	7920
	6/19/2013	7280
	12/11/2013	7440
	6/11/2014	7160
	12/3/2014	7700
	6/17/2015	730
	12/1/2015	7950
	6/22/2016	3160
	12/20/2016	8780
	6/6/2017	7350
	11/7/2017	7820
	2/27/2018	7560
	9/27/2018	8890
	5/7/2019	8480
	11/21/2019	8400
	6/25/2020	8860
	11/16/2020	46400
	5/26/2021	7520

Date	Count	Mean	Significant
11/17/2021	1	8020	FALSE

Shapiro-Francia Test of Normality

Parameter: Total Dissolved Solids

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Number of Measurements = 73

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	80	-2.22621	4.956	-178.097
2	88	-1.92684	8.6687	-347.658
3	102	-1.75069	11.7336	-526.228
4	151	-1.60725	14.3169	-768.923
5	160	-1.49852	16.5624	-1008.69
6	320	-1.39838	18.5179	-1456.17
7	669	-1.31652	20.2511	-2336.92
8	697	-1.23724	21.7818	-3199.27
9	730	-1.17	23.1507	-4053.37
10	743	-1.10306	24.3675	-4872.95
11	780	-1.04505	25.4596	-5688.09
12	810	-0.986272	26.4323	-6486.97
13	830	-0.93459	27.3058	-7262.68
14	834	-0.881587	28.083	-7997.92
15	838	-0.834498	28.7794	-8697.23
16	840	-0.785774	29.3968	-9357.28
17	860	-0.742143	29.9476	-9995.52
18	861	-0.696684	30.433	-10595.4
19	868	-0.655726	30.8629	-11164.5
20	878	-0.612813	31.2385	-11702.6
21	880	-0.573953	31.5679	-12207.7
22	882	-0.533048	31.8521	-12677.8
23	907	-0.49585	32.0979	-13127.6
24	911	-0.456542	32.3063	-13543.5
25	942	-0.420664	32.4833	-13939.7
26	952	-0.382622	32.6297	-14304
27	961	-0.347787	32.7507	-14638.2
28	966	-0.310738	32.8472	-14938.4
29	966	-0.276714	32.9238	-15205.7
30	971	-0.240426	32.9816	-15439.1
31	986	-0.207012	33.0245	-15643.3
32	988	-0.171285	33.0538	-15812.5
33	1000	-0.138305	33.0729	-15950.8
34	1000	-0.102953	33.0835	-16053.7
35	1050	-0.0702426	33.0885	-16127.5
36	1050	-0.0350997	33.0897	-16164.3
37	1120	0	33.0897	-16164.3
38	1189	0.0350997	33.0909	-16122.6
39	1190	0.0702426	33.0958	-16039
40	1240	0.102953	33.1064	-15911.4
41	1240	0.138305	33.1256	-15739.9
42	1250	0.171285	33.1549	-15525.8
43	1310	0.207012	33.1978	-15254.6
44	1310	0.240426	33.2556	-14939.6
45	1390	0.276714	33.3321	-14555
46	1420	0.310738	33.4287	-14113.7
47	1490	0.347787	33.5497	-13595.5

48	1510	0.382622	33.6961	-13017.8
49	1550	0.420664	33.873	-12365.7
50	1630	0.456542	34.0814	-11621.6
51	1760	0.49585	34.3273	-10748.9
52	1770	0.533048	34.6115	-9805.39
53	1790	0.573953	34.9409	-8778.01
54	1940	0.612813	35.3164	-7589.16
55	3160	0.655726	35.7464	-5517.06
56	7160	0.696684	36.2318	-528.803
57	7280	0.742143	36.7825	4874
58	7350	0.785774	37.4	10649.4
59	7440	0.834498	38.0964	16858.1
60	7520	0.881587	38.8736	23487.6
61	7530	0.93459	39.747	30525.1
62	7560	0.986272	40.7198	37981.3
63	7700	1.04505	41.8119	46028.2
64	7820	1.10306	43.0286	54654.1
65	7920	1.17	44.3975	63920.6
66	7950	1.23724	45.9283	73756.6
67	8020	1.31652	47.6615	84315.1
68	8400	1.39838	49.617	96061.4
69	8480	1.49852	51.8625	108769
70	8780	1.60725	54.4458	122880
71	8860	1.75069	57.5107	138392
72	8890	1.92684	61.2234	155521
73	46400	2.22621	66.1794	258817

Data Set Standard Deviation = 5919.22
Numerator = 6.69863e+010
Denominator = 1.66949e+011
W Statistic = 0.401238 = 6.69863e+010 / 1.66949e+011

5% Critical value of 0.968 exceeds 0.401238
Evidence of non-normality at 95% level of significance

1% Critical value of 0.956 exceeds 0.401238
Evidence of non-normality at 99% level of significance

Levene's Test for Equal of Variance

Parameter: Total Dissolved Solids

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Overall Mean = 1121.32
Overall Std Dev = 4464.53
Overall Total = 81856
SS Groups = 1.85716e+008
SS Total = 1.43511e+009

ANOVA Table

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Squares	F
Between Groups	1.85716e+008	4	4.64289e+007	2.52696
Error (within groups)	1.24939e+009	68	1.83734e+007	
Totals	1.43511e+009	72		

95% F-Statistic = 2.44724

2.52696 exceeds 2.44724; assumption of equal variance should be rejected

Group: MW#93-1	Sample	Residual
	6/6/2012	51.45
	12/12/2012	39.45
	6/19/2013	22.55
	12/11/2013	41.55
	6/11/2014	51.55
	12/3/2014	12.45
	6/17/2015	37.45
	12/1/2015	59.45
	6/22/2016	79.45
	12/20/2016	81.45
	6/6/2017	109.45
	11/7/2017	41.45
	2/27/2018	89.45
	9/27/2018	130.55
	5/7/2019	32.55
	11/21/2019	46.55
	6/25/2020	80.55
	11/17/2020	46.55
	5/26/2021	68.55
	11/17/2021	80.55

Group: MW#93-2	Date	Residual
	6/6/2012	1717.5
	12/12/2012	1327.5
	6/19/2013	1967.5
	12/11/2013	1807.5
	6/11/2014	2087.5
	12/3/2014	1547.5
	6/17/2015	8517.5
	12/1/2015	1297.5

6/22/2016	6087.5
12/20/2016	467.5
6/6/2017	1897.5
11/7/2017	1427.5
2/27/2018	1687.5
9/27/2018	357.5
5/7/2019	767.5
11/21/2019	847.5
6/25/2020	387.5
11/16/2020	37152.5
5/26/2021	1727.5
11/17/2021	1227.5

Group: MW#93-3	Date	Residual
	6/6/2012	266.5
	12/12/2012	431.5
	6/19/2013	239.5
	12/11/2013	403.5
	6/11/2014	114.5
	12/3/2014	357.5
	6/17/2015	189.5
	12/1/2015	50.5
	6/22/2016	289.5
	12/20/2016	88.5
	6/6/2017	320.5
	11/7/2017	149.5
	2/27/2018	89.5
	9/27/2018	319.5
	5/7/2019	409.5
	11/21/2019	449.5
	6/25/2020	209.5
	11/16/2020	209.5
	5/26/2021	139.5
	11/17/2021	19.5

Group: MW#03-2	Date	Residual
	9/27/2018	30
	5/7/2019	420
	11/21/2019	100
	6/25/2020	280
	11/17/2020	110
	5/26/2021	130
	11/17/2021	170

Group: MW#03-1	Date	Residual
	5/7/2019	48.1667
	11/21/2019	70.1667
	6/25/2020	0.833333
	11/17/2020	169.833
	5/26/2021	62.1667
	11/16/2021	9.83333

Concentrations (ppb)

Parameter: Thallium

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Measurements: 70
Total Non-Detect: 70
Percent Non-Detects: 100%
Total Background Measurements: 14
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
MW#93-1	14	14 (100%)	5/24/2018	ND<0.01	ND<0.01
			6/19/2018	ND<0.01	ND<0.01
			7/19/2018	ND<0.01	ND<0.01
			8/22/2018	ND<0.01	ND<0.01
			9/19/2018	ND<0.01	ND<0.01
			10/18/2018	ND<0.01	ND<0.01
			11/20/2018	ND<0.01	ND<0.01
			12/20/2018	ND<0.01	ND<0.01
			11/21/2019	ND<0.001	ND<0.001
			2/11/2020	ND<0.01	ND<0.01
			6/25/2020	ND<0.001	ND<0.001
			11/17/2020	ND<0.001	ND<0.001
			5/26/2021	ND<0.001	ND<0.001
			11/17/2021	ND<0.001	ND<0.001

There are 4 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
MW#03-1	14	14 (100%)	5/24/2018	ND<0.01	ND<0.01
			6/19/2018	ND<0.01	ND<0.01
			7/19/2018	ND<0.01	ND<0.01
			8/22/2018	ND<0.01	ND<0.01
			10/18/2018	ND<0.01	ND<0.01
			11/20/2018	ND<0.01	ND<0.01
			12/20/2018	ND<0.01	ND<0.01
			3/26/2019	ND<0.01	ND<0.01
			11/21/2019	ND<0.001	ND<0.001
			2/11/2020	ND<0.01	ND<0.01
			6/25/2020	ND<0.001	ND<0.001
			11/17/2020	ND<0.001	ND<0.001
			5/26/2021	ND<0.001	ND<0.001
			11/16/2021	ND<0.001	ND<0.001
MW#03-2	14	14 (100%)	5/24/2018	ND<0.01	ND<0.01
			6/19/2018	ND<0.01	ND<0.01
			7/19/2018	ND<0.01	ND<0.01
			8/22/2018	ND<0.01	ND<0.01
			9/19/2018	ND<0.01	ND<0.01
			10/18/2018	ND<0.01	ND<0.01
			11/20/2018	ND<0.01	ND<0.01
			12/20/2018	ND<0.01	ND<0.01
			11/21/2019	ND<0.001	ND<0.001
			2/11/2020	ND<0.01	ND<0.01
			6/25/2020	ND<0.001	ND<0.001

			11/17/2020	ND<0.001	ND<0.001
			5/26/2021	ND<0.001	ND<0.001
			11/17/2021	ND<0.001	ND<0.001
MW#93-2	14	14 (100%)	5/24/2018	ND<0.01	ND<0.01
			6/19/2018	ND<0.01	ND<0.01
			7/19/2018	ND<0.01	ND<0.01
			8/22/2018	ND<0.01	ND<0.01
			9/19/2018	ND<0.01	ND<0.01
			10/18/2018	ND<0.01	ND<0.01
			11/20/2018	ND<0.01	ND<0.01
			12/20/2018	ND<0.01	ND<0.01
			11/21/2019	ND<0.001	ND<0.001
			2/11/2020	ND<0.01	ND<0.01
			6/25/2020	ND<0.001	ND<0.001
			11/16/2020	ND<0.001	ND<0.001
			5/26/2021	ND<0.001	ND<0.001
			11/17/2021	ND<0.001	ND<0.001
MW#93-3	14	14 (100%)	5/24/2018	ND<0.01	ND<0.01
			6/19/2018	ND<0.01	ND<0.01
			7/19/2018	ND<0.01	ND<0.01
			8/22/2018	ND<0.01	ND<0.01
			9/19/2018	ND<0.01	ND<0.01
			10/18/2018	ND<0.01	ND<0.01
			11/20/2018	ND<0.01	ND<0.01
			12/20/2018	ND<0.01	ND<0.01
			11/21/2019	ND<0.001	ND<0.001
			2/11/2020	ND<0.01	ND<0.01
			6/25/2020	ND<0.001	ND<0.001
			11/16/2020	ND<0.001	ND<0.001
			5/26/2021	ND<0.001	ND<0.001
			11/17/2021	ND<0.001	ND<0.001

There are 0 unused locations

Loc.	Meas.	ND	Date	Conc.	Original