



July 29, 2025

Mr. Mark Bertram
Big Rivers Electric Corporation
Administrative Services
Director Environmental Services
710 West 2nd Street
Owensboro, KY 42301

Re: Statistical Evaluation of April 2025 Assessment Monitoring Groundwater Data
D.B. Wilson Station Phase II CCR Landfill in Centertown, Kentucky
Agency Interest ID #: 3319

Dear Mr. Bertram:

This letter presents the results of the statistical evaluation of analytical data from the April 2025 assessment monitoring event performed at the D.B. Wilson Station Phase II Coal Combustion Residual (CCR) Landfill in Centertown, Kentucky in accordance with the requirements of the U.S. Environmental Protection Agency's *Standards for the Disposal of Coal Combustion Residuals in Landfills and Surface Impoundments* (Title 40 Code of Federal Regulations [CFR] Part 257, Subpart D). This letter also presents a comparison of the April 2025 sampling results to groundwater protection standards (GWPSs). The GWPSs for the groundwater monitoring network were reviewed and updated as part of the statistical evaluation completed for the April 2025 sampling event and are presented in **Table 1**. These GWPSs will continue to be reviewed and updated as additional data are collected. A comparison of the April 2025 data to the updated GWPSs is presented in **Table 2**. The statistical evaluation presented herein was performed in accordance with the *Update to Certification of Statistical Method for Evaluating Groundwater in accordance with 40 CFR § 257.93 at D.B Wilson Station Phase II CC Landfill in Centertown, Kentucky* dated May 25, 2022.

In April 2025, the Phase II CCR Landfill Groundwater Monitoring Well Network was sampled for Appendix III and Appendix IV parameters per the requirements of 40 CFR §257.95(d)(1). Interwell prediction limit statistical analyses were performed for these well/constituent pairs and are discussed subsequently. GWPSs were also developed in accordance with 40 CFR §257.95(h), which describes a GWPS as one of the following: the higher value between a statistically calculated background concentration for an analyte; the established maximum concentration limit (MCL); or the GWPS criteria for select Appendix IV parameters without an MCL presented in 40 CFR §257.95(h)(2). This letter presents the results of the statistical evaluation of the April 2025 assessment monitoring event for inclusion in the Phase II CCR Landfill Operating Record.

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Statistical Evaluation of Phase II CCR Landfill Compliance Monitoring Well Network Evaluation

A review of the interwell prediction limit evaluation was performed to compare the April 2025 concentrations of Appendix III and Appendix IV parameters observed at CCR downgradient compliance Monitoring Wells MW-5, MW-6, MW-7, and MW-10 to calculated prediction limits (i.e., background limits) that were established using data collected from April of 2016 through April of 2025 from upgradient Monitoring Well MW-8. Note, any data qualified as rejected or considered an outlier (statistically or flagged using professional judgment) during the data review were excluded from the statistical analysis. Certain parameters were detected in April 2025 at concentrations above the calculated background limits (equivalent to the MW-8 prediction limits), and a summary is included in **Attachment 1**. This included the following well/constituent pairs for downgradient compliance monitoring wells with statistically significant increases (SSIs) above calculated background limits:

Appendix III Parameters:

- Boron (MW-5, MW-6, MW-7, and MW-10)
- Calcium (MW-5, MW-6, MW-7, and MW-10)
- Chloride (MW-5, MW-6, MW-7, and MW-10)
- Total dissolved solids (TDS) (MW-5, MW-6, MW-7 and MW-10)

Appendix IV Parameters:

- Cobalt (MW-10)
- Lithium (MW-5, MW-6 and MW-7)

The exceedances of background concentrations were generally consistent with the September-October 2024 statistical results. The exception is for the mercury SSI previously noted for Monitoring Well MW-10. Mercury has not been detected historically in these monitoring wells yet exhibited detections in the September-October 2024 sampling event. This April 2025 sampling event served as the verification sampling for these previous detections. No mercury detections were observed; thus, these previous mercury detections were determined to be anomalous results and were excluded from the statistical analyses.

All other above-noted Appendix III and Appendix IV SSIs continue to occur at the downgradient compliance monitoring wells in the April 2025 statistical analysis.

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The Appendix IV constituents with SSIs (cobalt and lithium) were further evaluated to determine whether they are present at statistically significant levels (SSLs) over the GWPSs by calculating the lower confidence limit (LCL) at 95% confidence for each well and constituent using the Baseline, Detection, and Assessment monitoring results collected to date from each monitoring well. For a constituent to be present at an SSL over the GWPS, its LCL must be greater than the GWPS. The comparison of the calculated LCLs with the GWPSs for cobalt and lithium at downgradient compliance Monitoring Wells MW-5, MW-6, MW-7, and MW-10 resulted in the following well/constituent pair(s) with a SSL above the GWPS:

- Cobalt (MW-10)

The LCLs for the remaining well/constituent pairs for cobalt and lithium were either equal to or less than the GWPS; thus, they are not considered SSLs. **Attachment 1** provides a summary of the calculated LCLs in comparison with the GWPSs. The cobalt SSL above the GWPS was consistent with the September-October 2024 SSI at Monitoring Well MW-10, as this SSL was present in groundwater the past four events.

Given that certain Appendix III and IV constituents were observed within the Phase II CCR Landfill groundwater monitoring network at concentrations above their respective calculated background limit and/or the LCL for a certain Appendix IV constituent was greater than the corresponding GWPS, these results do not warrant a transition to detection monitoring per the requirements of 40 CFR §257.95(f) and assessment monitoring will continue for the next second half semiannual monitoring event in 2025.

Sincerely,

Burns & McDonnell Engineering Company, Inc.

A handwritten signature in blue ink that reads "Chris Hoglund". The signature is fluid and cursive, with the first and last names clearly legible.

Chris Hoglund, PG
Project Manager



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Attachments:

Table 1 – Calculated Background and Groundwater Protection Standards for Groundwater

Table 2 – Summary of April 2025 Analytical Results

Attachment 1 – Sanitas™ Statistical Outputs for Phase II CCR Landfill Compliance Monitoring Network

cc: Diana Merritt, BREC Wilson Station

TABLES

Table 1
Calculated Background and Groundwater Protection Standards for Groundwater
D.B. Wilson Station Phase II CCR Landfill in Centertown, Kentucky

Detection Monitoring Constituents (Appendix III)	Units	Background*	MCL	40 CFR §257.95(h)(2) Criteria	Groundwater Protection Standard
Boron	mg/L	0.0518	--	--	--
Calcium	mg/L	349	--	--	--
pH	SU	4.67 - 6.84	--	--	--
Total Dissolved Solids	mg/L	1750	--	--	--
Chloride	mg/L	5.532	--	--	--
Fluoride	mg/L	0.486	4	--	4
Sulfate	mg/L	2180	--	--	--
Assessment Monitoring Constituents (Appendix IV)	Units	Background*	MCL	40 CFR §257.95(h)(2) Criteria	Groundwater Protection Standard
Antimony	mg/L	0.0025	0.006	--	0.006
Arsenic	mg/L	0.0144	0.01	--	0.0144
Barium	mg/L	0.07	2	--	2
Beryllium	mg/L	0.002	0.004	--	0.004
Cadmium	mg/L	0.0005	0.005	--	0.005
Chromium	mg/L	0.0224	0.1	--	0.1
Cobalt	mg/L	0.009	--	0.006	0.009
Fluoride	mg/L	0.486	4	--	4
Lead	mg/L	0.012	--	0.015	0.015
Lithium	mg/L	0.02	--	0.04	0.04
Mercury	mg/L	0.000005	0.002	--	0.002
Molybdenum	mg/L	0.0187	--	0.1	0.1
Combined Radium 226 and 228**	pCi/L	2.94	5	--	5
Selenium	mg/L	0.0015	0.05	--	0.05
Thallium	mg/L	0.001	0.002	--	0.002

Notes:

*Background concentrations were determined utilizing interwell prediction limits (Attachment 1). Upgradient Monitoring Well MW-8 was used to calculate background concentrations. This included background data ranging from April 2016 through April 2025. For pH, background is between those values presented.

**Combined radium is reported with an uncertainty range. However, this range cannot be incorporated into statistical calculations as it varies per result and is not a standard value. Therefore, to maintain consistency in reporting these results, the reported laboratory concentration was used for the statistical analyses.

CFR - Code of Federal Regulations

mg/L - milligrams per Liter

pCi/L - picocuries per Liter

MCL - maximum contaminant level

SU - standard units

Table 2
Summary of April 2025 Analytical Results
D.B. Wilson Station Phase II CCR Landfill in Centertown, Kentucky

Sample Location: Sample Date: Laboratory ID(s): All analytes excl. Radium/Radium only Note(s):			1st Half 2025 Calculated Background ¹	GWPS ²	MW-5 4/29/2025 5044390-11 Downgradient	MW-6 4/29/2025 5044390-13 Downgradient	MW-7 4/29/2025 5044390-15 Downgradient	MW-8 4/28/2025 5044390-17 Upgradient Well	MW-10 4/29/2025 5044390-19 Downgradient
Analytical Method	Analyte	Unit			CCR Compliance Monitoring Well Network				
Appendix III - Detection Monitoring									
6010B	Boron	mg/L	0.0518	--	0.96 M1	0.80	6.87 D1	0.10 U	0.39
6010B	Calcium	mg/L	349	--	789 D1, M3	542 D1	545 D1	236 D1	471 D1
In Situ	pH	SU	4.67 - 6.84	--	6.40	6.4	6.54	6.58	5.98
2540 C-2015	Total Dissolved Solids	mg/L	1750	--	3540	2630	2240	1680	1910
300.0 REV 2.1	Chloride	mg/L	5.532	--	276 D	29.9	222 D	3.6	51.1
300.0 REV 2.1	Fluoride	mg/L	0.486	4	0.20 U	0.20 U	0.22	0.25	0.20 U
300.0 REV 2.1	Sulfate	mg/L	2180	--	1580 D, M1	1650 D	1310 D	815 D	1710 D
Appendix IV - Assessment Monitoring									
6020A	Antimony	mg/L	0.0025	0.006	0.005 M1, U	0.005 U	0.005 U	0.005 U	0.005 U
6020A	Arsenic	mg/L	0.0144	0.0144	0.0032	0.0044	0.005	0.0059	0.0016
6020A	Barium	mg/L	0.07	2	0.013	0.012	0.015	0.023	0.008
6020A	Beryllium	mg/L	0.002	0.004	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
6020A	Cadmium	mg/L	0.0005	0.005	0.001 U	0.001 U	0.001 U	0.001 U	0.0001 J
6020A	Chromium	mg/L	0.0224	0.1	0.0006 J	0.002 U	0.0006 J	0.0017 J	0.002 U
6020A	Cobalt	mg/L	0.009	0.009	0.006	0.009	0.004 U	0.004 U	0.079
300.0 REV 2.1	Fluoride	mg/L	0.486	4	0.20 U	0.20 U	0.22	0.25	0.20 U
6020A	Lead	mg/L	0.012	0.015	0.0007 J	0.002 U	0.002 U	0.0006 J	0.002 U
6020A	Lithium	mg/L	0.02	0.04	0.04 M1	0.04	0.03	0.009 J	0.007 J
245.7 REV 2	Mercury	mg/L	0.000005	0.002	0.000005 M2, Y2, U	0.000005 U	0.000005 U	0.000005 U	0.000005 U
6020A	Molybdenum	mg/L	0.0187	0.1	0.005 J	0.006 J	0.005 J	0.01	0.01 U
903.1/904.0	Combined Radium 226 and 228 ³	pCi/L	2.94	5	0.881	0.728	1.07	1.77	1.14
6020A	Selenium	mg/L	0.0015	0.05	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
6020A	Thallium	mg/L	0.001	0.002	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U

Notes

1 - Background concentrations were determined utilizing interwell prediction limits. Upgradient Monitoring Well MW-8 was used to determine these background concentrations. This included data ranging from April 2016 through April 2025. For pH, background is between those values presented.

2 - GWPSs were developed in accordance with Title 40 Code of Federal Regulations §257.95(h).

3 - Combined radium is reported with an associated uncertainty range. However, this range cannot be incorporated into statistical calculations as it varies per result and is not a standard value. Therefore, to maintain consistency in reporting these results, the reported laboratory concentration was used for the statistical analyses.

Bold - Analyte detected above calculated background concentration.

Parameter was detected in compliance monitoring well located downgradient of the CCR Landfill at a statistically significant level above its GWPS (see Confidence Interval statistical output in Attachment 1).

CCR - coal combustion residual

D - Results reported from dilution.

D1 - Sample required dilution due to high concentration of target analyte.

GWPS - groundwater protection standard

J - estimated concentration

M1 - Matrix spike recovery was high; the method control sample recovery was acceptable.

M2 - Matrix spike recovery was low; the method control sample recovery was acceptable.

M3 - The accuracy of the spike recovery value is reduced since the analyte concentration in the sample is disproportionate to spike level. The method control sample recovery was acceptable.

mg/L - milligram per Liter

pCi/L - picocurie per Liter

SU - standard unit

U - nondetect

Y2 - MS/MSD RPD exceeded the method control limit. Recovery met acceptance criteria.

**ATTACHMENT 1 - SANITAS™ STATISTICAL OUTPUTS
FOR PHASE II CCR LANDFILL COMPLIANCE
MONITORING NETWORK**

Prediction Limit

Big Rivers Electric Corp. Client: Burns & McDonnell Data: BREC Wilson_Datafile Printed 7/22/2025, 9:54 PM

<u>Constituent</u>	<u>Well</u>	<u>Upper Lim.</u>	<u>Lower Lim.</u>	<u>Date</u>	<u>Observ.</u>	<u>Sig.</u>	<u>Bg N</u>	<u>%NDs</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Antimony (mg/L)	MW-5	0.0025	n/a	4/29/2025	0.0025ND	No	24	66.67	n/a	0.0378	NP Inter (NDs)
Antimony (mg/L)	MW-6	0.0025	n/a	4/29/2025	0.0025ND	No	24	66.67	n/a	0.0378	NP Inter (NDs)
Antimony (mg/L)	MW-7	0.0025	n/a	4/29/2025	0.0025ND	No	24	66.67	n/a	0.0378	NP Inter (NDs)
Antimony (mg/L)	MW-10	0.0025	n/a	4/29/2025	0.0025ND	No	24	66.67	n/a	0.0378	NP Inter (NDs)
Arsenic (ug/L)	MW-5	14.4	n/a	4/29/2025	3.2	No	24	0	n/a	0.0378	NP Inter (normality)
Arsenic (ug/L)	MW-6	14.4	n/a	4/29/2025	4.4	No	24	0	n/a	0.0378	NP Inter (normality)
Arsenic (ug/L)	MW-7	14.4	n/a	4/29/2025	5	No	24	0	n/a	0.0378	NP Inter (normality)
Arsenic (ug/L)	MW-10	14.4	n/a	4/29/2025	1.6	No	24	0	n/a	0.0378	NP Inter (normality)
Barium (ug/L)	MW-5	70	n/a	4/29/2025	13	No	23	0	n/a	0.03929	NP Inter (normality)
Barium (ug/L)	MW-6	70	n/a	4/29/2025	12	No	23	0	n/a	0.03929	NP Inter (normality)
Barium (ug/L)	MW-7	70	n/a	4/29/2025	15	No	23	0	n/a	0.03929	NP Inter (normality)
Barium (ug/L)	MW-10	70	n/a	4/29/2025	8	No	23	0	n/a	0.03929	NP Inter (normality)
Beryllium (ug/L)	MW-5	2	n/a	4/29/2025	1ND	No	23	100	n/a	0.03929	NP Inter (NDs)
Beryllium (ug/L)	MW-6	2	n/a	4/29/2025	1ND	No	23	100	n/a	0.03929	NP Inter (NDs)
Beryllium (ug/L)	MW-7	2	n/a	4/29/2025	1ND	No	23	100	n/a	0.03929	NP Inter (NDs)
Beryllium (ug/L)	MW-10	2	n/a	4/29/2025	1ND	No	23	100	n/a	0.03929	NP Inter (NDs)
Boron (ug/L)	MW-5	51.8	n/a	4/29/2025	960	Yes	25	56	n/a	0.03643	NP Inter (NDs)
Boron (ug/L)	MW-6	51.8	n/a	4/29/2025	800	Yes	25	56	n/a	0.03643	NP Inter (NDs)
Boron (ug/L)	MW-7	51.8	n/a	4/29/2025	6870	Yes	25	56	n/a	0.03643	NP Inter (NDs)
Boron (ug/L)	MW-10	51.8	n/a	4/29/2025	390	Yes	25	56	n/a	0.03643	NP Inter (NDs)
Cadmium (ug/L)	MW-5	0.5	n/a	4/29/2025	0.5ND	No	23	91.3	n/a	0.03929	NP Inter (NDs)
Cadmium (ug/L)	MW-6	0.5	n/a	4/29/2025	0.5ND	No	23	91.3	n/a	0.03929	NP Inter (NDs)
Cadmium (ug/L)	MW-7	0.5	n/a	4/29/2025	0.5ND	No	23	91.3	n/a	0.03929	NP Inter (NDs)
Cadmium (ug/L)	MW-10	0.5	n/a	4/29/2025	0.1J	No	23	91.3	n/a	0.03929	NP Inter (NDs)
Calcium (ug/L)	MW-5	349000	n/a	4/29/2025	789000	Yes	25	0	n/a	0.03643	NP Inter (normality)
Calcium (ug/L)	MW-6	349000	n/a	4/29/2025	542000	Yes	25	0	n/a	0.03643	NP Inter (normality)
Calcium (ug/L)	MW-7	349000	n/a	4/29/2025	545000	Yes	25	0	n/a	0.03643	NP Inter (normality)
Calcium (ug/L)	MW-10	349000	n/a	4/29/2025	471000	Yes	25	0	n/a	0.03643	NP Inter (normality)
Chloride (mg/L)	MW-5	5.532	n/a	4/29/2025	276	Yes	25	0	No	0.01	Param Inter
Chloride (mg/L)	MW-6	5.532	n/a	4/29/2025	29.9	Yes	25	0	No	0.01	Param Inter
Chloride (mg/L)	MW-7	5.532	n/a	4/29/2025	222	Yes	25	0	No	0.01	Param Inter
Chloride (mg/L)	MW-10	5.532	n/a	4/29/2025	51.1	Yes	25	0	No	0.01	Param Inter
Chromium (ug/L)	MW-5	22.4	n/a	4/29/2025	0.6J	No	24	29.17	n/a	0.0378	NP Inter (normality)
Chromium (ug/L)	MW-6	22.4	n/a	4/29/2025	0.3ND	No	24	29.17	n/a	0.0378	NP Inter (normality)
Chromium (ug/L)	MW-7	22.4	n/a	4/29/2025	0.6J	No	24	29.17	n/a	0.0378	NP Inter (normality)
Chromium (ug/L)	MW-10	22.4	n/a	4/29/2025	0.3ND	No	24	29.17	n/a	0.0378	NP Inter (normality)
Cobalt (ug/L)	MW-5	9	n/a	4/29/2025	6	No	23	52.17	n/a	0.03929	NP Inter (NDs)
Cobalt (ug/L)	MW-6	9	n/a	4/29/2025	9	No	23	52.17	n/a	0.03929	NP Inter (NDs)
Cobalt (ug/L)	MW-7	9	n/a	4/29/2025	2ND	No	23	52.17	n/a	0.03929	NP Inter (NDs)
Cobalt (ug/L)	MW-10	9	n/a	4/29/2025	79	Yes	23	52.17	n/a	0.03929	NP Inter (NDs)
Fluoride (mg/L)	MW-5	0.486	n/a	4/29/2025	1ND	No	22	0	n/a	0.0409	NP Inter (normality)
Fluoride (mg/L)	MW-6	0.486	n/a	4/29/2025	1ND	No	22	0	n/a	0.0409	NP Inter (normality)
Fluoride (mg/L)	MW-7	0.486	n/a	4/29/2025	0.22	No	22	0	n/a	0.0409	NP Inter (normality)
Fluoride (mg/L)	MW-10	0.486	n/a	4/29/2025	1ND	No	22	0	n/a	0.0409	NP Inter (normality)
Lead (ug/L)	MW-5	12	n/a	4/29/2025	0.7J	No	24	62.5	n/a	0.0378	NP Inter (NDs)
Lead (ug/L)	MW-6	12	n/a	4/29/2025	1ND	No	24	62.5	n/a	0.0378	NP Inter (NDs)
Lead (ug/L)	MW-7	12	n/a	4/29/2025	1ND	No	24	62.5	n/a	0.0378	NP Inter (NDs)
Lead (ug/L)	MW-10	12	n/a	4/29/2025	1ND	No	24	62.5	n/a	0.0378	NP Inter (NDs)
Lithium (ug/L)	MW-5	20	n/a	4/29/2025	40	Yes	24	16.67	n/a	0.0378	NP Inter (normality)
Lithium (ug/L)	MW-6	20	n/a	4/29/2025	40	Yes	24	16.67	n/a	0.0378	NP Inter (normality)

Prediction Limit

Big Rivers Electric Corp. Client: Burns & McDonnell Data: BREC Wilson_Datafile Printed 7/22/2025, 9:54 PM

<u>Constituent</u>	<u>Well</u>	<u>Upper Lim.</u>	<u>Lower Lim.</u>	<u>Date</u>	<u>Observ.</u>	<u>Sig.</u>	<u>Bg N</u>	<u>%NDs</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Lithium (ug/L)	MW-7	20	n/a	4/29/2025	30	Yes	24	16.67	n/a	0.0378	NP Inter (normality)
Lithium (ug/L)	MW-10	20	n/a	4/29/2025	7J	No	24	16.67	n/a	0.0378	NP Inter (normality)
Mercury (ug/L)	MW-5	0.005	n/a	4/29/2025	0.0025ND	No	22	100	n/a	0.0409	NP Inter (NDs)
Mercury (ug/L)	MW-6	0.005	n/a	4/29/2025	0.0025ND	No	22	100	n/a	0.0409	NP Inter (NDs)
Mercury (ug/L)	MW-7	0.005	n/a	4/29/2025	0.0025ND	No	22	100	n/a	0.0409	NP Inter (NDs)
Mercury (ug/L)	MW-10	0.005	n/a	4/29/2025	0.0025ND	No	22	100	n/a	0.0409	NP Inter (NDs)
Molybdenum (ug/L)	MW-5	18.7	n/a	4/29/2025	5J	No	24	0	n/a	0.0378	NP Inter (normality)
Molybdenum (ug/L)	MW-6	18.7	n/a	4/29/2025	6J	No	24	0	n/a	0.0378	NP Inter (normality)
Molybdenum (ug/L)	MW-7	18.7	n/a	4/29/2025	5J	No	24	0	n/a	0.0378	NP Inter (normality)
Molybdenum (ug/L)	MW-10	18.7	n/a	4/29/2025	5ND	No	24	0	n/a	0.0378	NP Inter (normality)
pH (SU)	MW-5	6.84	4.67	4/29/2025	6.4	No	24	0	n/a	0.07561	NP Inter (normality)
pH (SU)	MW-6	6.84	4.67	4/29/2025	6.4	No	24	0	n/a	0.07561	NP Inter (normality)
pH (SU)	MW-7	6.84	4.67	4/29/2025	6.54	No	24	0	n/a	0.07561	NP Inter (normality)
pH (SU)	MW-10	6.84	4.67	4/29/2025	5.98	No	24	0	n/a	0.07561	NP Inter (normality)
Radium 226 + 228 (pCi/L)	MW-5	2.94	n/a	4/29/2025	0.881	No	23	0	n/a	0.03929	NP Inter (normality)
Radium 226 + 228 (pCi/L)	MW-6	2.94	n/a	4/29/2025	0.728	No	23	0	n/a	0.03929	NP Inter (normality)
Radium 226 + 228 (pCi/L)	MW-7	2.94	n/a	4/29/2025	1.07	No	23	0	n/a	0.03929	NP Inter (normality)
Radium 226 + 228 (pCi/L)	MW-10	2.94	n/a	4/29/2025	1.14	No	23	0	n/a	0.03929	NP Inter (normality)
Selenium (ug/L)	MW-5	1.5	n/a	4/29/2025	1.5ND	No	23	91.3	n/a	0.03929	NP Inter (NDs)
Selenium (ug/L)	MW-6	1.5	n/a	4/29/2025	1.5ND	No	23	91.3	n/a	0.03929	NP Inter (NDs)
Selenium (ug/L)	MW-7	1.5	n/a	4/29/2025	1.5ND	No	23	91.3	n/a	0.03929	NP Inter (NDs)
Selenium (ug/L)	MW-10	1.5	n/a	4/29/2025	1.5ND	No	23	91.3	n/a	0.03929	NP Inter (NDs)
Sulfate (mg/L)	MW-5	2180	n/a	4/29/2025	1580	No	25	0	n/a	0.03643	NP Inter (normality)
Sulfate (mg/L)	MW-6	2180	n/a	4/29/2025	1650	No	25	0	n/a	0.03643	NP Inter (normality)
Sulfate (mg/L)	MW-7	2180	n/a	4/29/2025	1310	No	25	0	n/a	0.03643	NP Inter (normality)
Sulfate (mg/L)	MW-10	2180	n/a	4/29/2025	1710	No	25	0	n/a	0.03643	NP Inter (normality)
Thallium (ug/L)	MW-5	1	n/a	4/29/2025	1ND	No	24	87.5	n/a	0.0378	NP Inter (NDs)
Thallium (ug/L)	MW-6	1	n/a	4/29/2025	1ND	No	24	87.5	n/a	0.0378	NP Inter (NDs)
Thallium (ug/L)	MW-7	1	n/a	4/29/2025	1ND	No	24	87.5	n/a	0.0378	NP Inter (NDs)
Thallium (ug/L)	MW-10	1	n/a	4/29/2025	1ND	No	24	87.5	n/a	0.0378	NP Inter (NDs)
Total Dissolved Solids (mg/L)	MW-5	1750	n/a	4/29/2025	3540	Yes	25	0	n/a	0.03643	NP Inter (normality)
Total Dissolved Solids (mg/L)	MW-6	1750	n/a	4/29/2025	2630	Yes	25	0	n/a	0.03643	NP Inter (normality)
Total Dissolved Solids (mg/L)	MW-7	1750	n/a	4/29/2025	2240	Yes	25	0	n/a	0.03643	NP Inter (normality)
Total Dissolved Solids (mg/L)	MW-10	1750	n/a	4/29/2025	1910	Yes	25	0	n/a	0.03643	NP Inter (normality)

Prediction Limit

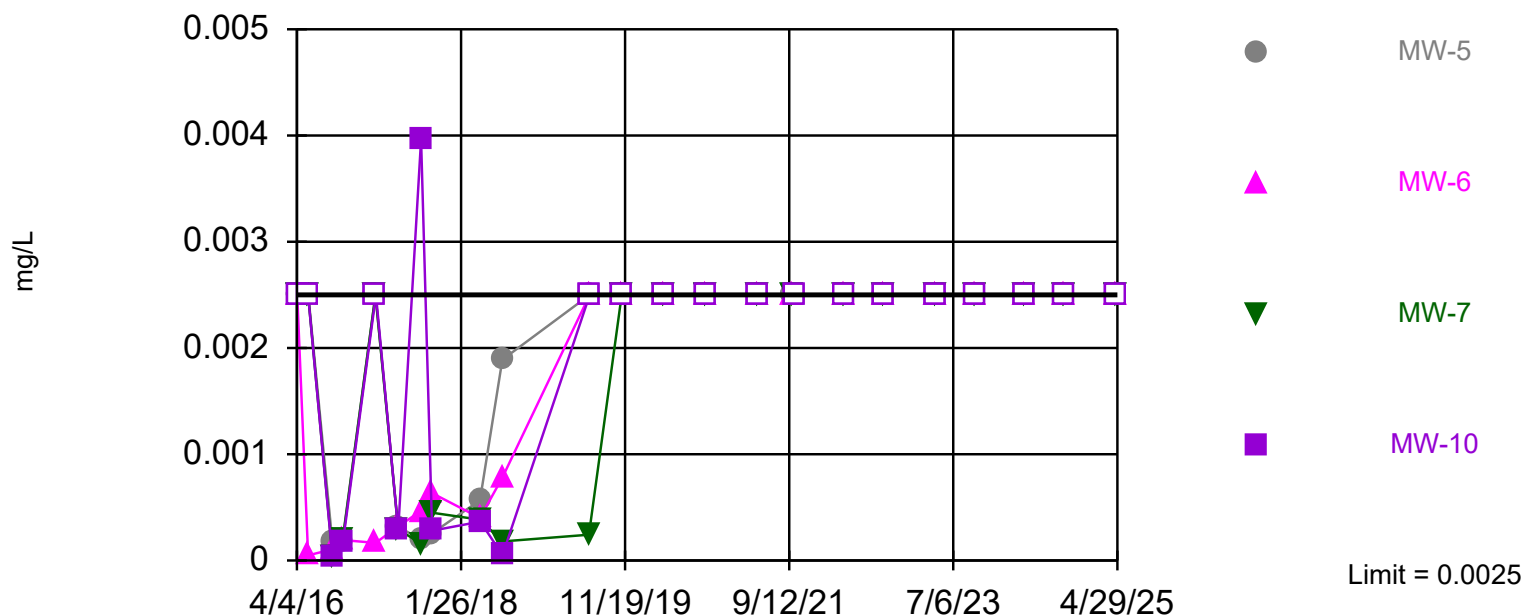
Big Rivers Electric Corp. Client: Burns & McDonnell Data: BREC Wilson_Datafile Printed 7/22/2025, 9:54 PM

<u>Constituent</u>	<u>Well</u>	<u>Upper Lim.</u>	<u>Lower Lim.</u>	<u>Date</u>	<u>Observ.</u>	<u>Sig.</u>	<u>Bg N</u>	<u>%NDs</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Boron (ug/L)	MW-5	51.8	n/a	4/29/2025	960	Yes	25	56	n/a	0.03643	NP Inter (NDs)
Boron (ug/L)	MW-6	51.8	n/a	4/29/2025	800	Yes	25	56	n/a	0.03643	NP Inter (NDs)
Boron (ug/L)	MW-7	51.8	n/a	4/29/2025	6870	Yes	25	56	n/a	0.03643	NP Inter (NDs)
Boron (ug/L)	MW-10	51.8	n/a	4/29/2025	390	Yes	25	56	n/a	0.03643	NP Inter (NDs)
Calcium (ug/L)	MW-5	349000	n/a	4/29/2025	789000	Yes	25	0	n/a	0.03643	NP Inter (normality)
Calcium (ug/L)	MW-6	349000	n/a	4/29/2025	542000	Yes	25	0	n/a	0.03643	NP Inter (normality)
Calcium (ug/L)	MW-7	349000	n/a	4/29/2025	545000	Yes	25	0	n/a	0.03643	NP Inter (normality)
Calcium (ug/L)	MW-10	349000	n/a	4/29/2025	471000	Yes	25	0	n/a	0.03643	NP Inter (normality)
Chloride (mg/L)	MW-5	5.532	n/a	4/29/2025	276	Yes	25	0	No	0.01	Param Inter
Chloride (mg/L)	MW-6	5.532	n/a	4/29/2025	29.9	Yes	25	0	No	0.01	Param Inter
Chloride (mg/L)	MW-7	5.532	n/a	4/29/2025	222	Yes	25	0	No	0.01	Param Inter
Chloride (mg/L)	MW-10	5.532	n/a	4/29/2025	51.1	Yes	25	0	No	0.01	Param Inter
Cobalt (ug/L)	MW-10	9	n/a	4/29/2025	79	Yes	23	52.17	n/a	0.03929	NP Inter (NDs)
Lithium (ug/L)	MW-5	20	n/a	4/29/2025	40	Yes	24	16.67	n/a	0.0378	NP Inter (normality)
Lithium (ug/L)	MW-6	20	n/a	4/29/2025	40	Yes	24	16.67	n/a	0.0378	NP Inter (normality)
Lithium (ug/L)	MW-7	20	n/a	4/29/2025	30	Yes	24	16.67	n/a	0.0378	NP Inter (normality)
Total Dissolved Solids (mg/L)	MW-5	1750	n/a	4/29/2025	3540	Yes	25	0	n/a	0.03643	NP Inter (normality)
Total Dissolved Solids (mg/L)	MW-6	1750	n/a	4/29/2025	2630	Yes	25	0	n/a	0.03643	NP Inter (normality)
Total Dissolved Solids (mg/L)	MW-7	1750	n/a	4/29/2025	2240	Yes	25	0	n/a	0.03643	NP Inter (normality)
Total Dissolved Solids (mg/L)	MW-10	1750	n/a	4/29/2025	1910	Yes	25	0	n/a	0.03643	NP Inter (normality)

Within Limit

Prediction Limit

Interwell Non-parametric



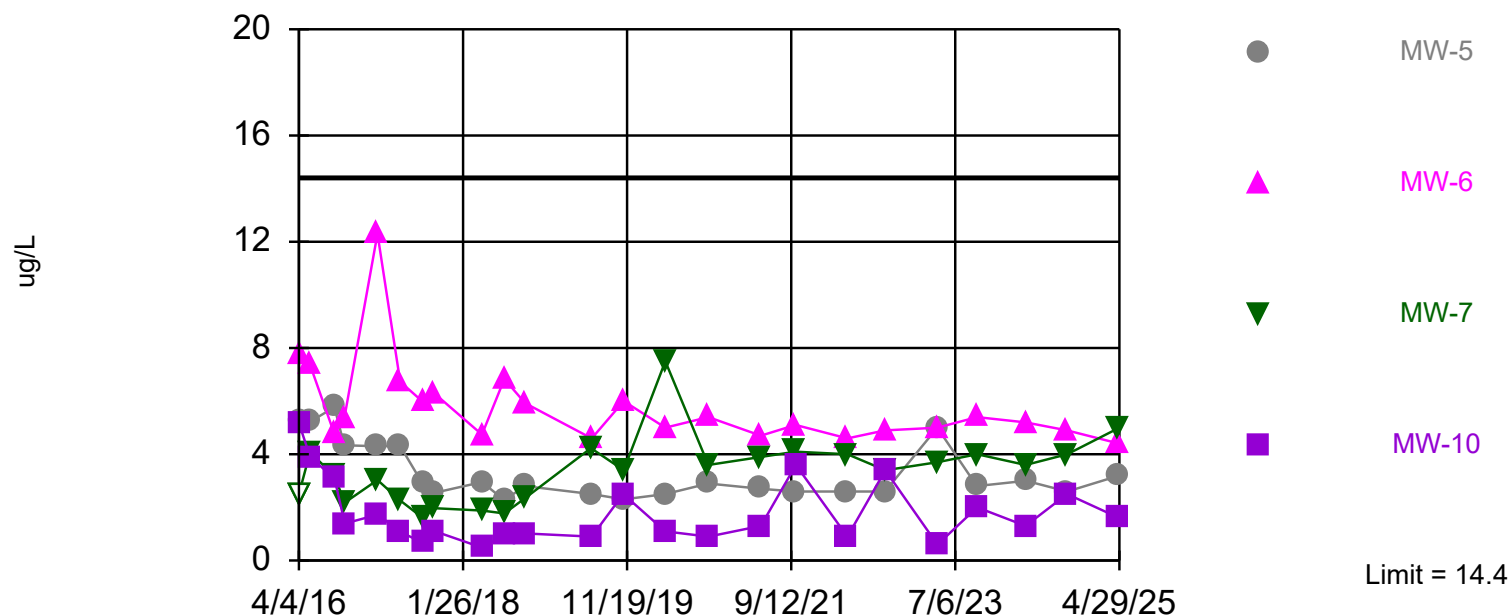
Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 24 background values. 66.67% NDs. Report alpha = 0.1429. Individual comparison alpha = 0.0378. Most recent point for each compliance well compared to limit. Distribution was found to be non-normal after removal of suspect values, so outliers could not be identified.

Constituent: Antimony Analysis Run 7/22/2025 9:53 PM View: 1H2025_CCR BREC
Big Rivers Electric Corp. Client: Burns & McDonnell Data: BREC Wilson_Datafile

Within Limit

Prediction Limit

Interwell Non-parametric



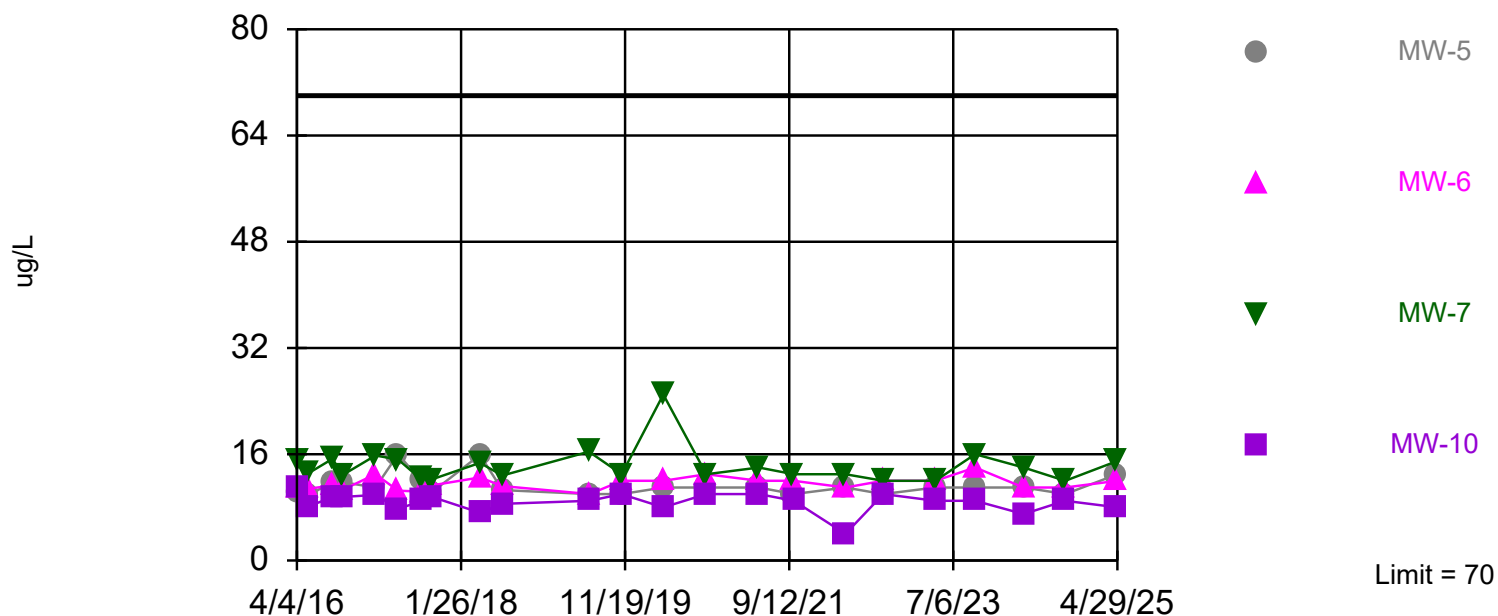
Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.05 alpha level. Limit is highest of 24 background values. Report alpha = 0.1429. Individual comparison alpha = 0.0378. Most recent point for each compliance well compared to limit. Distribution was found to be non-normal after removal of suspect values, so outliers could not be identified.

Constituent: Arsenic Analysis Run 7/22/2025 9:53 PM View: 1H2025_CCR BREC
Big Rivers Electric Corp. Client: Burns & McDonnell Data: BREC Wilson_Datafile

Within Limit

Prediction Limit

Interwell Non-parametric



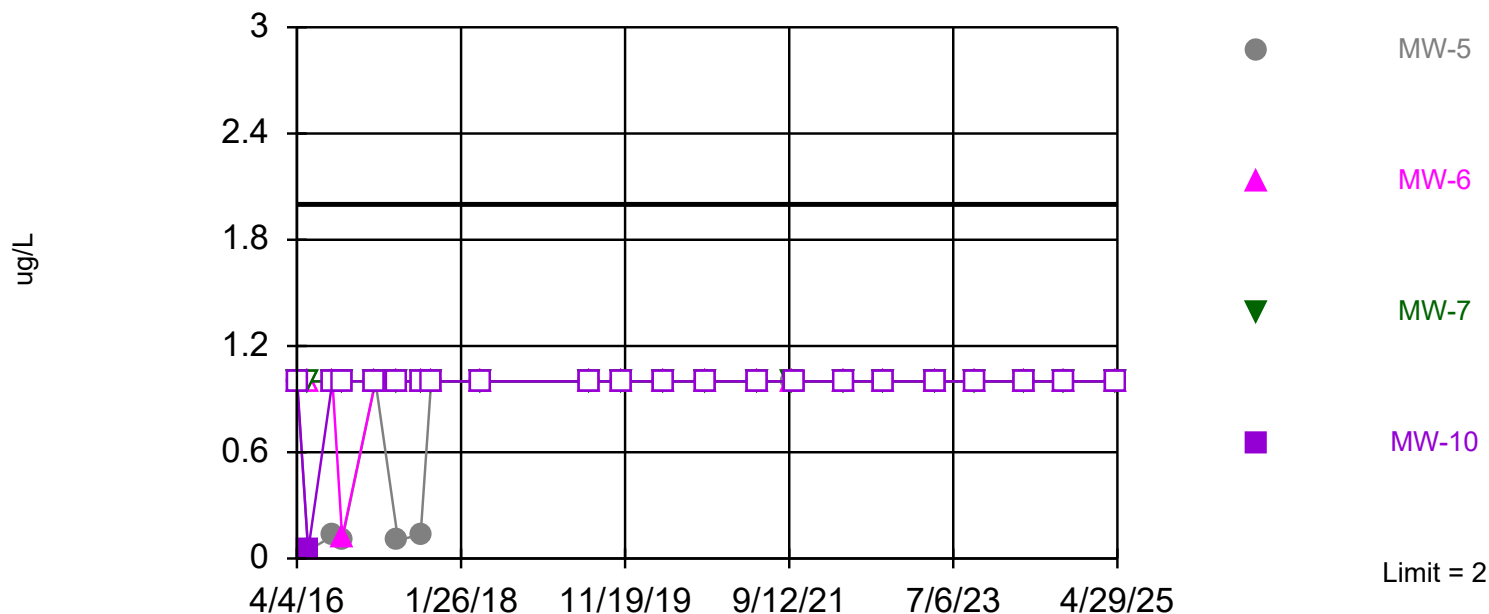
Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.05 alpha level. Limit is highest of 23 background values. Report alpha = 0.1481. Individual comparison alpha = 0.03929. Most recent point for each compliance well compared to limit. After outlier removal distribution was non-normal, so outlier results were invalidated.

Constituent: Barium Analysis Run 7/22/2025 9:53 PM View: 1H2025_CCR BREC
 Big Rivers Electric Corp. Client: Burns & McDonnell Data: BREC Wilson_Datafile

Within Limit

Prediction Limit

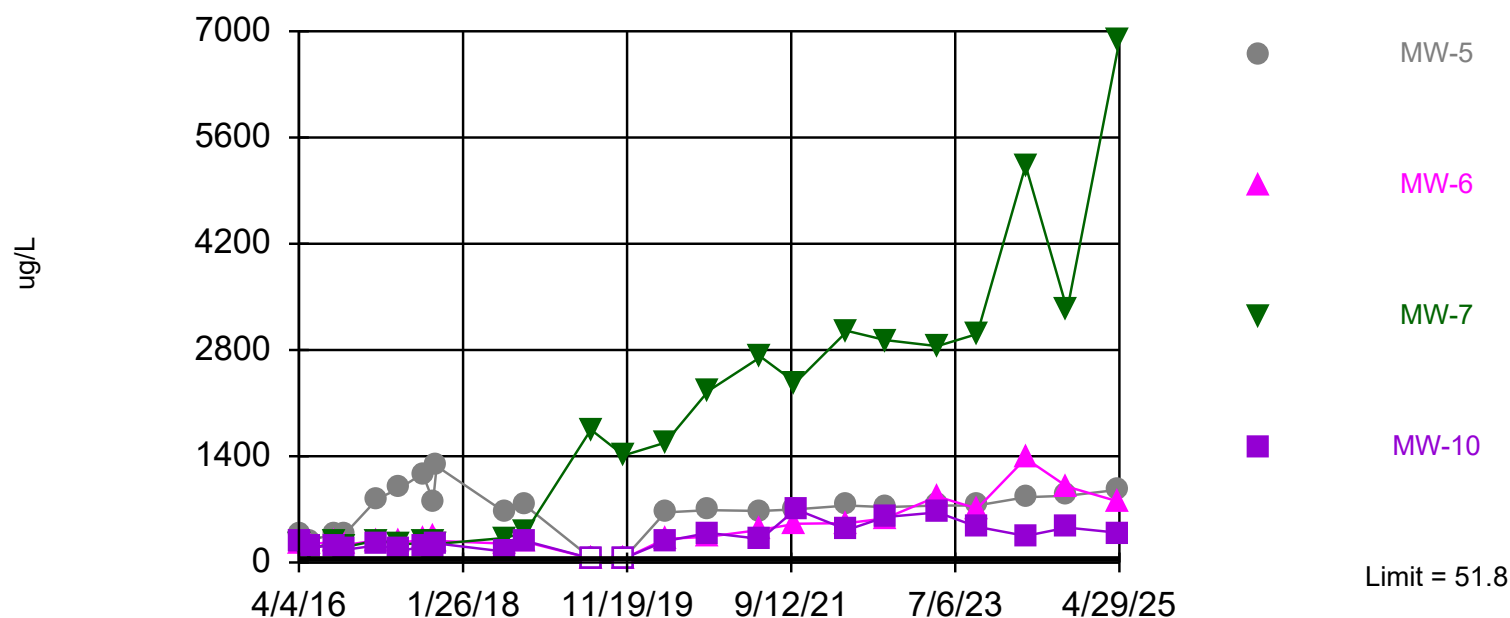
Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values ($n = 23$) were censored; limit is most recent reporting limit. Report $\alpha = 0.1481$. Individual comparison $\alpha = 0.03929$. Most recent point for each compliance well compared to limit. Distribution was found to be non-normal after removal of suspect values, so outliers could not be identified.

Exceeds Limit: MW-5, MW-6, MW-7, MW-10

Prediction Limit Interwell Non-parametric

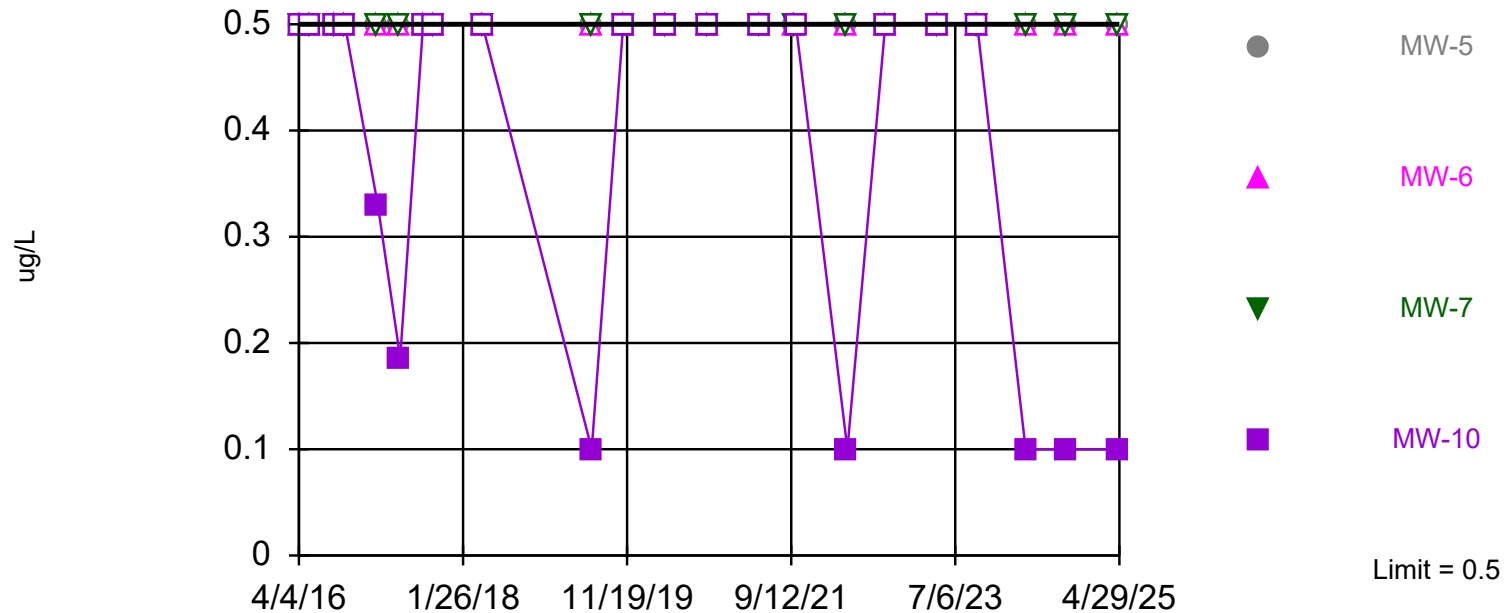


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 25 background values. 56% NDs. Report alpha = 0.1379. Individual comparison alpha = 0.03643. Most recent point for each compliance well compared to limit. Distribution was found to be non-normal after removal of suspect values, so outliers could not be identified.

Within Limit

Prediction Limit

Interwell Non-parametric



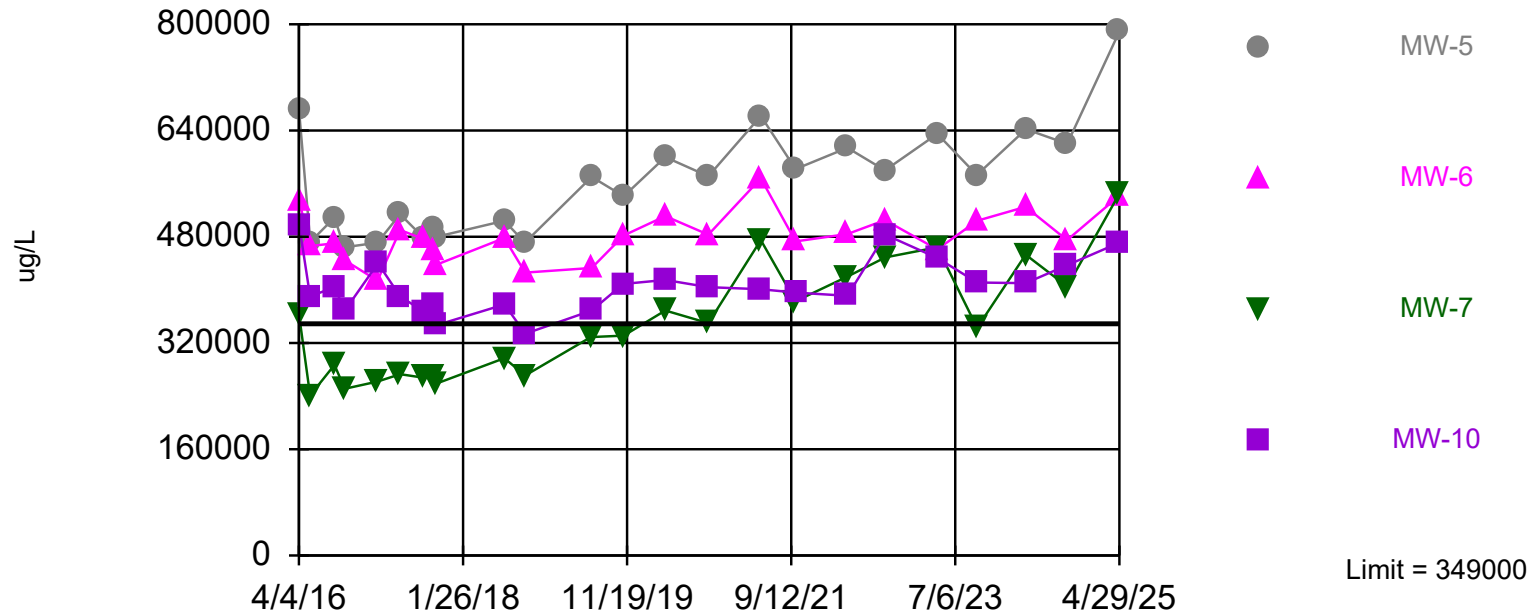
Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 23 background values. 91.3% NDs. Report alpha = 0.1481. Individual comparison alpha = 0.03929. Most recent point for each compliance well compared to limit. Distribution was found to be non-normal after removal of suspect values, so outliers could not be identified.

Constituent: Cadmium Analysis Run 7/22/2025 9:53 PM View: 1H2025_CCR BREC

Big Rivers Electric Corp. Client: Burns & McDonnell Data: BREC Wilson_Datafile

Exceeds Limit: MW-5, MW-6, MW-7, MW-10

Prediction Limit Interwell Non-parametric

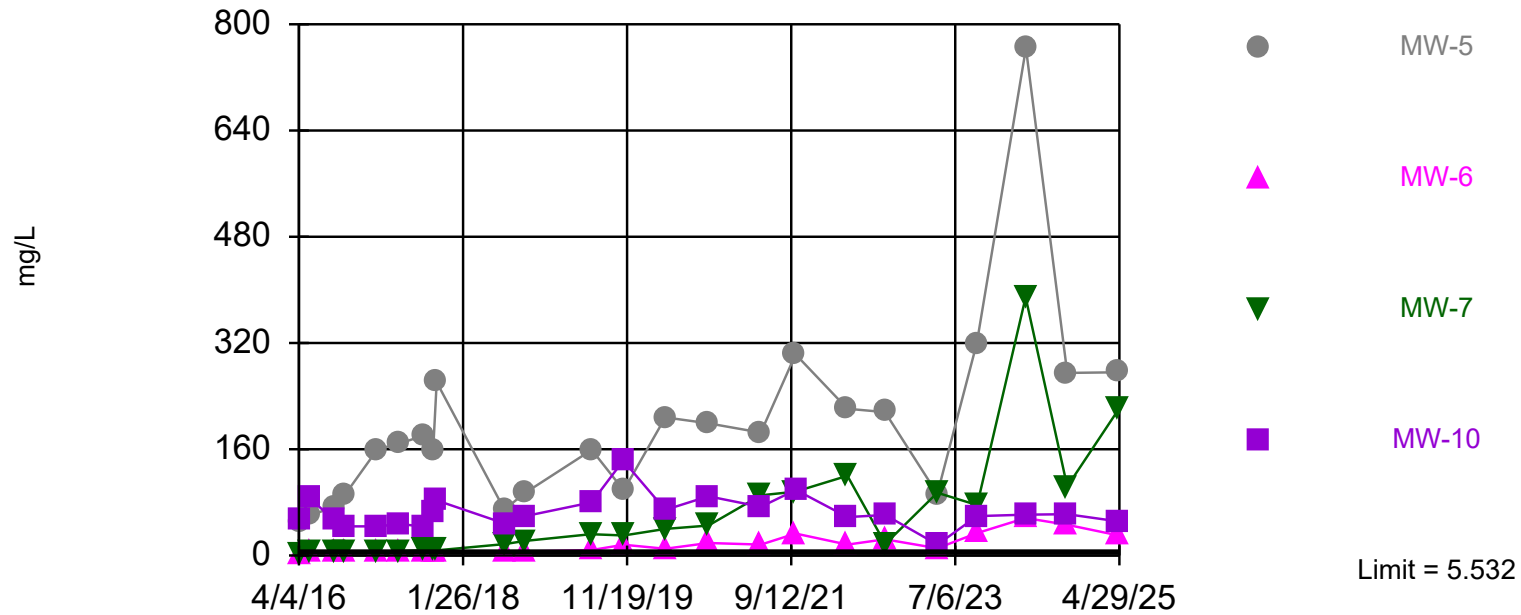


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.05 alpha level. Limit is highest of 25 background values. Report alpha = 0.1379. Individual comparison alpha = 0.03643. Most recent point for each compliance well compared to limit. Distribution was found to be non-normal after removal of suspect values, so outliers could not be identified.

Constituent: Calcium Analysis Run 7/22/2025 9:53 PM View: 1H2025_CCR BREC
Big Rivers Electric Corp. Client: Burns & McDonnell Data: BREC Wilson_Datafile

Exceeds Limit: MW-5, MW-6, MW-7, MW-10

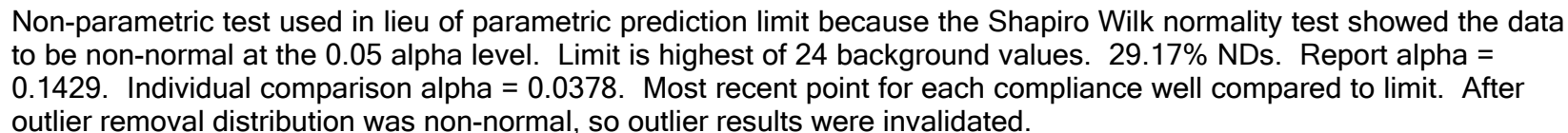
Prediction Limit Interwell Parametric



Background Data Summary: Mean=4.231, Std. Dev.=0.5117, n=25. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9219, critical = 0.918. Report alpha = 0.0394. Individual comparison alpha = 0.01. Most recent point for each compliance well compared to limit. EPA 1989 outlier screening was performed on the background data. No background outliers were found.

Constituent: Chloride Analysis Run 7/22/2025 9:53 PM View: 1H2025_CCR BREC
Big Rivers Electric Corp. Client: Burns & McDonnell Data: BREC Wilson_Datafile

Interwell Non-parametric

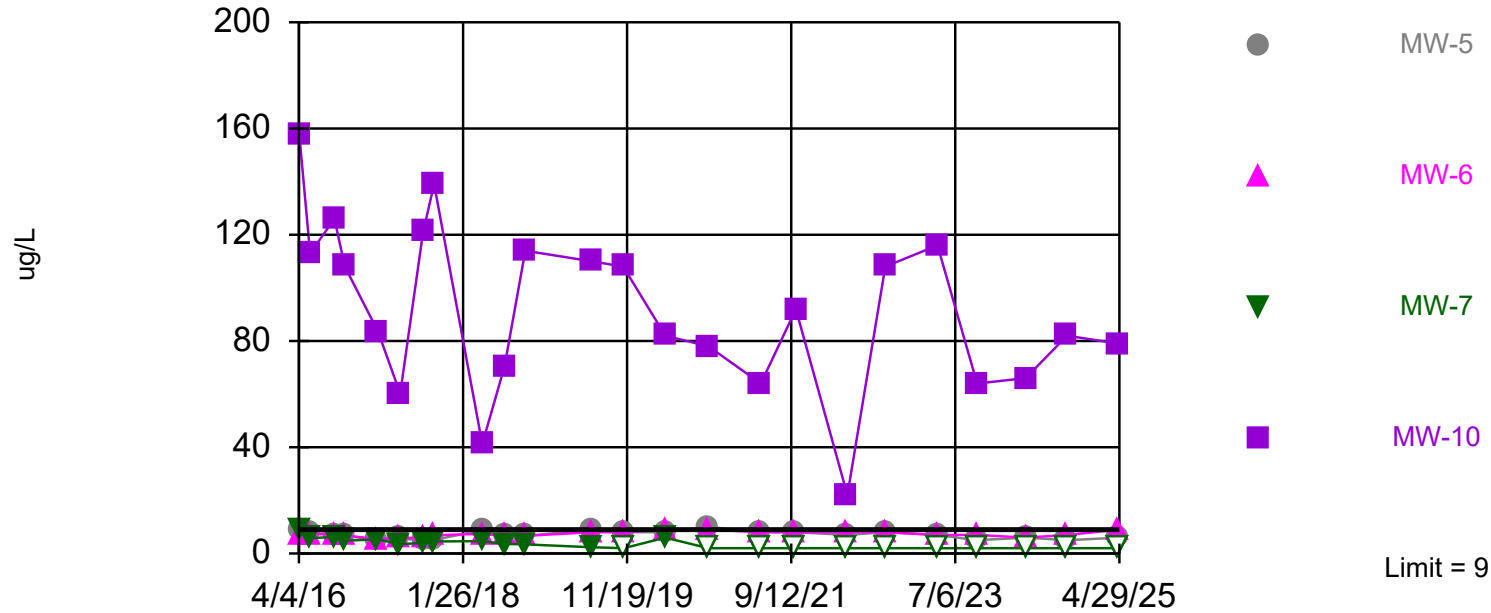


Constituent: Chromium Analysis Run 7/22/2025 9:53 PM View: 1H2025_CCR BREC
Big Rivers Electric Corp. Client: Burns & McDonnell Data: BREC Wilson_Datafile

Exceeds Limit: MW-10

Prediction Limit

Interwell Non-parametric



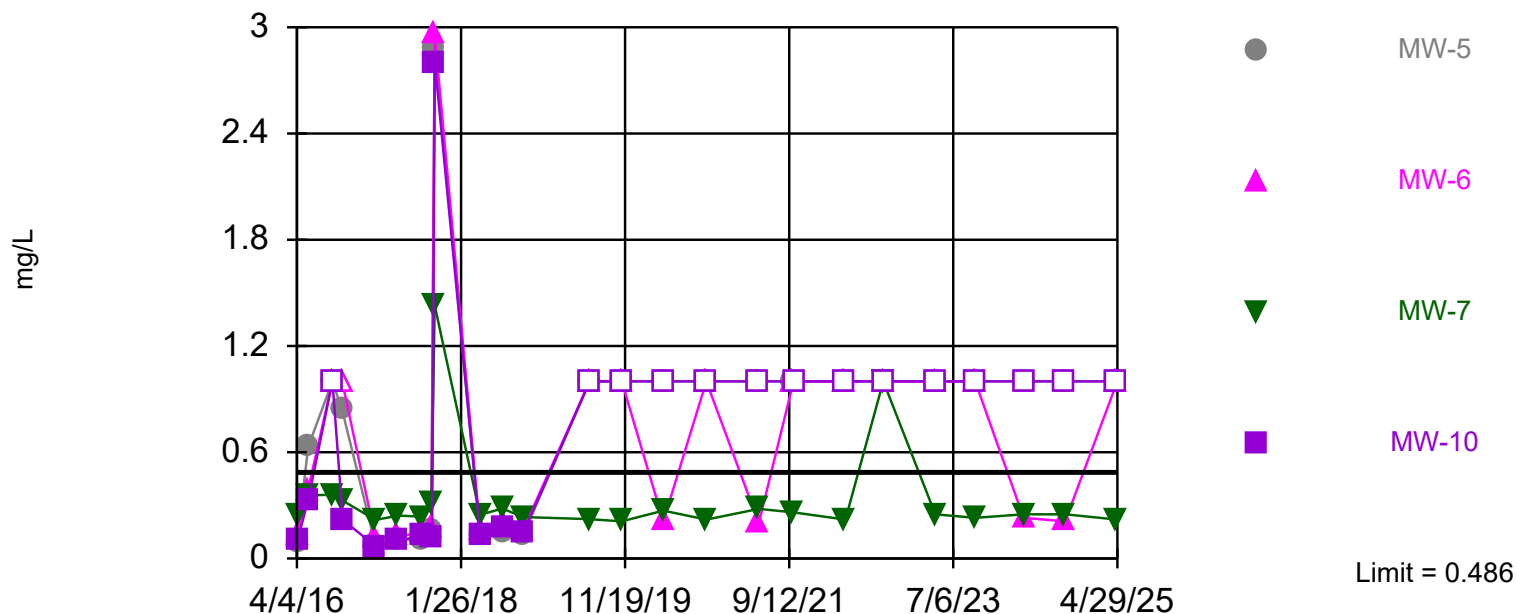
Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 23 background values. 52.17% NDs. Report alpha = 0.1481. Individual comparison alpha = 0.03929. Most recent point for each compliance well compared to limit. After outlier removal distribution was non-normal, so outlier results were invalidated.

Constituent: Cobalt Analysis Run 7/22/2025 9:53 PM View: 1H2025_CCR BREC
Big Rivers Electric Corp. Client: Burns & McDonnell Data: BREC Wilson_Datafile

Within Limit

Prediction Limit

Interwell Non-parametric



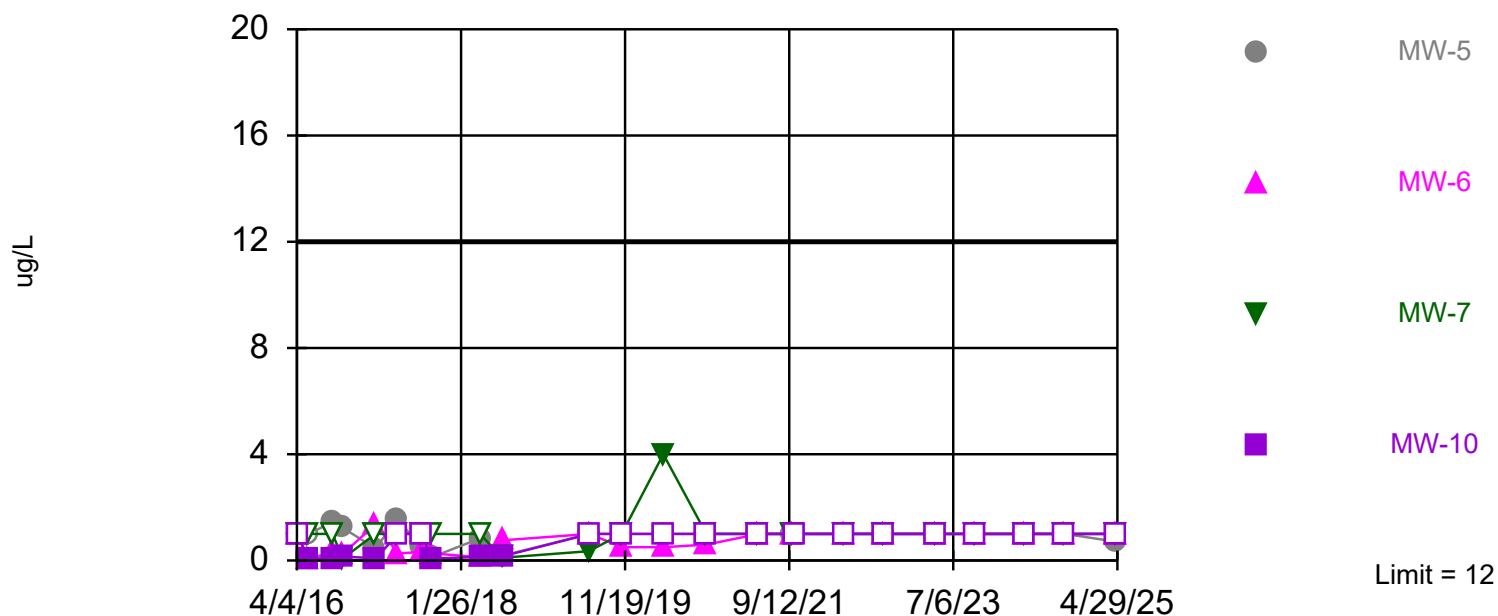
Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.05 alpha level. Limit is highest of 22 background values. Report alpha = 0.1538. Individual comparison alpha = 0.0409. Most recent point for each compliance well compared to limit. After outlier removal distribution was non-normal, so outlier results were invalidated.

Constituent: Fluoride Analysis Run 7/22/2025 9:53 PM View: 1H2025_CCR BREC
Big Rivers Electric Corp. Client: Burns & McDonnell Data: BREC Wilson_Datafile

Within Limit

Prediction Limit

Interwell Non-parametric

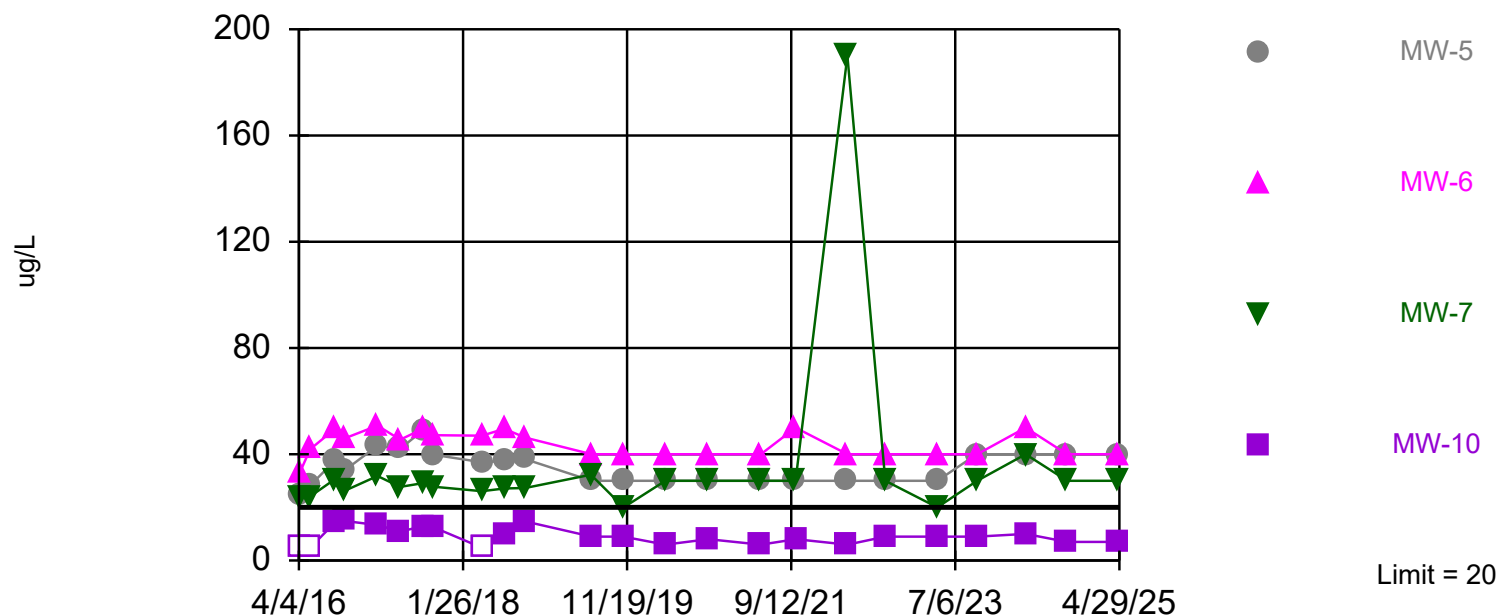


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 24 background values. 62.5% NDs. Report alpha = 0.1429. Individual comparison alpha = 0.0378. Most recent point for each compliance well compared to limit. After outlier removal distribution was non-normal, so outlier results were invalidated.

Exceeds Limit: MW-5, MW-6, MW-7

Prediction Limit

Interwell Non-parametric



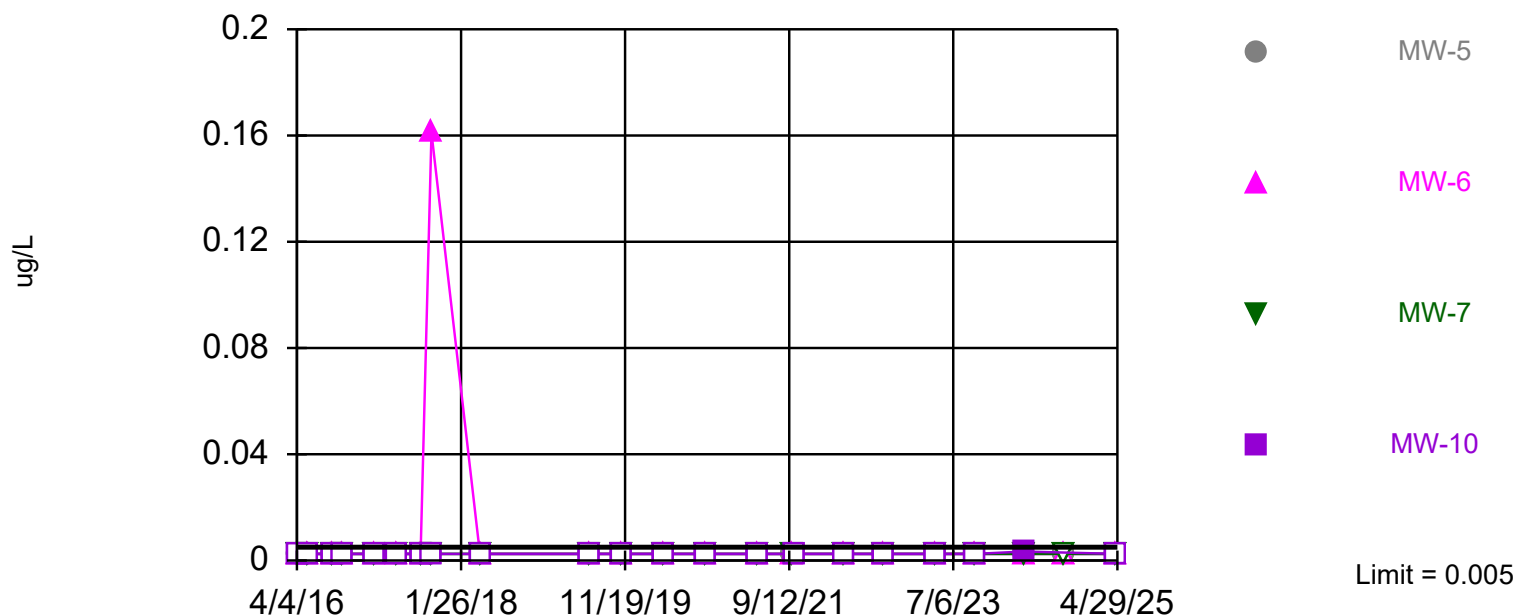
Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.05 alpha level. Limit is highest of 24 background values. 16.67% NDs. Report alpha = 0.1429. Individual comparison alpha = 0.0378. Most recent point for each compliance well compared to limit. Distribution was found to be non-normal after removal of suspect values, so outliers could not be identified.

Constituent: Lithium Analysis Run 7/22/2025 9:53 PM View: 1H2025_CCR BREC
Big Rivers Electric Corp. Client: Burns & McDonnell Data: BREC Wilson_Datafile

Within Limit

Prediction Limit

Interwell Non-parametric



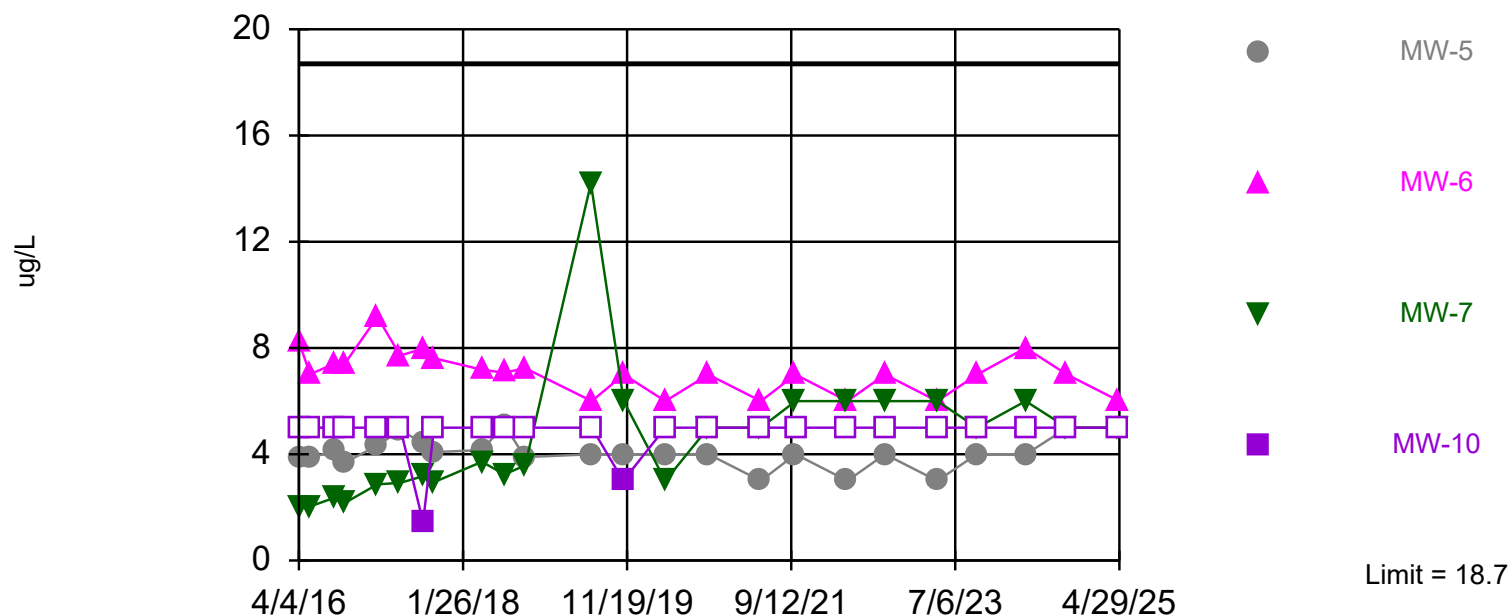
Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values ($n = 22$) were censored; limit is most recent reporting limit. Report alpha = 0.1538. Individual comparison alpha = 0.0409. Most recent point for each compliance well compared to limit. Distribution was found to be non-normal after removal of suspect values, so outliers could not be identified.

Constituent: Mercury Analysis Run 7/22/2025 9:53 PM View: 1H2025_CCR BREC
Big Rivers Electric Corp. Client: Burns & McDonnell Data: BREC Wilson_Datafile

Within Limit

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.05 alpha level. Limit is highest of 24 background values. Report alpha = 0.1429. Individual comparison alpha = 0.0378. Most recent point for each compliance well compared to limit. Distribution was found to be non-normal after removal of suspect values, so outliers could not be identified.

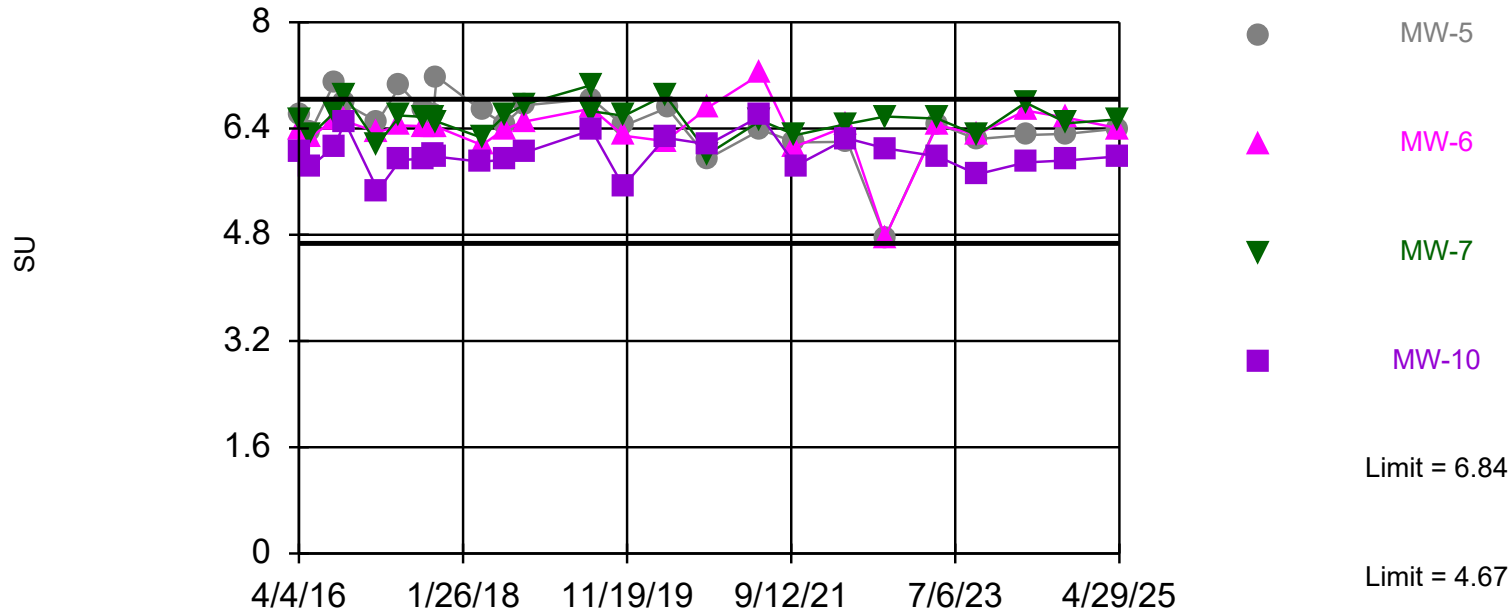
Constituent: Molybdenum Analysis Run 7/22/2025 9:53 PM View: 1H2025_CCR BREC

Big Rivers Electric Corp. Client: Burns & McDonnell Data: BREC Wilson_Datafile

Within Limits

Prediction Limit

Interwell Non-parametric



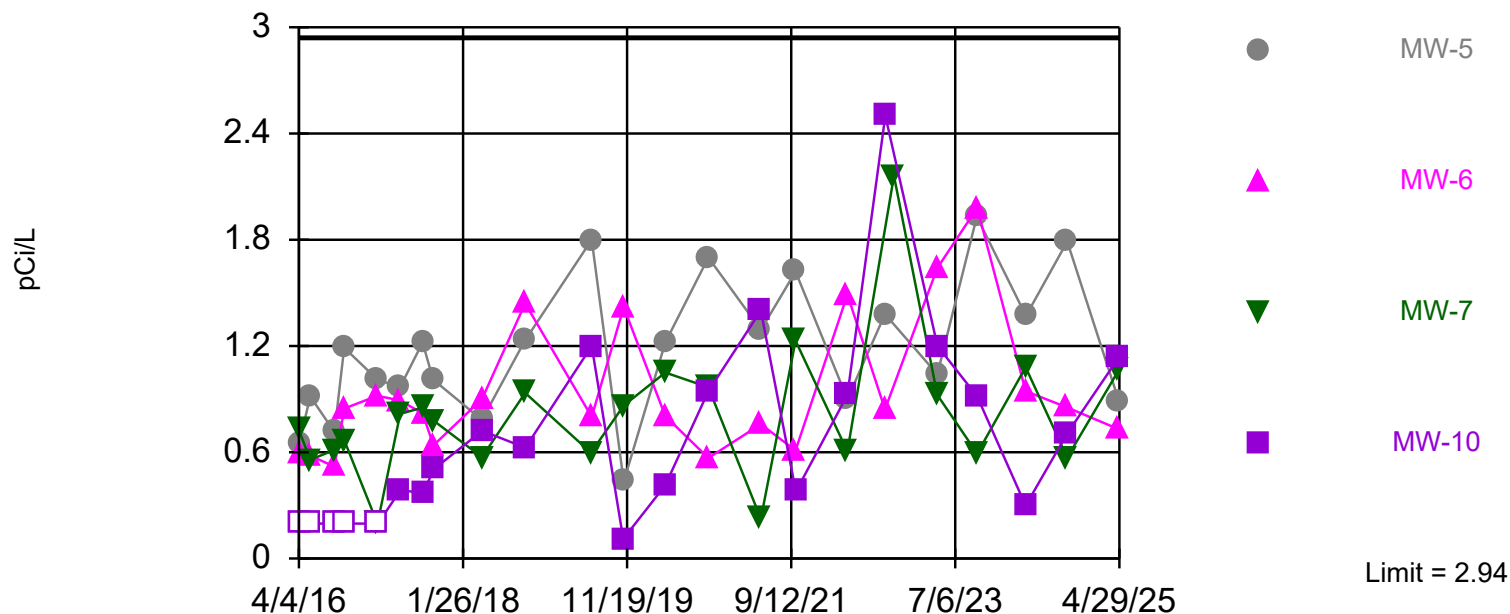
Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.05 alpha level. Limits are highest and lowest of 24 background values. Report alpha = 0.2857. Individual comparison alpha = 0.07561. Most recent point for each compliance well compared to limit. Distribution was found to be non-normal after removal of suspect values, so outliers could not be identified.

Constituent: pH Analysis Run 7/22/2025 9:53 PM View: 1H2025_CCR BREC
 Big Rivers Electric Corp. Client: Burns & McDonnell Data: BREC Wilson_Datafile

Within Limit

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.05 alpha level. Limit is highest of 23 background values. Report alpha = 0.1481. Individual comparison alpha = 0.03929. Most recent point for each compliance well compared to limit. After outlier removal distribution was non-normal, so outlier results were invalidated.

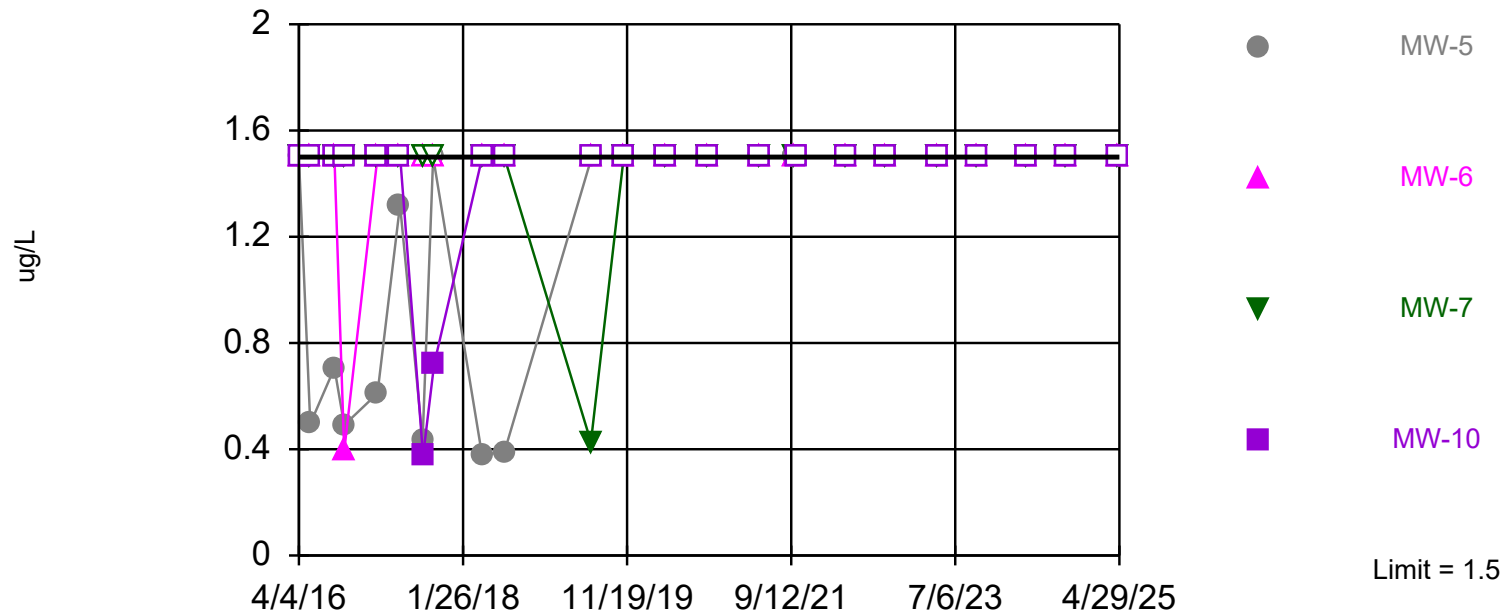
Constituent: Radium 226 + 228 Analysis Run 7/22/2025 9:53 PM View: 1H2025_CCR BREC

Big Rivers Electric Corp. Client: Burns & McDonnell Data: BREC Wilson_Datafile

Within Limit

Prediction Limit

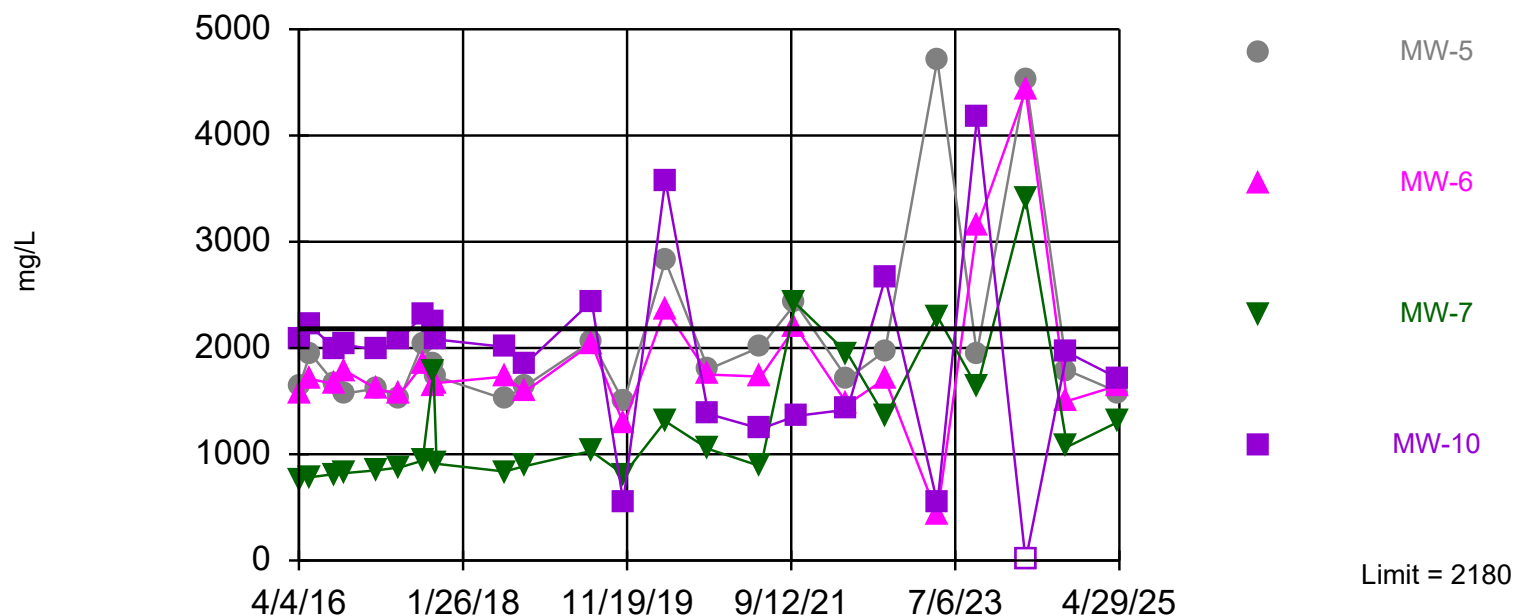
Interwell Non-parametric



Within Limit

Prediction Limit

Interwell Non-parametric



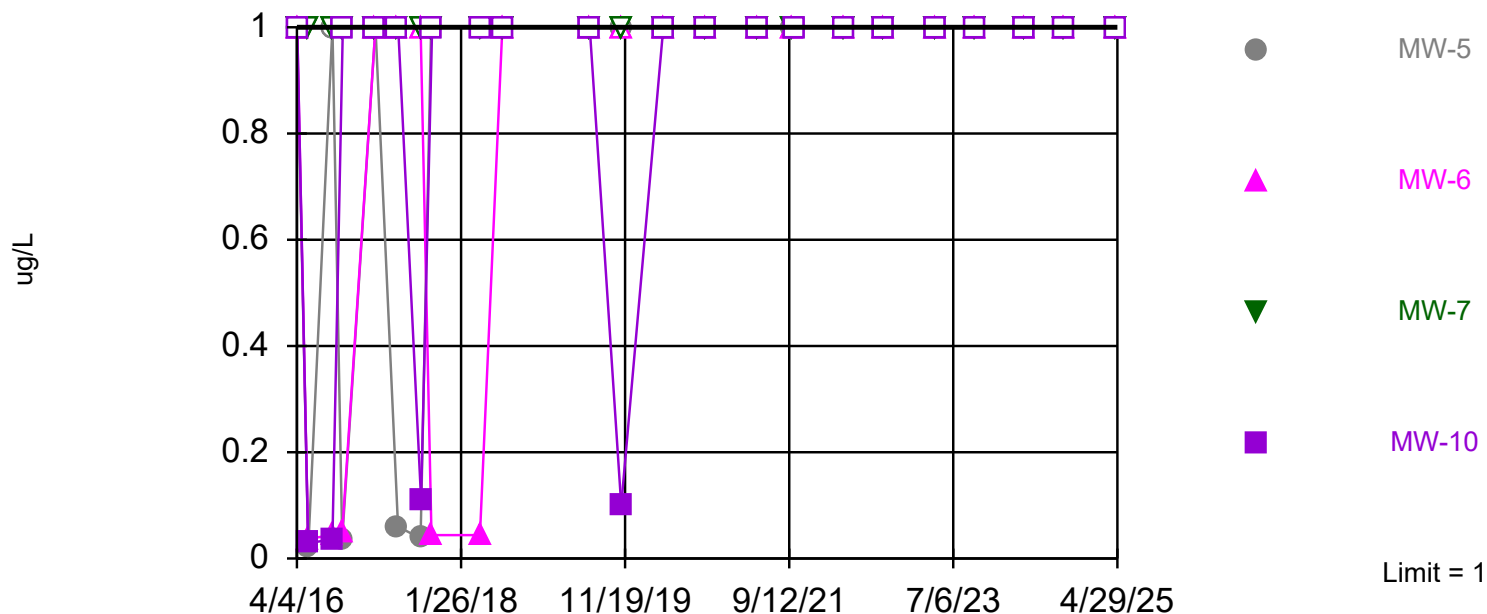
Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.05 alpha level. Limit is highest of 25 background values. Report alpha = 0.1379. Individual comparison alpha = 0.03643. Most recent point for each compliance well compared to limit. Distribution was found to be non-normal after removal of suspect values, so outliers could not be identified.

Constituent: Sulfate Analysis Run 7/22/2025 9:53 PM View: 1H2025_CCR BREC
Big Rivers Electric Corp. Client: Burns & McDonnell Data: BREC Wilson_Datafile

Within Limit

Prediction Limit

Interwell Non-parametric



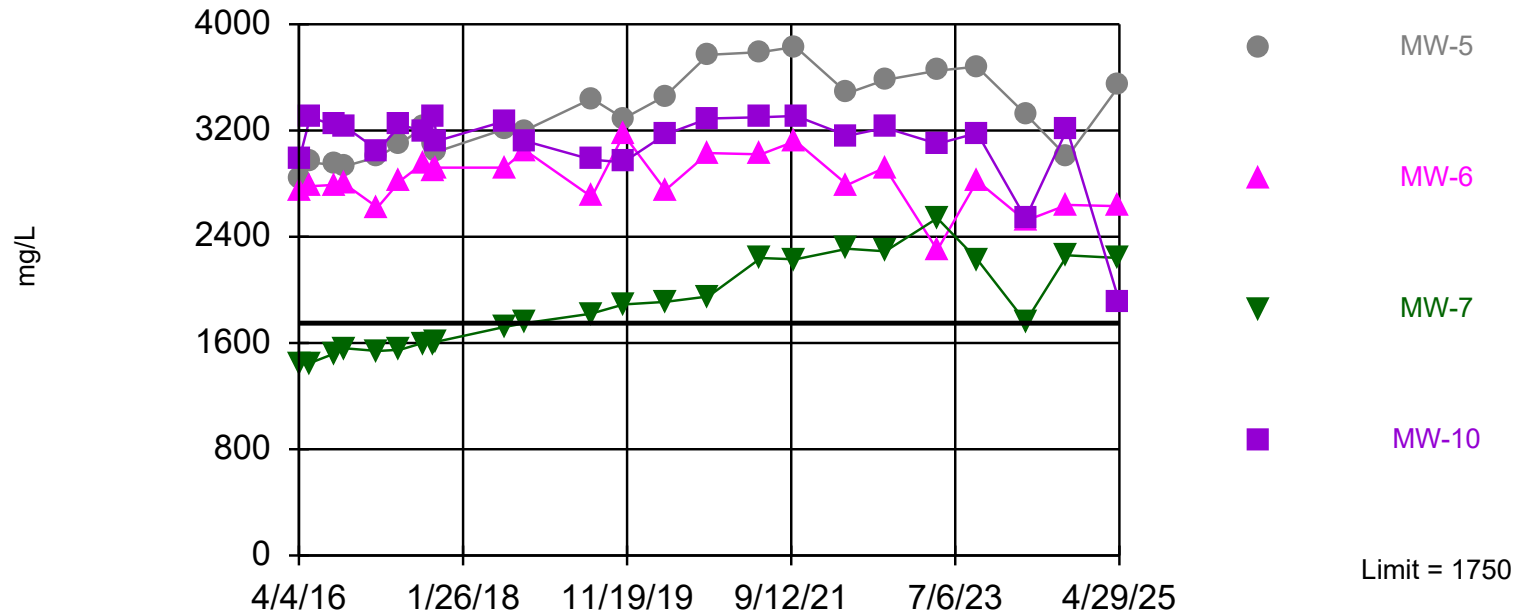
Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 24 background values. 87.5% NDs. Report alpha = 0.1429. Individual comparison alpha = 0.0378. Most recent point for each compliance well compared to limit. After outlier removal distribution was non-normal, so outlier results were invalidated.

Constituent: Thallium Analysis Run 7/22/2025 9:53 PM View: 1H2025_CCR BREC

Big Rivers Electric Corp. Client: Burns & McDonnell Data: BREC Wilson_Datafile

Exceeds Limit: MW-5, MW-6, MW-7, MW-10

Prediction Limit Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.05 alpha level. Limit is highest of 25 background values. Report alpha = 0.1379. Individual comparison alpha = 0.03643. Most recent point for each compliance well compared to limit. Distribution was found to be non-normal after removal of suspect values, so outliers could not be identified.

Constituent: Total Dissolved Solids Analysis Run 7/22/2025 9:53 PM View: 1H2025_CCR BREC

Big Rivers Electric Corp. Client: Burns & McDonnell Data: BREC Wilson_Datafile

Confidence Interval

Big Rivers Electric Corp.

Client: Burns & McDonnell

Data: BREC Wilson_Datafile

Printed 7/22/2025, 9:59 PM

<u>Constituent</u>	<u>Well</u>	<u>Upper Lim.</u>	<u>Lower Lim.</u>	<u>Compliance</u>	<u>Sig.</u>	<u>N</u>	<u>%NDs</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Cobalt (ug/L)	MW-5	7.541	6.502	9	No	24	0	No	0.05	Param.
Cobalt (ug/L)	MW-6	7.657	6.963	9	No	24	0	No	0.05	Param.
Cobalt (ug/L)	MW-7	4.54	2	9	No	24	45.83	No	0.05	NP (normality)
Cobalt (ug/L)	MW-8 (bg)	2	1.18	9	No	24	50	No	0.05	NP (normality)
Cobalt (ug/L)	MW-10	103	80.83	9	Yes	24	0	No	0.05	Param.
Lithium (ug/L)	MW-5	37.14	32.9	40	No	24	0	No	0.05	Param.
Lithium (ug/L)	MW-6	47	40	40	No	24	0	No	0.05	NP (normality)
Lithium (ug/L)	MW-7	30	27.3	40	No	24	0	No	0.05	NP (normality)
Lithium (ug/L)	MW-8 (bg)	11.91	9.356	40	No	24	16.67	No	0.05	Param.
Lithium (ug/L)	MW-10	10.31	8.084	40	No	24	12.5	No	0.05	Param.
Mercury (ug/L)	MW-5	0.0025	0.0025	2	No	22	100	No	0.05	NP (NDs)
Mercury (ug/L)	MW-6	0.0025	0.0025	2	No	22	95.45	No	0.05	NP (NDs)
Mercury (ug/L)	MW-7	0.0025	0.0025	2	No	22	100	No	0.05	NP (NDs)
Mercury (ug/L)	MW-8 (bg)	0.0025	0.0025	2	No	22	100	No	0.05	NP (NDs)
Mercury (ug/L)	MW-10	0.0025	0.0025	2	No	21	95.24	No	0.05	NP (NDs)

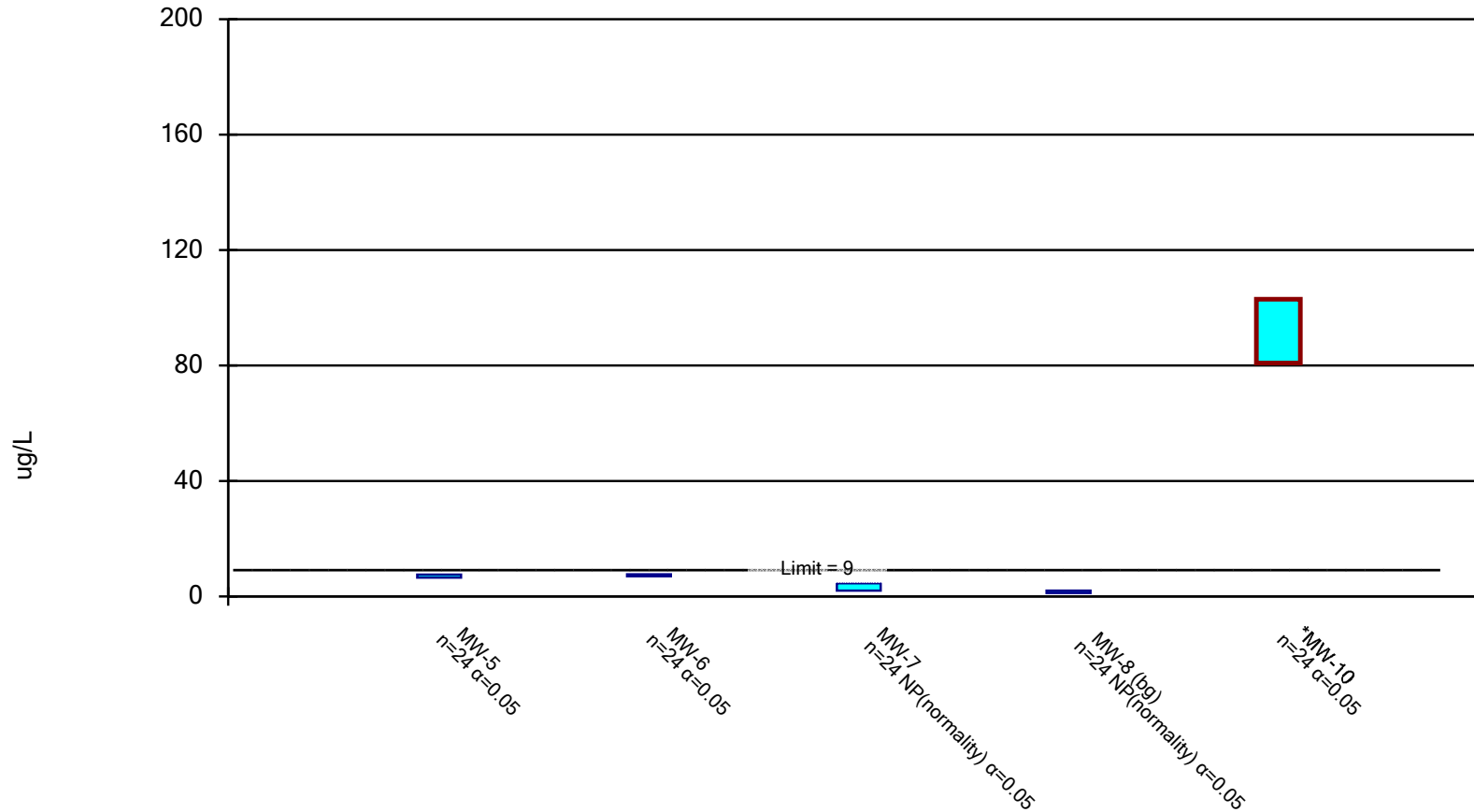
Confidence Interval

Big Rivers Electric Corp. Client: Burns & McDonnell Data: BREC Wilson_Datafile Printed 7/22/2025, 9:59 PM

<u>Constituent</u>	<u>Well</u>	<u>Upper Lim.</u>	<u>Lower Lim.</u>	<u>Compliance</u>	<u>Sig.</u>	<u>N</u>	<u>%NDs</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Cobalt (ug/L)	MW-10	103	80.83	9	Yes	24	0	No	0.05	Param.

Parametric and Non-Parametric (NP) Confidence Interval

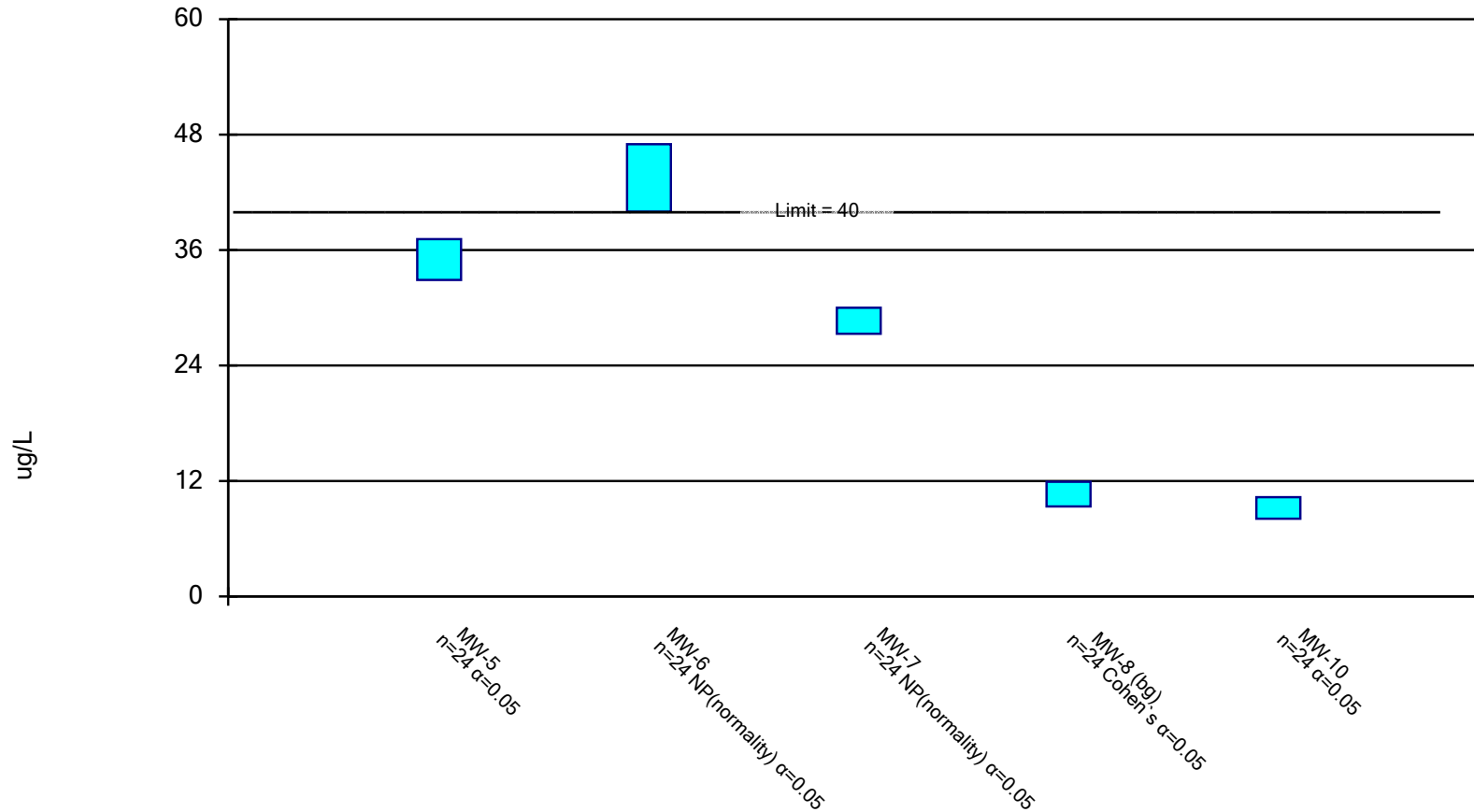
Compliance limit is exceeded.* Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cobalt Analysis Run 7/22/2025 9:58 PM View: 1H2025_CCR BREC
Big Rivers Electric Corp. Client: Burns & McDonnell Data: BREC Wilson_Datafile

Parametric and Non-Parametric (NP) Confidence Interval

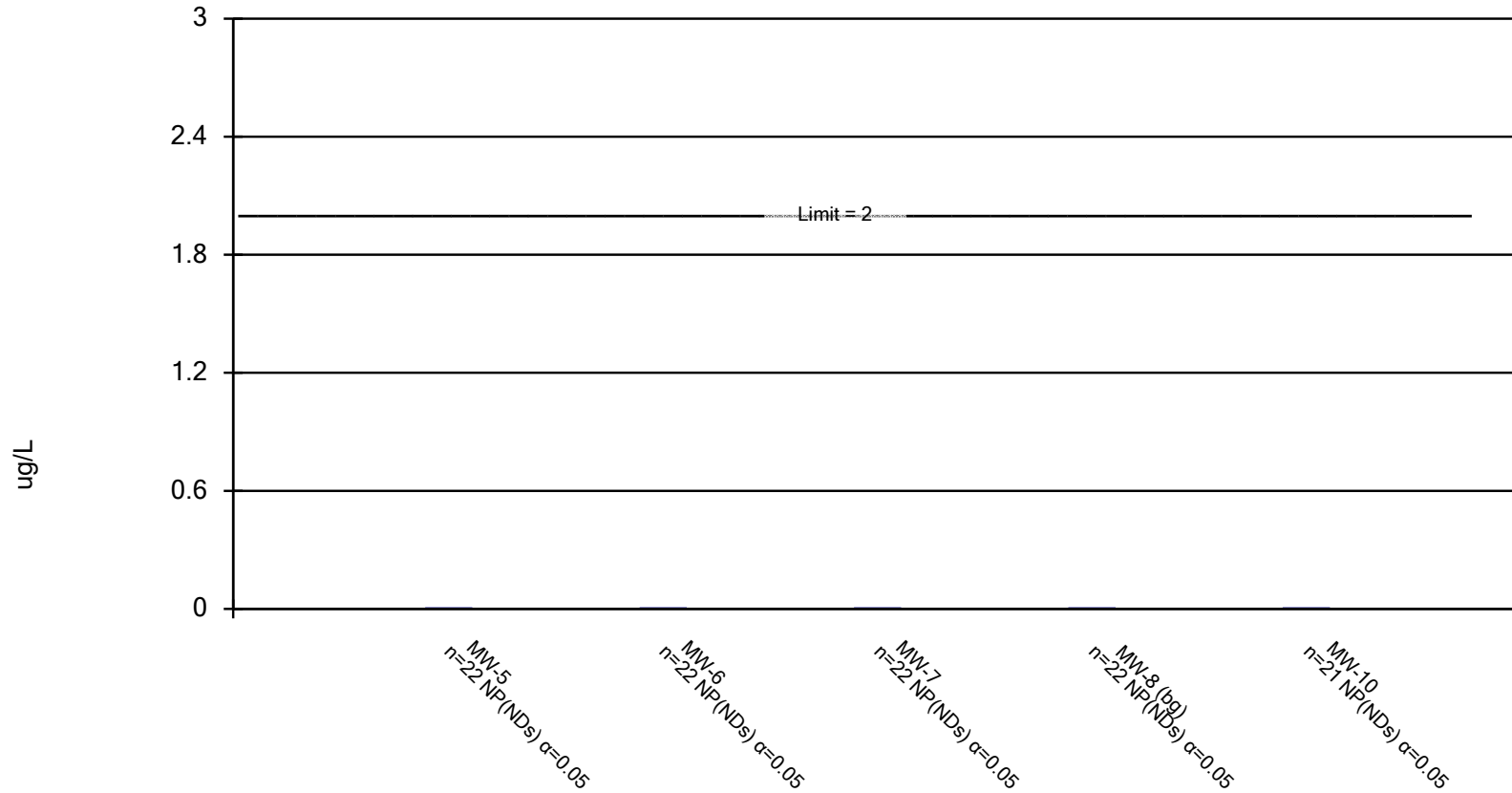
Compliance Limit is not exceeded. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Lithium Analysis Run 7/22/2025 9:58 PM View: 1H2025_CCR BREC
Big Rivers Electric Corp. Client: Burns & McDonnell Data: BREC Wilson_Datafile

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.



Constituent: Mercury Analysis Run 7/22/2025 9:58 PM View: 1H2025_CCR BREC
Big Rivers Electric Corp. Client: Burns & McDonnell Data: BREC Wilson_Datafile