

STATISTICAL ANALYSIS SUMMARY
BOTTOM ASH POND
Mitchell Plant
Moundsville, West Virginia

Submitted to



1 Riverside Plaza
Columbus, Ohio 43215-2372

Submitted by



engineers | scientists | innovators

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January 8, 2019

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LIST OF ACRONYMS AND ABBREVIATIONS

AEP	American Electric Power
BAP	Bottom Ash Pond
CCR	Coal Combustion Residuals
CCV	Continuing Calibration Verification
CFR	Code of Federal Regulations
GWPS	Groundwater Protection Standard
LCL	Lower Confidence Limit
LFB	Laboratory Fortified Blanks
LRB	Laboratory Reagent Blanks
MCL	Maximum Contaminant Level
NELAP	National Environmental Laboratory Accreditation Program
QA	Quality Assurance
QC	Quality Control
RSL	Regional Screening Level
SSI	Statistically Significant Increase
SSL	Statistically Significant Level
TDS	Total Dissolved Solids
UPL	Upper Prediction Limit
USEPA	United States Environmental Protection Agency
UTL	Upper Tolerance Limit

SECTION 1

EXECUTIVE SUMMARY

In accordance with the United States Environmental Protection Agency's (USEPA's) regulations regarding the disposal of coal combustion residuals (CCR) in landfills and surface impoundments (40 CFR 257.90-257.98, "CCR rule"), groundwater monitoring has been conducted at the Bottom Ash Pond (BAP), an existing CCR unit at the Mitchell Power Plant located in Moundsville, West Virginia.

Based on detection monitoring conducted in 2017, statistically significant increases (SSIs) over background were concluded for boron, calcium, chloride, and total dissolved solids (TDS) at the BAP. An alternate source was not identified at the time, so two assessment monitoring events were conducted at the BAP in 2018, in accordance with 40 CFR 257.95.

Groundwater data underwent several validation tests, including those for completeness, sample tracking accuracy, transcription errors, and consistent use of measurement units. No data quality issues were identified which would impact the usability of the data.

The monitoring data were submitted to Groundwater Stats Consulting, LLC for statistical analysis. Groundwater protection standards (GWPSs) were established for the Appendix IV parameters. Confidence intervals were calculated for Appendix IV parameters at the compliance wells to assess whether Appendix IV parameters were present at a statistically significant level (SSL) above the GWPS. No SSLs were identified, but Appendix III concentrations for boron, calcium, chloride, sulfate, and TDS remained above background. Thus, either the unit will remain in assessment monitoring or an alternative source demonstration will be conducted to evaluate if the unit can return to detection monitoring. Certification of the selected statistical methods by a qualified professional engineer is documented in Attachment A.

SECTION 2

BOTTOM ASH POND EVALUATION

2.1 Data Validation & QA/QC

During the assessment monitoring program, two sets of samples were collected for analysis from each upgradient and downgradient well to meet the requirements of 40 CFR 257.95(b) and 257.95(d)(1). Samples from both sampling events were analyzed for the Appendix III and Appendix IV parameters. A summary of data collected during assessment monitoring may be found in Table 1.

Chemical analysis was completed by an analytical laboratory certified by the National Environmental Laboratory Accreditation Program (NELAP). Quality assurance and quality control (QA/QC) samples completed by the analytical laboratory included the use of laboratory reagent blanks (LRBs), continuing calibration verification (CCV) samples, and laboratory fortified blanks (LFBs).

The analytical data were imported into a Microsoft Access database, where checks were completed to assess the accuracy of sample location identification and analyte identification. Where necessary, unit conversions were applied to standardize reported units across all sampling events. Exported data files were created for use with the Sanitas™ v.9.5 statistics software. The export file was checked against the analytical data for transcription errors and completeness. No QA/QC issues were noted which would impact data usability.

2.2 Statistical Analysis

Statistical analyses for the BAP were conducted in accordance with the January 2017 *Statistical Analysis Plan* (AEP, 2017), except where noted below. Time series plots and results for all completed statistical tests are provided in Attachment B.

The data obtained to meet the requirements of 40 CFR 257.95(b) and 257.95(d)(1) were screened for potential outliers. No outliers were identified. Outliers identified from the background and detection monitoring events conducted through January 2018 were summarized in a previous report (Geosyntec, 2018).

2.2.1 Establishment of GWPSs

A GWPS was established for each Appendix IV parameter in accordance with 40 CFR 257.95(h) and the *Statistical Analysis Plan* (AEP, 2017). The established GWPS was determined to be the greater value of the background concentration and the maximum contaminant level (MCL) or regional screening level (RSL) for each Appendix IV parameter. To determine background concentrations, an upper tolerance limit (UTL) was calculated using pooled data from the background wells collected during the background monitoring and assessment monitoring events.

Generally, tolerance limits were calculated parametrically with 95% coverage and 95% confidence. Non-parametric tolerance limits were calculated for cadmium, fluoride, mercury, selenium, and thallium due to apparent non-normal distributions. Tolerance limits and the final GWPSs are summarized in Table 2.

2.2.2 Evaluation of Potential Appendix IV SSLs

A confidence interval was constructed for each Appendix IV parameter at each compliance well. Confidence limits were generally calculated parametrically ($\alpha = 0.01$); however, non-parametric confidence limits were calculated in some cases (e.g., when the data did not appear to be normally distributed or when the non-detect frequency was too high). An SSL was concluded if the lower confidence limit (LCL) exceeded the GWPS (i.e., if the entire confidence interval exceeded the GWPS). Calculated confidence limits are shown in Attachment B.

No SSLs were identified at the Mitchell BAP.

2.2.3 Evaluation of Potential Appendix III SSIs

The CCR rule allows CCR units to move from assessment monitoring to detection monitoring if all Appendix III and Appendix IV parameters were at or below background levels for two consecutive sampling events [40 CFR 257.95(e)]. Since no Appendix IV SSLs were identified, Appendix III results were analyzed to assess whether concentrations of Appendix III parameters at the compliance wells exceeded background concentrations.

Prediction limits were calculated for the Appendix III parameters to represent background values. As described in the January 2018 *Statistical Analysis Summary* report (Geosyntec, 2018), intrawell tests were used to evaluate potential SSIs for fluoride and sulfate, whereas interwell tests were used to evaluate potential SSIs for boron, calcium, chloride, pH, and TDS.

Prediction limits for the interwell tests were recalculated using data collected during the 2018 assessment monitoring events. Twelve data points (i.e., two samples from six background wells) were added to the background dataset for each interwell test. New data were tested for outliers prior to being added to the background dataset. The updated prediction limits were calculated for a one-of-two retesting procedure, as during detection monitoring. The values of the updated prediction limits were similar to the values of the prediction limits calculated during detection monitoring. The revised prediction limits were used to evaluate potential SSIs for boron, calcium, chloride, pH, and TDS.

For the intrawell tests, limited data made it possible to add only two data points (i.e., two samples from each compliance well) to each background dataset. Because two sample results are insufficient to compare against the existing background dataset, the prediction limits were not updated for the intrawell tests at this time. The prediction limits calculated during detection monitoring were used to evaluate potential SSIs for fluoride and sulfate.

Data collected during the second assessment monitoring event from each compliance well were compared to the prediction limits to evaluate SSIs. The results from this event and the prediction limits are summarized in Table 3. The following exceedances of the upper prediction limits (UPLs) were noted:

- Boron concentrations exceeded the interwell UPL of 1.36 mg/L at MW-1505 (8.00 mg/L for both events), MW-1506 (5.73 mg/L and 5.91 mg/L), MW-1507 (10.4 mg/L and 9.29 mg/L), MW-1509 (6.81 mg/L and 6.97 mg/L), and MW-1510 (10.3 mg/L and 9.13 mg/L).
- Calcium concentrations exceeded the interwell UPL of 241 mg/L at MW-1505 (282 mg/L and 274 mg/L), MW-1506 (275 mg/L and 270 mg/L), MW-1507 (296 mg/L and 272 mg/L), MW-1509 (272 mg/L and 279 mg/L), and MW-1510 (292 mg/L and 268 mg/L).
- Chloride concentrations exceeded the interwell UPL of 238 mg/L at MW-1505 (289 mg/L and 284 mg/L), MW-1506 (382 mg/L and 369 mg/L), MW-1507 (400 mg/L and 331 mg/L), MW-1509 (324 mg/L and 323 mg/L), and MW-1510 (322 mg/L and 334 mg/L).
- Sulfate concentrations exceeded the intrawell UPL of 351 mg/L at MW-1505 (401 mg/L and 383 mg/L), the intrawell UPL of 345 mg/L at MW-1506 (347 mg/L and 349 mg/L), the intrawell UPL of 450 mg/L at MW-1509 (488 mg/L and 465 mg/L), and the intrawell UPL of 399 mg/L at MW-1510 (428 mg/L).
- TDS concentrations exceeded the interwell UPL of 1193 mg/L at MW-1505 (1220 mg/L and 1520 mg/L), MW-1506 (1300 mg/L and 1590 mg/L), MW-1507 (1390 mg/L and 1430 mg/L), MW-1509 (1390 mg/L and 1540 mg/L), and MW-1510 (1290 mg/L and 1550 mg/L).

Based on these results, concentrations of Appendix III parameters exceeded background levels at compliance wells at the Mitchell BAP during assessment monitoring. As a result, the Mitchell BAP CCR unit will remain in assessment monitoring.

2.3 Conclusions

Two assessment monitoring events were conducted in 2018 in accordance with the CCR Rule. The laboratory and field data were reviewed prior to statistical analysis, with no QA/QC issues identified that impacted data usability. A review of outliers identified no potential outliers in the 2018 data. GWPSs were established for the Appendix IV parameters. A confidence interval was constructed at each compliance well for each Appendix IV parameter; SSLs were concluded if the entire confidence interval exceeded the GWPS. No SSLs were identified.

The Appendix III results were evaluated to assess whether concentrations of Appendix III parameters exceeded background levels. Interwell tests were used to evaluate potential SSIs for boron, calcium, chloride, pH and TDS, and intrawell tests were used to evaluate potential SSIs for fluoride and sulfate. The prediction limits for the interwell tests were updated with additional data

collected from the background wells. Prediction limits were recalculated using a one-of-two retesting procedure. The prediction limits calculated during detection monitoring were used for the intrawell tests. Boron, calcium, chloride, sulfate, and TDS results exceeded background levels.

Based on this evaluation, the Mitchell BAP CCR unit will remain in assessment monitoring.

SECTION 3

REFERENCES

American Electric Power (AEP). 2017. Statistical Analysis Plan – Mitchell Plant. January 2017.

Geosyntec Consultants (Geosyntec). 2018. Statistical Analysis Summary – Bottom Ash Pond, Mitchell Plant, Moundsville, West Virginia. January 15, 2018.

TABLES

**Table 1 – Groundwater Data Summary
Mitchell – Bottom Ash Pond**

Parameter	Unit	MW-1504		MW-1505		MW-1506		MW-1507		MW-1508		MW-1509		MW-1510	
		4/11/2018	8/22/2018	4/11/2018	8/22/2018	4/11/2018	8/22/2018	4/11/2018	8/21/2018	4/11/2018	8/21/2018	4/11/2018	8/21/2018	4/12/2018	8/21/2018
Antimony	µg/L	0.0200 J	0.0500 J	0.0300 J	0.0500 J	0.0300 J	0.0600	0.0700	0.0800	0.0400 J	0.0600	0.0300 J	0.0900	0.0300 J	0.0300 J
Arsenic	µg/L	0.360	0.280	0.440	0.380	0.730	0.460	1.67	0.470	1.04	0.440	0.420	0.330	0.420	0.370
Barium	µg/L	36.9	37.9	46.0	48.0	55.4	54.6	71.2	62.1	46.4	40.1	52.8	53.8	43.3	42.6
Beryllium	µg/L	0.00500 J	0.02 U	0.00600 J	0.00700 J	0.0210	0.0100 J	0.0620	0.0100 J	0.0400	0.0100 J	0.00500 J	0.02 U	0.0100 J	0.00800 J
Boron	mg/L	0.0630	0.0960	8.00	8.00	5.73	5.91	10.4	9.29	0.806	0.952	6.81	6.97	10.4	9.13
Cadmium	µg/L	0.0300	0.0300	0.0300	0.0300	0.0200 J	0.0200	0.0400	0.0300	0.0400	0.0400	0.0100 J	0.00800 J	0.00500 J	0.00600 J
Calcium	mg/L	204	230	282	274	275	270	296	272	229	219	272	279	292	268
Chloride	mg/L	83.6	91.9	289	284	382	369	400	331	200	204	324	323	322	334
Chromium	µg/L	0.562	0.331	1.16	1.40	2.01	2.47	21.3	2.00	1.40	0.691	0.657	0.777	27.4	5.64
Cobalt	µg/L	0.114	0.0930	0.151	0.257	0.476	0.581	1.45	0.426	1.03	0.678	0.215	0.132	0.217	0.383
Combined Radium	pCi/L	0.349	1.05	0.582	0.576	0.592	1.72	0.701	1.42	0.236	0.315	0.792	0.736	0.0940	1.24
Fluoride	mg/L	0.190	0.200	0.20 U	0.0200 J	0.02 U	0.0500 J	0.0600 J	0.0700	0.0800	0.0800	0.150	0.140	0.20 U	0.0900
Lead	µg/L	0.0520	0.0370	0.116	0.150	0.477	0.319	1.56	0.308	1.11	0.384	0.0620	0.0350	0.119	0.133
Lithium	mg/L	0.00400	0.00600	0.00500	0.00800	0.00900	0.0100	0.0120	0.0100	0.00800	0.00700	0.00900	0.0120	0.00600	0.0110
Mercury	µg/L	0.01 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.00600	0.00200 J	0.01 U	0.005 U	0.00200 J	0.005 U	0.00200 J	0.005 U
Molybdenum	µg/L	0.410	0.330	0.670	1.35	1.23	0.500	2.73	0.870	0.450	0.250	0.340	0.320	3.30	0.430
Selenium	µg/L	0.0400 J	0.0400 J	0.700	0.400	0.100	0.0900 J	0.300	0.0800 J	0.700	0.400	0.200	0.300	0.100	0.100
Total Dissolved Solids	mg/L	842	936	1220	1520	1300	1590	1390	1430	1050	1080	1390	1540	1290	1550
Sulfate	mg/L	291	372	401	383	347	349	347	323	302	313	488	465	398	428
Thallium	µg/L	0.0300 J	0.0300 J	0.0650	0.0700	0.0500 J	0.0500	0.0590	0.0500 J	0.0500 J	0.0300 J	0.0570	0.0300 J	0.0200 J	0.0100 J
pH	SU	6.98	7.34	7.02	7.33	7.08	7.40	6.93	7.23	6.90	7.17	6.92	7.24	6.95	7.30

Notes:

µg/L: micrograms per liter

mg/L: milligrams per liter

pCi/L: picocuries per liter

SU: standard unit

U: Parameter was not present in concentrations above method detection limit and is reported as the reporting limit

J: Estimated value. Parameter was detected in concentrations below the reporting limit

**Table 2: Groundwater Protection Standards
Mitchell Plant - Bottom Ash Pond**

Constituent Name	MCL	RSL	Background Limit
Antimony, Total (mg/L)	0.006		0.000091
Arsenic, Total (mg/L)	0.01		0.0018
Barium, Total (mg/L)	2		0.06
Beryllium, Total (mg/L)	0.004		0.000077
Cadmium, Total (mg/L)	0.005		0.00009
Chromium, Total (mg/L)	0.1		0.0024
Cobalt, Total (mg/L)	n/a	0.006	0.0032
Combined Radium, Total (pCi/L)	5		2.41
Fluoride, Total (mg/L)	4		0.25
Lead, Total (mg/L)	n/a	0.015	0.0046
Lithium, Total (mg/L)	n/a	0.04	0.016
Mercury, Total (mg/L)	0.002		0.000008
Molybdenum, Total (mg/L)	n/a	0.1	0.002
Selenium, Total (mg/L)	0.05		0.0009
Thallium, Total (mg/L)	0.002		0.00011

Notes:

Grey cell indicates calculated UTL is higher than MCL.

MCL = Maximum Contaminant Level

RSL = Regional Screening Level

Calculated UTL (Upper Tolerance Limit) represents site-specific background values.

The higher of the calculated UTL or MCL/RSL is used as the GWPS.

**Table 3: Appendix III Data Evaluation
Mitchell Plant - Bottom Ash Pond**

Parameter	Units	Description	MW-1505		MW-1506		MW-1507		MW-1509		MW-1510	
			4/11/2018	8/22/2018	4/11/2018	8/22/2018	4/11/2018	8/21/2018	4/11/2018	8/21/2018	4/12/2018	8/21/2018
Boron	mg/L	Interwell Background Value (UPL)	1.36									
		Assessment Monitoring Result	8.00	8.00	5.73	5.91	10.4	9.29	6.81	6.97	10.3	9.13
Calcium	mg/L	Interwell Background Value (UPL)	241									
		Assessment Monitoring Result	282	274	275	270	296	272	272	279	292	268
Chloride	mg/L	Interwell Background Value (UPL)	238									
		Assessment Monitoring Result	289	284	382	369	400	331	324	323	322	334
Fluoride	mg/L	Intrawell Background Value (UPL)	0.200		0.200		0.200		0.160		0.200	
		Assessment Monitoring Result	0.050	0.020	0.050	0.050	0.060	0.070	0.150	0.140	0.050	0.090
pH	SU	Interwell Background Value (UPL)	7.35									
		Interwell Background Value (LPL)	6.84									
		Assessment Monitoring Result	7.02	7.33	7.08	7.40	6.93	7.23	6.92	7.24	6.95	7.30
Sulfate	mg/L	Intrawell Background Value (UPL)	351		345		377		450		399	
		Assessment Monitoring Result	401	383	347	349	347	323	488	465	398	428
Total Dissolved Solids	mg/L	Interwell Background Value (UPL)	1193									
		Assessment Monitoring Result	1220	1520	1300	1590	1390	1430	1390	1540	1290	1550

Notes:

UPL: Upper prediction limit

LPL: Lower prediction limit

Bold values exceed the background value.

Background values are shaded gray.

Based on a 1-of-2 resampling, a statistically significant increase (SSI) is only identified when both samples in the detection monitoring

ATTACHMENT A

Certification by Qualified Professional Engineer

Certification by Qualified Professional Engineer

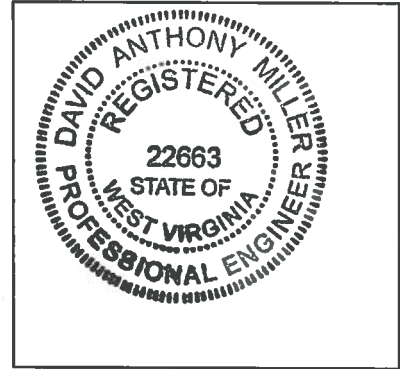
I certify that the selected and above described statistical method is appropriate for evaluating the groundwater monitoring data for the Mitchell Bottom Ash Pond CCR management area and that the requirements of 40 CFR 257.93(f) have been met.

DAVID ANTHONY MILLER

Printed Name of Licensed Professional Engineer

David Anthony Miller

Signature



22663

License Number

WEST VIRGINIA

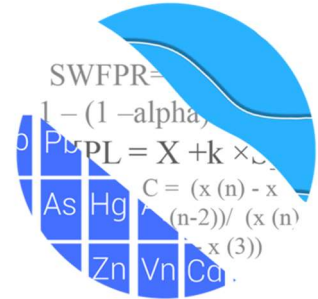
Licensing State

01.08.19

Date

ATTACHMENT B
Statistical Analysis Output

GROUNDWATER STATS CONSULTING



November 12, 2018

Geosyntec Consultants
Attn: Ms. Allison Kreinberg
150 E. Wilson Bridge Rd., #232
Worthington, OH 43085

Dear Ms. Kreinberg,

Groundwater Stats Consulting, formerly the statistical consulting division of Sanitas Technologies, is pleased to provide the evaluation of groundwater data for American Electric Power Company's Mitchell Bottom Ash Pond. The analysis complies with the federal rule for the Disposal of Coal Combustion Residuals from Electric Utilities (CCR Rule, 2015) as well as with the USEPA Unified Guidance (2009).

Sampling at each of the wells below began at Mitchell Bottom Ash Pond for the CCR program in 2016. The monitoring well network, as provided by Geosyntec Consultants, consists of the following: upgradient wells MW-1504 and MW-1508; and downgradient wells MW-1505, MW-1506, MW-1507, MW-1509 and MW-1510.

Data were sent electronically, and the statistical analysis was conducted according to the Statistical Analysis Plan and screening evaluation prepared by GSC and approved by Dr. Kirk Cameron, PhD Statistician with MacStat Consulting, primary author of the USEPA Unified Guidance, and Senior Advisor to GSC.

The CCR program consists of the following constituents:

- **Appendix III** (Detection Monitoring) - boron, calcium, chloride, fluoride, pH, sulfate, and TDS; and
- **Appendix IV** (Assessment Monitoring) – antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, combined radium 226 + 228, fluoride, lead, lithium, mercury, molybdenum, selenium, and thallium.

Time series plots for Appendix III and IV parameters are provided for all wells and constituents; and are used to evaluate concentrations over the entire record. Values in background which have previously been flagged as outliers may be seen in a lighter font and disconnected symbol on the graphs. Additionally, a summary of flagged values follows this letter.

Evaluation of Appendix III Parameters

Interwell prediction limits combined with a 1-of-2 resample plan were constructed for boron, calcium, chloride, pH, and TDS; and intrawell prediction limits combined with a 1-of-2 resample plan were constructed for fluoride and sulfate. The statistical method for applicable for each parameter was determined based on the results of the screening analysis performed in December 2017.

In the event of an initial exceedance of compliance well data, the 1-of-2 resample plan allows for collection of one additional sample to determine whether the initial exceedance is confirmed. When the resample confirms the initial exceedance, a statistically significant increase (SSI) is identified and further research would be required to identify the cause of the exceedance (i.e. impact from the site, natural variation, or an off-site source). If the resample falls within the statistical limit, the initial exceedance is considered a false positive result and, therefore, no further action is necessary. SSIs were noted for several of the Appendix III parameters and the results of those findings may be found in the Prediction Limit Summary tables following this letter.

When a statistically significant increase is identified, the data are further evaluated using the Sen's Slope/Mann Kendall trend test to determine whether data are statistically increasing, decreasing or stable. Several statistically significant decreasing trends were noted, but no statistically significant increasing trends were found except for sulfate in downgradient well MW_1509. The Trend Test Summary Table follows this letter.

Appendix IV – Assessment Monitoring Program

Evaluation of Appendix IV Parameters

Parametric tolerance limits were used to calculate background limits from pooled upgradient well data for Appendix IV parameters with a target of 95% confidence and 95% coverage to determine the Alternate Contaminant Level (ACL). The confidence and coverage levels for nonparametric tolerance limits are dependent upon the number of background samples. These limits were compared to the Maximum Contaminant Levels

(MCLs) and Regional Screening Levels (RSLs) in the Groundwater Protection Standards (GWPS) table following this letter to determine the highest limit for use as the GWPS in the Confidence Interval comparisons.

Confidence intervals were then constructed on downgradient wells for each of the Appendix IV parameters using the highest limit of either the MCL, RSL, or ACL as discussed above. Only when the entire confidence interval is above a GWPS is the well/constituent pair considered to exceed its respective standard. No exceedances were noted at any of the downgradient wells. A summary of the confidence interval results follows this letter.

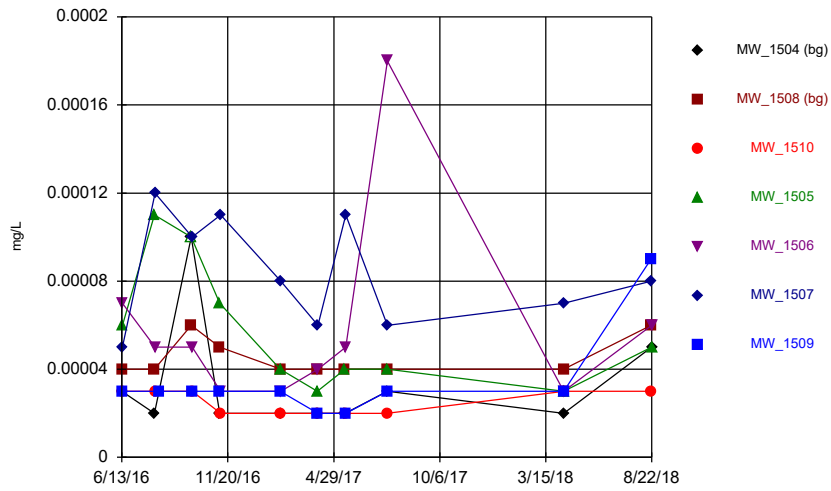
Thank you for the opportunity to assist you in the statistical analysis of groundwater quality for the Mitchell Bottom Ash Pond. If you have any questions or comments, please feel free to contact me.

For Groundwater Stats Consulting,

A handwritten signature in cursive script that reads "Kristina Rayner". The signature is written in black ink and is positioned below the typed name.

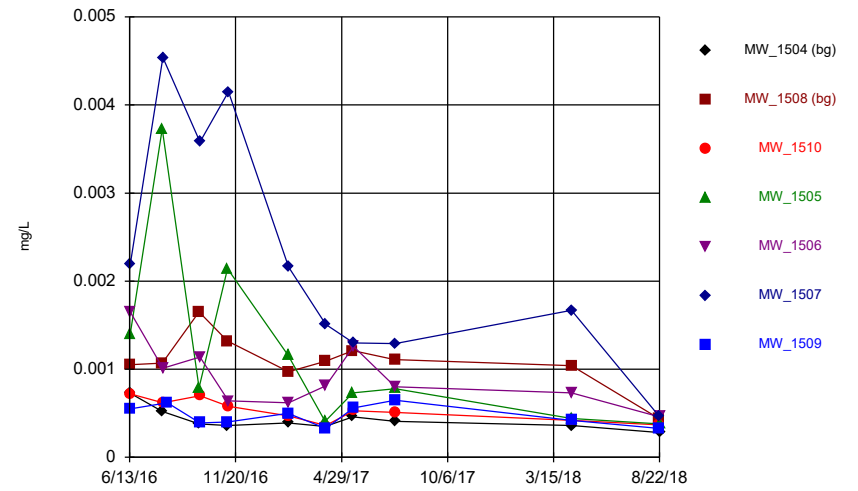
Kristina L. Rayner
Groundwater Statistician

Time Series



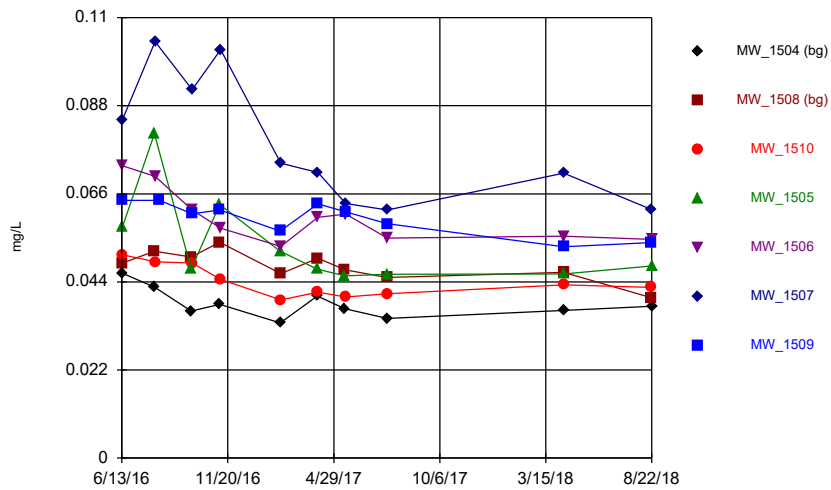
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Mitchell BAP Client: Geosyntec Data: Mitchell BAP

Time Series



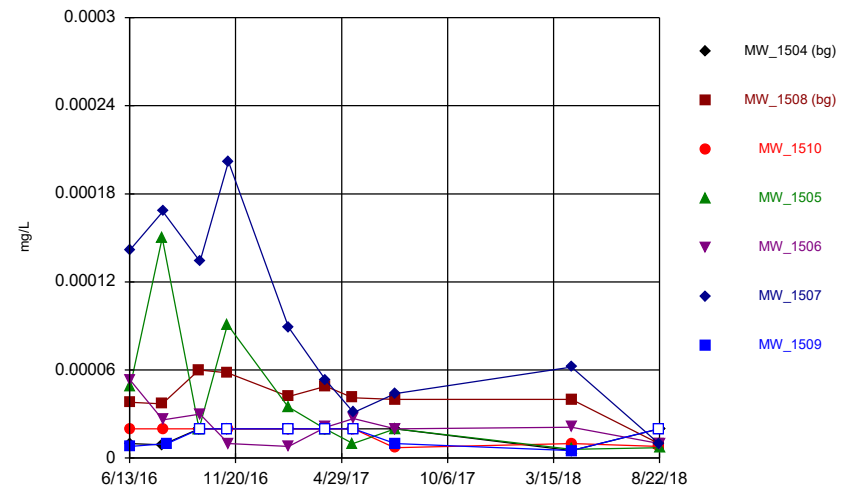
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Time Series



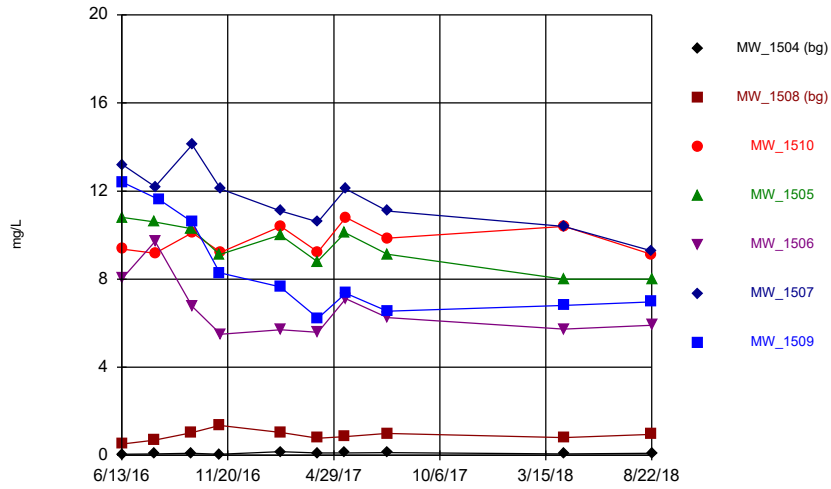
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Time Series



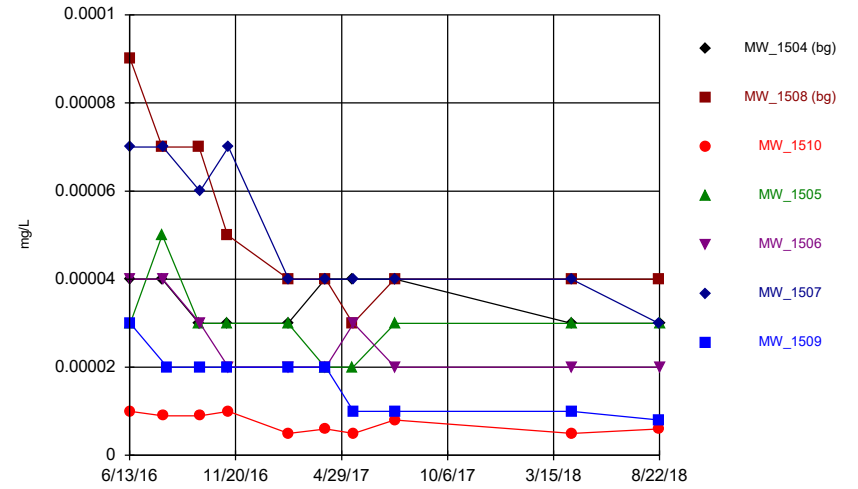
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Mitchell BAP Client: Geosyntec Data: Mitchell BAP

Time Series



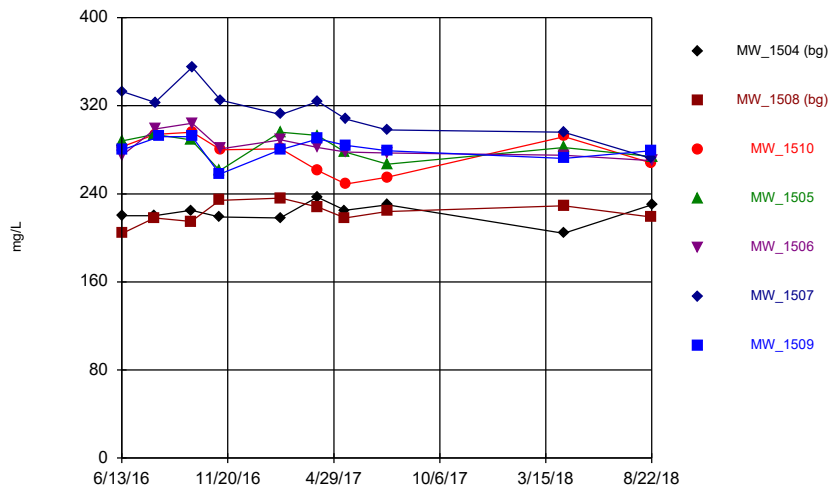
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Mitchell BAP Client: Geosyntec Data: Mitchell BAP

Time Series



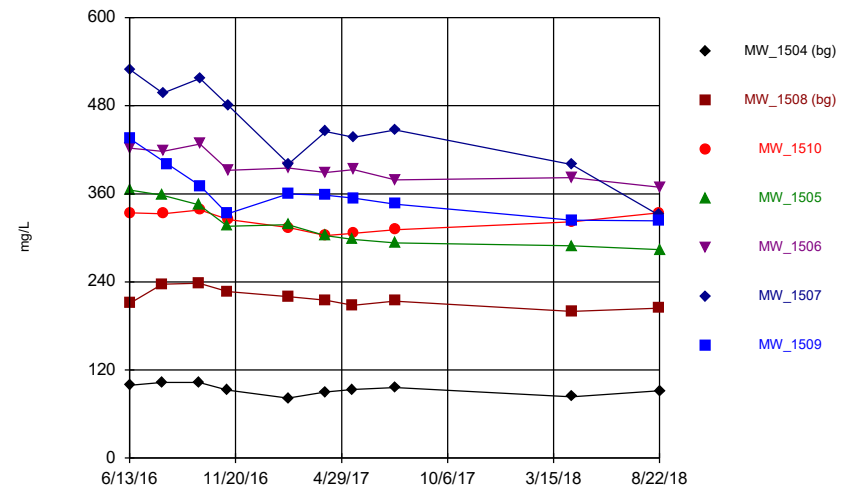
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Mitchell BAP Client: Geosyntec Data: Mitchell BAP

Time Series



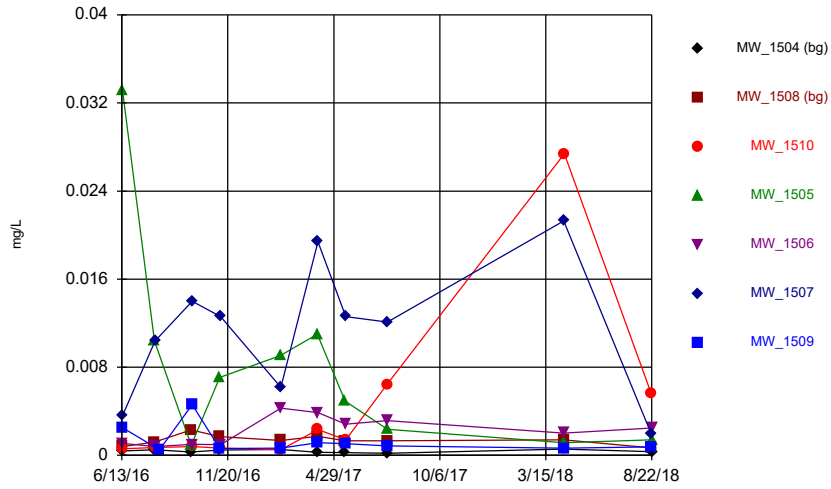
Constituent: Calcium, total Analysis Run 11/11/2018 2:37 PM View: Time Series - All Wells
Mitchell BAP Client: Geosyntec Data: Mitchell BAP

Time Series



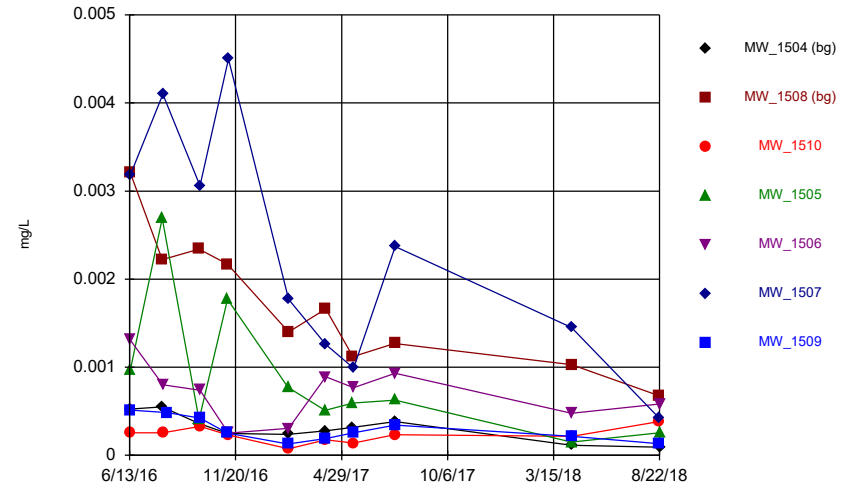
Constituent: Chloride, total Analysis Run 11/11/2018 2:37 PM View: Time Series - All Wells
Mitchell BAP Client: Geosyntec Data: Mitchell BAP

Time Series



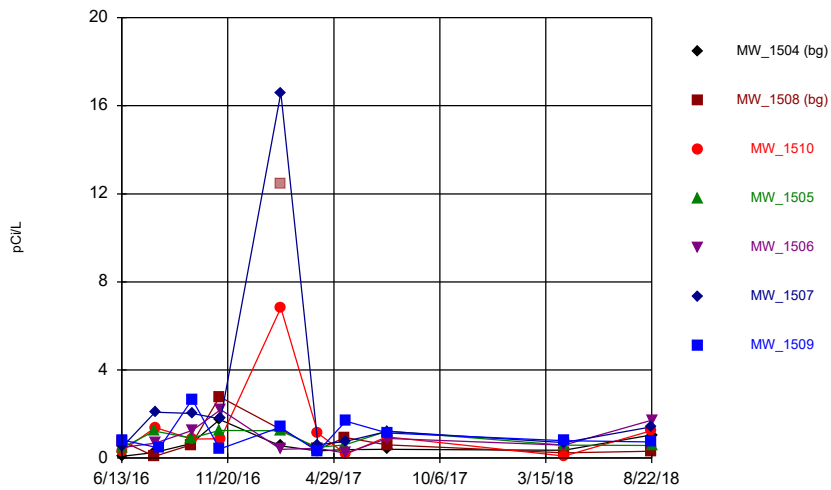
Constituent: Chromium, total Analysis Run 11/11/2018 2:37 PM View: Time Series - All Wells
Mitchell BAP Client: Geosyntec Data: Mitchell BAP

Time Series



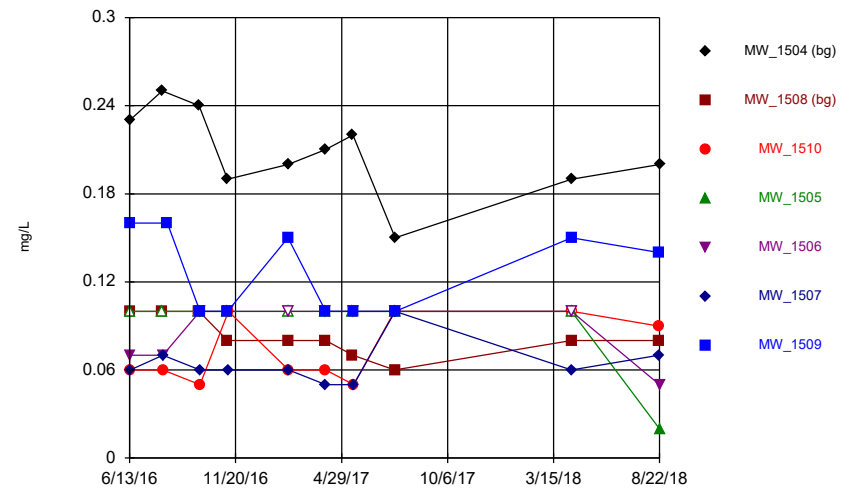
Constituent: Cobalt, total Analysis Run 11/11/2018 2:37 PM View: Time Series - All Wells
Mitchell BAP Client: Geosyntec Data: Mitchell BAP

Time Series



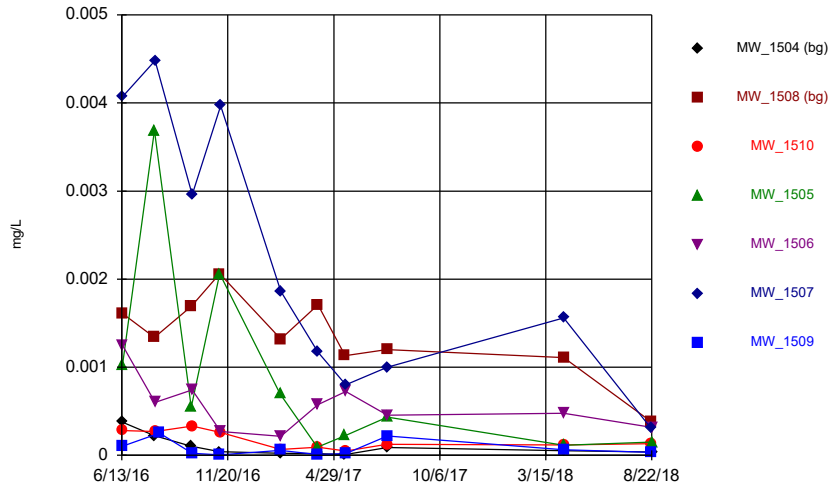
Constituent: Combined Radium 226 + 228 Analysis Run 11/11/2018 2:37 PM View: Time Series - All Well
Mitchell BAP Client: Geosyntec Data: Mitchell BAP

Time Series



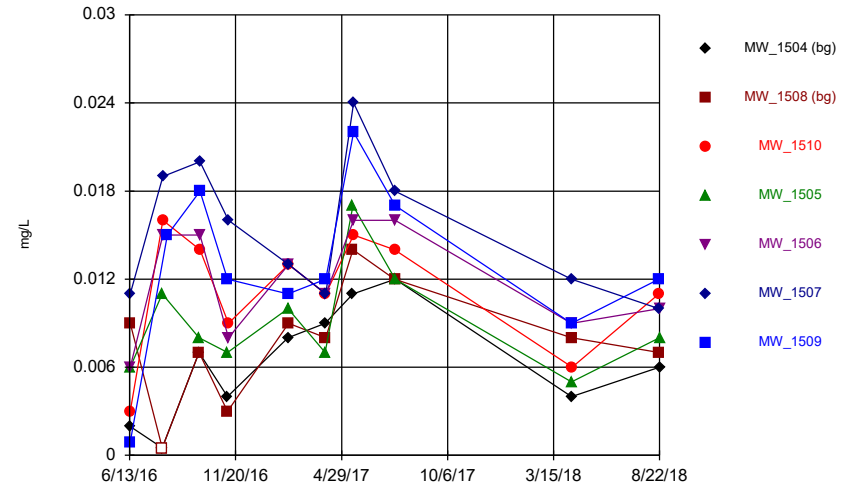
Constituent: Fluoride, total Analysis Run 11/11/2018 2:37 PM View: Time Series - All Wells
Mitchell BAP Client: Geosyntec Data: Mitchell BAP

Time Series



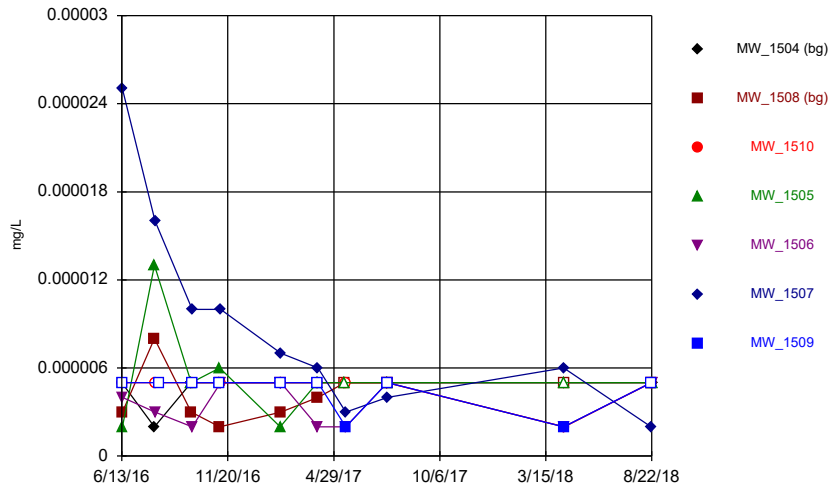
Constituent: Lead, total Analysis Run 11/11/2018 2:37 PM View: Time Series - All Wells
Mitchell BAP Client: Geosyntec Data: Mitchell BAP

Time Series



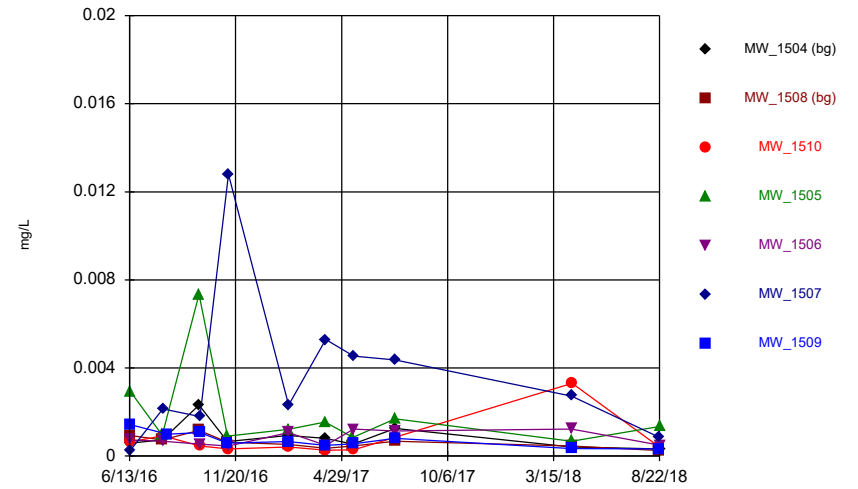
Constituent: Lithium, total Analysis Run 11/11/2018 2:37 PM View: Time Series - All Wells
Mitchell BAP Client: Geosyntec Data: Mitchell BAP

Time Series



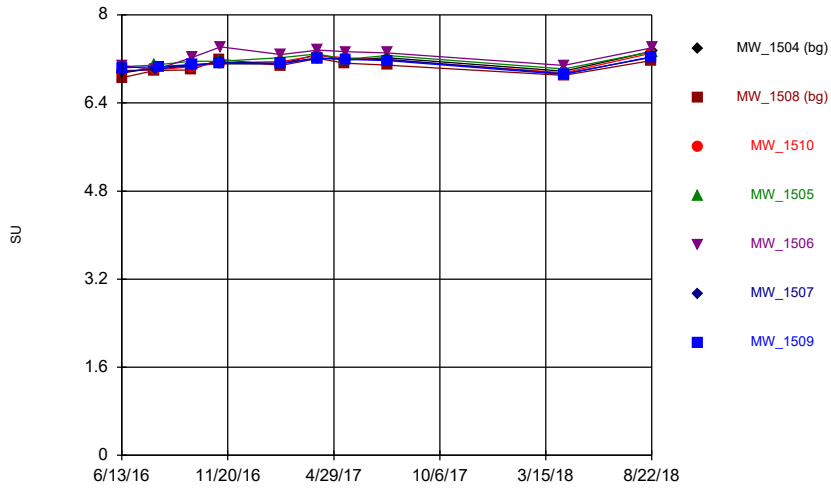
Constituent: Mercury, total Analysis Run 11/11/2018 2:37 PM View: Time Series - All Wells
Mitchell BAP Client: Geosyntec Data: Mitchell BAP

Time Series



Constituent: Molybdenum, total Analysis Run 11/11/2018 2:37 PM View: Time Series - All Wells
Mitchell BAP Client: Geosyntec Data: Mitchell BAP

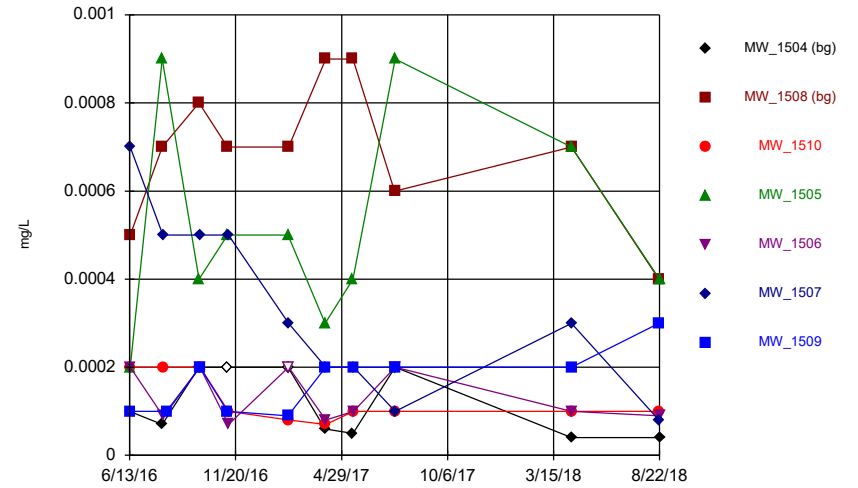
Time Series



Constituent: pH, field Analysis Run 11/11/2018 2:37 PM View: Time Series - All Wells
Mitchell BAP Client: Geosyntec Data: Mitchell BAP

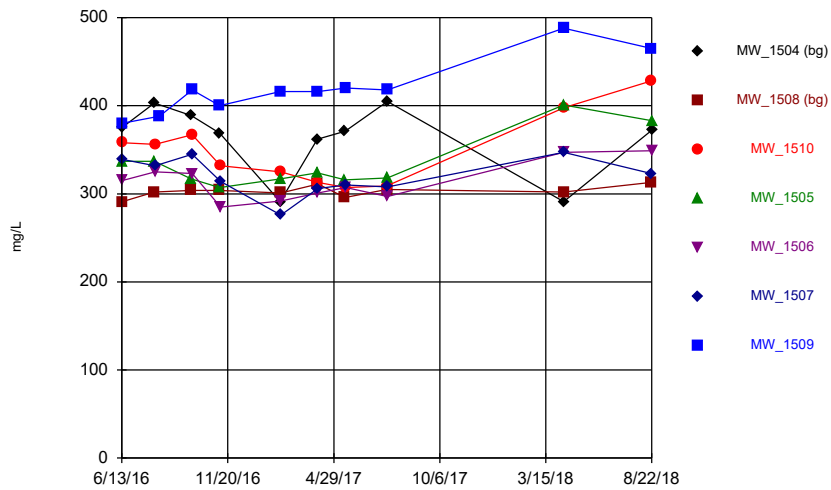
Hollow symbols indicate censored values.

Time Series



Constituent: Selenium, Total Analysis Run 11/11/2018 2:37 PM View: Time Series - All Wells
Mitchell BAP Client: Geosyntec Data: Mitchell BAP

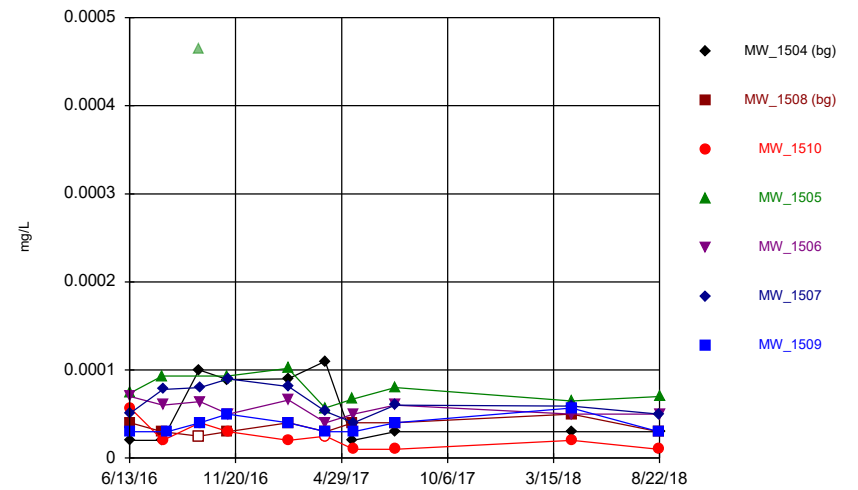
Time Series



Constituent: Sulfate, total Analysis Run 11/11/2018 2:37 PM View: Time Series - All Wells
Mitchell BAP Client: Geosyntec Data: Mitchell BAP

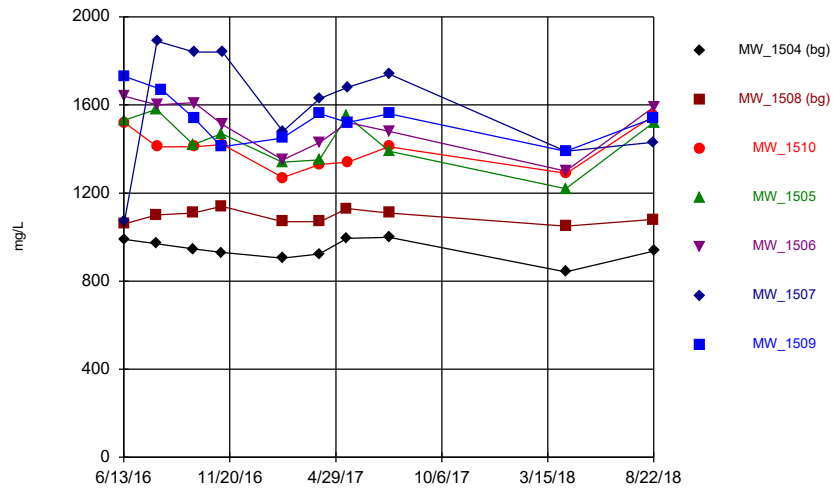
Hollow symbols indicate censored values.

Time Series



Constituent: Thallium, Total Analysis Run 11/11/2018 2:37 PM View: Time Series - All Wells
Mitchell BAP Client: Geosyntec Data: Mitchell BAP

Time Series



Constituent: Total Dissolved Solids [TDS] Analysis Run 11/11/2018 2:37 PM View: Time Series - All Wells
Mitchell BAP Client: Geosyntec Data: Mitchell BAP

Interwell Prediction Limit Summary Table - Significant Results

Mitchell BAP Client: Geosyntec Data: Mitchell BAP Printed 11/11/2018, 2:12 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev	%NDs	ND Adj.	Transform	Alpha	Method
Boron, total (mg/L)	MW_1510	1.36	n/a	8/21/2018	9.13	Yes	20	n/a	n/a	0	n/a	n/a	0.004024	NP (normality) 1 of 2
Boron, total (mg/L)	MW_1505	1.36	n/a	8/22/2018	8	Yes	20	n/a	n/a	0	n/a	n/a	0.004024	NP (normality) 1 of 2
Boron, total (mg/L)	MW_1506	1.36	n/a	8/22/2018	5.91	Yes	20	n/a	n/a	0	n/a	n/a	0.004024	NP (normality) 1 of 2
Boron, total (mg/L)	MW_1507	1.36	n/a	8/21/2018	9.29	Yes	20	n/a	n/a	0	n/a	n/a	0.004024	NP (normality) 1 of 2
Boron, total (mg/L)	MW_1509	1.36	n/a	8/21/2018	6.97	Yes	20	n/a	n/a	0	n/a	n/a	0.004024	NP (normality) 1 of 2
Calcium, total (mg/L)	MW_1510	241.2	n/a	8/21/2018	268	Yes	20	222.7	9.069	0	None	No	0.001504	Param 1 of 2
Calcium, total (mg/L)	MW_1505	241.2	n/a	8/22/2018	274	Yes	20	222.7	9.069	0	None	No	0.001504	Param 1 of 2
Calcium, total (mg/L)	MW_1506	241.2	n/a	8/22/2018	270	Yes	20	222.7	9.069	0	None	No	0.001504	Param 1 of 2
Calcium, total (mg/L)	MW_1507	241.2	n/a	8/21/2018	272	Yes	20	222.7	9.069	0	None	No	0.001504	Param 1 of 2
Calcium, total (mg/L)	MW_1509	241.2	n/a	8/21/2018	279	Yes	20	222.7	9.069	0	None	No	0.001504	Param 1 of 2
Chloride, total (mg/L)	MW_1510	238	n/a	8/21/2018	334	Yes	20	n/a	n/a	0	n/a	n/a	0.004024	NP (normality) 1 of 2
Chloride, total (mg/L)	MW_1505	238	n/a	8/22/2018	284	Yes	20	n/a	n/a	0	n/a	n/a	0.004024	NP (normality) 1 of 2
Chloride, total (mg/L)	MW_1506	238	n/a	8/22/2018	369	Yes	20	n/a	n/a	0	n/a	n/a	0.004024	NP (normality) 1 of 2
Chloride, total (mg/L)	MW_1507	238	n/a	8/21/2018	331	Yes	20	n/a	n/a	0	n/a	n/a	0.004024	NP (normality) 1 of 2
Chloride, total (mg/L)	MW_1509	238	n/a	8/21/2018	323	Yes	20	n/a	n/a	0	n/a	n/a	0.004024	NP (normality) 1 of 2
pH, field (SU)	MW_1506	7.352	6.838	8/22/2018	7.4	Yes	20	7.095	0.1256	0	None	No	0.000752	Param 1 of 2
Total Dissolved Solids [TDS] (mg/L)	MW_1509	1193	n/a	8/21/2018	1540	Yes	20	1018	85.7	0	None	No	0.001504	Param 1 of 2
Total Dissolved Solids [TDS] (mg/L)	MW_1510	1193	n/a	8/21/2018	1550	Yes	20	1018	85.7	0	None	No	0.001504	Param 1 of 2
Total Dissolved Solids [TDS] (mg/L)	MW_1505	1193	n/a	8/22/2018	1520	Yes	20	1018	85.7	0	None	No	0.001504	Param 1 of 2
Total Dissolved Solids [TDS] (mg/L)	MW_1506	1193	n/a	8/22/2018	1590	Yes	20	1018	85.7	0	None	No	0.001504	Param 1 of 2
Total Dissolved Solids [TDS] (mg/L)	MW_1507	1193	n/a	8/21/2018	1430	Yes	20	1018	85.7	0	None	No	0.001504	Param 1 of 2

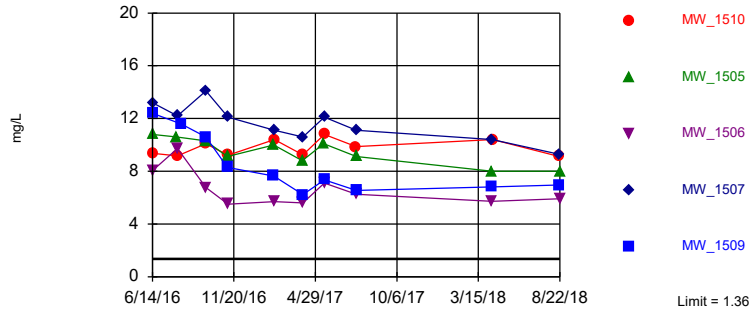
Interwell Prediction Limit Summary Table - All Results

Mitchell BAP Client: Geosyntec Data: Mitchell BAP Printed 11/11/2018, 2:12 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev	%NDs	ND Adj.	Transform	Alpha	Method
Boron, total (mg/L)	MW_1505	1.36	n/a	8/22/2018	8	Yes	20	n/a	n/a	0	n/a	n/a	0.004024	NP (normality) 1 of 2
Boron, total (mg/L)	MW_1506	1.36	n/a	8/22/2018	5.91	Yes	20	n/a	n/a	0	n/a	n/a	0.004024	NP (normality) 1 of 2
Boron, total (mg/L)	MW_1507	1.36	n/a	8/21/2018	9.29	Yes	20	n/a	n/a	0	n/a	n/a	0.004024	NP (normality) 1 of 2
Boron, total (mg/L)	MW_1509	1.36	n/a	8/21/2018	6.97	Yes	20	n/a	n/a	0	n/a	n/a	0.004024	NP (normality) 1 of 2
Boron, total (mg/L)	MW_1510	1.36	n/a	8/21/2018	9.13	Yes	20	n/a	n/a	0	n/a	n/a	0.004024	NP (normality) 1 of 2
Calcium, total (mg/L)	MW_1505	241.2	n/a	8/22/2018	274	Yes	20	222.7	9.069	0	None	No	0.001504	Param 1 of 2
Calcium, total (mg/L)	MW_1506	241.2	n/a	8/22/2018	270	Yes	20	222.7	9.069	0	None	No	0.001504	Param 1 of 2
Calcium, total (mg/L)	MW_1507	241.2	n/a	8/21/2018	272	Yes	20	222.7	9.069	0	None	No	0.001504	Param 1 of 2
Calcium, total (mg/L)	MW_1509	241.2	n/a	8/21/2018	279	Yes	20	222.7	9.069	0	None	No	0.001504	Param 1 of 2
Calcium, total (mg/L)	MW_1510	241.2	n/a	8/21/2018	268	Yes	20	222.7	9.069	0	None	No	0.001504	Param 1 of 2
Chloride, total (mg/L)	MW_1505	238	n/a	8/22/2018	284	Yes	20	n/a	n/a	0	n/a	n/a	0.004024	NP (normality) 1 of 2
Chloride, total (mg/L)	MW_1506	238	n/a	8/22/2018	369	Yes	20	n/a	n/a	0	n/a	n/a	0.004024	NP (normality) 1 of 2
Chloride, total (mg/L)	MW_1507	238	n/a	8/21/2018	331	Yes	20	n/a	n/a	0	n/a	n/a	0.004024	NP (normality) 1 of 2
Chloride, total (mg/L)	MW_1509	238	n/a	8/21/2018	323	Yes	20	n/a	n/a	0	n/a	n/a	0.004024	NP (normality) 1 of 2
Chloride, total (mg/L)	MW_1510	238	n/a	8/21/2018	334	Yes	20	n/a	n/a	0	n/a	n/a	0.004024	NP (normality) 1 of 2
pH, field (SU)	MW_1505	7.352	6.838	8/22/2018	7.33	No	20	7.095	0.1256	0	None	No	0.000752	Param 1 of 2
pH, field (SU)	MW_1506	7.352	6.838	8/22/2018	7.4	Yes	20	7.095	0.1256	0	None	No	0.000752	Param 1 of 2
pH, field (SU)	MW_1507	7.352	6.838	8/21/2018	7.23	No	20	7.095	0.1256	0	None	No	0.000752	Param 1 of 2
pH, field (SU)	MW_1509	7.352	6.838	8/21/2018	7.24	No	20	7.095	0.1256	0	None	No	0.000752	Param 1 of 2
pH, field (SU)	MW_1510	7.352	6.838	8/21/2018	7.3	No	20	7.095	0.1256	0	None	No	0.000752	Param 1 of 2
Total Dissolved Solids [TDS] (mg/L)	MW_1505	1193	n/a	8/22/2018	1520	Yes	20	1018	85.7	0	None	No	0.001504	Param 1 of 2
Total Dissolved Solids [TDS] (mg/L)	MW_1506	1193	n/a	8/22/2018	1590	Yes	20	1018	85.7	0	None	No	0.001504	Param 1 of 2
Total Dissolved Solids [TDS] (mg/L)	MW_1507	1193	n/a	8/21/2018	1430	Yes	20	1018	85.7	0	None	No	0.001504	Param 1 of 2
Total Dissolved Solids [TDS] (mg/L)	MW_1509	1193	n/a	8/21/2018	1540	Yes	20	1018	85.7	0	None	No	0.001504	Param 1 of 2
Total Dissolved Solids [TDS] (mg/L)	MW_1510	1193	n/a	8/21/2018	1550	Yes	20	1018	85.7	0	None	No	0.001504	Param 1 of 2

Exceeds Limit: MW_1510, MW_1505,
MW_1506, MW_1507, MW_1509

Prediction Limit
Interwell Non-parametric

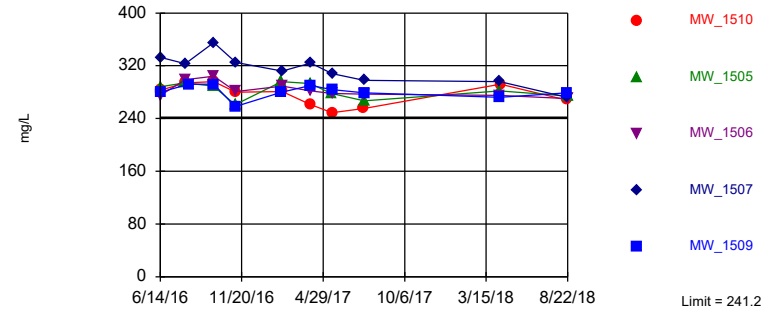


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 20 background values. Annual per-constituent alpha = 0.03952. Individual comparison alpha = 0.004024 (1 of 2). Comparing 5 points to limit.

Constituent: Boron, total Analysis Run 11/11/2018 2:10 PM View: PLs - Interwell
Mitchell BAP Client: Geosyntec Data: Mitchell BAP

Exceeds Limit: MW_1510, MW_1505,
MW_1506, MW_1507, MW_1509

Prediction Limit
Interwell Parametric

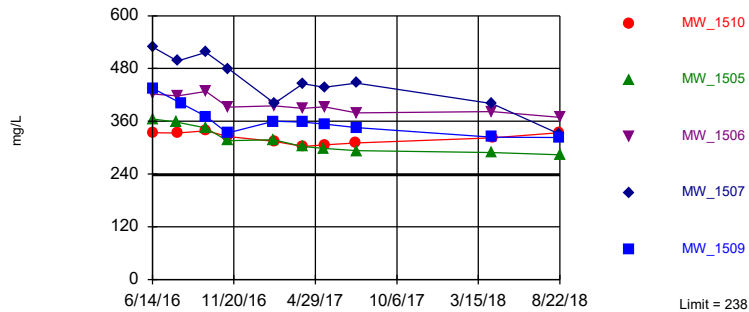


Background Data Summary: Mean=222.7, Std. Dev.=9.069, n=20. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9422, critical = 0.868. Kappa = 2.048 (c=7, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.001504. Comparing 5 points to limit.

Constituent: Calcium, total Analysis Run 11/11/2018 2:10 PM View: PLs - Interwell
Mitchell BAP Client: Geosyntec Data: Mitchell BAP

Exceeds Limit: MW_1510, MW_1505,
MW_1506, MW_1507, MW_1509

Prediction Limit
Interwell Non-parametric

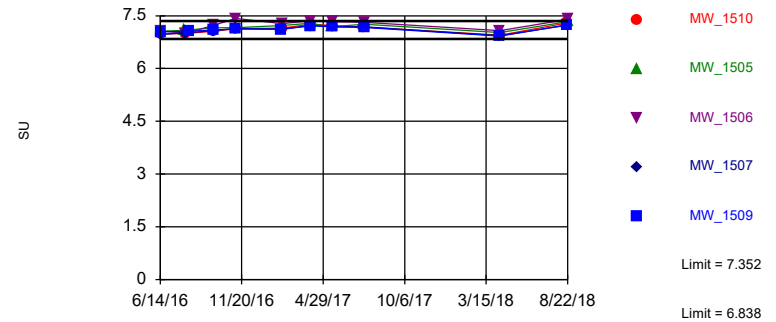


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 20 background values. Annual per-constituent alpha = 0.03952. Individual comparison alpha = 0.004024 (1 of 2). Comparing 5 points to limit.

Constituent: Chloride, total Analysis Run 11/11/2018 2:10 PM View: PLs - Interwell
Mitchell BAP Client: Geosyntec Data: Mitchell BAP

Exceeds Limits: MW_1506

Prediction Limit
Interwell Parametric

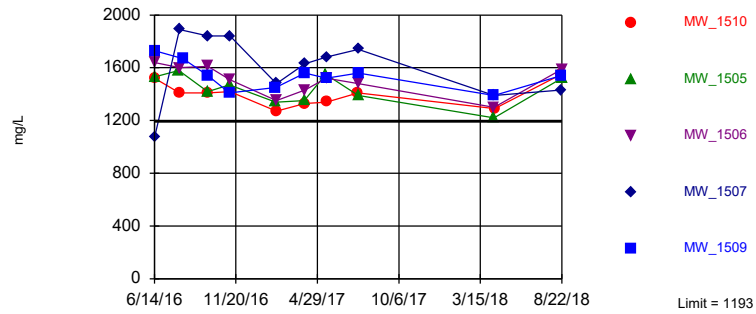


Background Data Summary: Mean=7.095, Std. Dev.=0.1256, n=20. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9864, critical = 0.868. Kappa = 2.048 (c=7, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.000752. Comparing 5 points to limit.

Constituent: pH, field Analysis Run 11/11/2018 2:10 PM View: PLs - Interwell
Mitchell BAP Client: Geosyntec Data: Mitchell BAP

Exceeds Limit: MW_1510, MW_1505,
MW_1506, MW_1507, MW_1509

Prediction Limit
Interwell Parametric



Background Data Summary: Mean=1018, Std. Dev.=85.7, n=20. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9477, critical = 0.868. Kappa = 2.048 (c=7, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.001504. Comparing 5 points to limit.

Constituent: Total Dissolved Solids [TDS] Analysis Run 11/11/2018 2:10 PM View: PLs - Interwell
Mitchell BAP Client: Geosyntec Data: Mitchell BAP

Intrawell Prediction Limit Summary - Significant Results

Mitchell BAP Client: Geosyntec Data: Mitchell BAP Printed 1/8/2019, 9:26 AM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig. Bg.N	Bg Mean	Std. Dev.	%NDs	ND Adj Transform	Alpha	Method
Sulfate, total (mg/L)	MW_1510	399.1	n/a	8/21/2018	428	Yes 8	333.4	23.98	0	None No	0.001504	Param 1 of 2
Sulfate, total (mg/L)	MW_1505	350.5	n/a	8/22/2018	383	Yes 8	321.6	10.56	0	None No	0.001504	Param 1 of 2
Sulfate, total (mg/L)	MW_1506	345.4	n/a	8/22/2018	349	Yes 8	305.6	14.51	0	None No	0.001504	Param 1 of 2
Sulfate, total (mg/L)	MW_1509	449.9	n/a	8/21/2018	465	Yes 8	407	15.64	0	None No	0.001504	Param 1 of 2

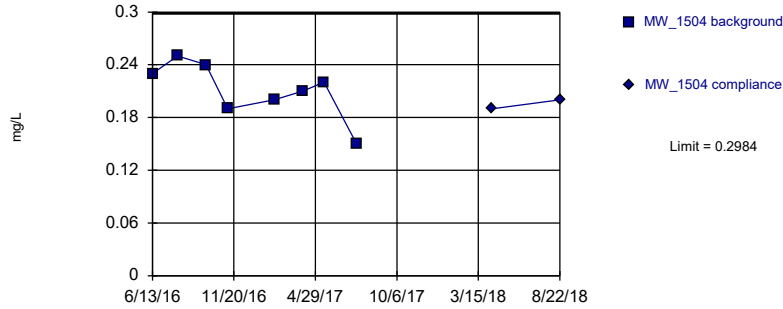
Intrawell Prediction Limit Summary - All Results

Mitchell BAP Client: Geosyntec Data: Mitchell BAP Printed 1/8/2019, 9:26 AM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig. Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj	Transform	Alpha	Method
Fluoride, total (mg/L)	MW_1504	0.2984	n/a	8/22/2018	0.2	No 8	0.2113	0.03182	0	None	No	0.001504	Param 1 of 2
Fluoride, total (mg/L)	MW_1508	0.125	n/a	8/21/2018	0.08	No 8	0.08375	0.01506	0	None	No	0.001504	Param 1 of 2
Fluoride, total (mg/L)	MW_1510	0.2	n/a	8/21/2018	0.09	No 8	n/a	n/a	25	n/a	n/a	0.02144	NP (normality) 1 of 2
Fluoride, total (mg/L)	MW_1505	0.2	n/a	8/22/2018	0.02	No 8	n/a	n/a	100	n/a	n/a	0.02144	NP (NDs) 1 of 2
Fluoride, total (mg/L)	MW_1506	0.2	n/a	8/22/2018	0.05	No 8	n/a	n/a	75	n/a	n/a	0.02144	NP (NDs) 1 of 2
Fluoride, total (mg/L)	MW_1507	0.2	n/a	8/21/2018	0.07	No 8	n/a	n/a	12.5	n/a	n/a	0.02144	NP (normality) 1 of 2
Fluoride, total (mg/L)	MW_1509	0.16	n/a	8/21/2018	0.14	No 8	n/a	n/a	0	n/a	n/a	0.02144	NP (normality) 1 of 2
Sulfate, total (mg/L)	MW_1504	468.9	n/a	8/22/2018	372	No 8	370.6	35.86	0	None	No	0.001504	Param 1 of 2
Sulfate, total (mg/L)	MW_1508	318.3	n/a	8/21/2018	313	No 8	301.8	6.042	0	None	No	0.001504	Param 1 of 2
Sulfate, total (mg/L)	MW_1510	399.1	n/a	8/21/2018	428	Yes 8	333.4	23.98	0	None	No	0.001504	Param 1 of 2
Sulfate, total (mg/L)	MW_1505	350.5	n/a	8/22/2018	383	Yes 8	321.6	10.56	0	None	No	0.001504	Param 1 of 2
Sulfate, total (mg/L)	MW_1506	345.4	n/a	8/22/2018	349	Yes 8	305.6	14.51	0	None	No	0.001504	Param 1 of 2
Sulfate, total (mg/L)	MW_1507	376.9	n/a	8/21/2018	323	No 8	316.3	22.13	0	None	No	0.001504	Param 1 of 2
Sulfate, total (mg/L)	MW_1509	449.9	n/a	8/21/2018	465	Yes 8	407	15.64	0	None	No	0.001504	Param 1 of 2

Within Limit

Prediction Limit
Intrawell Parametric

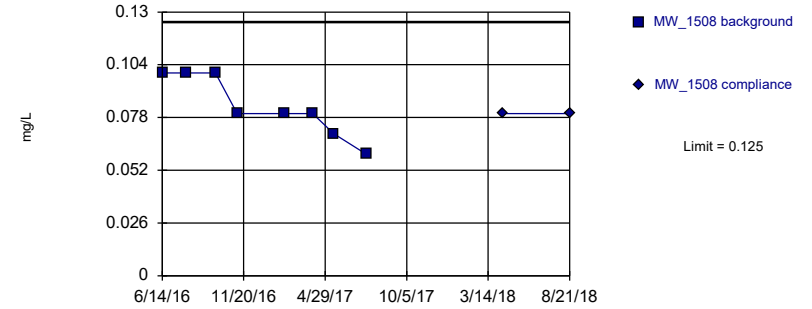


Background Data Summary: Mean=0.2113, Std. Dev.=0.03182, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9517, critical = 0.749. Kappa = 2.74 (c=7, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.001504.

Constituent: Fluoride, total Analysis Run 1/7/2019 7:40 PM View: PLs - Intrawell
Mitchell BAP Client: Geosyntec Data: Mitchell BAP

Within Limit

Prediction Limit
Intrawell Parametric

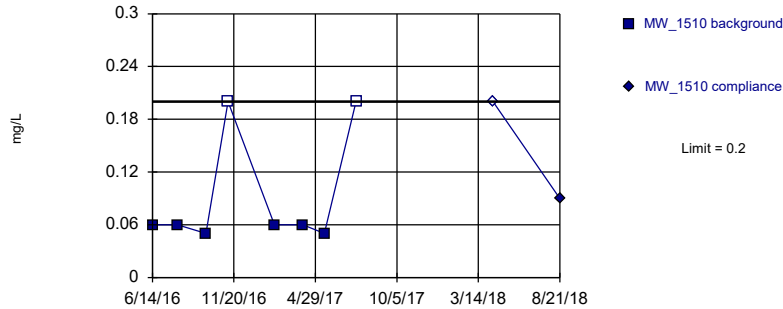


Background Data Summary: Mean=0.08375, Std. Dev.=0.01506, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8711, critical = 0.749. Kappa = 2.74 (c=7, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.001504.

Constituent: Fluoride, total Analysis Run 1/7/2019 7:40 PM View: PLs - Intrawell
Mitchell BAP Client: Geosyntec Data: Mitchell BAP

Within Limit

Prediction Limit
Intrawell Non-parametric

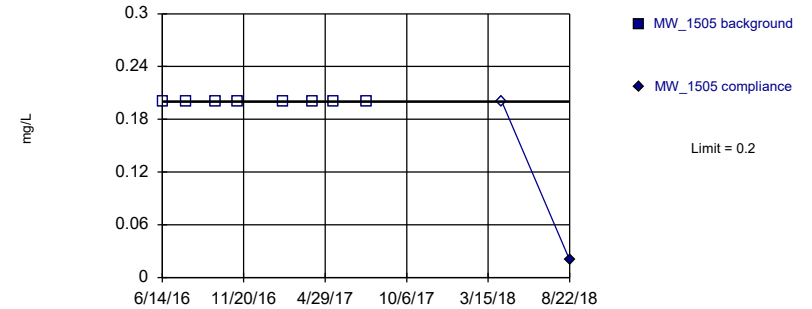


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 8 background values. 25% NDs. Well-constituent pair annual alpha = 0.04242. Individual comparison alpha = 0.02144 (1 of 2).

Constituent: Fluoride, total Analysis Run 1/7/2019 7:40 PM View: PLs - Intrawell
Mitchell BAP Client: Geosyntec Data: Mitchell BAP

Within Limit

Prediction Limit
Intrawell Non-parametric

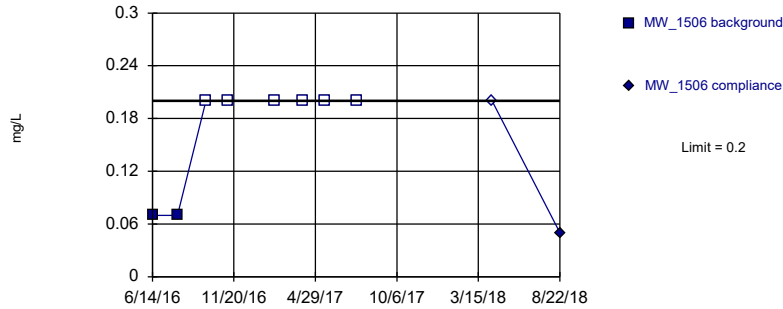


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values (n = 8) were censored; limit is most recent reporting limit. Well-constituent pair annual alpha = 0.04242. Individual comparison alpha = 0.02144 (1 of 2).

Constituent: Fluoride, total Analysis Run 1/7/2019 7:40 PM View: PLs - Intrawell
Mitchell BAP Client: Geosyntec Data: Mitchell BAP

Within Limit

Prediction Limit
Intrawell Non-parametric

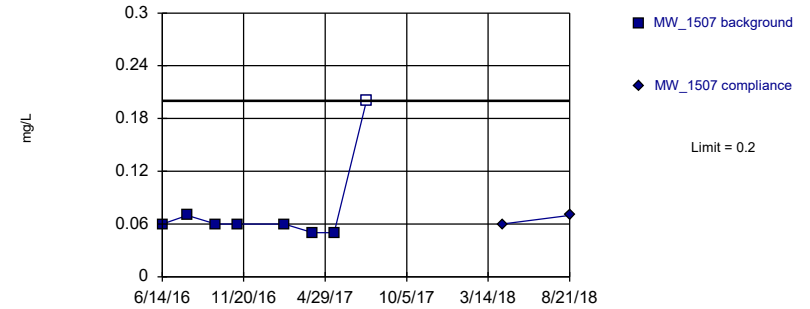


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 8 background values. 75% NDs. Well-constituent pair annual alpha = 0.04242. Individual comparison alpha = 0.02144 (1 of 2).

Constituent: Fluoride, total Analysis Run 1/7/2019 7:40 PM View: PLs - Intrawell
Mitchell BAP Client: Geosyntec Data: Mitchell BAP

Within Limit

Prediction Limit
Intrawell Non-parametric

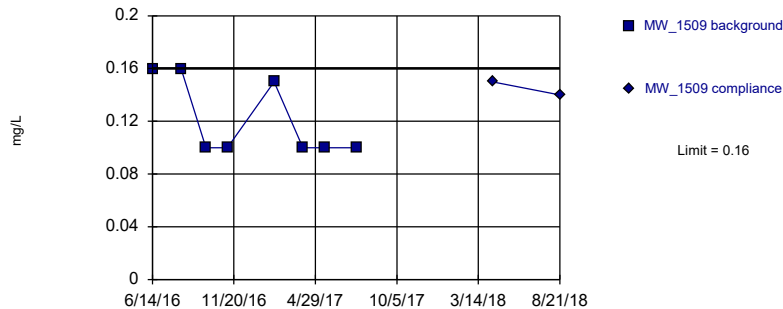


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 8 background values. 12.5% NDs. Well-constituent pair annual alpha = 0.04242. Individual comparison alpha = 0.02144 (1 of 2).

Constituent: Fluoride, total Analysis Run 1/7/2019 7:40 PM View: PLs - Intrawell
Mitchell BAP Client: Geosyntec Data: Mitchell BAP

Within Limit

Prediction Limit
Intrawell Non-parametric

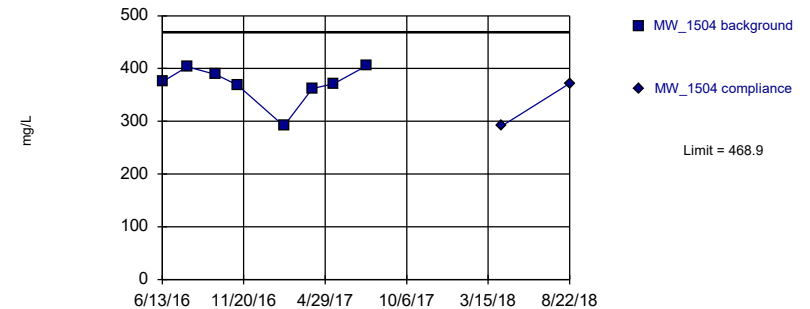


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 8 background values. Well-constituent pair annual alpha = 0.04242. Individual comparison alpha = 0.02144 (1 of 2).

Constituent: Fluoride, total Analysis Run 1/7/2019 7:40 PM View: PLs - Intrawell
Mitchell BAP Client: Geosyntec Data: Mitchell BAP

Within Limit

Prediction Limit
Intrawell Parametric

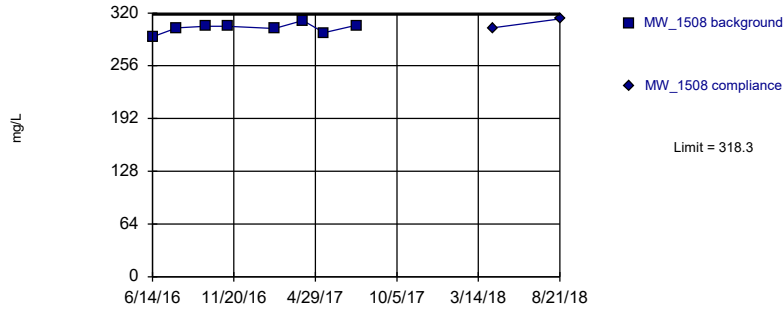


Background Data Summary: Mean=370.6, Std. Dev.=35.86, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8152, critical = 0.749. Kappa = 2.74 (c=7, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.001504.

Constituent: Sulfate, total Analysis Run 1/7/2019 7:40 PM View: PLs - Intrawell
Mitchell BAP Client: Geosyntec Data: Mitchell BAP

Within Limit

Prediction Limit
Intrawell Parametric

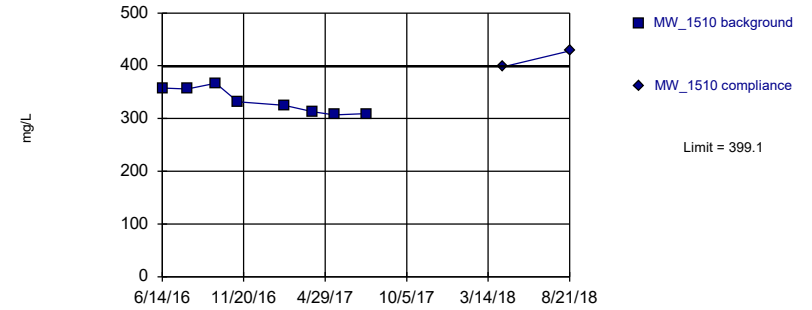


Background Data Summary: Mean=301.8, Std. Dev.=6.042, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9509, critical = 0.749. Kappa = 2.74 (c=7, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.001504.

Constituent: Sulfate, total Analysis Run 1/7/2019 7:40 PM View: PLs - Intrawell
Mitchell BAP Client: Geosyntec Data: Mitchell BAP

Exceeds Limit

Prediction Limit
Intrawell Parametric

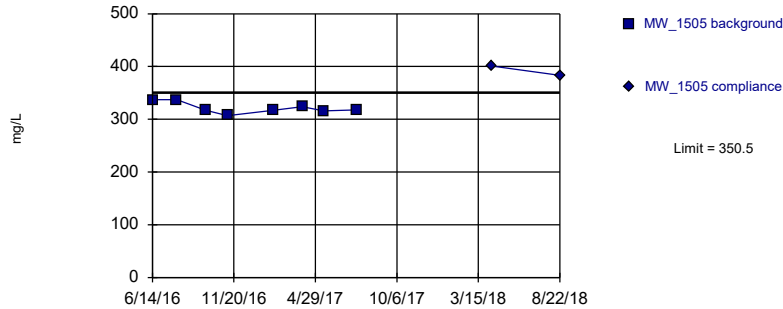


Background Data Summary: Mean=333.4, Std. Dev.=23.98, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8854, critical = 0.749. Kappa = 2.74 (c=7, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.001504.

Constituent: Sulfate, total Analysis Run 1/7/2019 7:40 PM View: PLs - Intrawell
Mitchell BAP Client: Geosyntec Data: Mitchell BAP

Exceeds Limit

Prediction Limit
Intrawell Parametric

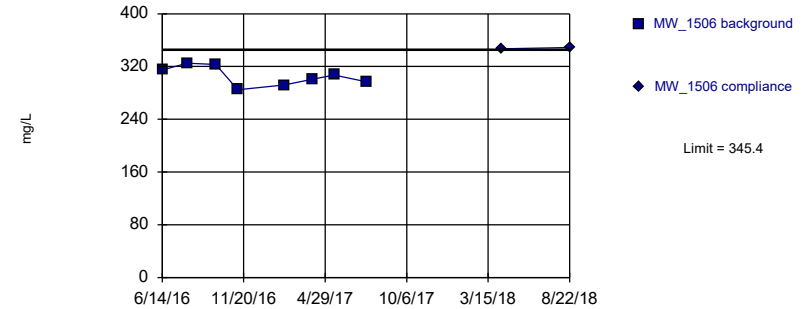


Background Data Summary: Mean=321.6, Std. Dev.=10.56, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8719, critical = 0.749. Kappa = 2.74 (c=7, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.001504.

Constituent: Sulfate, total Analysis Run 1/7/2019 7:40 PM View: PLs - Intrawell
Mitchell BAP Client: Geosyntec Data: Mitchell BAP

Exceeds Limit

Prediction Limit
Intrawell Parametric

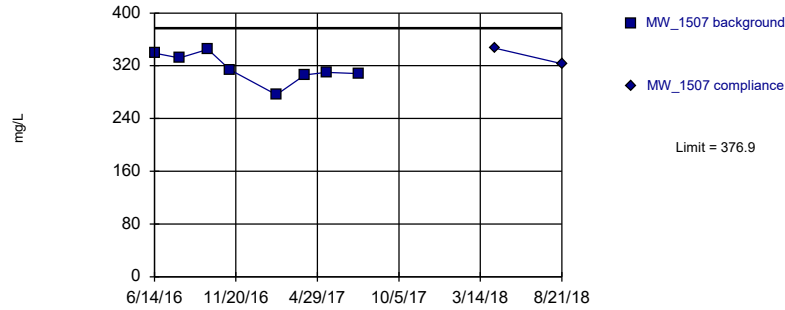


Background Data Summary: Mean=305.6, Std. Dev.=14.51, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9536, critical = 0.749. Kappa = 2.74 (c=7, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.001504.

Constituent: Sulfate, total Analysis Run 1/7/2019 7:40 PM View: PLs - Intrawell
Mitchell BAP Client: Geosyntec Data: Mitchell BAP

Within Limit

Prediction Limit
Intrawell Parametric

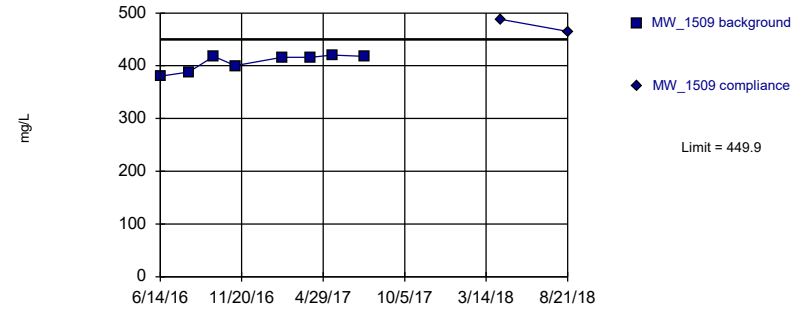


Background Data Summary: Mean=316.3, Std. Dev.=22.13, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9344, critical = 0.749. Kappa = 2.74 (c=7, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.001504.

Constituent: Sulfate, total Analysis Run 1/7/2019 7:40 PM View: PLs - Intrawell
Mitchell BAP Client: Geosyntec Data: Mitchell BAP

Exceeds Limit

Prediction Limit
Intrawell Parametric



Background Data Summary: Mean=407, Std. Dev.=15.64, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.7926, critical = 0.749. Kappa = 2.74 (c=7, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.001504.

Constituent: Sulfate, total Analysis Run 1/7/2019 7:40 PM View: PLs - Intrawell
Mitchell BAP Client: Geosyntec Data: Mitchell BAP

Trend Test Summary Table - Significant Results

Mitchell BAP Client: Geosyntec Data: Mitchell BAP Printed 11/11/2018, 2:30 PM

<u>Constituent</u>	<u>Well</u>	<u>Slope</u>	<u>Calc.</u>	<u>Critical</u>	<u>Sig.</u>	<u>N</u>	<u>%NDs</u>	<u>Normality</u>	<u>Xform</u>	<u>Alpha</u>	<u>Method</u>
Boron, total (mg/L)	MW_1505	-1.301	-32	-30	Yes	10	0	n/a	n/a	0.01	NP
Boron, total (mg/L)	MW_1507	-1.66	-33	-30	Yes	10	0	n/a	n/a	0.01	NP
Boron, total (mg/L)	MW_1509	-2.866	-31	-30	Yes	10	0	n/a	n/a	0.01	NP
Calcium, total (mg/L)	MW_1507	-27.55	-35	-30	Yes	10	0	n/a	n/a	0.01	NP
Chloride, total (mg/L)	MW_1505	-41.65	-43	-30	Yes	10	0	n/a	n/a	0.01	NP
Chloride, total (mg/L)	MW_1506	-29.8	-33	-30	Yes	10	0	n/a	n/a	0.01	NP
Chloride, total (mg/L)	MW_1507	-77.15	-33	-30	Yes	10	0	n/a	n/a	0.01	NP
Chloride, total (mg/L)	MW_1509	-33.28	-37	-30	Yes	10	0	n/a	n/a	0.01	NP
Sulfate, total (mg/L)	MW_1509	38.88	33	30	Yes	10	0	n/a	n/a	0.01	NP

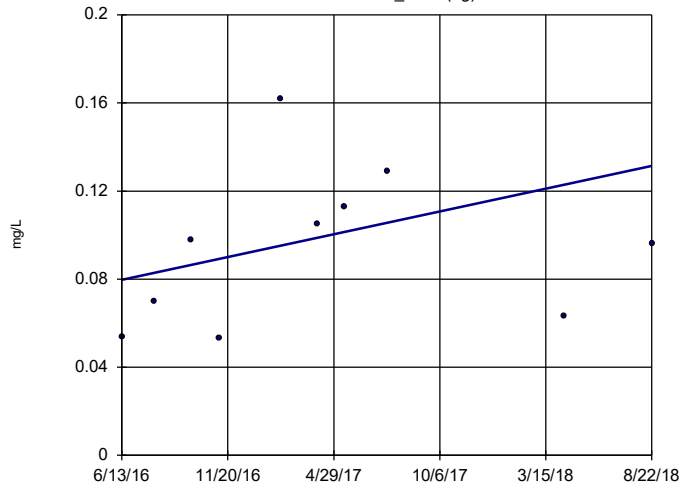
Trend Test Summary Table - All Results

Mitchell BAP Client: Geosyntec Data: Mitchell BAP Printed 11/11/2018, 2:30 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Boron, total (mg/L)	MW_1504 (bg)	0.0236	11	30	No	10	0	n/a	n/a	0.01	NP
Boron, total (mg/L)	MW_1508 (bg)	0.08374	7	30	No	10	0	n/a	n/a	0.01	NP
Boron, total (mg/L)	MW_1510	0.1475	6	30	No	10	0	n/a	n/a	0.01	NP
Boron, total (mg/L)	MW_1505	-1.301	-32	-30	Yes	10	0	n/a	n/a	0.01	NP
Boron, total (mg/L)	MW_1506	-0.7273	-11	-30	No	10	0	n/a	n/a	0.01	NP
Boron, total (mg/L)	MW_1507	-1.66	-33	-30	Yes	10	0	n/a	n/a	0.01	NP
Boron, total (mg/L)	MW_1509	-2.866	-31	-30	Yes	10	0	n/a	n/a	0.01	NP
Calcium, total (mg/L)	MW_1504 (bg)	3.942	6	30	No	10	0	n/a	n/a	0.01	NP
Calcium, total (mg/L)	MW_1508 (bg)	6.239	12	30	No	10	0	n/a	n/a	0.01	NP
Calcium, total (mg/L)	MW_1510	-14.75	-17	-30	No	10	0	n/a	n/a	0.01	NP
Calcium, total (mg/L)	MW_1505	-7.878	-13	-30	No	10	0	n/a	n/a	0.01	NP
Calcium, total (mg/L)	MW_1506	-8.69	-24	-30	No	10	0	n/a	n/a	0.01	NP
Calcium, total (mg/L)	MW_1507	-27.55	-35	-30	Yes	10	0	n/a	n/a	0.01	NP
Calcium, total (mg/L)	MW_1509	-3.959	-16	-30	No	10	0	n/a	n/a	0.01	NP
Chloride, total (mg/L)	MW_1504 (bg)	-6.065	-16	-30	No	10	0	n/a	n/a	0.01	NP
Chloride, total (mg/L)	MW_1508 (bg)	-17.1	-27	-30	No	10	0	n/a	n/a	0.01	NP
Chloride, total (mg/L)	MW_1510	-7.449	-12	-30	No	10	0	n/a	n/a	0.01	NP
Chloride, total (mg/L)	MW_1505	-41.65	-43	-30	Yes	10	0	n/a	n/a	0.01	NP
Chloride, total (mg/L)	MW_1506	-29.8	-33	-30	Yes	10	0	n/a	n/a	0.01	NP
Chloride, total (mg/L)	MW_1507	-77.15	-33	-30	Yes	10	0	n/a	n/a	0.01	NP
Chloride, total (mg/L)	MW_1509	-33.28	-37	-30	Yes	10	0	n/a	n/a	0.01	NP
pH, field (SU)	MW_1504 (bg)	0.1587	26	30	No	10	0	n/a	n/a	0.01	NP
pH, field (SU)	MW_1508 (bg)	0.0876	15	30	No	10	0	n/a	n/a	0.01	NP
pH, field (SU)	MW_1506	0.08941	14	30	No	10	0	n/a	n/a	0.01	NP
Sulfate, total (mg/L)	MW_1504 (bg)	-14.8	-8	-30	No	10	0	n/a	n/a	0.01	NP
Sulfate, total (mg/L)	MW_1508 (bg)	5.353	17	30	No	10	0	n/a	n/a	0.01	NP
Sulfate, total (mg/L)	MW_1510	-28.08	-5	-30	No	10	0	n/a	n/a	0.01	NP
Sulfate, total (mg/L)	MW_1505	11.41	7	30	No	10	0	n/a	n/a	0.01	NP
Sulfate, total (mg/L)	MW_1506	13.67	9	30	No	10	0	n/a	n/a	0.01	NP
Sulfate, total (mg/L)	MW_1509	38.88	33	30	Yes	10	0	n/a	n/a	0.01	NP
Total Dissolved Solids [TDS] (m...	MW_1504 (bg)	-42.26	-9	-30	No	10	0	n/a	n/a	0.01	NP
Total Dissolved Solids [TDS] (m...	MW_1508 (bg)	0	-1	-30	No	10	0	n/a	n/a	0.01	NP
Total Dissolved Solids [TDS] (m...	MW_1510	-39.25	-6	-30	No	10	0	n/a	n/a	0.01	NP
Total Dissolved Solids [TDS] (m...	MW_1505	-115.4	-13	-30	No	10	0	n/a	n/a	0.01	NP
Total Dissolved Solids [TDS] (m...	MW_1506	-130	-19	-30	No	10	0	n/a	n/a	0.01	NP
Total Dissolved Solids [TDS] (m...	MW_1507	-156	-12	-30	No	10	0	n/a	n/a	0.01	NP
Total Dissolved Solids [TDS] (m...	MW_1509	-86.9	-15	-30	No	10	0	n/a	n/a	0.01	NP

Sen's Slope Estimator

MW_1504 (bg)

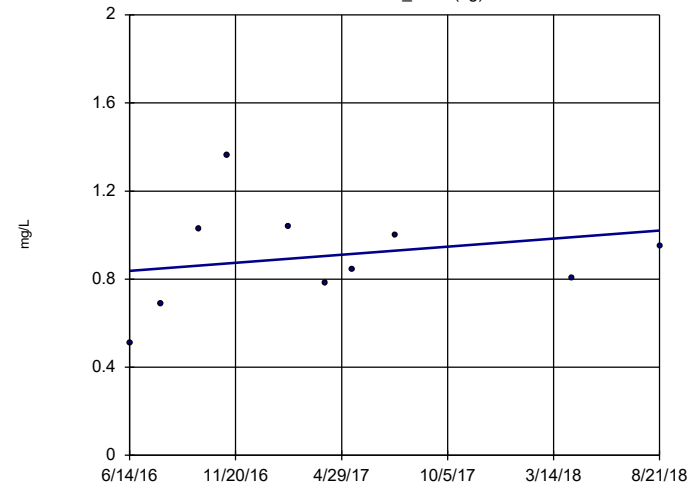


n = 10
 Slope = 0.0236 units per year.
 Mann-Kendall statistic = 11
 critical = 30
 Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Boron, total Analysis Run 11/11/2018 2:28 PM View: Trend Testing
 Mitchell BAP Client: Geosyntec Data: Mitchell BAP

Sen's Slope Estimator

MW_1508 (bg)

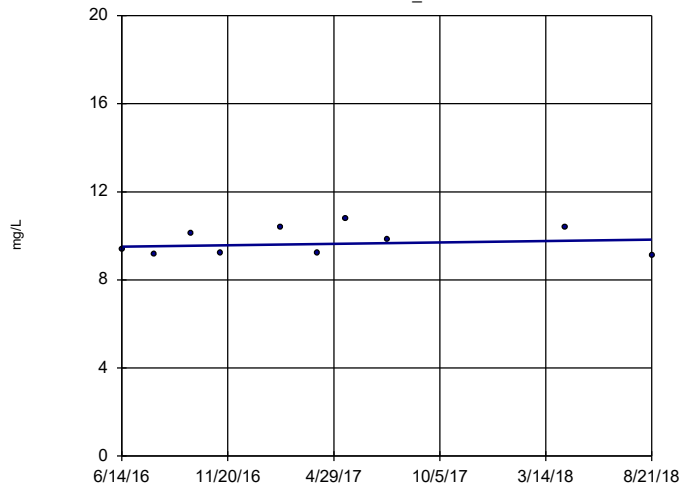


n = 10
 Slope = 0.08374 units per year.
 Mann-Kendall statistic = 7
 critical = 30
 Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Boron, total Analysis Run 11/11/2018 2:28 PM View: Trend Testing
 Mitchell BAP Client: Geosyntec Data: Mitchell BAP

Sen's Slope Estimator

MW_1510

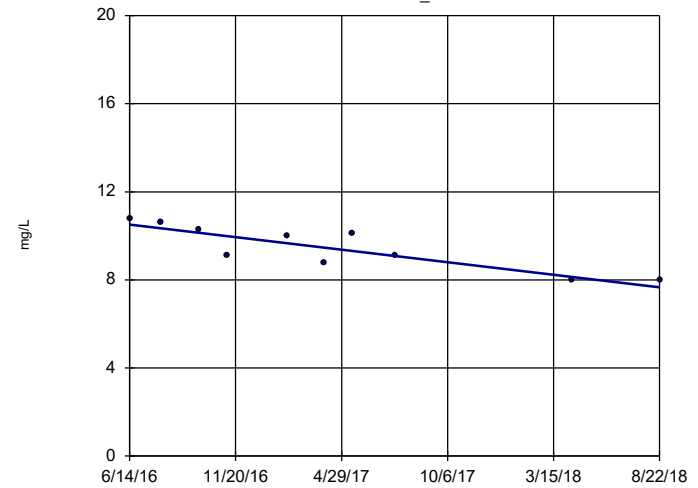


n = 10
 Slope = 0.1475 units per year.
 Mann-Kendall statistic = 6
 critical = 30
 Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Boron, total Analysis Run 11/11/2018 2:28 PM View: Trend Testing
 Mitchell BAP Client: Geosyntec Data: Mitchell BAP

Sen's Slope Estimator

MW_1505

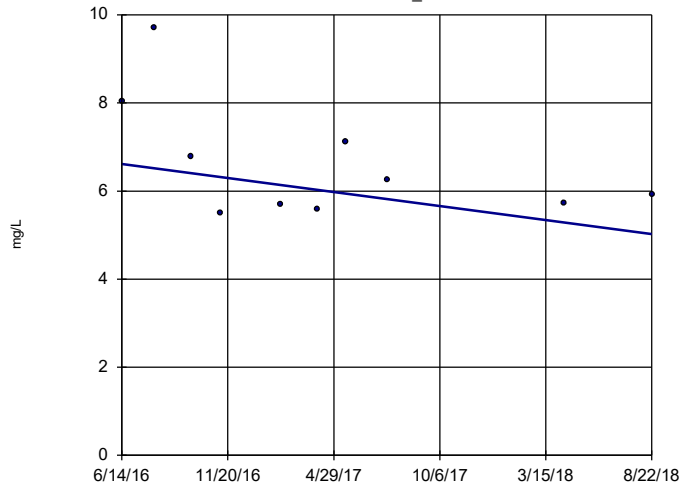


n = 10
 Slope = -1.301 units per year.
 Mann-Kendall statistic = -32
 critical = -30
 Decreasing trend significant at 99% confidence level (α = 0.005 per tail).

Constituent: Boron, total Analysis Run 11/11/2018 2:28 PM View: Trend Testing
 Mitchell BAP Client: Geosyntec Data: Mitchell BAP

Sen's Slope Estimator

MW_1506

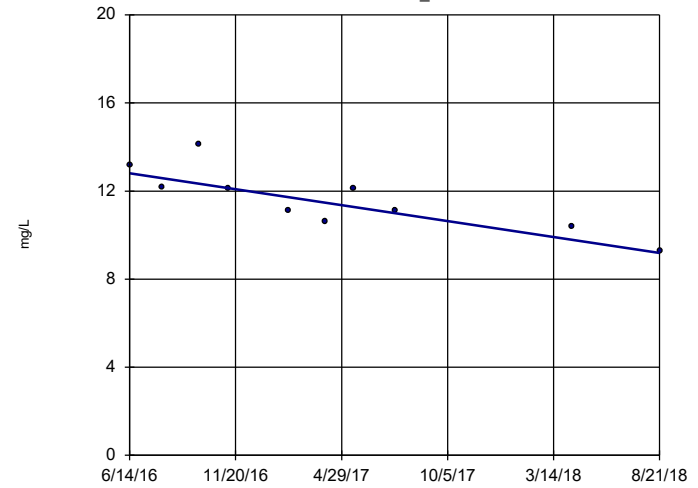


n = 10
 Slope = -0.7273
 units per year.
 Mann-Kendall
 statistic = -11
 critical = -30
 Trend not sig-
 nificant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: Boron, total Analysis Run 11/11/2018 2:28 PM View: Trend Testing
 Mitchell BAP Client: Geosyntec Data: Mitchell BAP

Sen's Slope Estimator

MW_1507

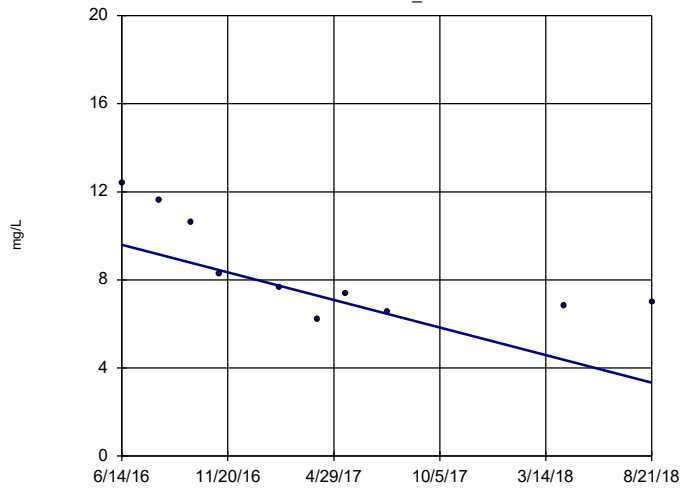


n = 10
 Slope = -1.66
 units per year.
 Mann-Kendall
 statistic = -33
 critical = -30
 Decreasing trend
 significant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: Boron, total Analysis Run 11/11/2018 2:28 PM View: Trend Testing
 Mitchell BAP Client: Geosyntec Data: Mitchell BAP

Sen's Slope Estimator

MW_1509

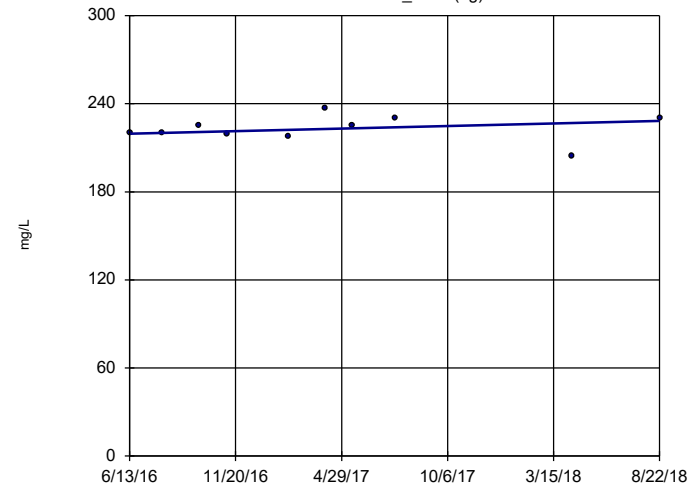


n = 10
 Slope = -2.866
 units per year.
 Mann-Kendall
 statistic = -31
 critical = -30
 Decreasing trend
 significant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: Boron, total Analysis Run 11/11/2018 2:28 PM View: Trend Testing
 Mitchell BAP Client: Geosyntec Data: Mitchell BAP

Sen's Slope Estimator

MW_1504 (bg)

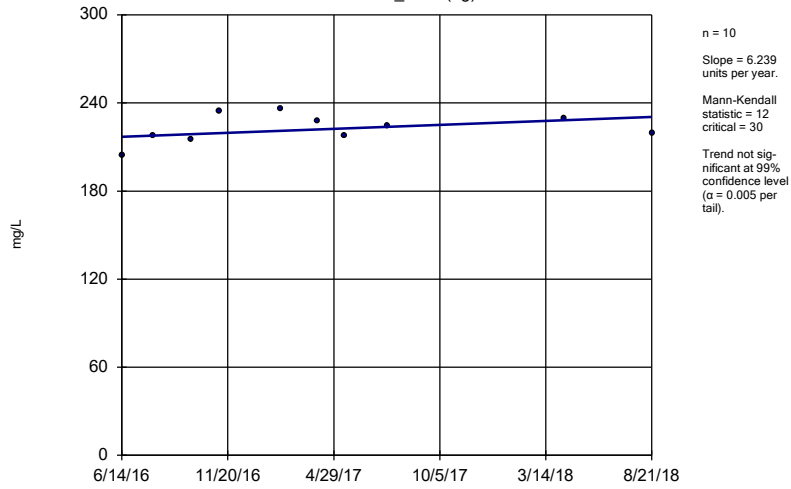


n = 10
 Slope = 3.942
 units per year.
 Mann-Kendall
 statistic = 6
 critical = 30
 Trend not sig-
 nificant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: Calcium, total Analysis Run 11/11/2018 2:28 PM View: Trend Testing
 Mitchell BAP Client: Geosyntec Data: Mitchell BAP

Sen's Slope Estimator

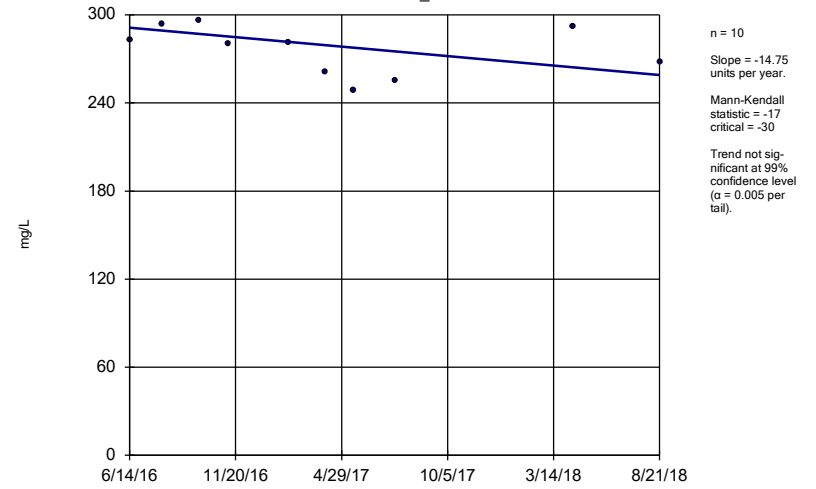
MW_1508 (bg)



Constituent: Calcium, total Analysis Run 11/11/2018 2:28 PM View: Trend Testing
 Mitchell BAP Client: Geosyntec Data: Mitchell BAP

Sen's Slope Estimator

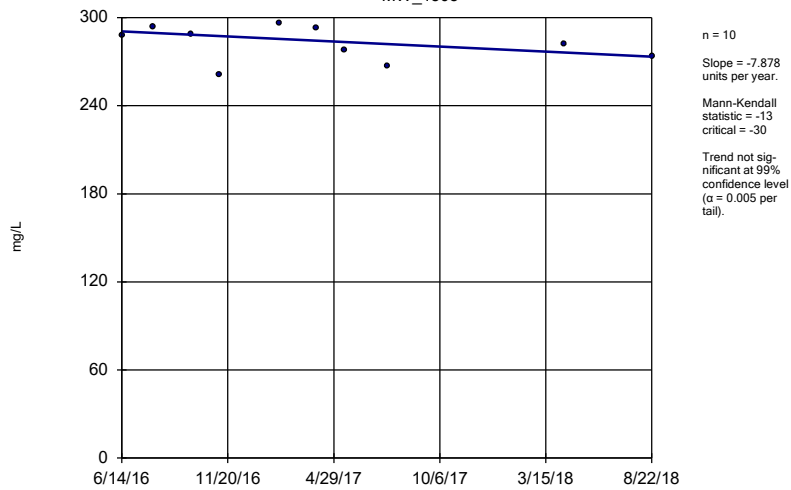
MW_1510



Constituent: Calcium, total Analysis Run 11/11/2018 2:28 PM View: Trend Testing
 Mitchell BAP Client: Geosyntec Data: Mitchell BAP

Sen's Slope Estimator

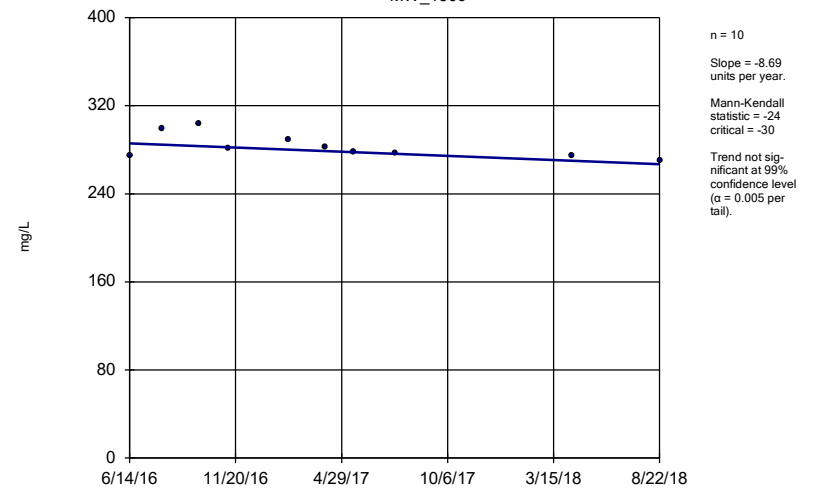
MW_1505



Constituent: Calcium, total Analysis Run 11/11/2018 2:28 PM View: Trend Testing
 Mitchell BAP Client: Geosyntec Data: Mitchell BAP

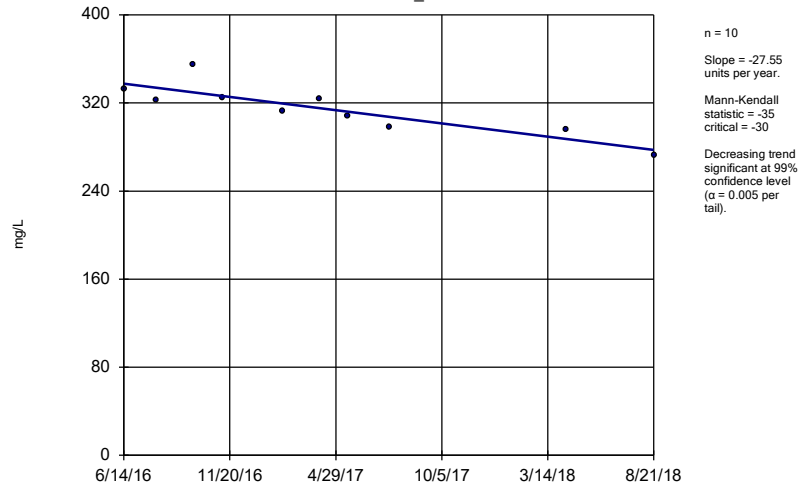
Sen's Slope Estimator

MW_1506



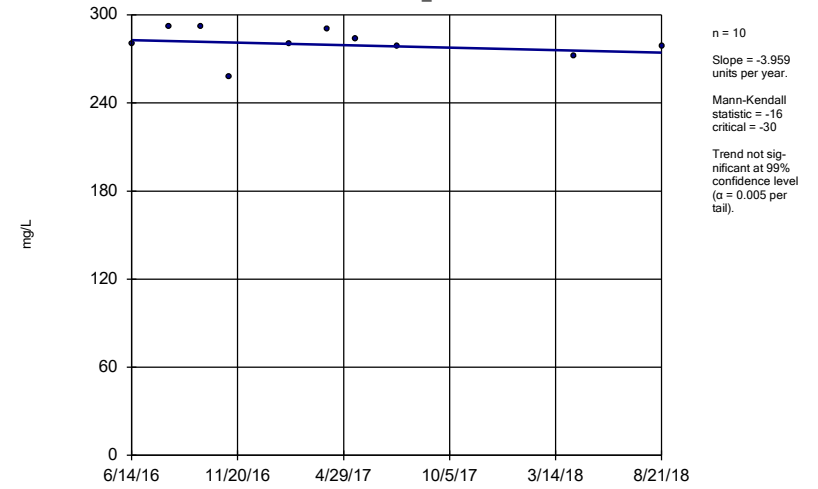
Constituent: Calcium, total Analysis Run 11/11/2018 2:28 PM View: Trend Testing
 Mitchell BAP Client: Geosyntec Data: Mitchell BAP

Sen's Slope Estimator
MW_1507



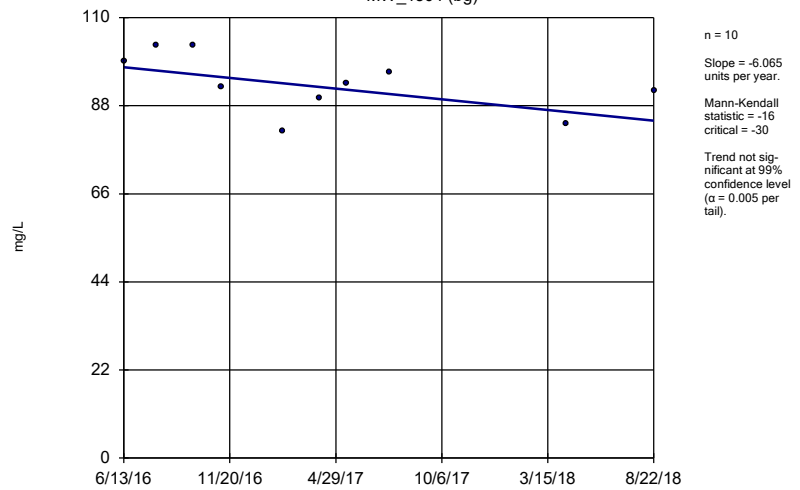
Constituent: Calcium, total Analysis Run 11/11/2018 2:29 PM View: Trend Testing
Mitchell BAP Client: Geosyntec Data: Mitchell BAP

Sen's Slope Estimator
MW_1509



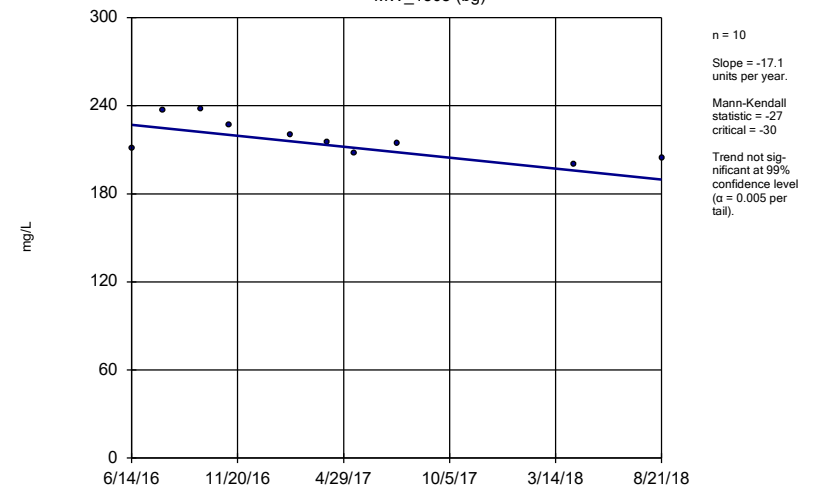
Constituent: Calcium, total Analysis Run 11/11/2018 2:29 PM View: Trend Testing
Mitchell BAP Client: Geosyntec Data: Mitchell BAP

Sen's Slope Estimator
MW_1504 (bg)



Constituent: Chloride, total Analysis Run 11/11/2018 2:29 PM View: Trend Testing
Mitchell BAP Client: Geosyntec Data: Mitchell BAP

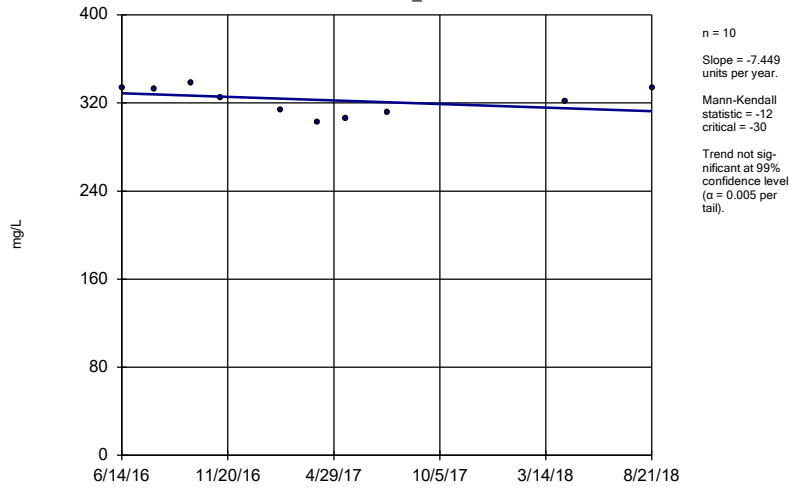
Sen's Slope Estimator
MW_1508 (bg)



Constituent: Chloride, total Analysis Run 11/11/2018 2:29 PM View: Trend Testing
Mitchell BAP Client: Geosyntec Data: Mitchell BAP

Sen's Slope Estimator

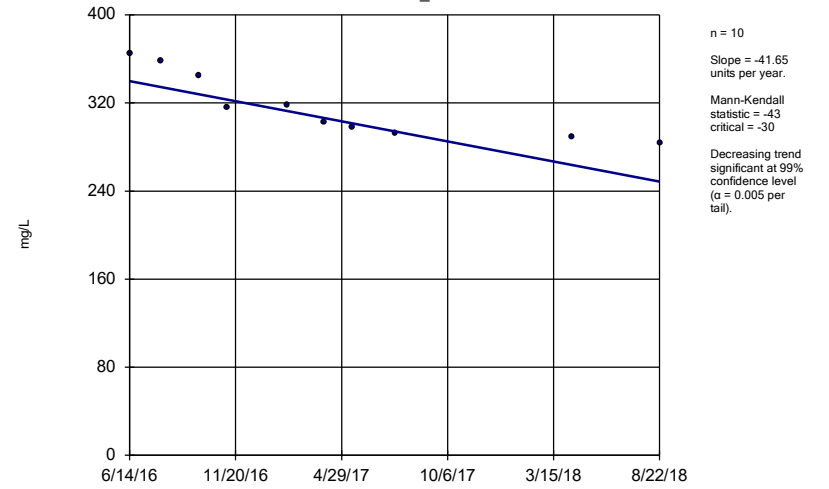
MW_1510



Constituent: Chloride, total Analysis Run 11/11/2018 2:29 PM View: Trend Testing
Mitchell BAP Client: Geosyntec Data: Mitchell BAP

Sen's Slope Estimator

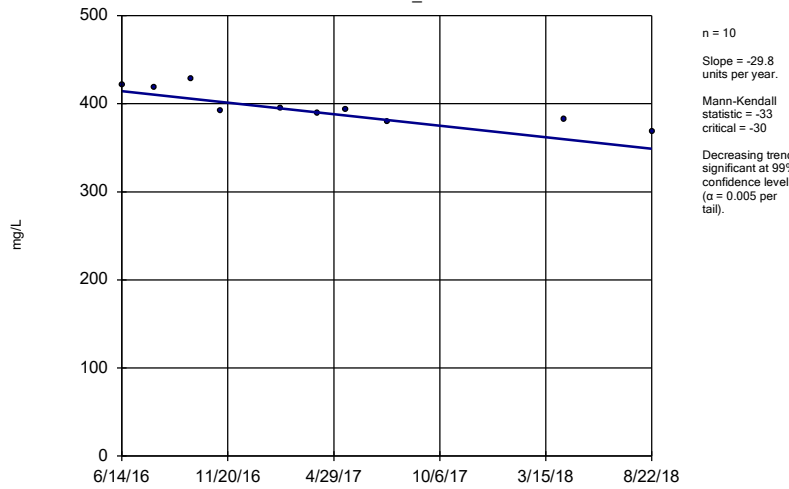
MW_1505



Constituent: Chloride, total Analysis Run 11/11/2018 2:29 PM View: Trend Testing
Mitchell BAP Client: Geosyntec Data: Mitchell BAP

Sen's Slope Estimator

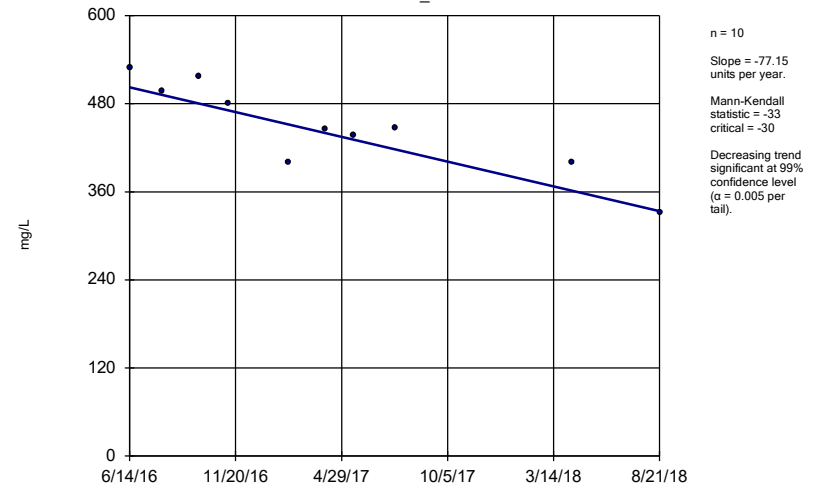
MW_1506



Constituent: Chloride, total Analysis Run 11/11/2018 2:29 PM View: Trend Testing
Mitchell BAP Client: Geosyntec Data: Mitchell BAP

Sen's Slope Estimator

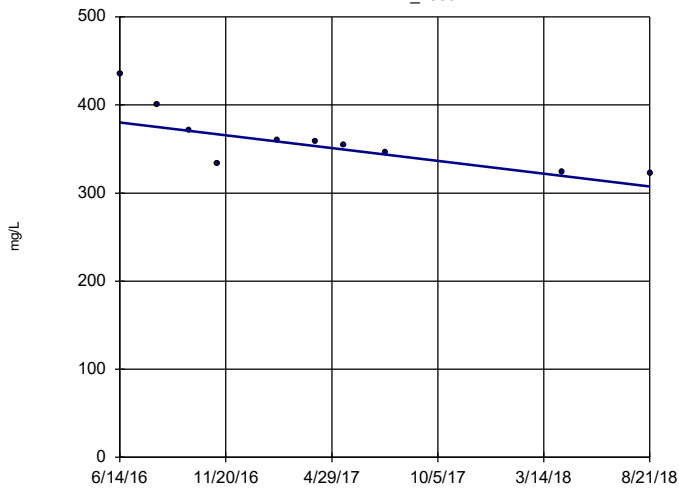
MW_1507



Constituent: Chloride, total Analysis Run 11/11/2018 2:29 PM View: Trend Testing
Mitchell BAP Client: Geosyntec Data: Mitchell BAP

Sen's Slope Estimator

MW_1509

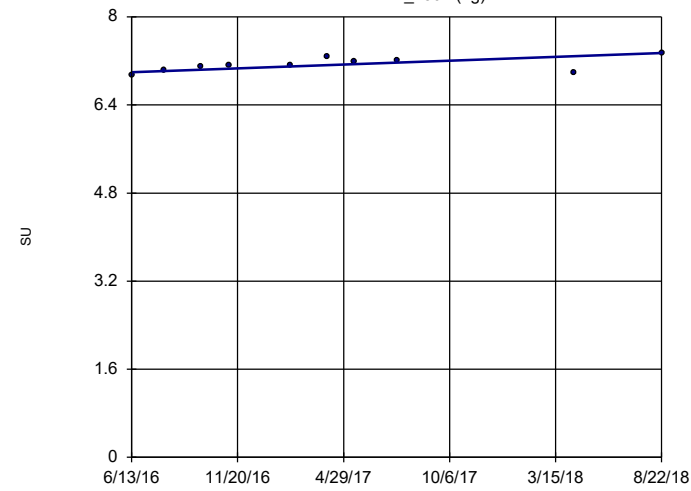


n = 10
 Slope = -33.28 units per year.
 Mann-Kendall statistic = -37
 critical = -30
 Decreasing trend significant at 99% confidence level (α = 0.005 per tail).

Constituent: Chloride, total Analysis Run 11/11/2018 2:29 PM View: Trend Testing
 Mitchell BAP Client: Geosyntec Data: Mitchell BAP

Sen's Slope Estimator

MW_1504 (bg)

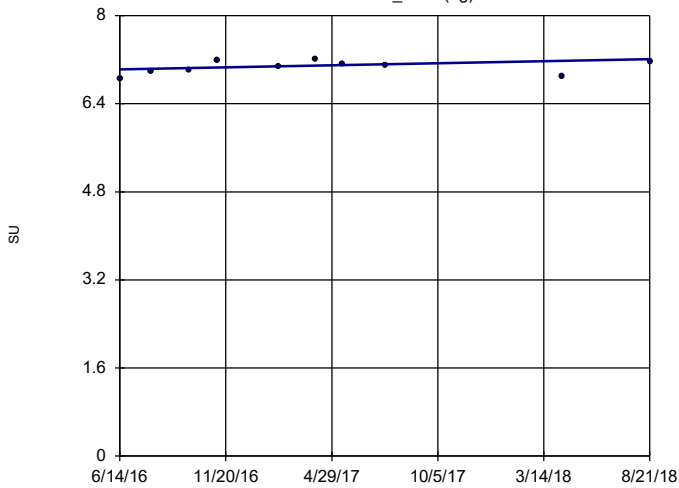


n = 10
 Slope = 0.1587 units per year.
 Mann-Kendall statistic = 26
 critical = 30
 Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: pH, field Analysis Run 11/11/2018 2:29 PM View: Trend Testing
 Mitchell BAP Client: Geosyntec Data: Mitchell BAP

Sen's Slope Estimator

MW_1508 (bg)

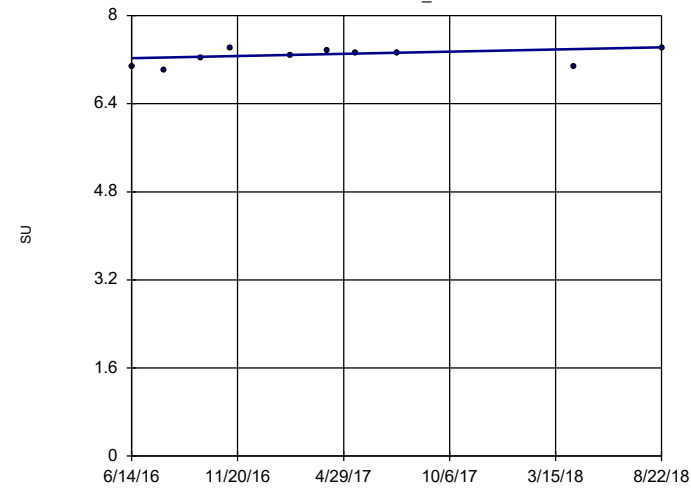


n = 10
 Slope = 0.0876 units per year.
 Mann-Kendall statistic = 15
 critical = 30
 Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: pH, field Analysis Run 11/11/2018 2:29 PM View: Trend Testing
 Mitchell BAP Client: Geosyntec Data: Mitchell BAP

Sen's Slope Estimator

MW_1506

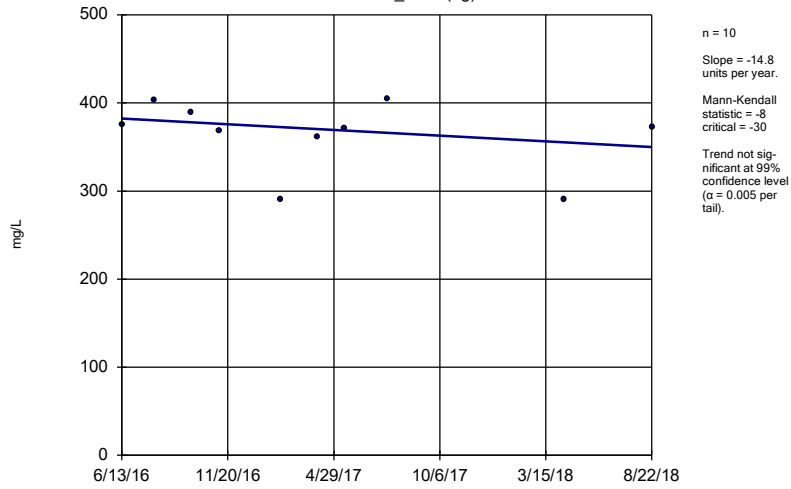


n = 10
 Slope = 0.08941 units per year.
 Mann-Kendall statistic = 14
 critical = 30
 Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: pH, field Analysis Run 11/11/2018 2:29 PM View: Trend Testing
 Mitchell BAP Client: Geosyntec Data: Mitchell BAP

Sen's Slope Estimator

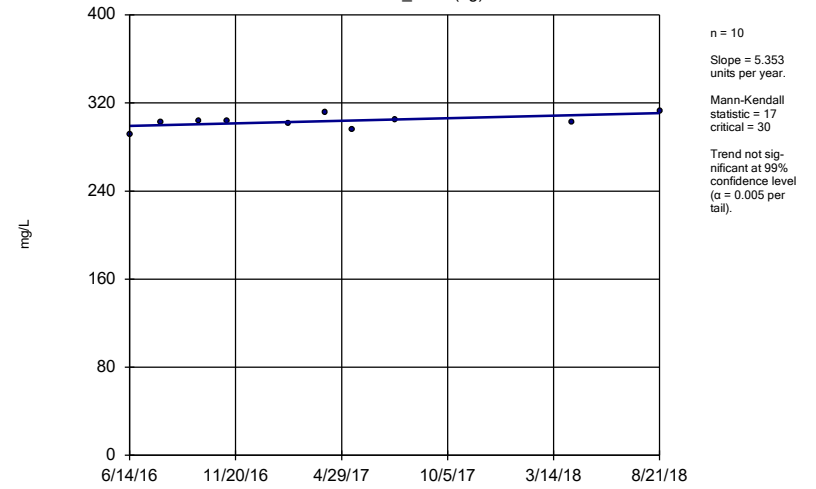
MW_1504 (bg)



Constituent: Sulfate, total Analysis Run 11/11/2018 2:29 PM View: Trend Testing
Mitchell BAP Client: Geosyntec Data: Mitchell BAP

Sen's Slope Estimator

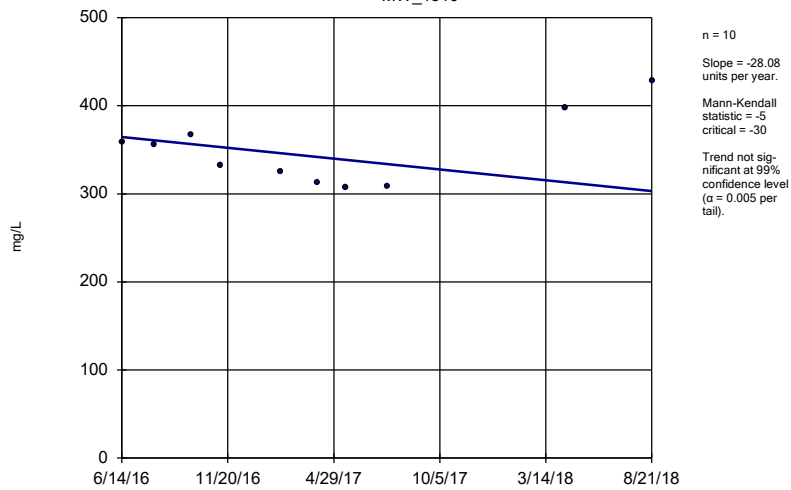
MW_1508 (bg)



Constituent: Sulfate, total Analysis Run 11/11/2018 2:29 PM View: Trend Testing
Mitchell BAP Client: Geosyntec Data: Mitchell BAP

Sen's Slope Estimator

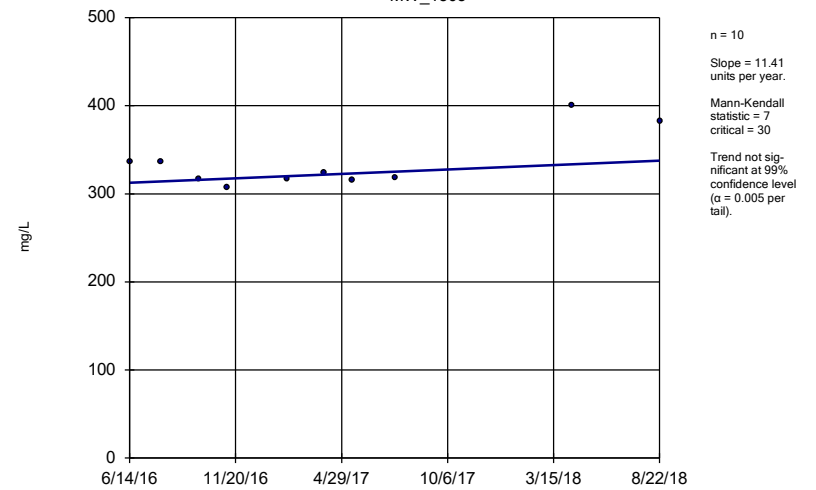
MW_1510



Constituent: Sulfate, total Analysis Run 11/11/2018 2:29 PM View: Trend Testing
Mitchell BAP Client: Geosyntec Data: Mitchell BAP

Sen's Slope Estimator

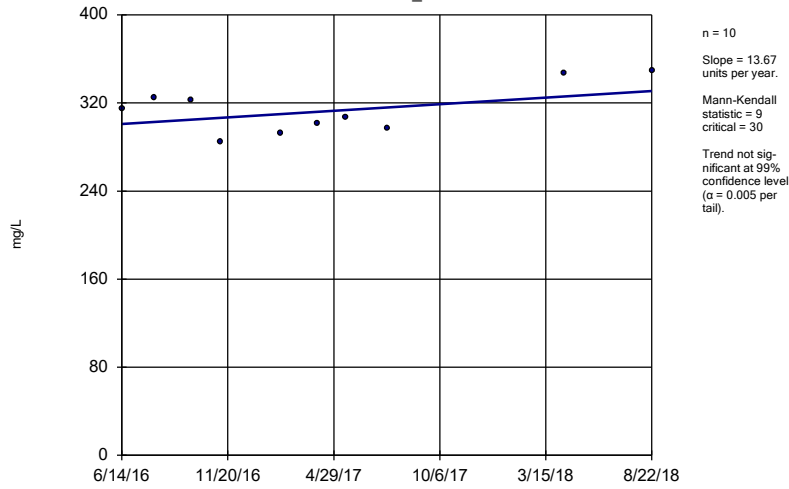
MW_1505



Constituent: Sulfate, total Analysis Run 11/11/2018 2:29 PM View: Trend Testing
Mitchell BAP Client: Geosyntec Data: Mitchell BAP

Sen's Slope Estimator

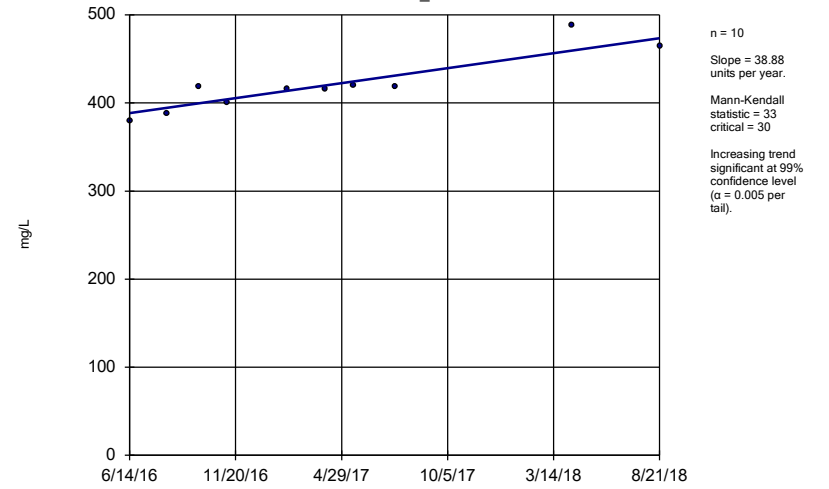
MW_1506



Constituent: Sulfate, total Analysis Run 11/11/2018 2:29 PM View: Trend Testing
 Mitchell BAP Client: Geosyntec Data: Mitchell BAP

Sen's Slope Estimator

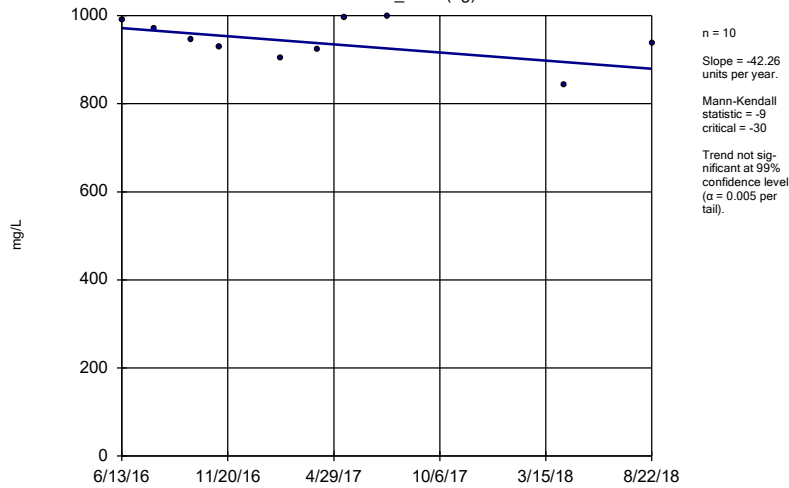
MW_1509



Constituent: Sulfate, total Analysis Run 11/11/2018 2:29 PM View: Trend Testing
 Mitchell BAP Client: Geosyntec Data: Mitchell BAP

Sen's Slope Estimator

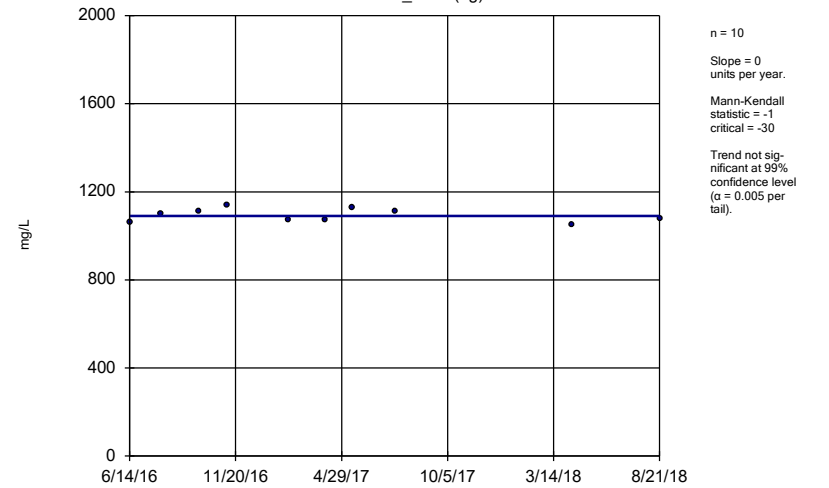
MW_1504 (bg)



Constituent: Total Dissolved Solids [TDS] Analysis Run 11/11/2018 2:29 PM View: Trend Testing
 Mitchell BAP Client: Geosyntec Data: Mitchell BAP

Sen's Slope Estimator

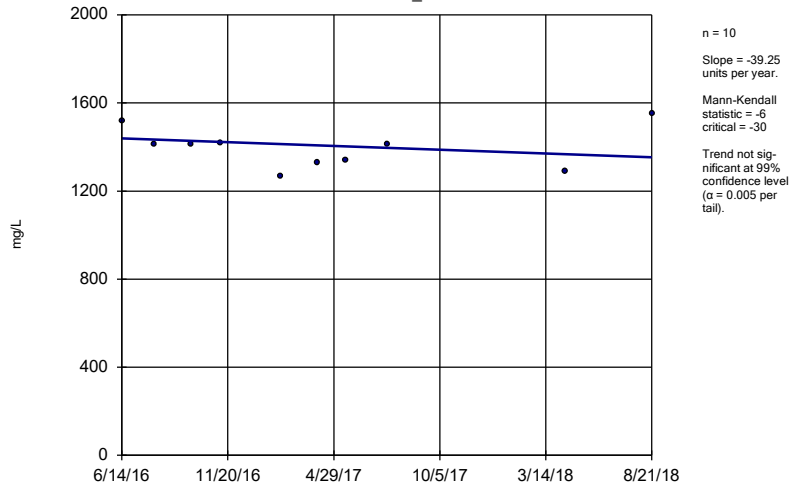
MW_1508 (bg)



Constituent: Total Dissolved Solids [TDS] Analysis Run 11/11/2018 2:29 PM View: Trend Testing
 Mitchell BAP Client: Geosyntec Data: Mitchell BAP

Sen's Slope Estimator

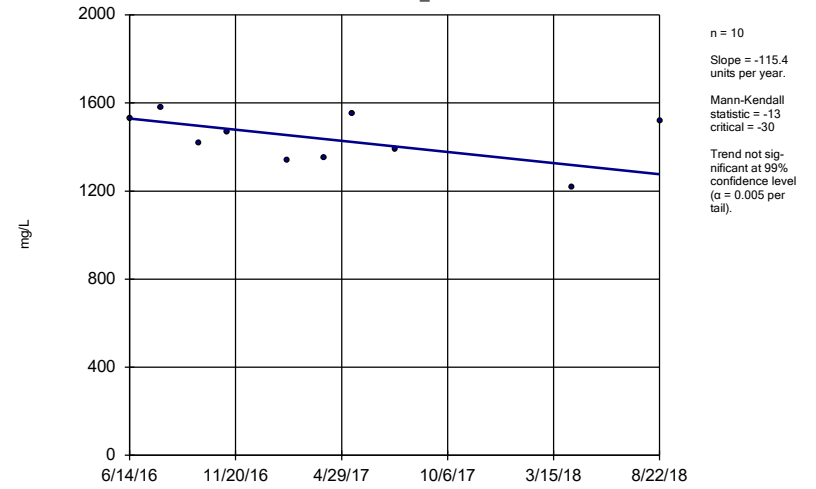
MW_1510



Constituent: Total Dissolved Solids [TDS] Analysis Run 11/11/2018 2:29 PM View: Trend Testing
 Mitchell BAP Client: Geosyntec Data: Mitchell BAP

Sen's Slope Estimator

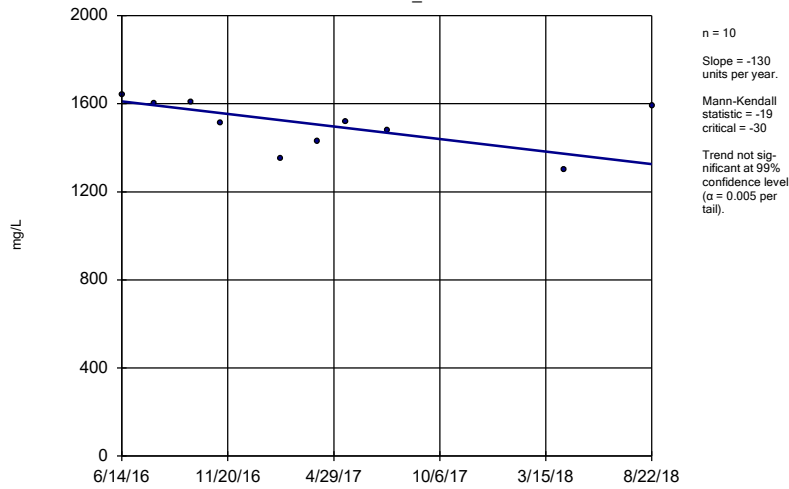
MW_1505



Constituent: Total Dissolved Solids [TDS] Analysis Run 11/11/2018 2:29 PM View: Trend Testing
 Mitchell BAP Client: Geosyntec Data: Mitchell BAP

Sen's Slope Estimator

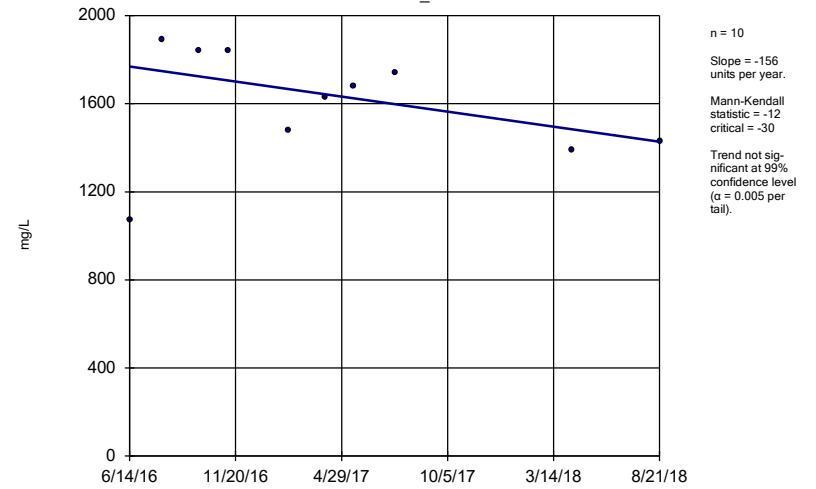
MW_1506



Constituent: Total Dissolved Solids [TDS] Analysis Run 11/11/2018 2:29 PM View: Trend Testing
 Mitchell BAP Client: Geosyntec Data: Mitchell BAP

Sen's Slope Estimator

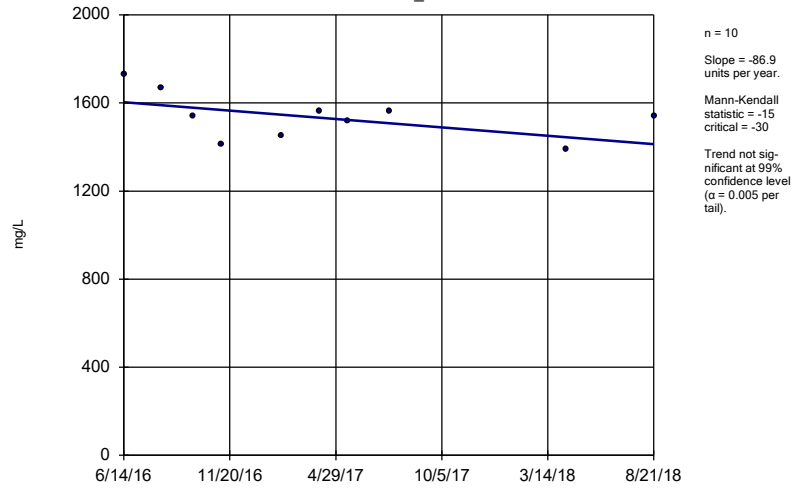
MW_1507



Constituent: Total Dissolved Solids [TDS] Analysis Run 11/11/2018 2:29 PM View: Trend Testing
 Mitchell BAP Client: Geosyntec Data: Mitchell BAP

Sen's Slope Estimator

MW_1509



Constituent: Total Dissolved Solids [TDS] Analysis Run 11/11/2018 2:29 PM View: Trend Testing
Mitchell BAP Client: Geosyntec Data: Mitchell BAP

Upper Tolerance Limits

Mitchell BAP Client: Geosyntec Data: Mitchell BAP Printed 11/11/2018, 2:18 PM

Constituent	Well	Upper Lim.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Antimony, total (mg/L)	n/a	0.00009103	20	0.006085	0.001443	5	None	sqrt(x)	0.05	Inter
Arsenic, Total (mg/L)	n/a	0.001745	20	0.0007595	0.0004114	0	None	No	0.05	Inter
Barium, Total (mg/L)	n/a	0.05775	20	0.04322	0.006065	0	None	No	0.05	Inter
Beryllium, total (mg/L)	n/a	0.00007696	20	0.00002304	0.00002251	35	Cohen's	No	0.05	Inter
Cadmium, total (mg/L)	n/a	0.00009	20	n/a	n/a	0	n/a	n/a	0.3585	NP Inter(normality)
Chromium, total (mg/L)	n/a	0.002346	20	0.0008811	0.0006116	0	None	No	0.05	Inter
Cobalt, total (mg/L)	n/a	0.003159	20	0.00101	0.0008968	0	None	No	0.05	Inter
Combined Radium 226 + 228 (pCi/L)	n/a	2.412	19	0.7433	0.3343	0	None	sqrt(x)	0.05	Inter
Fluoride, total (mg/L)	n/a	0.25	20	n/a	n/a	0	n/a	n/a	0.3585	NP Inter(normality)
Lead, total (mg/L)	n/a	0.004584	20	0.07481	0.0381	0	None	x^(1/3)	0.05	Inter
Lithium, total (mg/L)	n/a	0.01616	20	0.00705	0.003801	10	None	No	0.05	Inter
Mercury, total (mg/L)	n/a	0.000008	20	n/a	n/a	65	n/a	n/a	0.3585	NP Inter(normality)
Molybdenum, total (mg/L)	n/a	0.001907	20	0.02624	0.007275	0	None	sqrt(x)	0.05	Inter
Selenium, Total (mg/L)	n/a	0.0009	20	n/a	n/a	15	n/a	n/a	0.3585	NP Inter(normality)
Thallium, Total (mg/L)	n/a	0.00011	20	n/a	n/a	5	n/a	n/a	0.3585	NP Inter(normality)

Confidence Interval - All Results (No Significant Results)

Mitchell BAP Client: Geosyntec Data: Mitchell BAP Printed 11/11/2018, 2:34 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	%NDs	Transform	Alpha	Method
Antimony, total (mg/L)	MW_1505	0.000082225	0.00003175	0.006	No	10	10	No	0.01	Param.
Antimony, total (mg/L)	MW_1506	0.00007	0.00003	0.006	No	10	0	No	0.011	NP (normality)
Antimony, total (mg/L)	MW_1507	0.0001059	0.00006206	0.006	No	10	0	No	0.01	Param.
Antimony, total (mg/L)	MW_1509	0.00003	0.00002	0.006	No	10	0	No	0.011	NP (normality)
Arsenic, Total (mg/L)	MW_1505	0.001934	0.0004216	0.01	No	10	0	sqrt(x)	0.01	Param.
Arsenic, Total (mg/L)	MW_1506	0.001231	0.0005935	0.01	No	10	0	No	0.01	Param.
Arsenic, Total (mg/L)	MW_1507	0.003494	0.001078	0.01	No	10	0	No	0.01	Param.
Arsenic, Total (mg/L)	MW_1509	0.0005793	0.0003707	0.01	No	10	0	No	0.01	Param.
Barium, Total (mg/L)	MW_1505	0.0633	0.0455	2	No	10	0	No	0.011	NP (normality)
Barium, Total (mg/L)	MW_1506	0.06622	0.0541	2	No	10	0	No	0.01	Param.
Barium, Total (mg/L)	MW_1507	0.09293	0.06433	2	No	10	0	No	0.01	Param.
Barium, Total (mg/L)	MW_1509	0.06364	0.05608	2	No	10	0	No	0.01	Param.
Beryllium, total (mg/L)	MW_1505	0.000091	0.000006	0.004	No	10	20	No	0.011	NP (Cohens/xfm)
Beryllium, total (mg/L)	MW_1506	0.00003432	0.00001088	0.004	No	10	0	No	0.01	Param.
Beryllium, total (mg/L)	MW_1507	0.0001509	0.00003606	0.004	No	10	0	No	0.01	Param.
Beryllium, total (mg/L)	MW_1509	0.00001	0.000005	0.004	No	10	60	No	0.011	NP (normality)
Cadmium, total (mg/L)	MW_1505	0.00003	0.00002	0.005	No	10	0	No	0.011	NP (normality)
Cadmium, total (mg/L)	MW_1506	0.00004	0.00002	0.005	No	10	0	No	0.011	NP (normality)
Cadmium, total (mg/L)	MW_1507	0.00007	0.00003	0.005	No	10	0	No	0.011	NP (normality)
Cadmium, total (mg/L)	MW_1509	0.00002294	0.00001051	0.005	No	10	0	sqrt(x)	0.01	Param.
Chromium, total (mg/L)	MW_1505	0.01444	0.001413	0.1	No	10	0	sqrt(x)	0.01	Param.
Chromium, total (mg/L)	MW_1506	0.003385	0.001108	0.1	No	10	0	No	0.01	Param.
Chromium, total (mg/L)	MW_1507	0.01698	0.005854	0.1	No	10	0	No	0.01	Param.
Chromium, total (mg/L)	MW_1509	0.001897	0.00055	0.1	No	10	0	ln(x)	0.01	Param.
Cobalt, total (mg/L)	MW_1505	0.00144	0.0002788	0.006	No	10	0	sqrt(x)	0.01	Param.
Cobalt, total (mg/L)	MW_1506	0.0009874	0.000423	0.006	No	10	0	No	0.01	Param.
Cobalt, total (mg/L)	MW_1507	0.003528	0.001093	0.006	No	10	0	No	0.01	Param.
Cobalt, total (mg/L)	MW_1509	0.0004193	0.0001687	0.006	No	10	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW_1505	1.236	0.466	5	No	10	0	No	0.011	NP (normality)
Combined Radium 226 + 228 (pCi/L)	MW_1506	1.462	0.3149	5	No	10	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW_1507	2.09	0.521	5	No	10	0	No	0.011	NP (normality)
Combined Radium 226 + 228 (pCi/L)	MW_1509	1.68	0.3969	5	No	10	0	No	0.01	Param.
Fluoride, total (mg/L)	MW_1505	0.1	0.02	4	No	10	90	No	0.011	NP (NDs)
Fluoride, total (mg/L)	MW_1506	0.1	0.05	4	No	10	70	No	0.011	NP (normality)
Fluoride, total (mg/L)	MW_1507	0.07	0.05	4	No	10	10	No	0.011	NP (normality)
Fluoride, total (mg/L)	MW_1509	0.16	0.1	4	No	10	0	No	0.011	NP (normality)
Lead, total (mg/L)	MW_1505	0.001631	0.0001178	0.015	No	10	0	sqrt(x)	0.01	Param.
Lead, total (mg/L)	MW_1506	0.0008323	0.0002951	0.015	No	10	0	No	0.01	Param.
Lead, total (mg/L)	MW_1507	0.00358	0.0008556	0.015	No	10	0	No	0.01	Param.
Lead, total (mg/L)	MW_1509	0.00014	0.00001278	0.015	No	10	0	sqrt(x)	0.01	Param.
Lithium, total (mg/L)	MW_1505	0.01226	0.00594	0.04	No	10	0	No	0.01	Param.
Lithium, total (mg/L)	MW_1506	0.01512	0.008684	0.04	No	10	0	No	0.01	Param.
Lithium, total (mg/L)	MW_1507	0.01961	0.01119	0.04	No	10	0	No	0.01	Param.
Lithium, total (mg/L)	MW_1509	0.018	0.007779	0.04	No	10	0	No	0.01	Param.
Mercury, total (mg/L)	MW_1505	0.000006	0.000002	0.002	No	10	60	No	0.011	NP (normality)
Mercury, total (mg/L)	MW_1506	0.000003	0.000002	0.002	No	10	40	No	0.011	NP (normality)
Mercury, total (mg/L)	MW_1507	0.00001513	0.000002669	0.002	No	10	0	No	0.01	Param.
Mercury, total (mg/L)	MW_1509	0.0000025	0.000002	0.002	No	10	80	No	0.011	NP (NDs)
Molybdenum, total (mg/L)	MW_1505	0.002746	0.0007789	0.1	No	10	0	ln(x)	0.01	Param.
Molybdenum, total (mg/L)	MW_1506	0.001095	0.0005189	0.1	No	10	0	No	0.01	Param.
Molybdenum, total (mg/L)	MW_1507	0.00628	0.0009915	0.1	No	10	0	sqrt(x)	0.01	Param.
Molybdenum, total (mg/L)	MW_1509	0.00104	0.0004104	0.1	No	10	0	No	0.01	Param.
Selenium, Total (mg/L)	MW_1505	0.0007336	0.0003064	0.05	No	10	0	No	0.01	Param.
Selenium, Total (mg/L)	MW_1506	0.0002	0.00007	0.05	No	10	20	No	0.011	NP (normality)
Selenium, Total (mg/L)	MW_1507	0.0005199	0.0001561	0.05	No	10	0	No	0.01	Param.

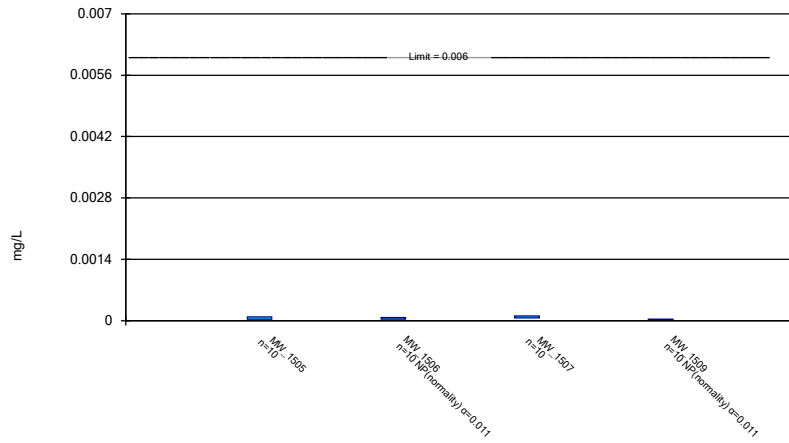
Confidence Interval - All Results (No Significant Results)

Mitchell BAP Client: Geosyntec Data: Mitchell BAP Printed 11/11/2018, 2:34 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>
Selenium, Total (mg/L)	MW_1509	0.0002	0.00009	0.05	No	10	0	No	0.011	NP (normality)
Thallium, Total (mg/L)	MW_1505	0.00009253	0.00006324	0.002	No	9	0	No	0.01	Param.
Thallium, Total (mg/L)	MW_1506	0.00006437	0.00004763	0.002	No	10	0	No	0.01	Param.
Thallium, Total (mg/L)	MW_1507	0.00007913	0.00004927	0.002	No	10	0	No	0.01	Param.
Thallium, Total (mg/L)	MW_1509	0.00005	0.00003	0.002	No	10	0	No	0.011	NP (normality)

Parametric and Non-Parametric (NP) Confidence Interval

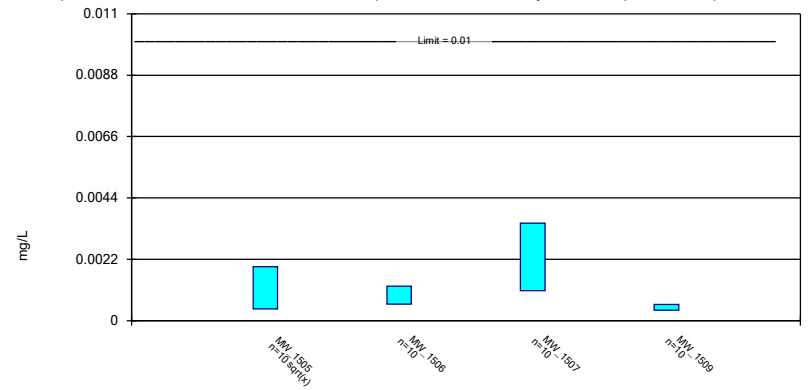
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Antimony, total Analysis Run 11/11/2018 2:32 PM View: Confidence Intervals - Appendix IV
Mitchell BAP Client: Geosyntec Data: Mitchell BAP

Parametric Confidence Interval

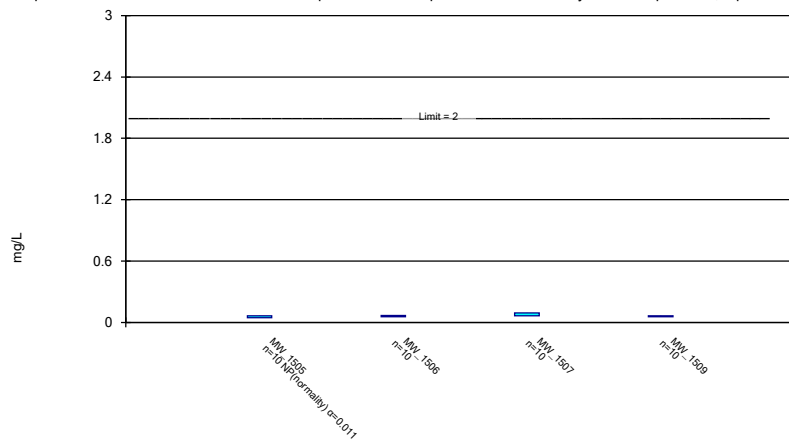
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Arsenic, Total Analysis Run 11/11/2018 2:32 PM View: Confidence Intervals - Appendix IV
Mitchell BAP Client: Geosyntec Data: Mitchell BAP

Parametric and Non-Parametric (NP) Confidence Interval

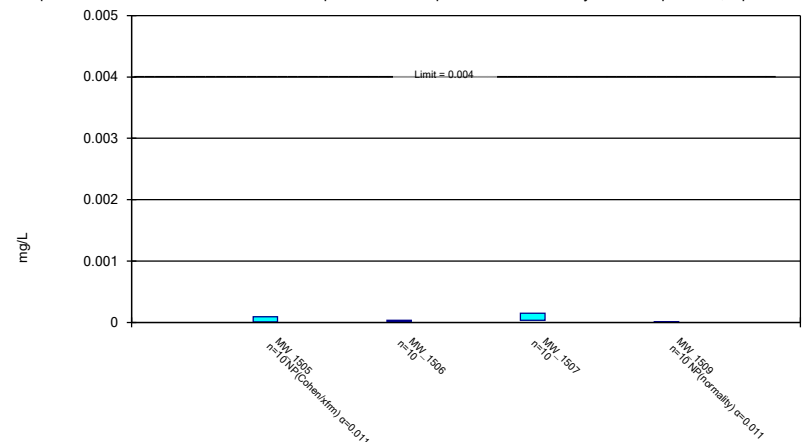
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Barium, Total Analysis Run 11/11/2018 2:32 PM View: Confidence Intervals - Appendix IV
Mitchell BAP Client: Geosyntec Data: Mitchell BAP

Parametric and Non-Parametric (NP) Confidence Interval

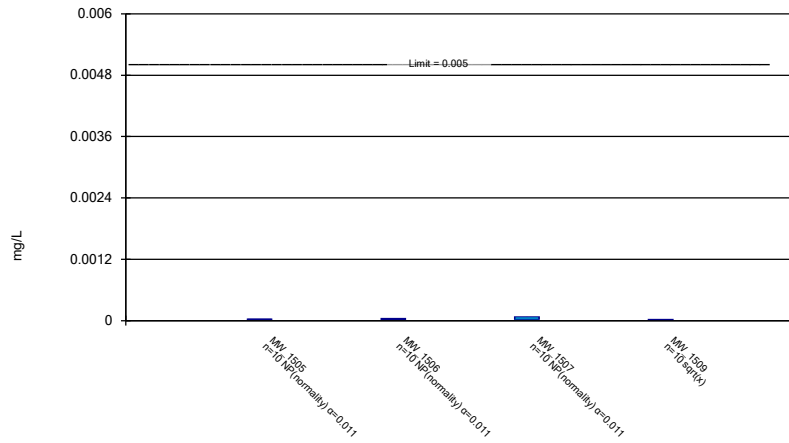
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Beryllium, total Analysis Run 11/11/2018 2:32 PM View: Confidence Intervals - Appendix IV
Mitchell BAP Client: Geosyntec Data: Mitchell BAP

Parametric and Non-Parametric (NP) Confidence Interval

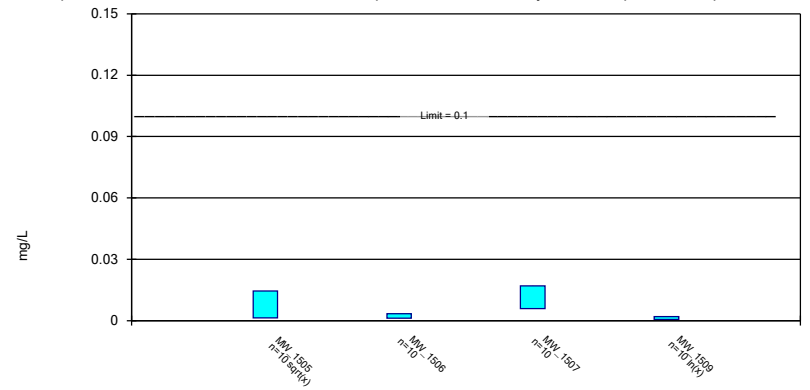
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cadmium, total Analysis Run 11/11/2018 2:32 PM View: Confidence Intervals - Appendix IV
Mitchell BAP Client: Geosyntec Data: Mitchell BAP

Parametric Confidence Interval

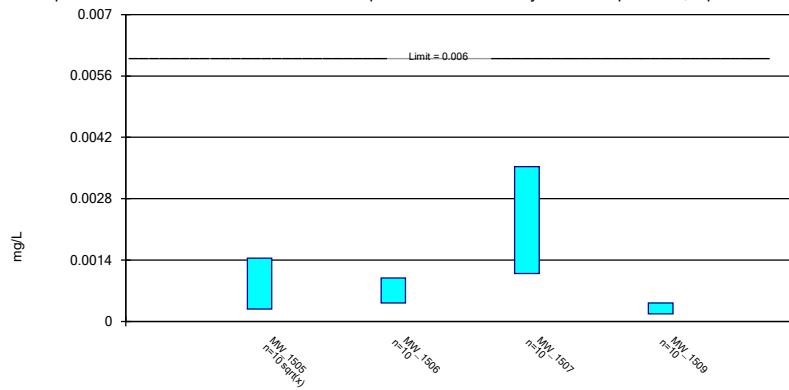
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Chromium, total Analysis Run 11/11/2018 2:32 PM View: Confidence Intervals - Appendix IV
Mitchell BAP Client: Geosyntec Data: Mitchell BAP

Parametric Confidence Interval

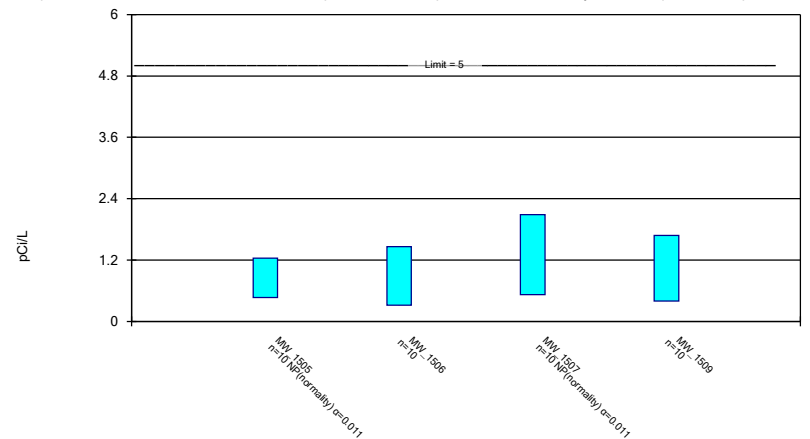
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cobalt, total Analysis Run 11/11/2018 2:32 PM View: Confidence Intervals - Appendix IV
Mitchell BAP Client: Geosyntec Data: Mitchell BAP

Parametric and Non-Parametric (NP) Confidence Interval

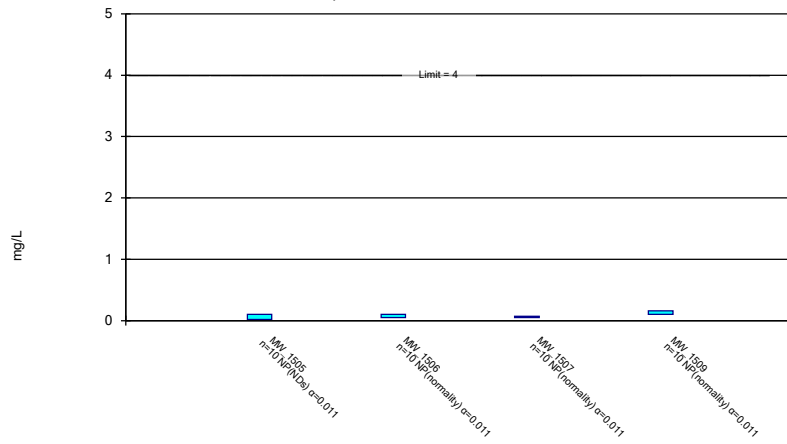
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Combined Radium 226 + 228 Analysis Run 11/11/2018 2:32 PM View: Confidence Intervals -
Mitchell BAP Client: Geosyntec Data: Mitchell BAP

Non-Parametric Confidence Interval

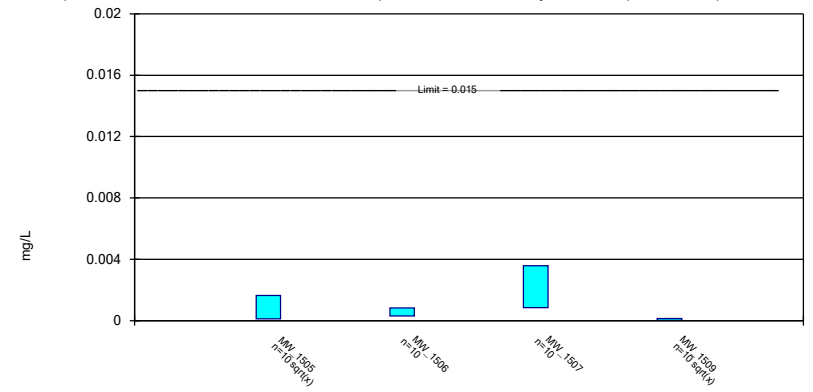
Compliance Limit is not exceeded.



Constituent: Fluoride, total Analysis Run 11/11/2018 2:32 PM View: Confidence Intervals - Appendix IV
Mitchell BAP Client: Geosyntec Data: Mitchell BAP

Parametric Confidence Interval

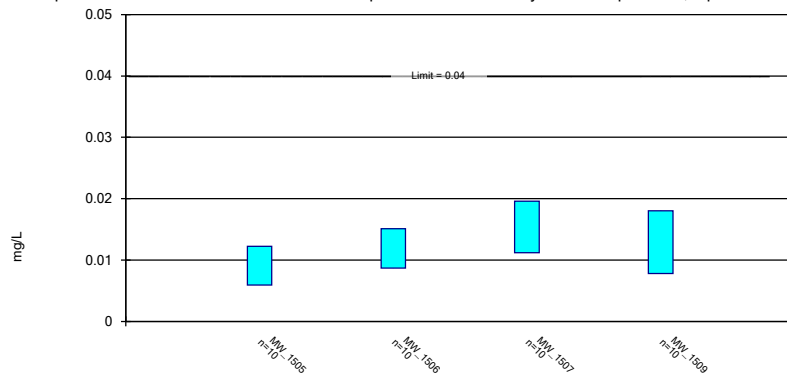
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Lead, total Analysis Run 11/11/2018 2:32 PM View: Confidence Intervals - Appendix IV
Mitchell BAP Client: Geosyntec Data: Mitchell BAP

Parametric Confidence Interval

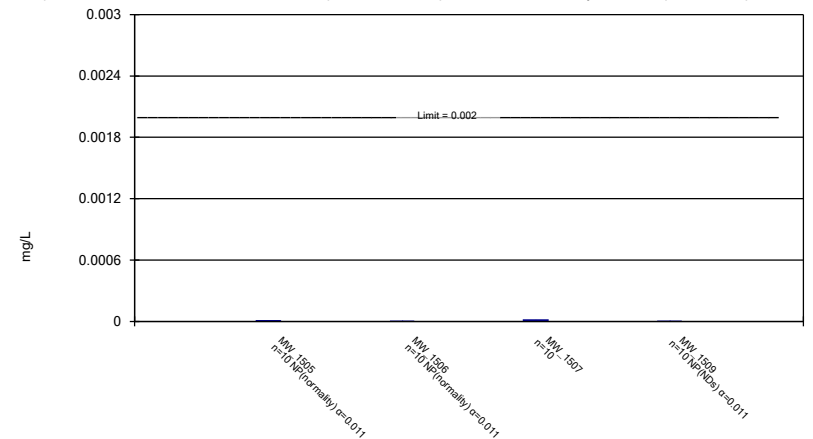
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Lithium, total Analysis Run 11/11/2018 2:32 PM View: Confidence Intervals - Appendix IV
Mitchell BAP Client: Geosyntec Data: Mitchell BAP

Parametric and Non-Parametric (NP) Confidence Interval

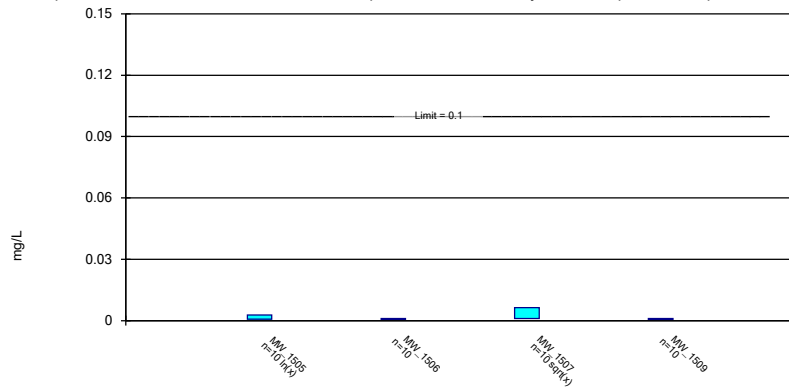
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Mercury, total Analysis Run 11/11/2018 2:33 PM View: Confidence Intervals - Appendix IV
Mitchell BAP Client: Geosyntec Data: Mitchell BAP

Parametric Confidence Interval

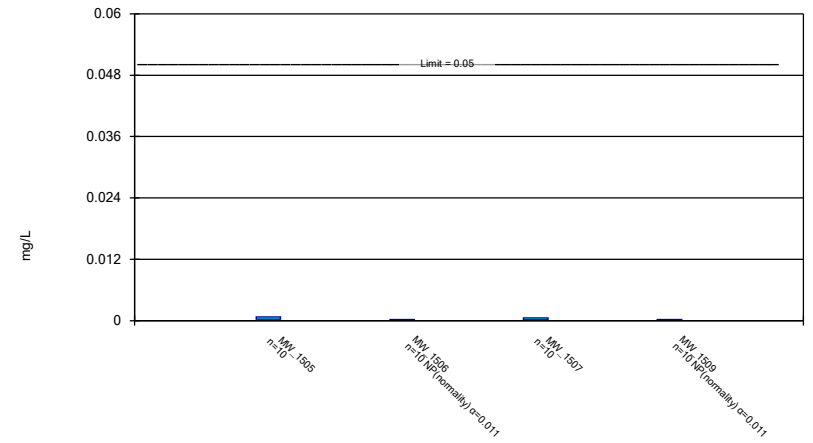
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Molybdenum, total Analysis Run 11/11/2018 2:33 PM View: Confidence Intervals - Appendix I
Mitchell BAP Client: Geosyntec Data: Mitchell BAP

Parametric and Non-Parametric (NP) Confidence Interval

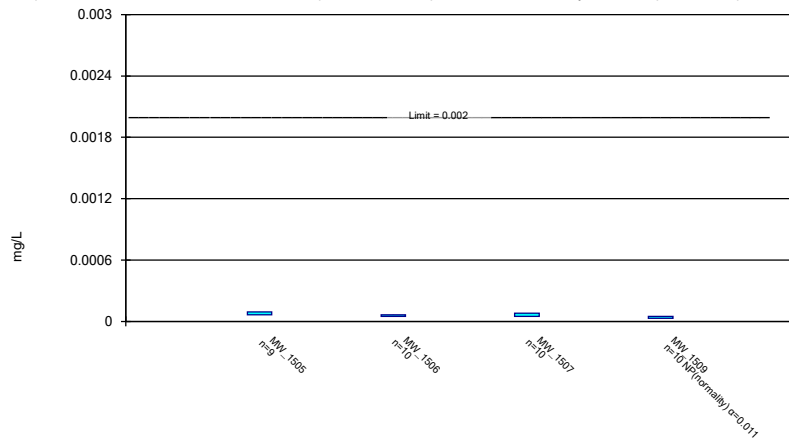
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Selenium, Total Analysis Run 11/11/2018 2:33 PM View: Confidence Intervals - Appendix IV
Mitchell BAP Client: Geosyntec Data: Mitchell BAP

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Thallium, Total Analysis Run 11/11/2018 2:33 PM View: Confidence Intervals - Appendix IV
Mitchell BAP Client: Geosyntec Data: Mitchell BAP